

An Analysis of Company Board Structures during Corporate Governance Reforms

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Abstract

This study examines the evolution of company board structure during a period of corporate governance reform. Using data over a time period following the publication of the Cadbury Report (1992) we present evidence of an increase in the independence of UK company boards, as measured by an increased willingness to employ independent non-executive directors, and to separate the positions of the CEO and the Chairman of the Board. We find that board structure changes more readily in response to changes in managerial control, equity issuance and corporate performance than changes in the firm-specific operating environment. Finally, evidence of compliance with the recommendations of the Cadbury Report (1992) indicates once again that owner-specific characteristics play a more significant role in a firm's compliance decision as firm-specific characteristics.

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Keywords: Board Size; Board Composition; Firm-specific Characteristics; Owner-specific Characteristics.

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1. Introduction

Despite a vast empirical literature on corporate governance and its effect on decision-making and value, to date little is known about how governance evolves over time. The limited research in this field suggests that firms adopt ‘optimal’ governance structures based on their individual contracting environment (see Demsetz and Lehn (1985), Agrawal and Knoeber (1996), Himmelberg et al. (1999), Lehn et al. (2004), and Yang et al. (2004)), but that changes in these structures occur in response to economic shocks and changes in managerial control (see Denis and Denis (1994), Denis and Sarin (1999), and Kole and Lehn (1999)).

This paper contributes to the existing literature by exploring the role of both owner and firm-specific attributes in the evolution of company board structure, and the decision to adopt the proposals enshrined in the Cadbury Report (1992). This is important to enhancing our understanding of how governance evolves over time, particularly in light of the recent wave of reforms aimed at strengthening the role of outside director monitoring on company boards (see Dahya and McConnell (2005)).

On one hand, companies may rationally choose adopt governance standards based on their internal firm-specific characteristics. For example, Young (2000) and Peasnell et al. (2003) find that larger firms with lower growth prospects are more likely to comply with the recommendation of employing at least three non-executive directors. However, managerial control, firm performance and external capital markets may also play an important role in corporate governance reform. To date this later issue remains largely unexplored in general, and particularly within the UK.¹

¹ Some evidence on this issue is provided by Dahya et al. (2002) and Peasnell et al. (2003), who report evidence that managerial ownership and firm performance are inversely correlated with the likelihood of adopting the Cadbury recommendation of employing at least three non-executive directors, using data measured at single points in time before and after the publication of Cadbury.

The findings presented in this paper provide evidence of the interdependence of governance systems. Managerial control and board independence are negatively correlated, as are changes in these variables. Cross-sectional estimates of the determinants of board structure provide limited evidence on the importance of firm-specific characteristics in determining the use of these structures. However, changes in board structure occur more frequently in response to changes in owner-specific characteristics, in a manner consistent with the bargaining framework put forward by Hermalin and Weisbach (2003). There is little consistent evidence that changes in board structure are correlated with changes in the firm-specific characteristics that are found to be important cross-sectional determinants of these variables.

We find some evidence that UK companies appear to rationally adopt the principles enshrined in the Cadbury Report (1992), whereby larger firms are more likely to comply with the report. However, the evidence presented here also indicates that firms are more likely to comply following CEO turnover and equity issuance. This is consistent with Hermalin and Weisbach's (2003) conclusions on how board structure evolves over time, and provides new evidence on the role of providers of new equity capital in the evolution of corporate governance.

The remainder of this paper is structured as follows. Section 2 develops our hypotheses on the determinants of company board structure. Section 3 describes the sample selection procedure and describes our data. Section 4 analyses the pre-Cadbury determinants of company board structure. Section 5 examines how corporate governance structures have changed over the sample period, and how these changes are interrelated. Section 6 examines the determinants of compliance with the Cadbury Report's (1992) recommendations, and how adoption has been correlated with changes in other governance systems. Finally, Section 7 concludes.

2. The determinants of corporate board structure

Past literature on the determinants of corporate board structure has proposed two main theories of how boards are shaped. Firstly, board structure may be determined by firm-specific characteristics, such as the size and scope of operations, firm age, the noisiness of operating environments, cash flows, and so forth. Alternatively, board structure will be determined by owner-specific characteristics that arise as a result of the bargaining process between the firm's top management and outside monitors.

2.1. Company board structure characteristics

The theoretical research of Fama and Jensen (1983) and Jensen (1993) highlights an important role for the board of directors in company decision-making. These authors suggest that corporate boards should be comprised largely of independent non-executive directors who are able to monitor the executive management of the firm. At the same time, board size should be limited due to the problems of co-ordination that exist as board size increases to unmanageable levels (see Yermack (1996)).

Within the present study we examine board size as the number of directors serving on the firm's board. Board independence is proxied using the incidence of splitting the roles of the CEO and the Chairman of the Board, and based on the role of non-executive and outside directors on the company's board. Furthermore, we specifically examine compliance with the recommendations put forward within the Cadbury Report (1992), as a model of company board structures.

2.2. Firm-specific characteristics

Proponents of ‘optimal’ systems of corporate governance, whereby firms self-select those structures that will maximise intrinsic value, hypothesise that firms will match board structure to a range of factors specific to the firm’s operating environment. Within this, firm-specific factors may further be segregated between those relating to the firm’s operations and requiring an advisory function, and those related to the scope for managerial opportunism that require a monitoring function from the board.

Operational characteristics: These have generally been taken to include factors relating to firm size, firm age, and the diversity of operations. Raheja (2005) proposes that *ceteris parabis* larger, older and more complex firms will require larger boards with a greater number of non-management directors due to the greater informational and monitoring requirements of these firms. At the same time, increases in firm size and complexity are expected to correlate with further increases in board size and independence in order to add experts in these new fields. Finally, as firms grow, monitoring requires a wider array of expertise that is handled by an ever-increasing number of sub-committees comprised of independent outside directors.

Evidence in support of operational characteristics as determinants of corporate governance is provided in the cross-sectional findings of Denis and Sarin (1999), who find that firm size is positively related to both board size and independence. However, these authors find that operational characteristics are poor predictors of changes in board structure over time. Recent empirical studies by Baker and Gompers (2003), Coles et al. (2004), Boone et al. (2004), and Lehn et al. (2004) do provide some evidence on the importance of operational characteristics in explaining both cross-sectional and time-series patterns in company board structure.

Monitoring characteristics: These have generally been taken to include factors relating to the firm's investment and cash flow needs. Examples have included growth prospects, stock price volatility as a measure of noise in the firm's operating environment, and leverage as a measure of the monitoring capability and incentives of outside lenders. Raheja (2005) formally models this process, and proposes that board monitoring will be a positive function of the private benefits available for management to expropriate, and a declining function of the noise contained within a firm's operating environment, which proxies for the cost of monitoring.

Cross-sectional predictions on the impact of monitoring requirements have received some support from the studies of Denis and Sarin (1999), Yang et al. (2004), and Coles et al. (2004). However, in examining time-series variations in corporate board structure Yang et al. (2004) actually find that increases in monitoring costs are correlated with increases in board size. They attribute these findings to boards performing an information dissemination role, and an attempt to improve the monitoring of top management in response to an increase in the private benefits that may be expropriated by these individuals.

Furthermore, Yang et al. (2004) find in cross-sectional testing that leverage and board size are negatively correlated, suggesting that they are monitoring substitutes, but that changes in the two are positively correlated. They attribute this to lenders adding their own monitors as firms seek to raise further finance. In contrast, Coles et al. (2004) find that board size and independence are positively related to leverage.

Following the arguments of Raheja (2005), we expect that increased variance correlates with increased noise, which should in turn increase the cost of monitoring company managers and lead to lesser use of monitoring systems. As such, we expect that stock return variance is negatively correlated with board size and independence.

Furthermore, we expect to observe a negative relationship between growth prospects and measures of board size and independence, which arises due to the increased cost of monitoring managers in high growth firms.

2.3.Owner-specific characteristics

In her model of board composition, Raheja (2005) notes that designing an optimal board structure becomes a normative process where agency conflicts between shareholders and managers extend to the corporate board. In a related strand of literature, Hermalin and Weisbach (2003) propose a model whereby board structure is the outcome of a bargaining process between managers and outside monitors. In this paper we separate owner-specific characteristics between those related to managerial control and those related to the control of outside owners.

Managerial control: Such measures are designed to capture the power of the CEO and/or executive directors to ‘capture’ the board, and dominate the decision making process. The most common measure of this is the top management’s fractional shareholdings within the firm. The research of Weisbach (1988) and Dahya et al. (2002) highlights the negative relationship that exists between managerial ownership and company board independence.

Additional and alternative measures have been taken to include the family/founder status of the company’s CEO, and their tenure as top officer. In their empirical studies, Denis and Sarin (1999) and Baker and Gompers (2003) find that founder status is negatively related to board independence and board size respectively.

While director shareholdings and family status yield powerful cross-sectional predictions on the nature of company boards, it is also expected that CEO turnover produces an increase in rates of director turnover over time. This arises as part of the

tournament to succeed the incumbent CEO, and the resulting increase in monitoring of a newly appointed CEO with relatively low power within the firm. The studies of Hermalin and Weisbach (1988), Yermack (1996), and Fee and Hadlock (2004) highlight the significance of CEO transitions as determinants of director turnover.

Outside owner control: Control by outside investors may come from several sources. At the most basic level this is likely to include monitoring by institutional shareholders who are able to use management's requirement for further financing to impose their own will on the running of the company.

We proxy for monitoring by large shareholders through their role in the process of raising capital. Easterbrook (1984) proposes that managers are subject to capital market discipline when they seek to raise finance. Furthermore, Yang et al. (2004) argue that lenders may add their own directors to company boards when they seek to raise finance in order to monitor the firm's management. It is also possible that such monitoring and director appointments occur as part of the process of the firm raising further capital following a lack of cash flow (see Baker and Gompers (2003)).

At the same time, Franks et al. (2005) suggest that stock financed acquisitions are a major driver of changes to corporate board structure. This arises where the board of the combined firm grows to accommodate directors from the targeted firm, who bring their own expertise in running the acquired assets.

Consistent with this, Franks et al. (2001) and Franks et al. (2005) present evidence that equity issuance and stock financed acquisitions are a major determinant of changes in company board structure. In a similar vein, Baker and Gompers (2003) suggest that board structure is the outcome of a firm's financing history, whereby growing firms with a lack of cash flow have larger and more independent corporate boards. Past empirical research (see Hermalin and Weisbach (1988), and Dahya and

McConnell (2004)), also suggests that poor performance leads to increases in board independence, whereby poor performance provides a measure of both outsiders' incentive to monitor and the cash flow requirements of the firm.

3. Sample and data

We track the governance and financial characteristics of a sample of UK companies over the period 1992 to 1997. Firms are excluded from this initial sample where they do not survive until 1994 for the collection of governance variables. This condition attempts to ensure that compliance or non-compliance with the Cadbury Report (1992) did not arise in response to the immediate danger of firm failure or being the subject of takeover activity.

For companies meeting these criteria, we manually collect annual reports for data on the corporate governance characteristics of sample companies. This process produces a final sample of 683 non-financial UK companies from 1992 through to 1994, after which companies drop out of the sample as they become delisted. Table 1 provides a breakdown of the time series properties of the sample.

It should be noted at this point that we are not carrying out a strict before and after analysis of company board structure surrounding the publication of the Cadbury Report (1992). Rather, we attempt to use the period immediately surrounding the report's publication to examine the determinants of corporate board structure during a period of heightened changes to company board structure. We view this as offering important policy implications in light of the move towards Cadbury style codes of corporate governance best practice documented by Dahya and McConnell (2005).

3.1. Sample definitions

Board structure: Data on board characteristics are collected from annual reports. *Split* is a dummy variable that takes the value of one where the company separates the roles of the Chairman and the CEO, and zero otherwise. *Outside Directors* are defined as non-executives without any financial or personal ties to company management.² *Grey Directors* are non-executives who fail to meet the criteria for being classified as outsiders. *Inside Directors* are those who are full-time executive members of the board, and *Board Size* is the number of directors serving on the board at the financial year-end. Given the subjective definition that must be made when classifying non-executive directors as outsiders, future testing is employed for both outside and non-executive directors on company boards.

When examining compliance with the recommendations of the Cadbury Report (1992), a number of further variables are examined based on our interpretation of how firms may have complied with the various proposals put forward in the report. *Simple Independent* is set equal to one where the company employs at least three non-executives, and zero otherwise. *True Independent* is set equal to one where the company meets the criteria for *Simple Independent*, with the additional constraint that the majority of non-executives are outsiders, and zero otherwise. *Simple Comply* is set equal to one where the company employs at least three non-executives and splits the roles of the CEO and the Chairman, and zero otherwise. Finally, *True Comply* is an indicator variable set equal to one where the company meets the requirements for

² Such ties are inferred where the non-executive is related to any of the firm's executive directors, has a tenure exceeding ten years with the firm, was formerly an executive director, or has any disclosable business relationships with the company. These include financial contracts disclosed in the annual report, including related party transactions and affiliations with the firm's advisors. In some cases the tenure of non-executives or past employment as an executive director is not disclosed in the annual report. Where this is the case, past editions of the *London Stock Exchange Yearbook* are examined for evidence of the director's past employment with the firm.

Simple Comply, with the additional constraint that the majority of non-executives are outsiders, and zero otherwise.

Ownership characteristics: Data on ownership by the company's CEO and the board as a whole is taken from annual reports. This is defined as their fractional ownership based on common equity shares held under voting control.³ A *Family CEO* variable is included to proxy for whether the company is controlled by a founder or family CEO. Family managed firms are defined as those where the CEO is explicitly described in the annual report or news reports as being a founder of the company or a descendant. Firms where the CEO shares their name with the company or another member of the board are also classified as family firms.⁴

In our time-series analysis of company board structure we also examine the impact of CEO turnover in changes to company board structure. The selection procedure for identifying the company's top officer is similar to that described for UK firms by Conyon and Florou (2002).⁵ *CEO Turnover* is set to one where there is a change in the individual holding the CEO title in the annual report from one financial year to the next, and zero otherwise.

³ Such shares include all beneficial holdings and any non-beneficial holdings through family trusts. Excluded from this are non-beneficial holdings that are not held through such trusts, including pension fund and other trustee holdings. This definition is used because the exact control of non-family trustee holdings is often difficult to determine, and changes in their control may occur due to factors outside the control of directors.

⁴ In practice this variable underplays the role of family control within this sample of companies. The practice of splitting the roles of the CEO and the Chairman in UK companies may lead to a number of cases where either an Executive or Non-Executive Chairman who fits the criteria for being classed as a family board member plays a stronger role in company decision making than is suggested by the presence of a CEO, who in practice may not actually run the company in the manner suggested by their operational title. In addition, there is also a possibility that companies will be family held, where family members have a significant role within the company, despite their lack of day-to-day involvement in the company's board of directors.

⁵ Where the company reports a Chief Executive (Officer) this person is deemed to be the top officer. In their absence, and in the presence of a Managing Director (MD), the annual report is examined for evidence of an MD's review of operations, information contained in the director's report, the report of the compensation committee, and disclosure with respect to whether the positions of the Chairman and the MD have been split in accordance with the Cadbury Report (1992). Based on this, a decision is made as to whether the MD is the top officer. When there is no Chief Executive or MD, the company's Executive Chairman is taken to be the top officer. Hereafter, the top officer is referred to as the CEO.

Outside owner control: *Acquisition* and *Equity Issue* are indicator variables set equal to one where the company has made a new equity issue through acquisition or the sale of shares to new or existing investors during the current financial year, and zero otherwise.⁶ Data on issues of equity capital are taken from the ‘Capital History’ section of *FT Extel Company Information Cards*.

We use industry adjusted return on assets (*IROA*) for the prior financial year to measure operating performance. This is measured as earnings before interest and taxes (EBIT) divided by the book value of assets at the beginning of the year. We adjust for industry by deducting the return on assets (ROA) of the median firm in the same FTSE level 4-industry group from the ROA of the sample firm.

Operational characteristics: *Assets* measures the book value of company assets, our measure of firm size. *Firm Age* is collected from *FT Extel Company Information Cards*, and is measured from the year of incorporation. *Revenue Concentration* is measured using a sales based Herfindahl index calculated from revenue data from 3-digit SIC industry classifications.⁷ In examining time-series variation in corporate governance we examine changes in the number of reported 3-digit SIC segments.⁸

Monitoring characteristics: *Leverage* is analysed as the ratio of total debt-to-assets. In cross sectional testing company growth prospects are proxied as the market-to-book value (*MTBV*) ratio, calculated as the market value of equity divided by the book value of total assets. In examining time-series variation in company board structure, the ratio of *Depreciation-to-Assets* is used to examine growth

⁶ We restrict our analysis of equity offerings to those issues accounting for at least 5% of the firm’s issued share capital prior to the issue. While this 5% cut-off is somewhat arbitrary, but is used to restrict the inclusion of acquisitions to those that are materially significant to the sample companies. The 5% figure is based on UK pre-emption guidelines which limit companies to raising no more than 5% of their share capital each year by any method other than a rights issue (see Franks et al. (2001)).

⁷ See Comment and Jarrell (1995) for a full definition of this formula.

⁸ This measure is preferable given the findings of Hermalin and Weisbach (1988) that firms add and remove directors as they enter and exit industrial segments. A Herfindahl index is preferable in cross-sectional testing in order to capture the degree of industrial focus, and to account for firms who are required to disclose relatively small interests in a larger number of business segments.

prospects.⁹ *Variance* is defined as the variance of the company's daily stock returns over its accounting year. Industry characteristics are measured on the basis of dummy variables for FTSE level 4 industry codes.

3.2.Descriptive statistics

Table 2 reports descriptive statistics for the sample of companies examined in this paper, where data is examined across all firm years. The average board holds 14.5% of their firm's equity, with the CEO accounting for 6.4% of total share capital. However, ownership is skewed, as median ownership is much lower than mean levels. Under the classification scheme used in this study, 19.5% of firms have a *Family CEO* in any given year. The average board has 7.07 members, of which 25.7% are outsiders and 15% are greys. The fraction of board members who are non-executives is lower than the 46% reported by Dahya et al. (2002) in their post-Cadbury period, while board size is also slightly below the mean of 7.29 reported in their sample.

The mean (median) firm has been incorporated for 45.4 years (38 years) and has assets valued at £480.42million (£55.85million). The average debt-to-assets ratio is 18.1%, and the average company has depreciation charges amounting to 4.1% of assets at their financial year-end. The mean revenue based Herfindahl index is 0.79, but the majority of sample companies operate in a single line of business.

⁹ This is preferable in this type of analysis because the MTBV contains both an element of company growth prospects and an element of company performance. Yermack (1996) examines the depreciation-to-assets ratio as an alternative measure of growth prospects in robustness testing. A preferable measure of firm level growth would be the ratio of research and development (R&D) expenditures to company assets. However, a significant fraction of the sample companies do not report data on R&D, making this approach infeasible in this paper.

4. Pre-Cadbury determinants of company board structure

Prior to analysing changes in company boards we attempt to gain an understanding of board structure at the start of our sample period. Table 3 presents a correlation matrix of ownership and board structure in 1992 for our sample of firms. All correlations are highly significant, and suggest a negative relationship between board independence, as proxied by non-executive and outsider representation, and splitting the roles of the Chairman and the CEO, and measures of director control. Larger boards employ more outsiders, are more likely to split the top officer roles, are associated with lower managerial ownership, and are less common in family CEO controlled firms.

Table 4 presents the results of regressions of the cross-sectional determinants of board structure in 1992, while controlling for the owner and firm-specific factors described in Section 2. We estimate our results using OLS regressions, while the final column presents the results of a logit regression where *Split* is the dependent variable.¹⁰ For completeness, and in light of the inherently subjective definition of outside directors, we examine the determinants of both the number and fraction of both outside and non-executive director representation on corporate boards.¹¹

In general, we find very little support for the importance of the firm-specific contracting environment as a determinant of board structure. Board size and independence, as proxied by outside director representation, are positively related to firm size. At the same time, diverse companies have more non-executives on their board of directors. Rather anomalously, we find that outside director representation is

¹⁰ The governance structures studied in this analysis are at least to some extent endogenous. The use of OLS techniques reduces the extent to which any inferences may be drawn about causality amongst the variables used in this analysis. However, the aim of this section is to examine correlations that may exist amongst these sample variables rather than attempting to determine the direction of causality. At the same time, Boone et al. (2004) are critical of the orthogonalising and two-staged least squares techniques that have been commonly used to correct for these endogeneity problems in cross-sectional analysis.

¹¹ As in Denis and Sarin (1999) industry dummies are assigned when an industry has at least ten firms in the sample period, none of which are significant in the analysis. A limit of ten firms is set to avoid assigning intercepts to individual or a small number of companies.

increasing with the noisiness of the firm's operating environment, which contrasts with the theoretical predictions of Raheja (2005) that firms where monitoring is costly should have fewer outside directors. We do find however, the board size is a decreasing function of the noise of a company's operating environment. Finally, we find no evidence that the decision to split the top officer functions is influenced by any of the firm-specific characteristics that we consider.

Of much greater importance is the role of owner-specific characteristics as determinants of company board structure. We find strong evidence that board independence is negatively related to our measures of managerial control, which is consistent with our earlier findings presented in Table 3. At the same time, board size is smaller in family CEO controlled firms. Finally, we report that our various measures of company board independence are positively correlated, while larger boards are characterised by more non-executive directors, who comprise a larger fraction of the board.

Overall, the above evidence is consistent with existing governance literature, which indicates that measures of board independence are negatively correlated with managerial control (see Denis and Denis (1994), and Anderson and Reeb (2003)). However, in contrast to the findings of Denis and Sarin (1999) and Young (2000), we find little evidence that the firm-specific characteristics of sample companies play an important role in the cross-sectional determination of company board structure, after controlling for these owner-specific characteristics.¹²

Thus, we find mixed evidence that UK firms had adopted board structures that were related to the firm-specific characteristics of the company's contracting

¹² In further (unreported) testing we conduct individual tests of the impact of these firm and owner-specific characteristics as determinants of board structure. We find some evidence that firm size and age are positively correlated with the number and fraction of non-executives on the firm's board. However, these results do not hold after controlling for the impact of owner-specific characteristics relating to the firm's management.

environment prior to the Cadbury Report's (1992) publication. In contrast, we find strong evidence that board structure is determined by the firm's insider owners.

However, this may not tell the entire story. Examining time-series variations in board structure, and the factors that drive changes to these systems may provide an alternative test of what drives the use of particular systems of governance. To the extent that these factors may be different from the cross-sectional determinants of board structure, this has important policy implications for the likelihood of compliance with corporate governance codes of best practice that have been adopted by several countries throughout the world (see Dahya and McConnell (2005)).

5. Changes in ownership and board structure

In this section we aim to explore the factors that affect changes in board structure, and the extent to which these changes are correlated with changes in other observable firm characteristics. If companies do indeed adopt optimal governance structures then it may be expected that changes in some aspects of board structure are correlated with changes in other aspects of these systems. However, prior to examining this issue we begin with an examination of the time series properties of board structure within our sample.

5.1. Time series properties of sample companies

The data presented in Table 2 provides information for the pooled sample of companies over time. However, as Young (2000) and Dahya et al. (2002) document, UK firms increased their reliance on non-executive directors and were more willing to separate the roles of the Chairman and the CEO over the time period of this study.

To examine this issue here, Figures 1 and 2 illustrate the increased independence of company boards over this sample period, based on the presumption that a greater fraction of non-executive and outside directors, and an increased willingness to separate the roles of the Chairman and the CEO are facets of an independent board of directors. Figure 1 highlights a large increase in the fraction of non-executive and outside directors serving on company boards, and a decline in the fraction of inside directors over the sample period. It appears the companies responded to the Cadbury Report (1992) by employing more directors who are regarded as independent of company management, while the fraction of directors who are regarded as grey remained relatively constant over the sample period. We view these findings as providing evidence of an attempt to comply with the spirit of the recommendations within the report, rather than simply filling board positions with non-executive directors that have some form of affiliation with management.

Figure 2 examines the extent of compliance with the model board structure put forward within the Cadbury Report (1992), as discussed previously. For each measure of compliance, there is a large increase in the fraction of companies that meet these requirements from the first year of the sample until the last. Overall, this suggests that companies increased the independence of their board of directors over the sample period through the appointment of independent outside directors, and an increased willingness to separate the roles of the Chairman and the CEO.¹³

However, examining average changes in board structure may not tell the whole story of how companies adapted their governance structures in response to Cadbury. Young (2000) finds that companies which increased their use of non-executive

¹³ In unreported testing we examine the statistical significance of changes in board independence between the first and last years covered by our sample. In most cases the difference is highly significant, and indicates a large increase in board independence from the first year of the sample to the last. The only exceptions to this are the marginally significant increase in the average board size over the sample period, and the statistically insignificant increase in the fraction of grey directors.

directors to the greatest extent following the report's publication were those classed as being under-represented by these directors prior to the report's publication.

To examine this issue further, Figures 3 and 4 plot changes in the fraction of non-executive and outside directors respectively for various bandings of non-executive and outside director representation in the first year of the sample, 1992. It is apparent that those companies with the lowest fraction of non-executive and outside director representation in 1992 experienced the largest increase in the fraction of the board that is comprised by these directors over the sample period. We also find that companies with the highest levels of board independence in 1992 experience declines in outside and non-executive representation by the end of the sample period. This finding is consistent with Denis and Sarin (1999), who report evidence of mean reversion in board composition over an extended period of time.¹⁴

5.2. The determinants of changes in ownership and board structure

Table 5 presents a correlation matrix of annual changes in ownership and board characteristics over our sample period. We find that, in general, changes in director control and board independence are negatively correlated, while annual changes in board size are positively related to changes in board ownership and independence.

The evidence presented above is consistent with Denis and Denis (1994), who report that changes in the involvement of a family board member are an important

¹⁴ To examine the statistical significance of these results, we examine changes in the fraction of outside and non-executive directors serving on company boards between 1992 and 1997 for varying bands of board independence in 1992. In each case the increase in board independence is statistically significant, with the exception of the largest category of outside and non-executive director representation in 1992, which experiences a significant decline in board independence over the sample period. As a further test, we examine changes in board independence in each banding in relation to the changes for all lower bandings. It is apparent that although most bandings of board independence experience an increase in non-executive and outside director representation over the sample period, this is most pronounced in the lower categories of board independence at the beginning of the sample period. In each case, the increase in board independence over the sample period for the lower categories in 1992 is significantly greater than that experienced in the bands above it.

determinant of changes in ownership, and Denis and Sarin (1999) who find that changes in ownership and board structure are highly correlated with one another.

Of equal interest is the extent to which these changes are correlated with changes in firm and owner-specific characteristics. To examine the extent to which this is the case, Table 6 estimates regressions of annual changes in board structure as a function of changes in both the firm and owner-specific characteristics described in Section 2. We also add lags of our dependant variable to control for the mean reversion in board structure documented in Figure 1, and industry and year dummies.

Models (1), (2) and (3) present the results of regressions examining the number of director appointments, the number of departures, and net changes in board size respectively. For consistency with Yermack (1996), results are estimated using Maximum Likelihood Poisson estimators for regressions examining the annual number of director appointments and departures, and OLS regressions of the determinants of net changes in board size. Our results provide limited evidence that board size does change in response to changes in firm-specific characteristics.

Director departure rates increase following reductions in firm size and increases in growth prospects, while changes in firm size and growth prospects are positively and negatively correlated respectively with net changes in board size. These findings are consistent with the recent empirical work of Lehn et al. (2004). In addition, director appointment rates and net increases in board size are positively correlated with changes in stock return variance. This is somewhat puzzling, given that increases in the cost of monitoring should be correlated with declines in board size (see Boone et al. (2004)). Declines in leverage lead to higher rates director appointments and departures, but have no net effect on board size. These findings contrast somewhat with those of Yang et al. (2004), who find that leverage is related

to board size, although the direction of this relationship is dependant upon whether the authors consider cross-sectional or time-series testing.

We find that CEO turnover creates large changes in board size, specifically higher rates of appointments and departures and a net reduction in board size. Poor performance leads to higher rates of director appointments and departures, but has no impact on net changes in board size. The above findings are consistent with Yermack (1996), who reports that board size does not change in response to performance, but that director turnover rates do increase following CEO turnover and poor stock price performance.

Finally, equity issuance through acquisitions and the sale of shares lead to higher rates of director appointments and departures, and a net increase in board size. These findings are consistent with Hermalin and Weisbach (1988), Denis and Denis (1999), and Franks et al. (2005) of the role of owner-specific characteristics, such as firm performance, CEO turnover and outside monitoring during the equity issuance process in driving changes to corporate board structure.

Models (4) through (7) present the results of OLS regressions examining the determinants of net changes in the number and fraction of outside and non-executive directors on the company's board. Of the firm-specific characteristics examined, only changes in variance consistently lead to changes in board independence, although the sign of this variable switches between outside and non-executive directors in a manner that is inconsistent with any of the theoretical and empirical literature that we consider previously (see for example Yang et al. (2004) and Raheja (2005)).

Once again, CEO turnover leads to an increase in board independence, but we find no evidence that increases in board independence follow poor performance. This is consistent with Hermalin and Weisbach (1988) for CEO turnover, but is

inconsistent with both Hermalin and Weisbach (1988) and Dahya and McConnell (2004) for the relationship between firm performance and changes in board independence. With respect to changes in outside owner control, we find that equity offerings lead to increased levels of board independence, although these results are not so strong for equity financed acquisitions. This provides some support for Franks et al. (2005), who report that equity issuance played a significant role in the evolution of board control in UK companies during the 20th century.

Overall, the evidence presented above indicates that changes in firm-specific characteristics are not strong predictors of changes in board independence. Of much greater importance is the role of owner-specific characteristics as determinants of changes in company board structure. We also find evidence that firm performance is correlated with increased rates of director turnover, but is unrelated to overall changes in board size or structure.

Our findings are consistent with Denis and Sarin (1999), and Hermalin and Weisbach (2003) regarding the importance of owner-specific over firm-specific characteristics as determinants of changes in corporate board structure. They are also complementary to Franks et al. (2001), Baker and Gompers (2003), and Franks et al. (2005) of the role played by capital markets in facilitating increases in the size and independence of company boards. However, they are somewhat contradictory to the findings of more recent empirical research, which suggests an important role for firm-specific characteristics in explaining changes in company board structure over time (see Boone et al. (2004), and Lehn et al. (2004)).

5.3. Factors associated with large changes in ownership and board structure

One problem with the above analysis is that large annual changes in board structure, whether positive or negative, may be correlated with changes in both firm and owner-specific characteristics. For example, declines in board size appear to follow CEO turnover in Table 6. However, CEO turnover may also be more common in firms that experience large increases in board size, in relation to firms with stable board size. To examine this, univariate comparisons are made across groups of annual changes in board structure based on the boundaries employed by Denis and Sarin (1999).

Panel A of Table 7 reports results for annual changes in board size. As in Table 6, there is a degree of evidence that changes in board size are correlated with changes in firm-specific characteristics, with a positive correlation between changes in firm size and stock return variance, and a negative correlation with changes in growth prospects and leverage, and net changes in board size being evident. While the evidence on firm size and growth prospects is consistent with the theoretical predictions of Raheja (2005), our findings with respect to leverage and variance are somewhat puzzling. Yang et al. (2004) attribute an increase in board size following increases in variance to boards performing an information dissemination role when attempting to address increases in the noise of a firm's operating environment. Such an argument may also be able to explain our own empirical findings. These same authors suggest that a negative relationship between board size and leverage may be suggestive of substitute monitoring systems in the cross-section. However, these authors also find that increases in leverage are correlated with increased board size.

Once again, CEO turnover and reductions in family CEO involvement are correlated with large changes in board size, particularly declines, and equity issuance

is more frequent in firms that experience increases in board size. Finally, acquisition rates are higher within firms that experience a large change in board size.

Panels B and C of Table 8 report univariate comparisons for annual changes in non-executive and outside director representation respectively. Once again, we find little evidence that changes in firm-specific attributes lead to changes in corporate boards, while CEO turnover is again correlated with large changes in board structure.

We also find evidence that changes in family CEO involvement are inversely correlated with changes in board independence, consistent with the cross-sectional findings in Table 4, and the evidence presented for family firms by Anderson and Reeb (2003). Equity offerings are more frequent in firms experiencing large changes in non-executive director representation, but we find no evidence that providers of equity capital have a significant impact on large changes in outsider representation.

Finally, we find that changes in board independence; whether positive or negative, follow a period of poor performance. This adds to the existing literature on the determinants of board structure, which suggests a negative relationship between firm performance and company board independence. Our findings suggest that this relationship may be more complex than previously believed. We view our results as suggesting that poor performance, and the resulting lack of cash flow and increased incentive for outsiders to monitor, lead to large changes in company board independence, whether positive or negative.

Overall, the evidence in Table 7 suggests that CEO turnover, firm performance and equity issuance are all correlated with large changes in company board structure. We also find evidence that board size changes in response to changes in firm-specific characteristics in a manner that is at times consistent with cross-sectional predictions, whereas this is not the case for board independence. These results are largely

consistent with past empirical evidence by Hermalin and Weisbach (1988), Denis and Denis (1994), Denis and Sarin (1999), Franks et al. (2001), Baker and Gompers (2003), and Franks et al. (2005) of the importance of owner-specific characteristics in driving changes to company board structure.

6. Cadbury compliance and corporate governance characteristics

To date this analysis has focused on changes in board structure for all sample firms. Of particular interest, however, is the manner in which companies may have adapted their existing governance systems to accommodate the specific changes in board structure proposed by the Cadbury Report (1992).

6.1. Factors leading to Cadbury compliance

In Table 8 the results of logit regressions are presented of compliance with *Split*, *Simple Independent*, *True Independent*, *Simple Comply* and *True Comply*, only for those companies that were not compliant in the previous financial year. In each case the dependent variable is set equal to one where the company adopts the recommendation of the report during the current financial year, and zero otherwise. Each of these variables is related to the same firm and owner-specific characteristics examined previously.

Firm size is positively related to all measures of Cadbury adoption, with the exception of the decision to split the roles of the CEO and the Chairman. However, with the above exception we find little evidence that the firm-specific characteristics of a company's operating environment played an important role in the decision over whether to adopt the model board structure outlined in the Cadbury Report (1992).

Cadbury adoption with respect to splitting the roles of the CEO and the Chairman (employing sufficient non-executive and outside directors) is positively related to existing outside director representation (having previously split the roles of the CEO and the Chairman). We also find the poor performance is correlated with measures of Cadbury compliance with respect to the employment of outside and non-executive director representation on the company board, a finding consistent with both Young (2000) and Dahya and McConnell (2004).

Finally, we report further evidence on the importance of changes in managerial control and equity issuance in facilitating changes to board independence. CEO turnover is positively correlated with all measures of Cadbury adoption, while equity issuance through acquisitions and the sale of shares is positively correlated with the adoption of the Cadbury Report's (1992) proposals. This provides further evidence in support of Baker and Gompers (2003) and Franks et al. (2005) of the relationship between equity issuance and changes in corporate board structure.

6.2. Is Cadbury compliance associated with discernible changes in other governance attributes?

As a further test of the effects of Cadbury, univariate comparisons are made across categories of compliance and non-compliance with the proposals contained in the report. This provides evidence of whether adoption was rationally associated with changes in other governance characteristics, and the extent to which it is correlated with changes in other discernable firm and owner-specific characteristics. The results of these findings are reported in Tables 9 and 10. For each of the modes of adoption discussed previously four states of nature are identified; companies can either

maintain compliance or non-compliance, or they may adopt compliance or non-compliance with the various recommendations of the Cadbury Report (1992).

The results reported in panels A, B and C of Table 9 relate to adoption of *Split*, *Simple Independent* and *True Independent*, and examine annual changes in firm and owner-specific characteristics for each of these possible states. What evidence does exist on the relationship between Cadbury adoption and changes in firm-specific characteristics is mixed in relation to the cross-sectional findings reported in the previous section. Smaller changes in assets are observed for companies that maintain and adopt non-compliance with *Simple Independent*. Also, large declines in leverage are observed for those firms that adopt non-compliance with the recommendations proposed by the report. However, in general these results are consistent with earlier reported findings of a lack of any systematic relationship between changes in board composition and changes in the firm-specific characteristics of sample companies.

We do find that younger companies are more likely to be able to maintain and adopt non-compliance with the report's proposals on board structure, while CEO turnover is more frequent amongst those companies who adopt either compliance or non-compliance. Reductions in family CEO involvement are also more common amongst companies that adopt compliance with the report's reforms. We find some evidence that companies which are able to maintain non-compliance with the report outperform other groups of companies, which is generally consistent with Hermalin and Weisbach (2003) who argue that poor performance leads to increases in board independence. Finally, rates of equity issuance are higher amongst companies that alter their compliance status, although this is significant only for sales of equity capital, and not for stock financed acquisitions.

Table 10 examines these changes in owner and firm-specific characteristics with respect to *Simple Comply* and *True Comply*, as described previously, and reports results generally consistent with those in Table 9. Once again, these findings stress the importance of changes in owner control over changes in firm-specific characteristics in determining changes to firm level corporate governance. These findings are consistent with the arguments of Baker and Gompers (2003), Hermalin and Weisbach (2003), and Franks et al. (2005).

In further (unreported) testing we also examine changes in company ownership and board structure across firms altering their Cadbury status in the manner outlined in Tables 9 and 10. We again find that companies which change their compliance status experience larger changes in board and CEO ownership than companies that maintain their existing governance structures. At the same time, we find that Cadbury compliance is correlated with increases in company board size, while adopting non-compliance correlates with declines in board size. Thus, our findings are consistent with Dahya et al. (2002), who report that adoption of the Cadbury Report's (1992) proposals on a model corporate board structure is correlated with increases in company board size.

6.3. The impact of Cadbury on non-complying companies

The above analysis provides evidence on the extent to which Cadbury compliance is correlated with changes in firm and owner-specific characteristics within sample firms. However, within the group of non-complying companies there may still be a substantial number of firms that have altered their governance structures as a result of the Cadbury Report (1992), despite not strictly complying with its recommendations. Figures 3 and 4 highlight that increases in non-executive director representation were

most substantial for those firms that were potentially underrepresented by these board members in 1992. Therefore, it is possible that the report has had major implications even for those firms that did not adopt the letter of its reforms.

In order to investigate this issue, sample firm years are segregated on the basis of whether board independence, as measured by non-executive and outside director representation increased, decreased, or was maintained. For this purpose, we examine changes in both the number and fraction of non-executive and outside directors for each firm year, and how these correlate with annual changes in firm and owner-specific characteristics. These results are reported in Table 11.

The table reports some evidence of a correlation between changes in board independence and changes in firm-specific characteristics. We find that increases in the *number* of outside and non-executive directors are more common in firms that have experienced the largest increases in firm size and the largest reduction in growth prospects. In addition, large declines in leverage are evident for those companies that have altered the outside and non-executive director representation on their boards.

However, we find more consistent evidence that changes in board independence are correlated with changes in owner-specific characteristics. CEO turnover rates are significantly higher amongst companies that have increased or decreased their use of non-executive and outside directors than for those companies that have maintained their levels of board independence from one year to the next. Rates of decline in family CEO involvement are generally higher amongst companies that alter their board independence, but this result is significant only for changes in the *fraction* of non-executive directors. Finally, we find some evidence that performance is worse in companies that changed their board structure, although this is significant only for changes in the *number* of non-executives. This is somewhat mixed in relation to the

arguments of Hermalin and Weisbach (2003), who suggest that poor performance leads to increased board independence. However, it is consistent with our findings reported in Table 7 for the relationship between prior performance and large changes in company board structure.

Finally, we find evidence that equity issuance is more frequent amongst firms that have experienced changes in board structure, although these findings are generally significant only for equity offerings and not for stock financed acquisitions.

Thus, these findings provide further evidence on the importance of changes in owner control in determining changes to corporate board structure. These findings provide further support for the research of Denis and Sarin (1999), Hermalin and Weisbach (2003), and Franks et al. (2005) on the factors that drive changes in firm-level corporate governance structures.

7. Conclusions

This paper has examined the changing nature of corporate governance in the UK following the publication of the Cadbury Report (1992), and its findings provide further evidence on the interdependence of corporate governance systems. Board independence, as measured by outside and non-executive director representation, and separating the roles of the Chairman and the CEO is negatively correlated with measures of managerial control, such as director ownership and family affiliations. Changes in these variables are also negatively correlated.

Cross-sectional estimates of ownership and board structure provide evidence on the importance of firm-specific characteristics, including size and growth prospects as determinants, but they are generally poor predictors of changes in these variables.

Instead, changes in managerial and outside control are much stronger predictors of annual changes in corporate board structure.

Limited evidence is presented that larger firms rationally adopted the recommendations of the Cadbury Report (1992). However, equity issuance and CEO turnover again play a consistent role in the compliance decision. These findings are consistent with the empirical studies of Denis and Denis (1994), Denis and Sarin (1999), Franks et al. (2001), Baker and Gompers (2003), and Franks et al. (2005) of the importance of owner-specific characteristics and equity issuance in determining changes to firm-level corporate governance structures.

We believe that these results have important implications for the likelihood of, and the factors associated with, compliance with corporate governance codes of best practice throughout the world. The analysis of La Porta et al. (1998) highlights the different control structures in countries regarded as having weak legal protection for company shareholders. These economies are characterised by much higher levels of ownership concentration in relation to common law countries, such as the UK and US.

As such, the adoption of Cadbury style codes of governance best practice appears to be dependent upon managerial control and external capital market activity. Within the UK, capital market activity comes in the form of takeovers and equity issuance, but this is not the case in other economies (see Kang and Shivdasani (1995) for Japanese companies). The adoption of the corporate governance practices contained in such codes of best practice will most likely be dependent upon support from controlling shareholders and the banking relationships that substitute for capital market activity within these economies.

Future research in this area may look to examine the way in which the speed and manner of governance adoption affects firm value. Kole and Lehn (1999) find that firms that quickly adapted their governance structure in response to deregulation in the US airline industry were more likely to survive than firms that were slow to adapt. In addition, Yermack (1996) finds evidence of a negative relationship between company board size and firm value. It is possible that companies that complied with the Cadbury Report's (1992) proposals by increasing board size will be valued poorly in relation to those companies that complied by replacing executive directors with outside directors.

Furthermore, our findings are consistent with the arguments of Denis and Sarin (1999) and Hermalin and Weisbach (2003) of the importance of changes in managerial and outsider control as determinants of annual changes in firm level corporate governance. However, they contrast somewhat with more recent evidence presented by Boone et al. (2004) and Yang et al. (2004), which indicates that board structure does change in response to changes in the firm-specific characteristics of companies. A distinct feature of these studies is their use of data at various intervals in time, rather than using annual data. One possibility is that governance does evolve slowly over time, such that studies of annual changes in corporate governance will not find evidence of any such relationship. Examining annual changes in corporate governance over an extended period of time, and comparing these with results using discrete intervals may yield interesting findings in this respect. These issues remain open to future empirical examination.

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Table 1
Year-by-year analysis of sample firms

The sample consists of up to 683 non-financial UK companies listed on the London Stock Exchange (LSE) during the period 1992 to 1997. The sample is constructed by examining all sample companies listed on the LSE with available sales data for 1992 to 1994. From 1995 onwards companies may drop out of the sample as they become delisted.

Year	Number of Sample Firms	Fraction of Total Firm Years
1992	683	0.177
1993	683	0.177
1994	683	0.177
1995	658	0.171
1996	607	0.157
1997	<u>542</u>	<u>0.141</u>
Total	3856	1.000

Table 2
Descriptive statistics for pooled firm years

Data is based on a sample of up to 683 UK listed non-financial companies over the period 1992 to 1997. Data on ownership and board characteristics are collected from company annual reports. Financial data is collected from *Datastream*. Revenue Concentration is calculated as a Herfindahl index based on revenue from 3-digit SIC lines of business. Firm Age is taken as the date of incorporation from *FT Extel Company Information Cards*. Market-to-book value (MTBV) is calculated as the market value of common equity divided by the book value of the firm's assets. Variance is measured as the variance of the company's daily stock returns over its accounting year. *Family / Founder CEO* is an indicator variable that takes the value of one where the company CEO is disclosed as a member of the firm's founding family, shares their name with the company or shares their name with another member of the board, and zero otherwise. Board size is the number of directors serving on the company's board at the financial year-end. Outside directors are defined as non-executive directors without any financial or personal ties to company management. Such ties are inferred where the non-executive is related to any of the company's executive directors, has a tenure exceeding ten years with the company, was formerly an executive director, or has any disclosable business relationships with the company. These include financial contracts disclosed in the company's accounts, such as related party transactions and associations with the company's advisors. Grey directors are non-executives who fail to meet the criteria for being classified as outsiders. *Split* is an indicator variable that takes the value of one where the company separates the functions of the Chairman and the CEO, and zero otherwise. *Acquisition* and *Equity Issue* are dummy variables taking the value of one if the company has issued new shares by means of acquisitions or the sale of shares respectively, and zero otherwise.

Variable	Mean	Median	Maximum	Minimum	St. Dev.
<i>Panel A: Owner-specific Characteristics</i>					
Family CEO	0.1952	n.a.	n.a.	n.a.	n.a.
CEO Ownership %	6.3916	0.4691	75.8315	0.0000	12.6295
Board Ownership %	14.5019	5.6510	80.8833	0.0020	18.6493
Board Size	7.0726	7.0000	24.0000	2.0000	2.4120
Fraction Inside	0.5923	0.6000	1.0000	0.0000	0.1636
Fraction Grey	0.1503	0.1429	0.8571	0.0000	0.1481
Fraction Outsiders	0.2574	0.2500	0.8182	0.0000	0.1648
Split	0.7101	n.a.	n.a.	n.a.	n.a.
Acquisition	0.0611	n.a.	n.a.	n.a.	n.a.
Equity Issue	0.1288	n.a.	n.a.	n.a.	n.a.
<i>Panel B: Firm-Specific Characteristics</i>					
Market Value of Equity (£000's)	460,720	49,023	34,440,880	374	1,706,736
Assets (£000's)	480,416	55,847	24,606,000	348	1,645,129
Sales (£000's)	503,735	79,978	14,935,000	28	1,336,638
Variance * 100	0.0486	0.0211	10.1344	0.0000	0.1834
MTBV	1.1590	0.9418	23.3190	0.0250	1.0778
Depreciation-to-Assets	0.0412	0.0366	0.3927	0.0000	0.0279
Leverage	0.1807	0.1616	8.0925	0.0000	0.2303
Revenue Concentration	0.7998	1.0000	1.0000	0.1678	0.2501
No. of Segments	1.9216	1.0000	9.0000	1.0000	1.2014
Firm Age (years)	45.4706	38.0000	146.0000	1.0000	31.3712

Table 3
Correlation matrix of ownership and board characteristics

Data is based on a sample of 683 UK listed non-financial companies in 1992. Data on ownership and board characteristics are collected from company annual reports. *Family / Founder CEO* is an indicator variable that takes the value of one where the company CEO is disclosed as a member of the firm's founding family, shares their name with the company or shares their name with another member of the board, and zero otherwise. Board size is the number of directors serving on the company's board at the financial year-end. Outside directors are defined as non-executive directors without any financial or personal ties to company management. Such ties are inferred where the non-executive is related to any of the company's executive directors, has a tenure exceeding ten years with the company, was formerly an executive director, or has any disclosable business relationships with the company. These include financial contracts disclosed in the company's accounts, such as related party transactions and associations with the company's advisors. Grey directors are non-executives who fail to meet the criteria for being classified as outsiders. *Split* is an indicator variable that takes the value of one where the company separates the functions of the Chairman and the CEO, and zero otherwise. P-values are reported in parenthesis.

Variable	Board Ownership	Family Firm	Fraction Outside Directors	Fraction Non- Executive Directors	Board Size	Split
CEO Ownership	0.758 (<0.001)	0.483 (<0.001)	-0.257 (<0.001)	-0.299 (<0.001)	-0.326 (<0.001)	-0.442 (<0.001)
Board Ownership		0.431 (<0.001)	-0.335 (<0.001)	-0.285 (<0.001)	-0.309 (<0.001)	-0.240 (<0.001)
Family Firm			-0.285 (<0.001)	-0.293 (<0.001)	-0.218 (<0.001)	-0.272 (<0.001)
Fraction Outside Directors				0.615 (<0.001)	0.207 (<0.001)	0.199 (<0.001)
Fraction Non- Executive Directors					0.220 (<0.001)	0.264 (<0.001)
Board Size						0.175 (<0.001)

Table 4
The determinants of company board characteristics

Data is based on a sample of 683 UK listed non-financial companies in 1992. MVEQ is the year end market value of the firm's common equity. Variance is the variance of the company's daily stock returns over the company's accounting year. MTBV is the market value of common equity divided by the book value of assets. Revenue Concentration is calculated as a Herfindahl index based on revenue from 3-digit SIC lines of business. Firm Age is taken from the year of incorporation from *FT Extel Company Information Cards*. *Family / Founder CEO* is a dummy variable that takes the value of one where the CEO is disclosed as a member of the firm's founding family, shares their name with the company or shares their name with another member of the board, and zero otherwise. Outside directors are defined as non-executive directors without any financial or personal ties to company management. *Split* is an indicator variable that takes the value of one where the company separates the functions of the Chairman and the CEO, and zero otherwise. P-values for two-tailed tests of significance are reported in parenthesis.

Variable	Fraction Non- Executives	Fraction Outsiders	Number of Non- Executives	Number of Outsiders	Board Size	Split
Intercept	0.357487 (<0.001)	0.201894 (0.100)	-0.424642 (0.414)	-0.868286 (0.112)	-4.089812 (<0.001)	1.392925 (0.211)
Ln (Assets)	-0.000651 (0.901)	0.010455 (0.057)	0.015425 (0.674)	0.142716 (<0.001)	0.920706 (<0.001)	-0.124937 (0.113)
Ln (Firm Age)	0.005615 (0.431)	-0.014066 (0.038)	0.051792 (0.301)	-0.079426 (0.117)	0.111338 (0.216)	-0.026438 (0.792)
Revenue Index	-0.066712 (0.012)	-0.042234 (0.112)	-0.425142 (0.023)	-0.168878 (0.349)	0.413581 (0.184)	-0.053315 (0.893)
Var * 100	0.059436 (0.325)	0.128750 (0.018)	0.381420 (0.369)	0.980170 (0.007)	-1.389244 (0.027)	0.657149 (0.507)
MTBV	-0.008865 (0.281)	-0.011532 (0.141)	-0.046704 (0.419)	-0.062960 (0.242)	0.154465 (0.204)	0.105061 (0.345)
Leverage	-0.019626 (0.291)	-0.006858 (0.574)	-0.175419 (0.180)	-0.047179 (0.554)	0.103197 (0.562)	-0.102456 (0.603)
Family CEO	-0.057983 (<0.001)	-0.047754 (0.002)	-0.311367 (0.006)	-0.326256 (<0.001)	-0.472334 (0.007)	-1.018396 (<0.001)
Board Ownership	-0.000948 (0.012)	-0.001592 (<0.001)	-0.006845 (0.009)	-0.008629 (<0.001)	0.005078 (0.266)	-0.012631 (0.012)
Split	0.052985 (<0.001)	0.031475 (0.011)	0.349042 (<0.001)	0.204503 (0.014)	0.283066 (0.072)	
Board Size	0.007877 (0.014)	0.002609 (0.413)	0.438287 (<0.001)	0.231802 (<0.001)		0.085443 (0.069)
Fraction Outsiders					0.418560 (0.407)	1.460214 (0.011)
Industry Controls	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	683	683	683	683	683	683
F-Statistic	6.159937 (<0.001)	5.682731 (<0.001)	35.48730 (<0.001)	18.81010 (<0.001)	18.63991 (<0.001)	
Log Likelihood						-450.2826 (<0.001)
R ² Adjusted	0.180148	0.166258	0.594916	0.431312	0.428958	0.094799

Table 5
Correlation matrix of annual changes in ownership and board characteristics

Data is based on annual changes in the ownership and board structures of a sample of up to 683 UK listed non-financial companies over the period 1992 to 1997. Data on ownership and board characteristics are collected from company annual reports. *Family / Founder CEO* is an indicator variable that takes the value of one where the company CEO is disclosed as a member of the firm's founding family, shares their name with the company or shares their name with another member of the board, and zero otherwise. Board size is the number of directors serving on the company's board at the financial year-end. Outside directors are defined as non-executive directors without any financial or personal ties to company management. Such ties are inferred where the non-executive is related to any of the company's executive directors, has a tenure exceeding ten years with the company, was formerly an executive director, or has any disclosable business relationships with the company. These include financial contracts disclosed in the company's accounts, such as related party transactions and associations with the company's advisors. *Split* is an indicator variable that takes the value of one where the company separates the functions of the Chairman and the CEO, and zero otherwise. P-values are reported in parenthesis.

Variable	Δ Board Ownership	Δ Family CEO	Δ Fraction Outsiders	Δ Fraction Non- Executives	Δ Board Size	Δ Split
Δ CEO Ownership	0.229 (<0.001)	0.358 (<0.001)	-0.014 (0.438)	-0.051 (<0.001)	-0.024 (0.172)	-0.267 (<0.001)
Δ Board Ownership		0.013 (0.481)	-0.026 (0.138)	-0.005 (0.772)	0.096 (<0.001)	-0.006 (0.72)
Δ Family CEO			-0.030 (0.092)	-0.064 (<0.001)	-0.018 (0.301)	-0.184 (<0.001)
Δ Fraction Outsiders				0.579 (<0.001)	0.027 (0.133)	0.024 (0.166)
Δ Fraction Non- Executives					0.030 (0.098)	0.067 (<0.001)
Δ Board Size						0.070 (<0.001)

Table 6
The factors associated with annual changes in company board characteristics

Data is based on annual changes in ownership and board structure characteristics for a sample of up to 683 UK listed non-financial companies between 1992 and 1997. Models (1) and (2) are Poisson Maximum Likelihood models, while Models (3) through (7) present the results of OLS regressions. Data on board structure is taken from company annual reports. Assets is the book value of a company's assets at the financial year-end. Variance is the variance of the company's daily stock returns over the company's accounting year. Depreciation-to-assets is taken as the company's reported depreciation charge in the profit and loss account for the financial year-end divided by the book value of assets for the same period. Debt-to-assets is the ratio of total debt to the book value of assets. Revenue Concentration is calculated as a Herfindahl Index based on revenue from 3-digit SIC lines of business. Board size is the number of directors serving on the company's board at the financial year-end. Outside directors are defined as non-executive directors without any financial or personal ties to company management. *Split* is an indicator variable that takes the value of one where the company separates the functions of the Chairman and the CEO, and zero otherwise. P-values for two-tailed tests of significance are reported in parenthesis.

Variable	Director Appointments	Director Departures	Δ Board Size	Δ Fraction Non-Executives	Δ Fraction Outsiders	Δ Number of Non-Executives	Δ Number of Outsiders
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Intercept	-0.461170 (<0.001)	-1.246590 (<0.001)	0.774928 (<0.001)	0.082945 (<0.001)	0.053258 (<0.001)	0.387659 (<0.001)	0.257134 (<0.001)
Δ Assets	2.72E-08 (0.672)	-6.38E-08 (0.037)	2.69E-07 (0.025)	-5.42E-10 (0.839)	-2.31E-09 (0.553)	1.21E-07 (0.034)	5.87E-08 (0.320)
Δ No. Segments	0.069828 (0.122)	0.008451 (0.838)	0.047343 (0.271)	-0.002872 (0.395)	-0.001712 (0.607)	0.007725 (0.813)	0.015230 (0.600)
Δ Variance	0.083920 (0.024)	0.017943 (0.862)	0.248321 (<0.001)	0.020478 (0.019)	-0.016004 (0.032)	0.143387 (<0.001)	-0.054862 (0.047)
Δ Depreciation-to-Assets	-1.280668 (0.202)	2.064408 (0.045)	-3.002874 (0.017)	-0.088990 (0.413)	0.018944 (0.864)	-1.358227 (0.092)	-0.719253 (0.280)
Δ Leverage	-0.137882 (0.021)	-0.211311 (<0.001)	0.014815 (0.932)	0.004981 (0.494)	-0.011774 (0.373)	0.036188 (0.628)	-0.034719 (0.720)

Table 6 continued

CEO Turnover	0.721915 (<0.001)	0.859970 (<0.001)	-0.176132 (0.018)	0.032654 (<0.001)	0.016948 (0.003)	0.118410 (0.018)	0.052799 (0.186)
Lagged IROA	-0.255577 (0.027)	-0.447549 (<0.002)	0.157709 (0.206)	-0.013811 (0.172)	-0.010827 (0.122)	-0.004743 (0.945)	-0.014005 (0.775)
Acquisition	0.363649 (<0.001)	0.182828 (0.029)	0.229936 (0.018)	0.004052 (0.554)	0.002381 (0.735)	0.103310 (0.091)	0.064673 (0.211)
Equity Offering	0.392087 (<0.001)	0.253263 (<0.001)	0.186519 (0.002)	0.010194 (0.047)	0.008801 (0.056)	0.128067 (0.002)	0.089651 (0.011)
Lagged Board Size	0.018557 (0.045)	0.146478 (<0.001)	-0.132722 (<0.001)				
Lagged Fraction Non-Executives				-0.195686 (<0.001)			
Lagged Fraction Outsiders					-0.175436 (<0.001)		
Lagged Number of Non-Executives						-0.141184 (<0.001)	
Lagged Number of Outsiders							-0.131719 (<0.001)
Industry and Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	3147	3147	3147	3147	3147	3147	3147
F-Statistic			8.875686 (<0.001)	12.50253 (<0.001)	8.536950 (<0.001)	8.791155 (<0.001)	6.308309 (<0.001)
Log likelihood	-4077.816 (<0.001)	-3972.355 (<0.001)					
Adjusted R ²	0.114437	0.190610	0.093085	0.130364	0.089440	0.092178	0.064704

Table 7
Univariate analysis of large annual changes in board structure

Data is based on average annual changes in firm-specific and owner-specific characteristics, CEO turnover, firm performance and the incidence of new equity issues across large annual changes in company board structure in a sample of up to 683 UK listed non-financial companies between 1992 and 1997. ***, **, * denote significance at the 1%, 5% and 10% level respectively of an F-test of the equality of means across groups.

	N	Δ Assets	Δ VAR	Δ Depreciation- to-Assets	Δ Leverage	Firm Age	CEO Turnover	Δ Family CEO	Lagged IROA	Acquisition	Equity Issue
<i>Panel A: Board Size</i>											
Δ Board < - 2	59	-78,060	-0.0094	0.0052	0.0004	52.44	0.3390	-0.0847	-0.0263	0.1017	0.0680
$-2 \leq \Delta$ Board ≤ 2	3052	25,988	-0.0045	-0.0002	-0.0041	45.96	0.1157	-0.0167	-0.0012	0.0609	0.1376
$2 < \Delta$ Board	64	49,405	0.1513	-0.0025	-0.0927	45.53	0.2188	-0.0313	-0.0506	0.1406	0.2969
F-statistic		3.30**	23.16***	2.72*	6.41***	1.24	16.50***	4.67***	2.57*	4.11**	7.94***
<i>Panel B: Fraction Non-Executive Directors</i>											
Δ NED < - 0.2	22	1,085	-0.0017	0.0107	-0.0416	48.72	0.2273	0.0000	-0.1335	0.0455	0.2727
$0.2 \leq \Delta$ NED ≤ 0.2	3054	25,243	-0.0043	-0.0002	-0.0050	46.17	0.1130	-0.0151	0.0002	0.0629	0.1346
$0.2 < \Delta$ NED	99	7,652	0.0863	-0.0008	-0.0225	42.50	0.3737	-0.1212	-0.0659	0.0808	0.2626
F-statistic		0.21	11.87***	3.50**	0.75	0.74	32.22***	18.38***	11.06***	0.32	8.22***
<i>Panel C: Fraction Outside Directors</i>											
Δ OUT < - 0.2	37	-6,380	0.0118	0.0040	-0.0306	45.24	0.1351	0.0270	-0.0954	0.0541	0.0909
$0.2 \leq \Delta$ OUT ≤ 0.2	3030	24,097	-0.0010	-0.0002	-0.0032	46.12	0.1158	-0.0168	-0.0008	0.0624	0.1394
$0.2 < \Delta$ OUT	108	47,182	-0.0170	-0.0004	-0.0690	45.08	0.2870	-0.0741	-0.0402	0.0926	0.1515
F-statistic		0.45	0.50	0.85	6.14***	0.07	14.42***	7.02***	6.64***	0.83	0.43

Table 8
Logit regressions of the determinants of Cadbury Compliance

The table presents logit regressions that relate compliance with the Cadbury Report (1992) in year *t* with firm-specific characteristics in year *t-1*, and equity issuance, changes in owner-specific characteristics and firm performance in year *t*. Only those firms not previously compliant with the dependant variable are included in regressions. Data on managerial ownership and board structure is taken from company annual reports. *Adopt Split* is an indicator variable set equal to one where the company adopts the recommendation of separating the roles of the CEO and the Chairman. *Adopt Simple Independent* is a dependent variable set equal to one where the company adopts the criteria of employing at least three non-executive directors on the company's board, and zero otherwise. *Adopt True Independent* is a dependent variable set equal to one where the company adopts the criteria for *Simple Independent*, with the additional constraint that the majority of non-executive directors are deemed as outsiders, and zero otherwise. *Adopt Simple Comply* is set equal to one where the company adopts the recommendation of employing at least three non-executives and splitting the roles of the CEO and the Chairman, and zero otherwise. *Adopt True Comply* is an indicator variable set equal to one where the company meets the requirements for *Simple Comply*, with the additional constraint that the majority of non-executives are outsiders, and zero otherwise. MVEQ is the year-end market value of the firm's common equity. Variance is the variance of the company's daily stock returns over the company's accounting year. MTBV is the market value of common equity divided by the book value of assets. Revenue Concentration is calculated as a Herfindahl index based on revenue from 3-digit SIC lines of business. Firm Age is taken from the year of incorporation from *FT Extel Company Information Cards*. *Family / Founder CEO* is an indicator variable that takes the value of one where the company CEO is disclosed as a member of the firm's founding family, shares their name with the company or shares their name with another member of the board, and zero otherwise. Board size is the number of directors on the company's board at the financial year-end. Outside directors are defined as non-executive directors without any financial or personal ties to company management. P-values for two-tailed tests of significance are reported in parenthesis.

Variable	Adopt Split	Adopt Simple Independent	Adopt True Independent	Adopt Simple Comply	Adopt True Comply
Intercept	-4.159196 (0.039)	-6.720462 (<0.001)	-6.113438 (<0.001)	-9.443081 (<0.001)	-8.677802 (<0.001)
Ln (Assets)	0.065054 (0.628)	0.466072 (<0.001)	0.472790 (<0.001)	0.378152 (<0.001)	0.397931 (<0.001)
Ln (Firm Age)	-0.248401 (0.241)	-0.081560 (0.426)	-0.022117 (0.815)	-0.069935 (0.522)	-0.035360 (0.735)
Revenue Index	-0.061837 (0.932)	0.102623 (0.779)	-0.029574 (0.932)	0.103974 (0.787)	-0.024194 (0.948)
Var * 100	0.554367 (0.714)	0.331733 (0.769)	-0.530245 (0.669)	-0.881036 (0.538)	-0.687464 (0.642)
MTBV	-0.081129 (0.516)	-0.038480 (0.614)	-0.059519 (0.633)	-0.025447 (0.760)	-0.071359 (0.595)
Leverage	1.742934 (0.009)	-0.763669 (0.110)	-0.107003 (0.779)	-0.389823 (0.352)	-0.099085 (0.811)
Family CEO	0.102525 (0.796)	-0.267331 (0.182)	-0.295427 (0.125)	-0.352894 (0.131)	-0.339509 (0.151)
Board Ownership	0.007557 (0.411)	-0.004268 (0.378)	-0.008726 (0.083)	0.003788 (0.484)	-0.001469 (0.784)
Board Size	0.002182 (0.978)	0.050606 (0.329)	-0.096550 (0.018)	0.079521 (0.071)	-0.023386 (0.613)
Fraction Outsiders	2.854163 (0.002)				4.667993 (<0.001)
Fraction Non-Executives				3.979080 (<0.001)	

Table 8 continued

Split		0.537607 (0.002)	0.309939 (0.056)	2.111933 (<0.001)	1.506419 (<0.001)
CEO Turnover	4.931973 (<0.001)	1.049796 (<0.001)	0.731751 (<0.001)	2.535067 (<0.001)	1.833663 (<0.001)
Lagged IROA	1.163491 (0.306)	-1.151652 (0.005)	-1.224395 (0.001)	-0.683893 (0.073)	-0.993467 (0.013)
Acquisition	-0.113312 (0.823)	0.539261 (0.069)	0.400457 (0.143)	0.989563 (0.002)	0.674382 (0.018)
Equity Offering	0.296963 (0.525)	0.514573 (0.011)	0.439575 (0.022)	0.693466 (0.002)	0.410289 (0.052)
Industry and Year Dummies	Yes	Yes	Yes	Yes	Yes
No. of Observations	955	1424	1992	1740	2196
No. of Observation = 1	165	252	263	248	244
Log likelihood	-439.5473 (<0.001)	-664.6691 (<0.001)	-777.3261 (<0.001)	-712.5778 (<0.001)	-766.0353 (<0.001)
Pseudo R ²	0.525913	0.127554	0.110964	0.268625	0.221427

Table 9
Univariate analysis of factors correlated with individual Cadbury Compliance decisions

Data is based on average annual changes in firm-specific and owner-specific characteristics, CEO turnover, firm performance and the incidence of new equity issues for various measures of compliance and non-compliance with the recommendations of the Cadbury Report (1992) in a sample of up to 683 UK listed non-financial companies between 1992 and 1997. ***, **, * denote significance at the 1%, 5% and 10% level respectively of an F-test of the equality of means across groups.

	N	Δ Assets	Δ VAR	Δ Depreciation-to-Assets	Δ Leverage	Firm Age	CEO Turnover	Δ Family CEO	Lagged IROA	Acquisition	Equity Issue
<i>Panel A: Split</i>											
Adopt Comply	165	27,435	0.0701	0.0005	-0.0047	45.29	0.7333	-0.1939	-0.0149	0.0727	0.1879
Adopt Non-Comply	69	6,805	-0.0065	0.0070	-0.0529	43.25	0.4493	-0.0435	-0.0808	0.0290	0.1739
Maintain Comply	2146	24,932	-0.0050	-0.0001	-0.0057	47.64	0.0993	-0.0093	0.0010	0.0634	0.1417
Maintain Non-Comply	795	24,369	-0.0061	-0.0010	-0.0022	42.26	0.0277	-0.0038	-0.0033	0.0642	0.1208
F-statistic		0.08	8.97***	3.68**	1.41	5.94***	310.91***	64.68***	4.31***	0.54	2.10*
<i>Panel B: Simple Independent</i>											
Adopt Comply	253	13,160	0.0023	-0.0031	-0.0091	42.19	0.2213	-0.0711	-0.0360	0.0830	0.2253
Adopt Non-Comply	141	-2,349	-0.0056	0.0004	-0.0678	44.19	0.2057	0.0071	-0.0457	0.0851	0.1560
Maintain Comply	1598	41,572	-0.0057	0.0002	-0.0004	50.04	0.1195	-0.0094	0.0058	0.0651	0.1239
Maintain Non-Comply	1183	7,137	0.0041	-0.0000	-0.0050	41.77	0.0938	-0.0220	-0.0019	0.0541	0.1403
F-statistic		3.15**	0.71	2.19*	5.11***	17.64***	13.97***	10.57***	6.05***	1.52	6.39***
<i>Panel C: True Independent</i>											
Adopt Comply	264	24,926	0.0007	-0.0017	-0.0087	45.78	0.2008	-0.0492	-0.0316	0.0833	0.1970
Adopt Non-Comply	173	7,708	-0.0031	0.0003	-0.0560	44.95	0.1850	0.0058	-0.0317	0.0867	0.1792
Maintain Comply	995	42,989	-0.0083	0.0002	-0.0017	51.12	0.1236	-0.0100	-0.0017	0.0593	0.1256
Maintain Non-Comply	1743	15,597	0.0023	-0.0001	-0.0027	43.35	0.1027	-0.0207	0.0040	0.0602	0.1348
F-statistic		1.74	0.73	0.68	4.07***	13.16***	9.34***	4.81***	4.10***	1.31	3.82***

Table 10
Univariate analysis of factors correlated with overall Cadbury Compliance compliance

Data is based on average annual changes in firm-specific and owner-specific characteristics, CEO turnover, firm performance and the incidence of new equity issues for various measures of compliance and non-compliance with the recommendations of the Cadbury Report (1992) in a sample of up to 683 UK listed non-financial companies between 1992 and 1997. ***, **, * denote significance at the 1%, 5% and 10% level respectively of an F-test of the equality of means across groups.

	N	Δ Assets	Δ VAR	Δ Depreciation- to-Assets	Δ Leverage	Firm Age	CEO Turnover	Δ Family CEO	Lagged IROA	Acquisition	Equity Issue
<i>Panel A: Simple Comply</i>											
Adopt Comply	249	30,860	0.0048	-0.0019	-0.0041	45.11	0.4056	-0.0964	-0.0392	0.0843	0.2289
Adopt Non-Comply	124	10,929	-0.0093	-0.0002	-0.0711	47.56	0.2258	-0.0081	-0.0393	0.0887	0.1532
Maintain Comply	1297	35,386	-0.0064	0.0002	-0.0020	50.19	0.1002	-0.0031	0.0053	0.0686	0.1272
Maintain Non-Comply	1505	15,241	0.0025	-0.0001	-0.0040	42.56	0.0850	-0.0193	-0.0005	0.0532	0.1342
F-statistic		1.04	0.73	0.81	4.77***	14.06***	80.45***	20.81***	5.40***	2.15*	6.28***
<i>Panel B: True Comply</i>											
Adopt Comply	244	34,239	0.0046	-0.0005	-0.0084	47.68	0.3443	-0.0656	-0.0402	0.0861	0.1967
Adopt Non-Comply	147	13,619	-0.0050	-0.0006	-0.0673	48.33	0.1769	-0.0136	-0.0309	0.0612	0.1701
Maintain Comply	816	33,409	-0.0101	0.0000	-0.0030	50.75	0.1029	-0.0049	-0.0034	0.0637	0.1311
Maintain Non-Comply	1968	20,455	0.0017	-0.0001	-0.0020	43.77	0.0981	-0.0183	0.0044	0.0605	0.1336
F-statistic		1.00	0.92	0.07	5.12***	10.12***	45.14***	7.79***	5.15***	0.80	2.95**

Table 11**Univariate analysis of factors correlated with increases in non-executive and outside director representation on company boards**

Data is based on average annual changes in firm-specific and owner-specific characteristics, CEO turnover, firm performance and the incidence of new equity issues for various measures of compliance and non-compliance with the recommendations of the Cadbury Report (1992) in a sample of up to 683 UK listed non-financial companies between 1992 and 1997. ***, **, * denote significance at the 1%, 5% and 10% level respectively of an F-test of the equality of means across groups.

	N	Δ Assets	Δ VAR	Δ Depreciation- to-Assets	Δ Leverage	Firm Age	CEO Turnover	Δ Family CEO	Lagged IROA	Acquisition	Equity Issue
<i>Panel A: Number of Non-Executives</i>											
Increase NEDS	684	47,481	0.0101	-0.0013	-0.0165	45.61	0.1769	-0.0292	-0.0175	0.0731	0.1944
Maintain NEDS	2053	24,055	-0.0043	0.0000	0.0024	45.83	0.0925	-0.0146	0.0052	0.0580	0.1232
Decrease NEDS	438	-9,107	-0.0061	0.0010	-0.0274	47.95	0.1735	-0.0183	-0.0169	0.0731	0.1301
F-statistic		4.23***	1.76	2.17*	5.43***	0.92	23.71***	1.84	5.07***	1.40	11.09***
<i>Panel B: Fraction of Non-Executives</i>											
Increase NEDS	1015	29,356	0.0051	-0.0006	-0.0072	45.69	0.1961	-0.0246	-0.0082	0.0670	0.1655
Maintain NEDS	1431	14,830	-0.0048	0.0003	0.0012	45.56	0.0559	-0.0077	0.0043	0.0538	0.1132
Decrease NEDS	729	36,837	-0.0038	-0.0002	-0.0175	47.62	0.1481	-0.0302	-0.0087	0.0768	0.1550
F-statistic		1.33	0.96	0.56	2.23*	1.15	59.65***	5.11***	1.75	2.33*	7.74***
<i>Panel C: Number of Outsiders</i>											
Increase Outsiders	612	48,861	-0.0079	-0.0016	-0.0198	47.84	0.1405	-0.0212	-0.0101	0.0654	0.1830
Maintain Outsiders	2205	17,134	0.0014	0.0003	0.0011	45.57	0.1125	-0.0181	0.0007	0.0626	0.1302
Decrease Outsiders	358	28,465	-0.0080	-0.0003	-0.0244	46.17	0.1480	-0.0137	-0.0113	0.0642	0.1229
F-statistic		2.41*	0.88	2.21*	4.51***	1.26	3.05**	0.20	1.19	0.03	6.05***

Table 11 continued

<i>Panel D: Fraction Outsiders</i>											
Increase Outsiders	1007	20,430	-0.0072	-0.0002	-0.0163	47.85	0.1718	-0.0179	-0.0072	0.0665	0.1569
Maintain Outsiders	1513	22,146	0.0035	0.0002	0.0049	45.06	0.0773	-0.0165	0.0020	0.0516	0.1236
Decrease Outsiders	665	36,325	-0.0039	-0.0001	-0.0014	45.70	0.1481	-0.0229	-0.0066	0.0855	0.1496
F-statistic		0.58	1.12	1.32	4.26***	2.46*	28.32***	0.31	0.85	4.58***	2.85*

Figure 1
Average board composition of sample firms over time

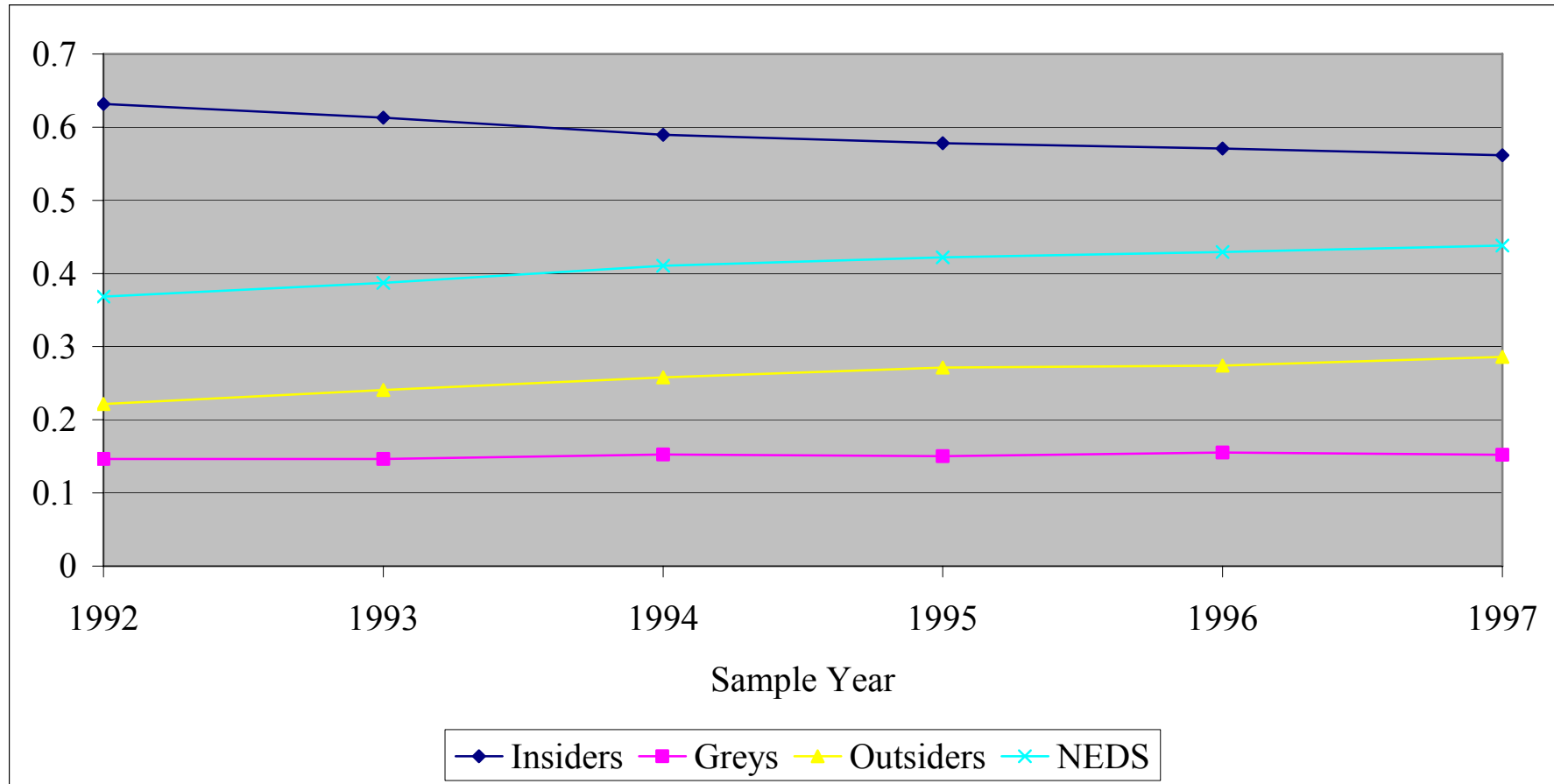


Figure 2
Cadbury compliance of sample firms over time

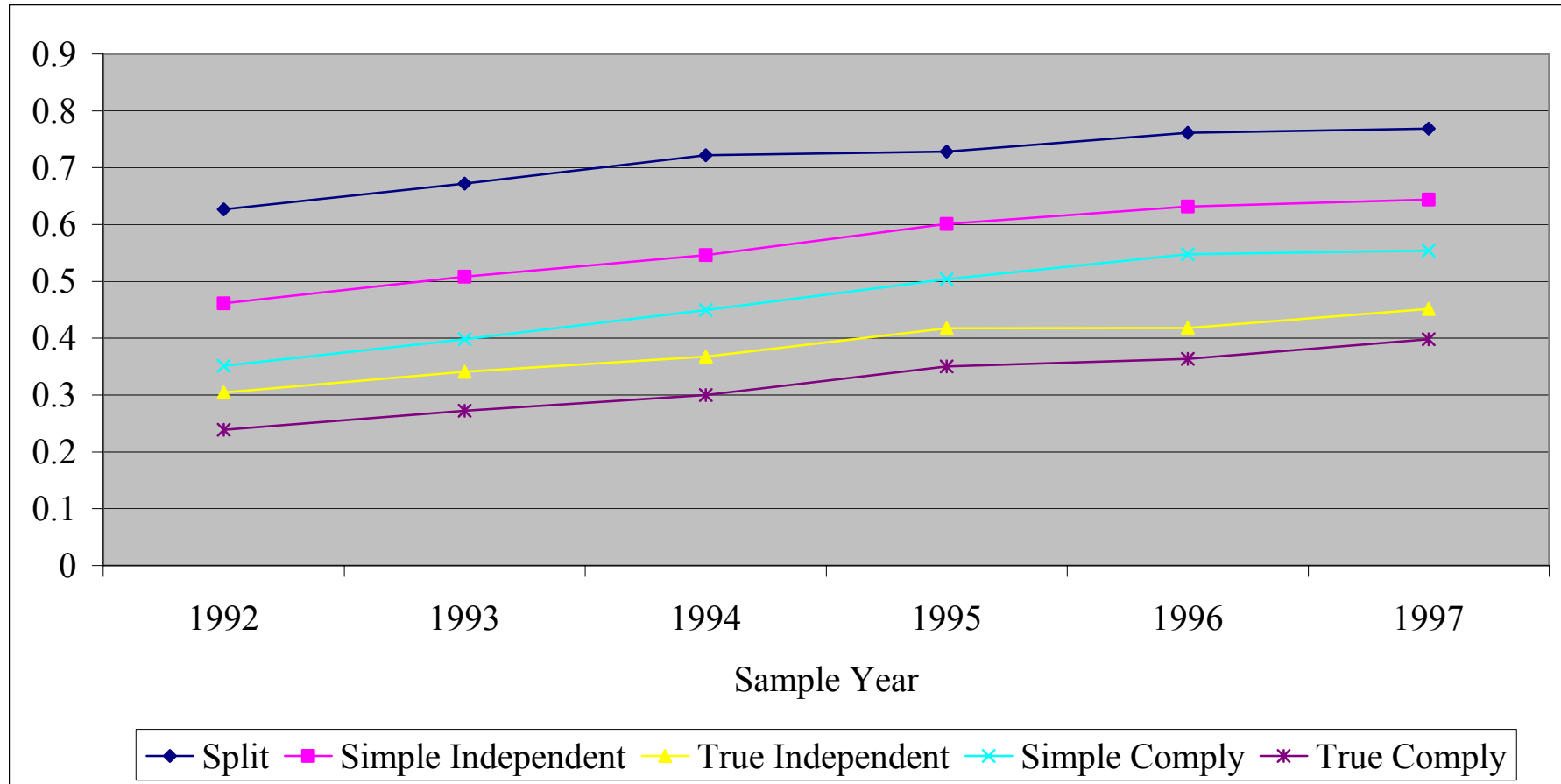


Figure 3
Change in the fraction of non-executive directors (NEDS) based on bandings of NED board representation in 1992

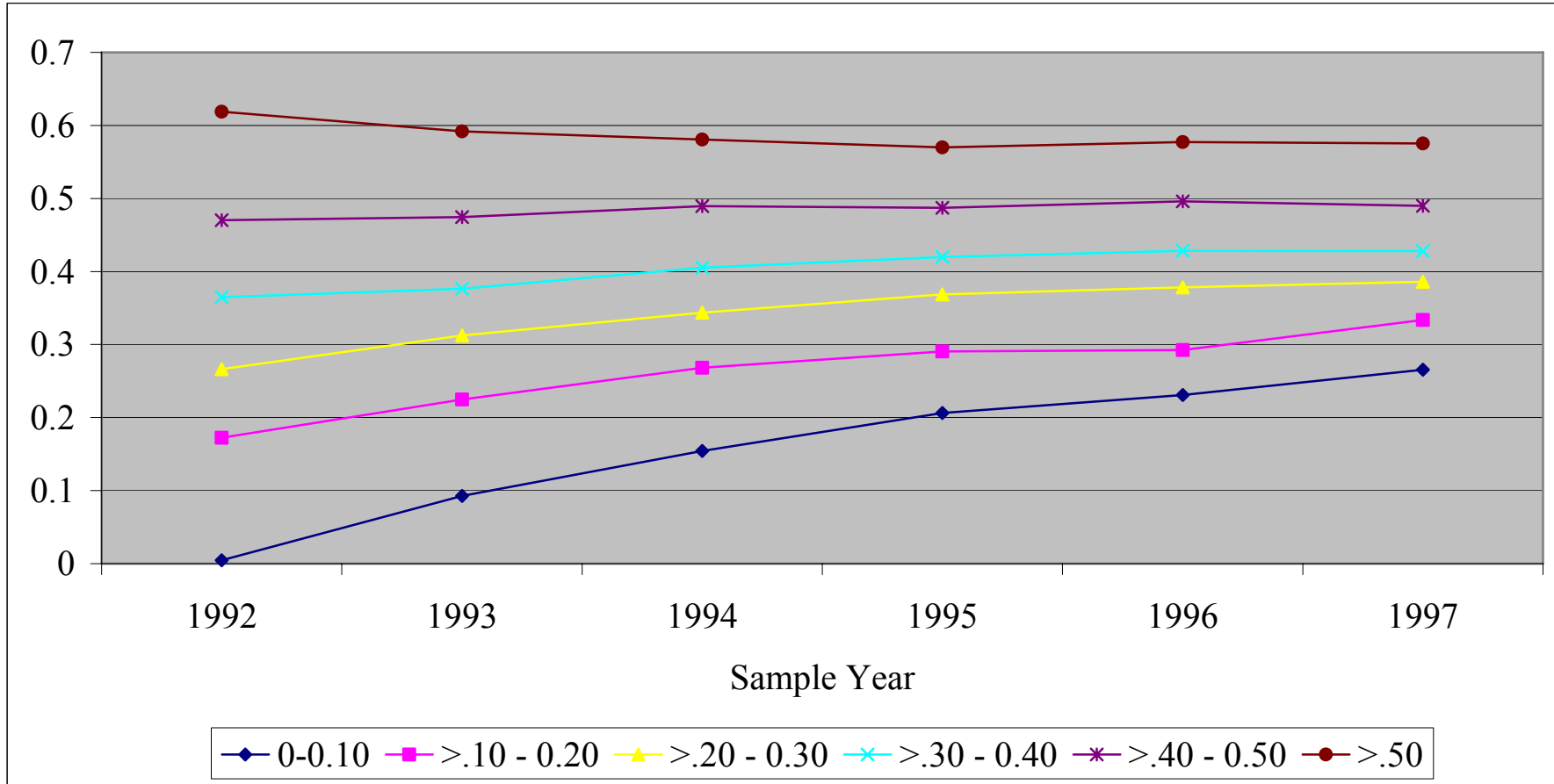


Figure 4
Change in the fraction of outside directors based on bandings of outside board representation in 1992

