

Who Disciplines Management in Poorly Performing Companies?*

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Abstract

Economic theory points to five parties disciplining management of poorly performing firms: holders of large share blocks, acquirers of new blocks, bidders in takeovers, non-executive directors, and investors during periods of financial distress. This paper reports the first comparative evaluation of the role of these different parties in disciplining management. We find that, in the UK, most parties, including holders of substantial share blocks, exert little disciplining and that some, for example, inside holders of share blocks and boards dominated by non-executive directors, actually impede it. Bidders replace a high proportion of management of companies acquired in takeovers but do not target poorly performing management. In contrast, during periods of financial constraints prompting distressed rights issues and capital restructuring, investors focus control on poorly performing companies. These results stand in contrast to the US, where there is little evidence of a role for new equity issues but non-executive directors and acquirers of share blocks perform a disciplinary function. The different governance outcomes are attributed to differences in minority investor protection in two countries with supposedly similar common law systems.

Key words: Corporate governance, control, restructuring, board turnover, regulation

JEL classification: G3

1. Introduction

How do capital markets discipline the management of poorly performing firms? We attempt to answer this question in the context of the UK capital market by running a “horse race” between the five principal competing parties suggested in the literature. First, shareholders, and in particular large, shareholders may intervene directly and replace management when performance is poor. Second, management replacement may follow the acquisition of a large block of shares. Third, bidders may discipline the management of the acquired company. Fourth, non-executive directors i.e. outside directors, may act on behalf of shareholders and replace management when they are thought to perform poorly. Finally, financial crises may trigger interventions by shareholders when new equity is issued.

This paper provides the first comparative assessment of the degree of managerial disciplining provided by the five parties. The assessment evaluates the relation between disciplining and the performance of firms. We examine the extent to which the parties provide significant disciplining of poorly performing management, and consider whether that disciplining is focused. We measure *focus* by whether disciplining is concentrated exclusively on poorly performing firms. We measure *significance* by the extent to which different interventions contribute to high board turnover in poorly performing companies. A governance mechanism can be focused on poorly performing companies but have an insignificant effect on overall board turnover in these firms, i.e. have a high level of Type 1 errors. A governance mechanism can be significant in dismissing a large number of managers in poorly performing companies but be unfocused in also dismissing a large number of other managers in well performing firms, i.e. have a high level of Type 2 errors.

The evidence reported in Franks and Mayer (1996) illustrates this distinction. They report that on average target firms are not poorly performing companies. Bidders do not therefore provide a focused form of corporate control. Nevertheless, they could still perform a significant disciplinary function if they give rise to a high level of managerial replacement in poorly performing firms.

The horse race evaluates both the focus and significance of disciplining by different parties. The results are quite striking. We find that at least two parties - non-executive directors and directors with large share stakes - tend to entrench management by reducing board turnover in poorly performing firms. Neither existing holders nor new purchasers of large share blocks exert much disciplining and, as noted above, bidders impose high board turnover after takeovers but in an unfocused way. It is only when there is financial distress, requiring equity issues and capital restructuring, that disciplining is both significant and focused on the management of poorly performing firms.

Some of the results reported for the UK are similar to those recorded for the US, most notably entrenchment by insiders. However, others are quite different. In the US, non-executives perform a disciplinary function (see Hermalin and Weisbach, 1991; active outside shareholders discipline management when share blocks change hands (see Bethel et al., 1998); and there is no reported role for new share offerings in disciplining management. All these results stand in marked contrast to what was described above for the UK.

We believe that these differences are at least in part a consequence of regulation. At first sight, this is surprising since the UK and US are countries usually characterized as having similar “common law” regulatory systems (see La Porta et al., 1998). Four examples will illustrate significant differences in regulation and how

these lead to different governance outcomes in the two countries. First, the UK has a Takeover Code that makes accumulation of controlling blocks expensive; the US does not. Second, the UK has stronger minority protection laws making the acquisition of partial controlling blocks as well as takeovers expensive. For example, in the UK a transaction between a large shareholder and its connected company must be undertaken at arms-length and requires the consent of non-controlling shareholders; in the US, shareholder protection is limited to seeking redress in the courts for unfairly priced transactions. Third, in the UK all seasoned equity issues, above 5% of share capital, have to be in the form of rights issues and rights requirements can only be waived with considerable difficulty. These requirements provide dispersed shareholders with significant control when firms need to raise new equity financing. In the US, shareholders can and do waive rights issue requirements for almost all seasoned offerings. Finally, in the US there are significant fiduciary obligations on directors, breaches of which create high management turnover (Romano, 1991). There are few such obligations in the UK where “actions to enforce the duties of directors of quoted companies have been almost non-existent” (see Stapledon, 1996, pp. 13-14). Where the role of non-executives is strengthened in the UK, through for example the adoption of the Cadbury Code (see Cadbury Report, 1992), it has been shown that the disciplinary function of boards increases (see Dayha et al., 2000).

In summary, we find that there are differences in regulation, even within two common law countries, and that these differences are associated with significantly different governance outcomes. The results of this paper therefore enrich the La Porta et al. (1998) view of regulation as an important influence on the operation of capital markets.

Section 2 of the paper describes the methodology employed in this paper. Section 3 examines the relation between board turnover and performance and the role of each of the five parties in disciplining poor management in the UK. Section 4 reports regressions of board turnover on performance: Section 4.1 reports the results for the total sample and Section 4.2 for poorly performing firms. Section 5 contrasts the UK results in this paper with those reported for the US and shows how regulation may account for these differences. Section 6 summarizes the paper.

2 Methodology

This paper is concerned with identifying who precipitates board restructuring in poorly performing firms. The literature on managerial disciplining points to five parties: (i) Shleifer and Vishny (1986) show that large shareholdings mitigate free rider problems of corporate control; (ii) Scharfstein (1988) models the way in which takeovers perform a disciplinary function; (iii) Burkart et al. (1997; 1998) argue that trades in share blocks may be more cost effective than full takeovers; (iv) Fama (1980) and Fama and Jensen (1983) describe how managerial labour markets and non-executive directors assist in the governance of firms; and (v) Jensen (1986) and Aghion and Bolton (1992) discuss the role that capital structure plays in reducing agency costs.

This paper examines the role of all five forms of interventions in disciplining management. A sample of 250 companies, excluding financial institutions, real estate companies and insurance companies, was randomly selected from all companies quoted on the London Stock Exchange in 1988. We collected data on their performance and board turnover over the period 1988 to 1993 and combined these with information on ownership, sales of

share blocks, takeovers, board structure and capital structure.

To be included in the sample, companies were required to have data on boards and ownership for at least three of the first six years of the sample period to allow panel data analyses to be performed. Companies delisted through takeovers or insolvencies for the first three years, between 1988 through to 1990, were therefore excluded. In addition, seven of the original 250 companies were dropped because of lack of performance data.

Data on the composition of the board of directors were compiled for each year from 1988 to 1993 from annual reports, Datastream, the Financial Times and Nexus databases. They include the names, tenure and age of the CEO, Chairmen, and all directors, both executive and non-executive.

We measured annual executive turnover of the board from 1988 to 1993. Board turnover is calculated by dividing the total number of directors who leave the company by total board size. Executive and non-executive turnover is calculated in the same way, except that the denominator is the number of executive and non executive directors, respectively. CEO and Chairman turnover represents the proportion of sample companies where the CEO and Chairman, respectively, leave the company. All turnover figures are corrected for natural turnover. We distinguish between natural and forced turnover, classifying a resignation as ‘natural’ if the director was described as having left the board for reasons of retirement, death or illness. Otherwise the resignation was classified as being forced. The normal retirement age is between 62 and 65 but some voluntary retirement does occur before that; we took 62 as the minimum retirement age and viewed any earlier retirement as forced.¹ This reflects the difficulty of establishing whether public announcements of resignations result from forced retirements or reflect the natural career progression of good managers. Where a company was taken over after 1990, board turnover was collected for two years after the acquisition to determine the survival rate of the pre-takeover directors of the target firm.

In the regressions, we examine the relation of executive board and CEO turnover to five different measures of performance: abnormal share price returns, dividend cuts and omissions measured as a dummy variable (equal to minus one where there is a cut or omission), after tax cash flow margins (cash flows divided by total sales), after tax rates of return on book equity, and earnings losses measured as a dummy variable (equal to minus one where there is a loss). Abnormal share price returns were taken from the London Share Price Database (LSPD).² We employed two measures of leverage, the ratio of pre-tax earnings to interest charges, and a debt

¹ Weisbach (1988) also assumes that any resignation over 62 is natural turnover, unless there is evidence of conflict.

² This uses a Capital Asset Pricing Model with Bayesian updating and a thin trading correction. Further details can be found in LSPD, London Business School, 1997.

to book (and market) value of assets ratio.

Different performance measures were used because it is not always clear what constitutes poor performance and because governance may be more sensitive to one performance measure than another. Marsh (1992) examines 6000 UK dividend announcements over the period 1989 to 1992. His evidence, which is consistent with that in the US, shows that ‘dividend cuts are interpreted by the market as powerful signals of bad news both about the current situation and about future prospects.’(p. 50). Ball et al. (1997) examine the discretion that managers have in different countries to smooth earnings; for example, UK managers have little discretion while German managers have considerable discretion and as a result, tend to use hidden reserves to smooth earnings and hide earnings losses. The three measures (abnormal returns, dividend cuts and omissions, and earnings losses) yield different incidence of poor performance in our data set; for example, 17.0% reported dividend cuts or omissions on average each year, compared with 10.4% that reported earnings losses. We also examine performance measured relative to industry benchmarks, namely abnormal returns and return on equity relative to industry averages.

Since the focus of this paper is on the disciplining of management of poorly performing companies, we investigated the relation between very poor performance and executive board turnover in greater detail. Our sample of 243 companies has about 24 companies in the lowest decile in any one year, but across the entire sample the number of different companies in the lowest decile totals ninety.³ To expand the set of poorly performing companies, we collected a second sample of fifty companies in the lowest decile of abnormal share price returns in any one of the three years from 1988 to 1990. For the sample of all poorly performing companies, we used two further measures of poor performance: earnings losses combined with dividend cuts and omissions, and abnormal returns of less than minus 50% combined with earnings losses and dividends cuts and omissions.

In Section 3, we provide a univariate analysis of the relation between board turnover and performance, and the parties organizing interventions. We report either individual year data for the whole sample period, or we choose the sample of companies from 1990 and aggregate data over three years from 1990 to 1992.

In Section 4 we report the results of panel regressions of executive board turnover on performance, ownership and capital structure over the period 1988 to 1993. We relate executive board turnover to performance in the current year, and with lags, to five classes of variables:

- (i) Ownership for the different categories of investors described below,
- (ii) Changes in share stakes of different categories of investors,
- (iii) Takeovers,
- (iv) Board structure: the proportion of non-executives on the board and separation of the position of chairman and CEO,
- (v) Capital structure and the incidence of new equity issues.

In addition we include interactive terms between performance and the above five categories. The results reported below refer to interactive terms with performance lagged one year; regressions using interactive terms with contemporaneous performance were also performed.

We report executive board turnover panel regressions estimated using a Tobit regression to take account of fact that there are frequently no changes to boards. We also undertook OLS regressions with logistic transformations of the dependent variable. Within (fixed effect) regressions were also performed and time dummies for individual years were used. Since high board turnover in one year might lead to low turnover in a subsequent year, we investigated the robustness of the results using a cross-sectional OLS regression where the dependent variable is accumulated board turnover for the year of poor performance and two subsequent years. The results reported below refer to the panel regressions that include time as well as cross-sectional effects.

In Section 4.1 we report the results for the complete randomly selected sample of firms. Although the potential size of our sample is 1458 firm years (number of companies x 6 years), it is reduced to 1193 firm years as a result of takeovers (180), bankruptcies (10) and missing data (75), and if the independent variable is lagged then there is a further loss of 243 firm years. In Section 4.2 we report regressions for a sample of poorly performing firms drawn from the lowest decile of abnormal returns in any one of the years 1988 to 1990.

The results in Section 4.1 provide a measure of *focus* – to what extent are different interventions focused exclusively on high executive board turnover in poorly performing firms? The results in Section 4.2 provide an indication of *significance* – to what extent do different interventions contribute significantly to high board turnover in badly performing companies? A

³ This is after adjusting for bankruptcies, acquisitions and double counting of those companies appearing in the bottom decile in more than one year.

governance mechanism can be focused, in the sense of being well targeted on just poorly performing companies but insignificant in its effect on board turnover of the worst performing companies, in other words in having a high level of Type-1 errors. A governance mechanism can be significant in dismissing a large number of managers in poorly performing companies but unfocused in also dismissing a large number of other managers as well, i.e. it has a high level of Type-2 errors.

To rank the contribution of different governance mechanisms to board turnover, we report their economic as well as statistical significance. Economic significance is measured as the effect on board turnover of moving from the mean to the extreme (upper or lowest) decile value of the relevant independent variable. The economic significance of events, such as takeovers and new equity issues, are measured by their marginal impact on board turnover, i.e. the coefficient on the relevant dummy variable.

3 Data on board turnover and performance and parties initiating interventions

This section investigates the relation between board turnover, performance and the five different parties initiating interventions.

3.1 Board turnover and performance

Table 1 provides a snapshot of the relation between board turnover and performance. Panel A of the table partitions the sample into deciles of performance using abnormal returns. We choose the sample of companies from 1990 and aggregate data over three years from 1990 to 1992. The period 1990 to 1992 is chosen because 1990 is the first year when the threshold for disclosing share stakes held by outsiders was reduced from 5% to 3%, and subsequent regressions demonstrate that performance has an impact on executive board turnover in the current and following two years.

Table 1 records that there is a high level of board turnover in poorly performing companies. It also shows that the relation between board turnover and performance is highly non-linear. Annual board turnover is substantially higher in decile one than in any of the other deciles, for example, 15.5% compared with 6.8% and 6.4% for deciles five and ten, respectively. Executive board turnover is much higher than non-executive turnover because non-executives perform both a monitoring and advisory function. CEO turnover is also much higher in decile 1 (at almost 28.8%) than in other deciles (for example, 11.6% in decile 5). Turnover of

chairmen is relatively high in decile one, although the level is lower than for CEOs, reflecting the fact that some chairmen are non-executive and perform a monitoring role. When the sample was partitioned using abnormal returns accumulated over two years, 1989-1990, the relation between performance and turnover was very similar to that in panel A.⁴

Panel B reports that companies with losses and companies with dividend cuts or omissions have more than twice the executive board turnover of better performing companies. Companies with dividend cuts have 3.7 times the CEO turnover of those with increasing or stable dividends, and companies with earnings losses have 2.3 times than those without. We therefore find that there is a strong, non-linear relation between board turnover and performance.

3.2 Ownership concentrations

We collected data on the size of shareholdings over the period 1988-1993. All directors' holdings greater than 0.1% are included as well as outside share stakes greater than 5% until 1989. From 1990, the statutory disclosure threshold for outside shareholders was reduced to 3%.⁵

Shareholdings were classified according to 7 categories: (i) banks, (ii) insurance companies, (iii) institutional shareholders including investment trusts, unit trusts and pension funds, (iv) industrial and commercial companies, (v) families and individuals, not directly related to any director, (vi) executive directors and their immediate family and trusts, and (vii) non-executive directors and their immediate family and trusts.⁶ We will refer to directors and their families as 'insiders' and financial institutions, industrial and commercial companies and other major shareholders as 'outsiders'.⁷ The sizes of share stakes held by government and real estate companies were collected but are not reported because they are so small.

The distinction between different outside holdings is important because some may be passive in the face of poor management performance while others are active. For example, institutional shareholders are often regarded as passive, and industrial companies and individuals/families as active. Corporate investors may have more knowledge about the industry

⁴ Lai and Sudersanam (1998) also report declines in board turnover after performance declines.

⁵ The disclosure threshold in the US is 5%.

⁶ As well as direct (or beneficial) holdings, we included all non-beneficial holdings held by directors on behalf of families and charitable trusts. Directors do not obtain cash flow benefits from these holdings but they have control rights. We also investigated nominee holdings and found that in 95% of the cases, institutional investors used the nominee registration to reduce administrative costs. The nominee shareholdings were classified according to category of shareholder using nominee accounts.

⁷ Recent IPOs may particularly affect the pattern of ownership; however, the large majority of our companies, 71%,

than other investors, and individuals and families may have more incentive to intervene as principals rather than agents.

This section reports the pattern of ownership for the sample companies. Panel A of Table 2 records the largest individual share holding for all companies in each year from 1988 to 1993 with the average for all years being 15.3%. The largest five shareholders accounted for between 29.7 and 36.7% of the company's shares depending on the year. There is a large increase in reported blocks from 31.4% to 41.0% between 1989 and 1990, which we attribute to the change in the disclosure rule on block ownership, referred to earlier.

Panel B of Table 2 reports that the median size of the largest stake lies in the range 5-15% for all individual years, but there are a significant number of blocking minorities, defined as a stake of at least 25%. For example, in 1988 almost 24% of stakes are in excess of 25%.⁸ Panel C disaggregates large shareholders by their type and size of holding in 1991. Institutional investors hold the highest proportion (52.6%). Insiders, directors and their families, are the next most significant holders. The difference between outsider and insider blocks is important because the latter may entrench poor management. Although not shown in the table, insider holdings are roughly split two-thirds executive and one-third non-executive directors. The size distributions of institutional investors and insider holdings are very different. Insiders have a greater number of blocking minority stakes than financial institutions, for example, 9.2% of their stakes are greater than 25% compared with 2.1% for institutional investors.

Levels of concentration in the UK are similar to those reported in the US. Holderness and Sheehan (1988) find that 13% of [all] publicly traded corporations and 5% of companies traded on the NYSE and AMEX exchanges have a single shareholder (family or another firm) holding a majority of the shares. In our UK sample, the figure is 3%. Measuring concentration by cumulating the largest five holdings, Demsetz and Lehn (1985) report a mean of 24.8% in the US compared with 33% in our UK sample. Denis and Denis (1995) record insider ownership of 11.7 % for the US, as against 11.8% for our UK sample.⁹

By Continental standards, these are low levels of concentrations. In Italy, 84% of Italian companies have a single shareholder owning majority stakes (see Bianco et al., 1996). In Belgium, 93% of quoted industrial companies have a single shareholder who owns a block of at

have been listed for at least eight years.

⁸ Individual stakes of 30% or greater were almost always built up prior to the company's IPO. In other cases they resulted from acquisitions in which target shareholders did not tender all their shares.

⁹ Bristow's (1995) data show that for 3963 firms median insider ownership is 12.5% and for other much smaller samples the median rises to about 16%.

least 25% of voting rights (Renneboog, 2000), and in Germany, there is a single shareholder with at least 25% of shares in 85% of large quoted companies (see Franks and Mayer, 2000).

Table 3 disaggregates the UK sample by both size and performance measured by abnormal returns for three years 1990-1992. There is little relation between concentration of ownership and performance; for example, largest shareholdings are similar in the worst and best performing firms. However, concentration is related to the size of equity capitalization; for example, the sum of institutional shares is significantly greater in below-median-capitalization than in above-median-capitalization firms, 31.3% compared with 20.5% (for the worst performing sample). In contrast, board turnover is closely related to performance (as noted above) but not to the size of firms: differences in board turnover are not economically large or statistically significant across the two groups of firms, those below and those above the median capitalization.

In summary, although the UK is described as a relatively dispersed capital market, coalitions of shareholders can potentially exert significant voting power, insiders have substantial blocks, and there is a strong relation between concentration of ownership and size but not, performance of firms. Since we have observed in the previous section a strong association between board turnover and performance but not to the size of firms, this suggests that concentrations of ownership may not bear a close relation to board turnover. We find confirmation for this in the regression results in Section 4.

3.3 Takeovers and trades in share blocks

In this section we report the incidence of full acquisition of firms and trades in share blocks. The rate of takeovers in the original sample of 243 companies, for the period up to 1993, is 6%.¹⁰ If those same companies are tracked to 1997, the rate of acquisition increases to 13%. The rate of takeover for the second sample, of poorly performing firms, is substantially higher. Over the period 1988-1993, the rate of acquisition was 22%.¹¹ If those same companies are tracked to 1997, the rate of acquisition increases to 28%. This suggests that there is a higher acquisition rate amongst the worst performing companies but this only occurs after considerable lag from the year of poor performance.¹²

¹⁰ The quotation of 3 were suspended or cancelled, 1 company was taken private and the equity of 3 other firms were converted into a different security.

¹¹ 14% of companies had quotations suspended or cancelled.

¹² The bankruptcy rate is low. For the original sample of 243 companies it is zero. For the additional sample of poorly performing companies it is 4% for the period 1988-1993. It increases to 6% if we follow the sample to 1997

Data on board turnover were collected in companies subject to takeover both before and after the acquisition. They suggest relatively low rates of turnover prior to the takeover, but very high turnover post-takeover. For example, during the two years pre-takeover, total annual board turnover is 15.6% and annual CEO turnover is 17.4%, whereas for the two years post takeover they are 88% and 94%, respectively.¹³ Moreover, there is little difference in turnover between poorly performing companies and better performing companies, suggesting that takeovers provide relatively unfocused disciplining. For example, if we define poorly-performing companies as those in the bottom decile of abnormal share price performance in one of the two years prior to takeover, total board turnover is identical at 88% post takeover in both samples of poorly-performing and better-performing firms.

In the US, Bethel et al. (1998) examine the relation between block purchases of 5% or more and firm performance. They find that activist blockholders acquired stakes in highly diversified firms with poor profitability. They also find that the target firm's profitability increased after the block purchase, and as a result, they conclude that this market works as a market for corporate control. We investigate the size of this market in share blocks in the UK and the extent to which it is motivated by poor performance leading to the disciplining of management. We also distinguish between active and passive blockholders.

In Panel A of Table 4 we show the total number of purchases of share blocks by new shareholders in excess of 5% for the three-year period, 1991 to 1993.¹⁴ We choose this sub-period because the disclosure threshold changed to 3% in 1990. There are a total of 303 purchases of stakes greater than 5% and 82 greater than 10%; the latter represents an annual rate of 9% per year compared with 6.7% for the US cited in Bethel et al.¹⁵ Almost one half of block sales greater than 10% are made by companies, families and insiders, suggesting greater scope for more active investing. In Panel B of the table we examine changes in the level of concentration by both existing and new shareholders. We accumulate share blocks by adding together individual purchases in each company greater than 5% in any one year. The panel reports that in 89 companies more than 10% of the equity was purchased by existing and new shareholders for the 3-year period. This means that on average in 30 sample companies or 14.7% of firms, 10% or more of equity is held by new blockholders. Panel B also shows that a single

¹³ Martin and McConnell (1992) also report high board turnover post takeover, between 58% and 64% depending upon whether it was hostile or friendly.

¹⁴ If we included increases in existing shareholdings, the totals would increase by 22 for [5,10%[, 15 for [10,25%[, and 3 for [25,50%[.

¹⁵ The lower rate of block sales in the US may be due to their sample being confined to the Fortune 500 companies, whereas our sample is drawn from all quoted companies.

investor or a coalition of blockholders purchases an equity stake of 25% or more in 19 companies. The acquisition of blocking minority stakes takes place on average in 3.1% of listed firms per year, similar to the annual rate of takeover activity in the UK of 3-4%, where control passes when a majority of shares are acquired by the bidder, usually via a tender offer.

Although not reported in the table, we examined the relation between purchases of share blocks and performance, measured over two years prior to, and the year of, the purchase. The number of share blocks is virtually identical in the worst and best deciles of performance and similar to the average for the complete sample.

In summary, there is a high level of both takeovers and trades in share blocks in the UK. There is some evidence of a relation between the incidence of takeovers and poor performance but not between trades in blocks and performance. This suggests that takeovers may be performing a disciplinary function but trades in blocks do not. We investigate this further in Section 4.

3.4 Board structure

Panel A of Table 5 reports the board structure of the sample of firms partitioned by decile of abnormal share price performance in 1990. There is evidence that the proportion of companies in which the roles of CEO and chairman are combined is lower in the worst performing decile of firms than in other deciles. However, in other respects there is very little relation between board structure and performance; for example, the proportion of non-executive directors is almost identical in the best and worst performing companies.

Panel B examines how the structure of the board alters after a change in CEO. The purpose is to analyse the extent to which a change in CEO is used to strengthen corporate governance by altering the composition of the board. It partitions the sample of firms into those where there was a change in CEO and those where there was no change using data from 1990. It reports the average board structure two years before and two years after 1990 for the two samples of firms. The proportion of non-executive directors on the board increased in both sets of firms over the period, reflecting the increasing emphasis on non-executives in corporate governance in the UK.¹⁶ More strikingly, in those companies where there is a change in CEO, there is a

¹⁶ Hermalin and Weisbach (1998) predict that the “probability that independent directors are added to the board increases following poor corporate performance.”

significant reduction in the proportion of companies with combined roles of CEO and chairman from 42.9%, before 1990, to 14.3% after. Subsequent regressions suggest that separation of CEO and chairman plays an important role in disciplining of management of poorly performing firms.

In summary, there is little relation between the proportion of non-executives on the boards of firms and corporate performance suggesting little disciplinary role associated with non-executive directors. However, there is evidence that the role of CEO and chairman is more frequently separated after changes in CEOs. We examine these observations further in the regressions in Section 4.

3.5 Capital structure

Jensen (1989) suggests that creditors may have greater incentives than shareholders to monitor and change management in exchange for new loans or the restructuring of existing loans. This suggests that board turnover may be particularly high where poor performance is combined with high leverage (or low interest cover). Alternatively, shareholders may be able to exert greater control over management where poor performance forces companies to seek outside equity finance. In this section we examine interventions by shareholders in companies facing financial constraints.

An analysis of our entire sample of 243 companies shows that leverage increases as performance declines. Although not shown in a table, for the period 1990 to 1992, there are significantly higher levels of capital leverage in the lowest decile of performance than in higher deciles - a median of 39.3% in the lowest decile compared with 34.9% and 23.9% in the 5th and 10th deciles respectively. Similarly, interest coverage is significantly lower in decile 1 than in decile 5; a median of 1.8 compared with 4.0 in the worst performing decile.¹⁷

Table 6 shows that high leverage, combined with poor performance, is related to increased executive board turnover. Companies in the lowest decile of share price performance and the lowest quartile of interest coverage had significantly higher executive board and CEO turnover in the year of poor performance and the two years subsequently than those in the highest quartile of interest coverage, 69.6 and 24.2%, respectively. Companies in the lowest decile of

¹⁷ Similar relations between interest coverage and other measures of performance are found. For example, median interest cover for companies with dividend cuts is 0.6 compared with 4.5 for those with stable or increasing dividends.

share price performance and the highest quartile of capital leverage had higher executive board and CEO turnover than those in the lowest quartile of capital leverage (though only the latter was significant).

The annual rate of new equity issues in the sample of poorly performing firms used in the subsequent regressions at 11.5% is almost identical to that of the total sample at 11.6%. This suggests an important role for new equity issues in distressed companies. We investigated this further by undertaking press searches on 34 firms that were both below average performers and had high levels of debt. The criteria for selection were that firms both had interest coverage less than two and were in the bottom three deciles of performance in at least one year during the period 1990-1993.¹⁸ In 28 firms the CEO or chairman resigned, or both resigned. Eighteen firms or about 54% of the sample raised new equity finance. Of these, 15 were rights issues or open offers, while the remaining three were offered to new shareholders in the form of placings.¹⁹ In three cases the offer took the form of convertible preference shares, otherwise it was for straight equity.

There was a substantial number of other ownership changes. In twenty-four companies, or 72% of the sample, there was at least one of the following: a new issue, a takeover or the emergence of a large shareholder. In some cases board changes coincided with one of these events, but in many cases capital or ownership changes preceded board changes by a matter of several months.

Debt restructuring is also important. There were five cases of a public debt issue and another five of a capital reconstruction or public recontracting of existing debt. In one case the bank stated at an Extraordinary General Meeting that a renewal of loan facilities was conditional on a resolution to approve the sale of assets. Since much of UK debt is in the form of private bank debt, the actual level of bank restructuring is much greater than that which is publicly revealed.

It is clear from the descriptions in *The Financial Times* (FT) that the party initiating the boardroom changes is not necessarily creditors. For example, in the departure of the CEO of Burton the FT reported “that he had not performed with sufficient vigor to impress [the board’s] non-executive directors.” (November 30, 1990). In another company, Cookson’s, the FT stated that “the CEO/Chairman resigned after it became clear that he had lost the confidence of the company’s own senior executives”. (November 30, 1990). For Platon, “a series of boardroom changes was foreshadowed when the company detailed plans for a sterling open [equity] offer. The chairman of Era resigned a week after “a long and angry shareholders’ meeting”. Finally, in the case of Caledonian Newspapers, a large shareholder when approached about subscribing for new equity responded that “they would put more money up, but if so, it was good-bye management”.

An important question is why large institutional shareholders are active only when poorly-performing firms make distressed rights issues. Senior management at the largest fund managers in the UK informed us that although they might intervene where there was very poor performance, in the face of management opposition, they were likely to avoid confrontation because they disliked the consequent publicity and the costs of organizing other shareholders. However, it was a different story when the poorly performing company required new financing: “it comes to a

¹⁸ A level of two is chosen because investment grade companies “typically have coverage ratios exceeding two times interest expense” (Copeland et al., 1995, p.178).

¹⁹ Rights issues are offered to existing shareholders and any rights not taken up may be sold for the benefit of the shareholder; in open offers, rights not taken up may not be sold by the original holder and can be sold by the company to other shareholders.

crunch when companies raise additional finance” or “it all unpicks when a company needs money”.

In summary, the financial structure of poorly-performing companies is worse than that of other firms and there is a higher incidence of board turnover where leverage is very high (or interest cover is low) and new finance is raised. In a significant number of cases new financing includes equity. The regression results in the next section will shed further light on these observations.

3.6 Summary

The univariate analysis of this section reveals significant potential for coalition formation, a large market in acquisitions and share block sales, and a high incidence of new finance raised by poorly performing firms. However, we find little relation between poor performance and concentration of ownership, share block transactions, takeovers, and the proportion of non-executive directors on boards of firms. This suggests that holders of large share blocks, purchasers of share blocks, acquirers and non-executive directors do not perform a strong disciplining function. In contrast, there is a large amount of new equity raised by poorly performing companies, which is associated with board changes, indicating that shareholders intervene when new equity is raised.

4 Regression results for board turnover on governance and performance

This section reports the results of regressions of executive board turnover on performance and the five sets of governance variables described above over the period 1988 to 1993. Section 4.1 discusses the results for the total sample and Section 4.2 for the worst performing companies.

4.1 The total random sample

Table 7 records the results of a Tobit panel regression on executive board turnover; although not formally reported in the tables, comparisons were undertaken with different estimation techniques including industry and time dummies, OLS regressions and fixed effect regressions.²⁰ Five different measures of performance are reported: annual abnormal returns, industry corrected annual abnormal returns, an earnings loss dummy, industry corrected return on equity, and a dummy for dividend decreases and omissions. The best explanatory power is found in the earnings loss equation. Consistent with Ball et al. (1997), earnings losses may therefore be the most relevant signal of managerial failure. Size, as measured by sales, was included as a control variable but is not significant in any of the regressions.

To rank the contribution of different parties to board turnover, we report the economic as well as statistical significance of the independent variables. These reflect the effect on executive board turnover of moving from their mean to their extreme (upper or lowest) decile value. For example, the highest decile ownership of executives is 43.5% as against a mean holding of 7.6%. The difference of 35.9% has been multiplied by the coefficient of -0.3576 to yield a marginal effect on board turnover of moving from the average to the highest decile executive ownership of -12.8% .²¹

Performance: Lines 3 to 5 of Table 7 show a strong negative relation between board turnover for four out of five measures of performance either concurrently or with lags (the exception being industry corrected return on equity). The economic effect of abnormal returns in the lowest decile is to raise board turnover by 7.0% two years later. The economic effect of earnings losses is much larger in raising board turnover by 24.6% over a three year period. This suggests that board turnover is more sensitive to earnings losses than contemporaneous abnormal share price

²⁰ We controlled for the change in the disclosure threshold from 5 to 3% in 1989 by including a dummy variable which equals 0 for 1988-89 and 1 afterwards. We also verified the robustness of our results, by including dummy variables for the years and by running the regression on subsamples which excluded the years 1989 and 1990. This did not significantly alter the results reported below.

²¹ In the case of zero-one (or minus one) dummy variables (earnings losses, dividend cuts and omissions, takeovers and new equity issues), economic effects relate to the effect of switching from zero to one (or minus one). The tables with the means and percentiles of independent variables are available on request.

returns.²² It may be that management and shareholders regard earnings losses as a more serious sign of managerial failure than abnormal returns. We report below the regression results describing the influence of existing shareholders, changes in shareholdings, takeovers, leverage and board structure on board turnover.

Existing shareholders: If concentration of ownership overcomes a free rider problem of corporate control, we would expect there to be higher board turnover in poorly-performing firms where concentration of ownership is high. The signs of the coefficients on the interactive terms between ownership and performance should therefore be negative in lines 11 to 15. In fact, there are few significant terms in lines 6-15, indicating that ownership concentration on its own or with interaction terms does not play a significant role in disciplining management. An exception is holdings of executive directors, which are consistently negatively related to board turnover for four performance measures. The economic effect of executive ownership (which has a mean value of 7.6%) is to lower board turnover by between 12.2% and 15.1%, depending on the performance measure, but it is generally unrelated to performance (line 14 in Table 7). This suggests that large ownership gives executives modest protection against outside intervention, irrespective of company performance. This is robust to different estimation techniques.

Increases in shareholdings: Significant changes in shareholdings are likely to give rise to changes in management irrespective of corporate performance. However, if these changes are performing a disciplinary function then there should be higher board turnover with poor performance and with changes in shareholdings. We would therefore expect to observe positive coefficients on lines 16 to 20 and negative coefficients in lines 21 to 25.

Table 7 shows a strong positive relation between increases in share holdings by both families and executive directors, and executive board turnover (lines 18 and 19). This is consistently observed across different estimation techniques. Purchases of share stakes are for the most part new holdings rather than increases in existing holdings. The economic effect of increases in holdings by families and individuals (on average 0.7%) is to increase board turnover by between 5.4% and 7.7%, depending on the performance measure used. The economic effect of increase in holdings by executives (on average 0.7%) is between 10.5% and 12.5% increases in board turnover. However, the interaction terms do not support the view that changes in family and executive holdings are performing a disciplinary function (lines 23 and 24). We do not

²² We examined the effect of interactions between dividend cuts/omissions and negative share price performance on board turnover by restricting the regression to the sample of companies that incurred abnormal losses. The regression

observe a relation of executive board turnover to industrial companies shareholdings either on their own (line 17) or interactively with performance (line 22). There is therefore little difference in impact of active and passive shareholders on corporate governance.²³

Takeovers: We included a dummy variable in the regression for whether the firm was taken over and an interactive dummy variable with performance. The takeover variable was significant in every regression but the interactive term with performance was significant in none. The economic effect of takeovers on board turnover is in the range 89.5% to 113.2% depending on the measure of performance used. This confirms the result in Franks and Mayer (1996) that there is a very high level of board turnover associated with takeovers but it is unrelated to poor performance. In Section 3.3, we observed that over an extended period of time, the incidence of takeovers is higher in poorly performing than other firms. This suggests that the disciplinary effect of takeovers may be delayed beyond the one or two year lags in these regressions.

Board structure: If non-executive directors perform a corporate governance function then we would expect to observe more board turnover in poorly performing companies with separate chairmen and chief executives and with a high proportion of non-executive directors (negative signs on the interactive terms in lines 31 and 32, respectively). If, however, non-executives perform more of an advisory than a monitoring role then we would expect non-executives and separate chairmen to reduce executive board turnover irrespective of performance (i.e. negative signs in lines 26 and 27) and the interactive terms in lines 31 and 32 to be insignificantly different from zero. What we observe is more consistent with the latter than the former. For all five measures of performance, the relation with proportion of non-executives (line 26) is negative and the interactive terms (lines 31 and 32) are not significantly different from zero (weakly so in the presence of dividend cuts). The economic effect of an increase in non-executives to the upper decile average of 63.6% from a mean of 38.9% is associated with a decline in board turnover of between 7.4% and 9.5%, depending upon the performance measure. The proportion of non-executives therefore has a substantial negative influence on board turnover.

Financial structure: If capital structure influences executive board turnover, we expect a high level of executive board turnover to be related to high levels of capital leverage (a positive coefficient in line 28), and low levels of interest coverage combined with poor performance (a

results were little affected.

²³ The results were rerun assuming coalitions of shareholders, for example, all outside shareholders were grouped together, with executive and non-executives forming two other groups. The results are similar to those in tables 7 and 8. These tables are available on request.

negative coefficient in line 33). In addition, we examine whether board turnover is associated with new equity issues (a positive coefficient in line 29 and a negative coefficient in line 34 with an interaction with performance). We find that high leverage is significantly related to turnover in two of the five regressions, and it is negatively related to the interaction of leverage with performance in two of the remaining regressions. The economic effect of leverage increasing to the upper decile level of 72.2% from a mean of 32.7% is an increase in board turnover of between 3.9% and 6.9% depending on which performance measure is used. We also reran our regressions using interest coverage. We expect a high level of board turnover to be related to low levels of interest coverage particularly when combined with poor performance. We find a strong relation between turnover and interest coverage, including interactions with lagged performance. The significance of leverage and interest coverage is consistently observed using different estimation techniques.²⁴

There is a strong correlation between new equity issues and board turnover (four significant positive coefficients in line 29 and the remaining one has a significant negative interactive coefficient with performance). When new equity is issued then board turnover increases by between 6.6% and 10.0%. The significant interaction between new equity issues and performance in the earnings loss regression is consistent with the case study observation of Section 3.5 that corporate refinancing in the wake of poor performance provides an opportunity to restructure the board.

Overview: The results to date suggest that neither owners nor purchasers of share blocks perform a disciplinary function. The only significant effect of large block holdings is associated with those in the hands of executives and these are used to entrench rather than discipline management. Share sales by families and executives are associated with board turnover but not interactively with performance. Takeovers have a very large impact on board turnover but again not interactively with performance. Share block sales and takeovers therefore have a significant effect on board turnover but they are not focused on the worst-performing companies. Non-executives appear to perform more of an advisory and supportive than a disciplinary role. In contrast, financial variables (leverage and new equity issues taken together) are economically and significantly related to board turnover and performance. They are therefore both significant and focused and are thus far ahead in the horse race.

²⁴ Results remained unaltered when leverage and interest cover were included with a lag of a year, rejecting a reversed causation explanation for their significance.

4.2 Poor performance

The results in the previous section were based upon all firms in the sample. In this section, we examine only poorly-performing firms. We look at how board turnover is related to the five governance mechanisms in the presence of five definitions of poor performance. The first is annual abnormal returns of less than -50% . The second is incidence of earnings losses. The third is dividend cuts and omissions. The other two definitions take even more extreme measures of poor performance: earnings losses combined with dividend cuts and omissions, and abnormal returns of less than 50% combined with earnings losses and dividends cuts and omissions. Clearly, the sample sizes for the fourth and fifth definitions are appreciably smaller than for the other three.

Table 8 reports regression results for our sample of poorly performing firms with the same variables as in Table 7, excluding the interactive terms with performance.

Existing shareholders: The results for the worst performing firms are almost identical to those of the complete sample. There is no evidence of share concentrations affecting turnover, except for holdings by executive directors. Again there is strong evidence of entrenchment. The economic effect of moving from average to upper decile executive ownership is a decrease of between 10.4% and 17.9% in executive board turnover in the worst performing firms depending on what measure of poor performance is used.

Increases in shareholdings: As in the complete sample, increases in shareholdings by families and executive directors are associated with significant increases in board turnover. The economic effects of moving from average to upper decile ownership by families and executive directors are between 5.8% and 8.2% , and 4.4% and 6.8% increases in board turnover respectively. Increases in institutional ownership are associated with significant decreases in board turnover, suggesting that institutions sell to other investors to accomplish board replacements in poorly performing companies. The economic effect of such institutional sales is between 3.5% and 7.2% increases in board turnover for a reduction in holdings from upper decile to average levels.

Board structure: The proportion of non-executives on the board of poorly performing companies is not significantly related to board turnover. The number of non-executives does not therefore affect managerial disciplining. However, separation of the roles of chairman and chief executive is associated with significantly higher board turnover - between 8.5% and 12.0% more

turnover.

Financial structure: Capital leverage is associated with significantly higher board turnover. An increase from average to upper decile levels of leverage raises board turnover by between 2.5% and 3.9%. Firms with earnings losses that make rights issues have a 13.8% higher level of board turnover than those that do not.

Takeovers: Takeovers are a highly significant influence on board turnover in the worst performing companies and are associated with a between 64.1% and 78.7% increase in executive board turnover. This is, however, appreciably lower than the board turnover of firms in the complete sample that are targets of takeovers.

Summary: The results for the worst-performing companies are very similar to those for the complete sample. There is evidence of managerial entrenchment through executive share ownership while block holdings in the hands of other investors are not associated with managerial disciplining. Purchases of share blocks by families and executives, and financial constraints are associated with increases in board turnover and takeovers have an even more significant impact.

While the previous tests established the focus of different governance mechanisms, these results shed light on significance. Takeovers emerge as being the most significant governance mechanism but are unfocused. Purchases of share blocks by families and executives are also significant but unfocused. Only financial constraints are both focused and significant, in the case of new equity finance in particular when poor performance is measured by earnings losses.

4.3 Other tests

We performed several tests of the robustness of the results to alternative specification and different definitions of variables.

CEO in place of executive board turnover: We examined the effect of using CEO replacement in place of board turnover and related CEO replacement in a logistic regression on the same performance governance measures. We find that there is a significant relation between CEO replacement and performance when companies made losses, when dividends were cut or omitted and when past abnormal returns were negative. Ownership variables are not generally significant, except for holdings by executive directors, with the sign suggesting managerial entrenchment. For four performance measures, changes in share holdings of non-executive directors are significant implying that greater ownership by this group is related to higher CEO replacement.

This effect is independent of performance, suggesting a non-disciplinary reason for replacement.

The structure of the board is important for all five measures of performance; in particular, the separation of the CEO and chairman leads to greater CEO replacement.²⁵ This suggests that the presence of a non-executive chairman is of considerable importance in governance when firms perform poorly. However, there is some evidence that a higher proportion of non-executive directors is negatively related to CEO turnover, the same result as reported above for board turnover using the complete sample. Both financial ratios – capital leverage and interest coverage²⁶ – lead to increased CEO changes for two measures of performance.

Overall, board structure is more important in the CEO than the board regressions with separation of the position of CEO and chairman leading to higher CEO turnover. Boards are therefore instrumental in dismissing CEOs in response to earnings losses or dividend cuts. To achieve wider board restructuring, investors require the leverage of external finance provided by high debt levels.

Serial correlation tests: If there is high annual board turnover in one year it may be followed by low board turnover, thus inducing serial correlation in the panel data. To check for this we performed a cross sectional regression where the dependent variable was the annual average board turnover for each company in the three year period including the year of poor performance. The independent variables were measured in the year of poor performance in one set of regressions and with a lag of one year in another set of regressions. These cross-sectional regressions were performed using data from firms in two years, 1990 and 1991. We find that the results are consistent with the panel data, although the level of significance is different in a number of cases. We find statistical support for the entrenchment effect of insider holdings by directors, for the relation between leverage (and interest cover) and performance, rights issues and executive board turnover, and that non-executive directors support incumbent management.

Exogeneity tests: An important assumption in the previous specification is that all the independent variables are exogenous. To investigate this question we lagged all independent variables by one year in a panel OLS regression with fixed effects. We find that most of the results in the previous regressions are supported: board turnover increases with past poor

²⁵ Including a variable for the length of tenure of the CEO eliminated the significance of the separation variable. However, length of tenure was only available for a sub-sample of firms (130 observations were lost) and has not therefore been shown in the table. There is likely to be less CEO-chairman separation in companies where CEOs have been in place for long periods of time and non-executive chairman may be able to exert less influence where CEOs are firmly entrenched. As a consequence, tenure extinguishes the significance of separation.

performance and it decreases with high concentration of ownership when held by executive directors (entrenchment). Book leverage is positively correlated with executive turnover, but interest coverage is not. A Tobit with lags produced some significance on rights issues with board turnover.

Demsetz and Lehn (1985) and Himmelberg et al. (1999) argue that ownership is endogenous to performance. We investigated this by running reversed regressions of performance on ownership and changes in ownership, disaggregated by different classes of investor. We ran six regressions using abnormal returns, earnings losses, changes in earnings per share, return on equity, cash flow margins and changes in dividends per share as dependent variables. No consistent relation was found between these measures of performance and either ownership or changes in ownership.

Summary: We have investigated the robustness of the results reported in the previous sections to replacing board turnover with CEO turnover and to tests of serial correlation and exogeneity of the independent variables. We have found that the conclusions of the previous section are robust to these changes and that there is some evidence that board structure has more of an influence on CEO replacement than on executive board turnover.

5. Influence of regulation on governance

In Section 5.1 we discuss how UK regulation may have affected the above results on governance. In Section 5.2, we compare the results that we have found in the UK with those reported in the US. In Section 5.3, we describe how regulatory differences between the UK and US might explain differences in outcomes between two seemingly similar capital markets.

5.1 Influence of UK regulation

5.1.1. Protection of minorities

Minority and dispersed shareholders are protected in the UK by The City Code on Takeovers and Mergers (called ‘The Code’) and by UK company law. These create obstacles to building controlling stakes. For example, an outside blockholder who owns 15% or more of the equity of a firm must make public their intentions of launching a takeover. Where a stake of 30% or more has been acquired, there is a compulsory tender provision for all remaining shares

²⁶ Interest coverage was substituted for leverage in separate regressions.

and the tender price must be at least that paid for any shares acquired over the previous twelve months. Purchases of share blocks in excess of 3% together with the identity of the buyer must be disclosed to the market. These rules are designed to establish “fair play” in takeovers and to reduce the potential for predators to purchase stakes cheaply. However, they have the effect of raising acquisition costs.

Other rules affect incentives to acquire less than 100% of the shares of a target. The Stock Exchange lays down specific rules concerning transactions between controlling blockholders, who own more than 50% of shares, and related parties. These state that the firm “must be capable at all times of operating and making decisions independently of any controlling shareholder and all transactions and relationships in the future between the applicant and any controlling shareholder must be at arm's length and on a normal commercial basis”.²⁷ A majority of the directors of the board of the subsidiary must be independent of the parent firm and minority shareholders have the right to be consulted about, and approve, transactions with the parent firm (Sections 11.4 and 11.5 of The Stock Exchange rules). The effect of these rules is to increase the costs of partial stakes. They explain why almost all bids are made conditional on acceptance by 90% or more of target shareholders. The remainder can be purchased compulsorily at the original bid price using a squeeze out rule under the 1948 Companies Act. In a recent bid by Capital Shopping Centres (CSC) for 25% of shares of Liberty International that they did not already own, the independent directors of Liberty advised minority shareholders not to accept the offer. They argued that it ‘does not give any premium for full control of the company’ (The Financial Times, October 19, 2000).

5.1.2. Fiduciary duties of directors

Can regulation explain the results reported earlier about the role of non-executive directors in poorly performing companies? One important characteristic of UK regulation is the lack of fiduciary responsibilities of directors. Stapledon (1996) finds that although directors in the UK owe their companies ‘fiduciary duties of honesty and loyalty, and a duty of care and skill’, in practice ‘actions to enforce the duties of directors of quoted companies have been almost non-existent’ (pp. 13-14).²⁸ Problems of mounting such actions may have been exacerbated by free rider problems, the difficulty of recovering costs of the action from the firm and the illegality of contingent fees (Miller, 1998).²⁹ In the absence of a duty of care, we would

²⁷ See sections 3.12 and 3.13 of Chapter 11 of the Stock Exchange rules.

²⁸ See also Parkinson (1993).

²⁹ In Germany there are particular lawsuits by shareholders that must be funded by the company, for example, where

expect non-executive directors to perform an advisory role.

5.1.3. Rights issues

Another significant mechanism in the horse race was equity issues. Section 89(1) of the Companies Act 1985 states that seasoned new equity issues by companies must be in the form of rights issues.³⁰ Section 95 of the same Companies Act describes the circumstances under which pre-emption rights may be waived. It requires a super-majority vote by shareholders of 75% or more on each and every occasion an equity issue is to be made. In a recent case, involving the Olivier Company, shareholders controlling 30% of the shares prevented a waiver of a rights issue.³¹ Even where shareholders vote to drop pre-emption rights the discount of any new issue must not exceed 10% of the market price at the time of the issue's announcement (paragraph 4.26, Stock Exchange Rules, 1999). These rules ensure that old shareholders cannot be diluted by new shareholders.³² They are reinforced by guidelines, authorized by the National Association of Pension Funds and the Association of British Insurers, limiting companies to raising 5 per cent of their share capital each year by any method apart from rights issues - and 7.5 per cent in any rolling three-year period.

5.2 Comparison of UK and US Empirical Results

In some respects, the determinants of board turnover in the UK and US are similar. We find a significant negative relation between board turnover and performance, similar to results reported for the US (see Weisbach, 1988; Warner et al., 1988; and Coughlan and Schmidt, 1985). There is strong evidence of entrenchment by insiders in both countries in the form of a negative relation between board turnover and insider holdings (see Hermalin and Weisbach, 1991, and McConnell and Servaes, 1990, for results in the US).^{33 34}

We have found little evidence in our UK sample of a relation between concentration of outside shareholdings and board turnover. US results are similar. For example, Holderness and

shareholders object to being 'squeezed out' when a blockholder has at least 95% of the target's shares. The minority may demand a court hearing at the company's expense.

³⁰ If shareholders fail to take up their rights, the rights may be sold for the shareholder's benefit. These pre-emption rights are recognised in European Community law.

³¹ Financial Times, May 29, 1998.

³² The Exchange may relax these rules if the company is in severe financial difficulties.

³³ Morck et al. (1988), and McConnell and Servaes (1990) find that corporate performance as measured by Tobin's Q initially rises with low levels of insider ownership (for example, up to 5% in Morck et al. study) and then declines.

³⁴ Our results are also consistent with the use of anti-takeover amendments, recorded by Borokhovich et al. (1997), to entrench management, and Stultz's (1988) argument that anti-takeover amendments substitute for insider ownership as an entrenchment mechanism.

Sheehan (1988) report that the identity of large outside block owners is important, and that firms with majority outside blockholders have better performance than those with diffuse ownership, but the differences are not statistically significant. Denis and Kruse (2000) find that the presence of large blockholders, other than directors and their families, does not have an impact on industry-adjusted operating performance and they find no evidence of ownership structure influencing non-routine board turnover.

However, in other respects UK and US results differ significantly. There is more evidence in the US than in the UK of disciplining associated with sales of share blocks. In the US, Bethel et al. (1998) report that purchases of share blocks by active investors are targeted on poorly performing companies. Holderness and Sheehan (1988) find that when their majority blocks trade, there is substantial management turnover and stock prices increase. In the UK, we have found little evidence that changes in share blocks by potentially active investors perform a disciplinary function.

There are two still more pronounced differences between the UK and US. First, in the US, Weisbach (1988) reports a closer relation of CEO turnover to performance in firms where non-executive directors dominate the board. Also, Gilson (1990) and Kaplan and Reishus (1990) find that non-executive directors of poorly performing companies lose reputation and are frequently unable to find replacement positions. In the UK, we found no evidence of disciplining by non-executive directors; indeed, the relation is negative between the proportion of non-executives and board turnover. Second, we find that capital structure and new equity financing are particularly significant influences on board turnover in the UK. We are not aware of any US study reporting this relation. The table below summarizes evidence on the parties performing disciplining in the UK and US. It shows the effect on disciplining of different parties' interventions in the two countries.

Effect on disciplining	UK	US
Negative	Executive block holders Non-executive directors	Executive block holders
Neutral	Other block holders Purchasers of blocks	Other block holders Providers of new finance
Positive	Bidders Providers of new finance	Some purchasers of blocks Bidders Non-executive directors

5.3 Regulatory Differences Between the UK and US

5.3.1 Protection of minorities

We have already reported that protection of minorities is extensive in the UK. In terms of Goshen's (1998) characterization of systems of minority protection, the UK has a "property rule" which prevents any transaction from proceeding without the minority owner's consent. In contrast, the US has a "liability rule" which allows transactions to be imposed on an unwilling minority but ensures that the minority is adequately protected in objective market value terms.³⁵

³⁶ Protection of investors, especially minorities, is primarily the concern of the courts. Until this year, there was no US equivalent of the UK Takeover Code requiring full bids for companies to be made but there are much more extensive takeover defences in state legislation and company charters than in the UK (Miller, 1998).^{37 38}

The impediments to the exercise of control by dominant shareholders in the UK and the more liberal view of takeovers encourage full acquisitions of companies rather than control through partial share blocks. This may explain why, in contrast to the US, trades in share blocks in the UK do not involve active shareholders and are not disciplinary in nature.

5.3.2 Fiduciary duties of directors

³⁵ The difference that is drawn here between UK and US minority protection conforms with the more general distinction which Atiyah and Summers (1987) and Posner (1996) draw between reliance on substantive reasoning under US law and formal reasoning in UK law.

³⁶ The US does have the Williams Act of 1968 which introduced rules on block disclosure (10% later amended to 5%), a minimum period for which a tender offer must be left open, and a provision explicitly allowing targets to sue bidding firms.

³⁷ Protection may even fall short of that provided by the application of a fair price rule. Gilson (1995) argues that in *Sinclair Oil Corp v. Levien* business judgement rather than intrinsic fairness tests should have been applied. It is debatable whether minority protection in the US interferes with business judgements of parents. Eisenberg (1976) states that "the checks on unfair dealing by the parent are few. In theory, of course, the fairness of the parent's behaviour is subject to the check of judicial review; but in practice such review is difficult even where the courts have the will to engage in it, and they often lack the will."

³⁸ La Porta et al. (1997; 1999) measure anti-director rights in the UK and US and find greater protection for minorities in the US. However, they focus on the rights under commercial law and do not consider the influence of the non-statutory, but highly effective, Takeover Code and Stock Exchange rules.

While powers to enforce fiduciary responsibilities on directors in the UK are weak, in the US, directors (both executive and non-executive) have a duty of care to shareholders and can be sued for failing to fulfil their fiduciary responsibilities.³⁹ This may explain why non-executives play quite different roles in the UK and US - an active governance function in the US as against an advisory role in the UK. There is evidence to support the view that litigation encourages boards to be active in the US (see Millstein and MacAvoy, 1998). This is strengthened by the high proportion of non-executive directors in the US - an average of 75% of the total board compared with only 33% in our UK sample (see Kini et al., 2000).

5.3.3 Rights issues

As noted above, in the UK new equity issues generally take the form of rights issues. In the US, companies frequently obtain shareholders' agreement to drop pre-emption rights. Brealey and Myers (1996) suggest that 'the arguments [by management] for dropping pre-emption rights do not make sense' (p. 405). Our results imply that managers have incentives

to drop pre-emption rights to allow equity issues to be made to new shareholders at a discount to the equilibrium price, thereby diluting existing shareholder wealth. The discount would be in exchange for implicit or explicit agreements to new shareholders to leave existing management in place. US evidence provided by Loderer et al. (1991) suggests that a significant minority of new seasoned equity issues are made at a discount from the market price, although not necessarily below their equilibrium price. Stronger rights requirements in the UK may therefore have allowed investors to exert greater control over management as a pre-condition for the provision of new finance.

In summary, while La Porta et al. (1998) suggest that the rights of shareholders in the UK and US are similar, we find significant differences in minority investor protection, fiduciary responsibilities of non-executives and rules relating to new equity issues.⁴⁰ These differences in protection appear to be related to the more active role of share block purchasers and non-executive directors in the US and the more active role for providers of new finance in the UK

6. Conclusions

The question posed at the beginning of the paper was: who initiates control changes in poorly performing companies? Five parties were suggested: existing large shareholders, purchasers of blocks, bidders in takeovers, non-executive directors, and shareholders supplying new equity finance.

Coalitions of five shareholders can on average control more than 30% of shares in the UK. However, there is little evidence that they do. On the contrary, the main source of block holder control comes from those in the hands of insiders and these are used to entrench rather than to discipline management.

³⁹ Clark (1986) describes the circumstances under which shareholders can be sued in the US. For example, in *Smith v. Van Gorkum*, shareholders successfully sued directors for a breach of duty of care with respect to a merger. However, Clark also notes the paucity of such successful cases.

⁴⁰ An example in differing interpretations is 'Preemptive Right to New Issues. The evidence is clear that in the UK waiver of rights issues is very difficult unless the company is in distress, whereas in the US waivers are the norm.

An as yet undocumented characteristic of the UK capital market is an active market in share blocks. Markets in share blocks could be used to discipline poorly performing management, and in the US there is some evidence that they do. But in the UK they do not; instead, board turnover is primarily associated with full acquisitions in takeovers.

The role of boards in exercising governance is also weak as evidenced by the fact that non-executive directors do not perform a disciplinary function. In this respect, the UK is quite different from the US. In the UK, ineffective implementation of fiduciary responsibilities results in non-executive directors regarding their role as being primarily advisory rather than disciplinary.

If neither holders of share blocks nor boards discipline management in poorly-performing companies in the UK, who does? We find that capital structure is a significant determinant of board changes and high levels of leverage and low interest coverage are associated with high levels of board turnover in poorly-performing companies. At first sight, this suggests that creditor intervention is the main source of corporate reorganisation. However, evidence from 34 case studies and from the regression analyses also revealed an important role for new equity issues in board restructurings.

Regulation appears to be a significant influence on this pattern of governance in the UK. Strong minority protection has discouraged partial accumulation of share blocks in favour of full acquisitions in takeovers. Weak fiduciary obligations on directors have resulted in non-executives playing more of an advisory than a disciplinary role. Rights issue requirements protect existing shareholders against wealth transfers initiated by the management of poorly performing firms and allow outside shareholders to impose board changes as a condition for the provision of new equity finance.

Thus, despite the frequent categorization of UK regulation under the same “common law” classification as the US, there are significant differences - more minority investor protection in the UK than in the US, less fiduciary obligations on directors in the UK but stricter rights issue requirements. These differences appear to be associated with more governance through partial acquisitions of share blocks and by non-executive directors in the US, but less governance through the provision of new financing than in the UK. Subtle differences in regulatory systems may therefore be associated with pronounced difference in governance outcomes.

What is the significance of these differences for corporate performance? We have not attempted to answer this question directly in this paper; however, it might be argued that greater

reliance on financial constraints and less reliance on boards in the UK leads to a greater concentration of disciplining on the worst-performing firms. This is consistent with the observation that higher board turnover is restricted to the very worst performing firms. The greater reliance on “unfocused” takeovers may to some extent have compensated for this but, if regulation makes this an expensive form of intervention, then there may still be inadequate restructuring in the UK prior to the emergence of financial distress.

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Table 1 : Annual board turnover in 1990-1992 partitioned by decile of abnormal share price performance calculated in 1990 for a sample of 243 UK unquoted companies

This table reports the turnover of the total board, the executive and non-executive directors, the CEO and chairmen for the three year period 1990-1992. Board turnover is calculated by dividing the total number of directors who leave the company (excluding those leaving as a result of retirement, death or illness) by total board size. Executive and non-executive director turnover is calculated in the same way, except that the denominator is the number of executive and non-executive members, respectively. CEO and chairman turnover represents the proportion of sample companies where the CEO and the chairman, respectively, leave the company (corrected for natural turnover). Board turnover data for the sample of 243 companies are categorized by performance: panel A categorizes companies by abnormal share price performance in 1990 for six deciles; panel B categorizes companies by dividend cuts and omissions, and earnings losses in 1990.

Source: Annual reports, Datastream and London Share Price Database.

Panel A : Annual Board turnover over 1990-92 partitioned by decile of abnormal share price performance in 1990										
Decile of abnormal returns	Worst 1	2	3	5	9	Best 10	Average	t-test on decile difference		
Annual board turnover of:	-45% to -27%	-27% to -19%	-13% to -5%	12% to 23%	>23%			1 vs. 5	1 vs. 10	
Total board	15.5%	7.0%	7.7%	6.8%	6.0%	6.4%	7.3%	2.122	2.085	
Executive directors	21.1%	10.0%	9.9%	8.1%	8.0%	6.9%	9.2%	2.300	2.388	
Non-executive directors	7.4%	1.7%	4.9%	4.2%	3.6%	4.8%	4.2%	0.758	0.511	
CEOs	28.8%	19.2%	11.4%	11.6%	14.5%	10.4%	13.6%	1.815	1.953	
Chairmen	15.8%	6.9%	5.8%	7.2%	2.9%	5.9%	7.0%	0.862	1.007	
Sample size	24	24	24	23	23	23	23			

Panel B : Board turnover for 1990-1992 categorized by dividends changes and by earnings, respectively during 1989-90						
Annual board turnover of:	Dividend cuts and omissions	Constant or increased dividends	t-test on differences in means			
Total board turnover	11.5%	6.2%	2.640	Earnings losses	6.4%	3.303
Executive directors	14.9%	7.0%	2.776	17.5%	8.0%	2.754
Non-executive directors	6.0%	5.8%	0.077	9.8%	3.7%	1.965
CEOs	25.9%	7.0%	2.795	26.0%	11.2%	1.846
Chairmen	15.9%	8.4%	1.464	19.1%	5.1%	2.302
Sample size (average)	36	181		18	190	

Table 2: Size and category of the largest shareholder in the sample of UK quoted companies, 1988 to 1993

Panel A shows the average largest shareholding, the sum of the largest 5 shareholdings and the sum of all reported large shareholdings over the period 1988 to 1993. Panel B shows the percentage of companies with a large shareholding in five size ranges over the period 1988 to 1993. Panel C reports the size distribution of the largest shareholding by type of shareholder in 240 companies in 1991. All holdings by directors greater than 0.1% are included; shareholdings by outsiders in excess of 5% are reported in 1988 and 1989 and in excess of 3% thereafter. Source: Annual reports.

Panel A : Size of largest shareholding, sum of ownership of largest 5 share stakes and all reported large shareholdings respectively ^(a)				
Year	Largest shareholding	Largest 5 shareholdings ^(b)	All reported large shareholdings ^(b)	
1988	15.3%	29.7%	30.6%	
1989	15.6%	30.7%	31.4%	
1990	16.5%	36.4%	41.0%	
1991	15.6%	36.7%	42.7%	
1992	15.0%	35.2%	40.7%	
1993	13.7%	30.4%	33.5%	

Panel B : Percentage of firms with largest shareholding by size of holding.					
Year	[0-5%]	[5-15%]	[15-25%]	[25-50%]	[50-100%]
1988	23.0%	34.7%	18.4%	20.9%	2.9%
1989	17.0%	39.8%	20.7%	19.1%	3.3%
1990	11.6%	44.2%	21.9%	18.2%	4.1%
1991	10.0%	52.1%	19.6%	14.6%	3.8%
1992	10.6%	56.0%	17.4%	13.5%	2.4%
1993	15.5%	58.1%	13.5%	11.6%	1.3%

Panel C : Proportion of firms with the largest shareholder by type and size of holding for 1991.						
Category of shareholder	Total	[0-5%]	[5-15%]	[15-25%]	[25-50%]	[50-100%]
Institutional investors	52.6%	6.3%	37.9%	6.3%	1.7%	0.4%
Industrial companies	13.0%	0.8%	3.8%	4.2%	3.8%	0.4%
Families, individuals	3.8%	0.0%	1.3%	0.8%	1.7%	0.0%
Insiders (directors)	28.0%	2.1%	8.8%	7.9%	7.1%	2.1%
All ^(c)	97.4%	9.2%	51.8%	19.2%	14.3%	2.9%

Notes to table: (a) Sample sizes were 239, 241, 241, 240, 207 and 205 in each of the six years 1988 to 1993 respectively.

(b) The increase in 1990 reflects the reduction in the disclosure threshold from 5% to 3% in 1989.

(c) The sum is less than 100% because small shareholdings held by the government and real estate companies are not included.

Table 3: Concentration of ownership in worst and best performing companies, partitioned by size of equity market capitalisation

The table reports average ownership concentration over the period 1990 to 1992 for firms with below median and above median market capitalisation in 1990. Ownership concentration is reported for the largest shareholding and the sum of all disclosed shares held by investment institutions, industrial companies, families and individuals and insiders. Board turnover is calculated by dividing the total number of directors who leave the company (excluding those leaving as a result of retirement, death or illness), by total board size. Executive and non-executive director turnover is calculated in the same way, except that the denominator is the number of executive and non-executive members, respectively. CEO and chairman turnover represents the proportion of sample companies where the CEO and the chairman, respectively, leave the company (corrected for natural turnover). Source: Annual reports, London Share Price Database.

	Average for 1990-1992	Size of equity market capitalisation		t-tests on differences in means
		Smallest Below median of market capitalization	Largest Above median of market capitalization	
Worst performing				
Quintile of annual	Largest shareholding (%)	16.2%	11.9%	1.029
Abnormal returns 1990	Sum of institutional investor shares (%)	31.3%	20.5%	3.030
	Sum of companies and family shares (%)	7.3%	5.9%	0.485
	Sum of insiders' shares (%)	13.1%	6.4%	1.753
	Executive board turnover	17.5%	14.7%	0.382
	CEO turnover	28.6%	28.0%	0.030
	Sample size	23	8	
Best performing				
Quintile of annual	Largest shareholding (%)	14.0%	13.0%	0.266
Abnormal returns 1990	Sum of institutional investor shares (%)	29.9%	12.5%	6.627
	Sum of companies and family shares (%)	3.5%	57.6.6%	-1.364
	Sum of insiders' shares (%)	11.3%	9.9%	0.684
	Executive board turnover	6.5%	7.7%	-0.267
	CEO turnover	6.7%	14.8%	-0.847
	Sample size	15	27	

Table 4: Purchases of share blocks for 243 companies for the period 1991 to 1993

Panel A reports purchases of share blocks of between 5 and 10%, 10 and 25%, 25 and 50% and more than 50% over the period 1991 to 1993 by type of purchaser. Panel B reports the number of companies with increases in concentration of more than 5% by new and existing shareholders over the period 1991 to 1993. Source: Annual reports

Panel A: Number of share blocks purchased by new shareholders exceeding 5% for the period 1991 to 1993				
	[5-10%[[10-25%[[25-50%[≥50%
Institutions	168	38	5	0
Companies	24	15	5	0
Families	19	6	2	0
Directors	10	11	0	0
Total	221	70	12	0

Panel B: Number of companies with increases in concentration greater than 5% over the period 1991 to 1993				
Year	[5-10%[[10-25%[[25-50%[≥50%
1991	37	36	4	2
1992	16	25	5	2
1993	14	9	4	2
Total	67	70	13	6

Table 5: Board characteristics and firm performance for 243 companies

Panel A shows board size, the proportion of non-executives on the board, the proportion of companies with combined CEO and Chairman, the age and tenure of the CEO and Chairman averaged annually over the period 1990 to 1992 for 6 deciles of abnormal share price performance in 1988. Panel B reports the proportion of non-executives, combined CEO and chairman, and age of CEO and chairman averaged over two years either side of 1990 for companies in which there was a change in CEO in 1990 and for companies in which there was no change in CEO in 1990.

Panel A: Board characteristics by decile of abnormal share price performance in 1990

	Worst Decile 1 <45%	Decile 2 [-45,-27.9%]	Decile 3 [-27.9,-8.85%]	Decile 5 [-13.12,-5.0%]	Decile 9 [12.0,22.5%]	Best Decile 10 >22.5%	Average
Total number of directors	8.7	8.7	8.4	9.6	10.9	8.4	9.3
Proportion of non-exec. dir.(%)	37.5%	37.3%	38.2%	42.4%	43.5%	40.7%	39.8%
Combined CEO/Chairman	27.1%	43.1%	31.0%	42.0%	34.8%	28.4%	32.9%
CEO age (years)	49.7	53.2	51.5	55.9	54.4	54.5	52.6
CEO tenure (years)	4.1	5.1	5.1	8.2	5.2	5.7	5.3
Chairman age (years)	55.0	60.3	59.8	59.6	60.3	58.5	59.0
Chairman tenure (years)	5.5	5.1	5.9	6.5	7.1	6.1	6.1

Panel B : Board characteristics of companies with and without CEO turnover in 1990 two years prior and two years post 1990

Companies with CEO turnover	Sample size	Two years prior Average 1988-89	Two years after Average 1991-92	t-test of Difference in means
Proportion nonexec. dir.(%)	28	36.4%	41.5%	1.464
Combined CEO/Chairman	28	42.9%	14.3%	-2.449
CEO age (years)	19	51.9	52.6	0.329
Chairman age (years)	19	59.4	59.4	-0.032
Companies without CEO turnover				
	Sample size	Two years prior Average 1988-89	Two years after Average 1991-92	t-test on difference in means
Proportion nonexec. dir.(%)	180	36.2%	40.8%	2.483
Combined CEO/Chairman	180	42.2%	38.9%	-0.643
CEO age (years)	110	51.6	53.1	1.801
Chairman age (years)	121	57.8	59.1	1.419
t-statistics of differences between companies with and without CEO turnover in 1990				
Proportion non-executive directors		0.068	0.305	
Combined CEO/Chairman		0.062	-3.213	
CEO age (years)		0.130	-0.332	
Chairman age (years)		1.144	0.221	

Table 6: The relation between board turnover and leverage for companies in the lowest decile of performance.

This table reports the cumulative turnover in poorly performing companies by quartile of interest coverage and capital leverage. Quartile 1 represents the lowest interest cover and the highest book leverage. Poorly performing companies are defined as in the lowest decile of annual abnormal return in at least one of the years in the period 1988-93. For each of the poorly performing sample companies, the year of poor performance was identified and the cumulative executive board turnover and CEO turnover was calculated over the year of poor performance and two years subsequent. Differences in turnover are then studied based on quartiles of interest coverage and capital leverage. * denotes significant differences in sample means at better than the 10% level, ** significant at better than 5% level and *** significant at better than 1% level.

Source: Own calculations based on annual reports, Datastream, London Business School's Risk Measurement Service.

Leverage	Cumulative Executive Turnover: Interest Cover			Cumulative CEO Turnover: Interest Cover			Cumulative Executive Turnover: Capital Leverage			Cumulative CEO Turnover: Capital Leverage		
	Sample	Mean	Stdev.	Sample	Mean	Stdev.	Sample	Mean	Stdev.	Sample	Mean	Stdev.
Quartile 1 (Highest)	21	67.2%	38.4%	23	69.6%	76.5%	22	56.4%	31.5%	24	79.2%	72.1%
Quartile 2	25	44.6%	27.7%	27	59.3%	63.6%	25	39.5%	27.8%	27	59.3%	63.6%
Quartile 3	34	45.4%	28.2%	34	55.9%	66.0%	35	45.0%	30.9%	36	47.2%	69.6%
Quartile 4 (Lowest)	32	34.3%	27.0%	33	24.2%	50.2%	31	44.7%	34.6%	31	22.6%	42.5%
T-statistics on differences in means												
Quartile 1 Minus		2.25	**		0.51			1.94	*		1.04	
Quartile 2 Minus												
Quartile 1 Minus		3.4	***		2.49	**		1.27			3.41	***
Quartile 4 Minus												

Table 7: Regressions of executive board turnover on governance and performance for the total sample, 1988-1993.

The table records a Tobit regression of annual board turnover on performance, ownership, increases in shareholdings, board composition and takeovers for the period 1988 to 1993. The measures of performance include annual abnormal returns, both with and without a correction for industry abnormal returns, earnings losses (dummy, loss=-1), return on equity corrected for average industry performance, dividend decreases and omissions (dummy, dividend cuts or omissions =-1). Nine blocks of independent variables are reported. The first relates to performance with up to two-year lags. The second relates to concentration of ownership by five classes of investors. The third relates to the interaction of concentration of ownership with prior year performance for the different classes of investors. The fourth relates to increases in concentrations of share holdings. The fifth relates to the interaction between these increases and performance in the prior year. The sixth relates to the structure of the board (separation of CEO-Chairman =1 if there is separation, %nonexec directors is the proportion of non executives on the board), leverage, new equity issues=1 if there is a new issue and takeovers = 1 if the firm is acquired. The seventh relates to the interaction of the board, financial structure and takeover variables with prior year performance. The eighth relates to a dummy variable which equals zero in the years 1988-1989 and 1 in the other years (1990-93) reflecting the reduction in ownership disclosure from 5% to 3% over the period 1989-1990. The ninth relates to size of firm measured by log of total sales. Ownership variables, capital leverage and % of non-executives are all in percentages. * denotes significant at better than the 10% level, ** significant at better than 5% level and *** significant at better than 1% level. Source: own calculations based on annual reports, Datastream, London Business School's Risk Measurement Service

Pooled Tobit regression: dependent variable, executive board turnover

Performance	Ann. Abn. Return	Return			Earnings losses (dummy=-1)	Industry corrected ROE			Dividend decreases/ omissions (dum = -1)		
		Par. Est.	Pr>Chi	Par. Est.	p-value	Par. Est.	Pr>Chi	Par. Est.	p-value	Par. Est.	Pr>Chi
1988-1993											
Independent Variable											
1. Sample size	905			905		938		948		948	
Noncensored	337			337		349		352		352	
Left censored	568			568		589		596		596	
2. Intercept	6.4890	0.16		4.1165	0.36	5.3199	0.23	1.0762	0.81	4.6022	0.33
Performance											
3. Performance T-2	-0.1041	0.00		-0.1057	0.00	-10.2785	0.04	-0.0085	0.53	-10.4561	0.00
4. Performance T-1	0.0928	0.45		0.0536	0.68	-28.3968	0.16	-0.0761	0.31	-5.8946	0.59
5. Performance T	-0.0367	0.18		-0.0278	0.34	-14.3359	0.00	-0.0124	0.20		
Existing shareholders											
6. institutions	-0.0019	0.98		0.0038	0.97	-0.0206	0.82	0.0141	0.87	-0.0532	0.59
7. industrial cos	0.0713	0.51		0.1010	0.33	0.0801	0.45	0.1179	0.27	0.1395	0.21
8. families and indiv.	-0.2040	0.25		-0.2512	0.16	-0.3520	0.06	-0.4198	0.04	-0.2151	0.26
9. executive directors	-0.3576	0.00		-0.3397	0.00	-0.3433	0.00	-0.3671	0.00	-0.4200	0.00
10. non-executive dir.	-0.1022	0.51		-0.0655	0.66	-0.0321	0.82	0.0475	0.74	0.0852	0.57
Interaction terms : cum ownership per category * performance T-1											
11. institutions	-0.0027	0.37		-0.0043	0.19	0.8986	0.03	0.0006	0.80	-0.0470	0.82
12. industrial cos	-0.0016	0.60		-0.0015	0.67	0.2851	0.42	0.0026	0.40	0.1131	0.68
13. families and indiv.	0.0004	0.94		-0.0010	0.85	0.1298	0.84	-0.0191	0.02	0.6004	0.21
14. executive directors	-0.0018	0.55		0.0003	0.92	0.9214	0.02	0.0007	0.75	0.0603	0.79
15. non-executive dir.	-0.0007	0.88		-0.0006	0.89	0.2432	0.65	-0.0017	0.64	0.6443	0.06
Increases in shareholding											

16. institutions	0.1607	0.28	0.1774	0.22	0.2059	0.16	0.1029	0.48	0.2616	0.09
17. industrial cos	0.1111	0.71	0.0650	0.82	-0.0535	0.85	0.3865	0.14	-0.0041	0.99
18. families and indiv.	0.9933	0.01	1.1462	0.00	1.2302	0.00	1.4283	0.00	1.1242	0.00
19. executive directors	1.3076	0.00	1.1639	0.00	1.1922	0.00	1.2396	0.00	1.3886	0.00
20. non-executive dir.	0.5908	0.28	0.6350	0.21	0.6241	0.13	0.4658	0.28	0.5673	0.21
Interaction terms : increases in shareholdings per category * performance T-1										
21. institutions	0.0042	0.29	0.0051	0.23	0.4138	0.44	0.0016	0.67	0.6734	0.07
22. industrial cos	-0.0072	0.35	-0.0126	0.15	-1.4877	0.05	-0.0048	0.49	-0.9204	0.13
23. families and indiv.	-0.0105	0.29	-0.0086	0.45	0.7496	0.66	0.0220	0.14	-0.9359	0.29
24. executive directors	0.0171	0.14	0.0064	0.59	-0.9735	0.33	-0.0031	0.84	0.6782	0.41
25. non-executive dir	-0.0113	0.56	-0.0090	0.64	1.0021	0.66	0.0030	0.69	-0.5732	0.58
Board structure, leverage and takeovers										
26. % nonexec dir.	-0.3185	0.00	-0.3022	0.00	-0.3263	0.00	-0.3006	0.00	-0.3855	0.00
27. Separ. CEO-chair	1.9722	0.41	1.7487	0.45	0.4776	0.84	1.5695	0.50	0.8427	0.73
28. Cap. Lev. (book)	0.0481	0.37	0.0440	0.40	0.0567	0.25	0.1656	0.00	0.0977	0.08
29. New equity issue	9.4970	0.00	9.9686	0.00	4.9607	0.12	6.6196	0.04	7.1537	0.03
30. Merger/Acquis	113.2149	0.00	96.2547	0.00	98.4948	0.00	89.4849	0.00	96.7921	0.00
Interaction board structure, leverage, takeovers and performance at T-1 :										
31. % nonexec dir.	-0.3300	0.16	-0.2614	0.29	2.8602	0.93	0.0152	0.94	-0.3294	0.09
32. Separ. CEO-chair	-0.0024	0.97	-0.0420	0.59	9.9548	0.35	0.0285	0.62	-0.1324	0.98
33. Leverage	-0.0026	0.05	-0.0026	0.06	-0.0574	0.50	0.0011	0.11	0.0151	0.85
34. Equity issues	0.0299	0.75	-0.0320	0.75	-36.2614	0.00	-0.0890	0.19	-2.9039	0.77
35. Merger/Acquis	0.9832	0.17	0.6005	0.17	-6.8505	0.79	-0.1227	0.53	27.4024	0.16
36. Disclosure dum	-6.8984	0.02	-3.6863	0.17	-5.7543	0.03	-4.5981	0.09	-5.1204	0.05
37. Total sales (log)	1.56E-07	5.79E-01	1.42E-07	6.14E-01	4.47E-08	8.72E-01	6.69E-08	8.20E-01	5.76E-09	9.84E-01
p-value of F-test	0.001		0.0001		0.001		0.0001		0.001	
Rsq adj	0.1957		0.1962		0.2119		0.1512		0.1913	

Table 8: Regressions of executive board turnover on governance and performance for the worst performing companies, 1988-1993.

The worst performing companies include those in the original random sample of 243 companies supplemented with a further 50 companies from the worst performing decile. The samples were selected on one of five criteria: annual abnormal returns of less than -50%, earnings losses, dividend cuts and omissions, earnings losses and dividend cuts and omissions and annual abnormal returns of less than 50% together with earnings losses and dividend cuts and omissions. The table reports a Tobit regression of annual board turnover on levels and increases in concentration of ownership by five classes of investors, the structure of the board (separation of CEO-Chairman = 1 if there is separation, %nonexec directors is the proportion of non executives on the board), leverage, new equity issues = 1 if there is a new issue and takeovers = 1 if the firm is acquired. A dummy variable which equals zero in the years 1988-1989 and 1 in the other years (1990-93) reflecting the reduction in ownership disclosure from 5% to 3% over the period 1989-1990 is included as is the size of the firm measured by log of total sales. Ownership variables, capital leverage and % of non-executives are all in percentages. * denotes significant at better than the 10% level, ** significant at better than 5% level and *** significant at better than 1% level.

Source: own calculations based on annual reports, Datastream, London Business School's Risk Measurement Service.

Pooled Tobit regression: dependent variable, executive board turnover

Sample selection criterion	Ann. Abn. Return <-50%		Earnings losses		Dividend cuts and omissions		Earnings losses and dividend cuts and omissions		Abn. Return<-50% and losses and dividend cuts	
	Par. Est.	p-val.	Par. Est.	p-val.	Par. Est.	p-val.	Par. Est.	p-val.	Par. Est.	p-val.
1988-1993										
Independent variable										
Sample size	228		171		248		138		73	
Noncensored data	125		100		131		82		52	
Censored data	103		71		117		56		21	
Intercept	14.2893	0.11	19.6005	0.08	14.9767	0.12	24.6063	0.04	37.1205	0.02
Existing shareholders										
Institutions	0.1201	0.42	0.1422	0.41	0.0405	0.78	0.1210	0.53	0.3211	0.19
Industrial cos	0.1302	0.46	0.0303	0.88	0.0297	0.86	0.0050	0.98	-0.0112	0.96
Families and indiv.	-0.5044	0.21	-0.5132	0.20	-0.7840	0.05	-0.6628	0.17	-0.5507	0.48
Executive directors	-0.2886	0.06	-0.4011	0.02	-0.5000	0.00	-0.5870	0.00	-0.4588	0.08
Non-executive dir.	-0.0714	0.78	-0.1717	0.59	-0.3390	0.19	-0.1778	0.58	0.5312	0.25
Increases in shareholding										
Institutions	-0.5499	0.03	-0.7006	0.01	-0.4166	0.08	-0.6495	0.03	-0.3431	0.30
Industrial cos	0.4391	0.25	0.4388	0.28	0.7214	0.03	0.5559	0.24	0.5183	0.39
Families and indiv.	1.0760	0.08	1.1109	0.06	1.5230	0.01	1.2999	0.06	1.0070	0.33
Executive directors	0.4983	0.06	0.4874	0.11	0.7542	0.01	0.7155	0.02	0.4494	0.16
Non-executive dir.	0.1054	0.87	0.1597	0.82	0.3288	0.69	-1.2174	0.34	-2.6717	0.06
Board structure, leverage and takeovers										
% nonexec dir.	-0.0870	0.54	-0.0625	0.70	-0.1074	0.45	-0.0903	0.61	-0.2975	0.22
Separ. CEO-chair	8.4895	0.09	9.8290	0.09	2.3962	0.63	12.0251	0.06	5.4033	0.51
Cap. Leverage (book)	0.0751	0.03	0.0707	0.04	0.0982	0.00	0.0835	0.02	0.0635	0.07
New equity issue	11.0971	0.12	13.6903	0.08	5.3056	0.49	11.7129	0.20	15.7946	0.18
Mergers/Acquisitions	78.7200	0.00	76.0784	0.00	76.5755	0.00	69.1113	0.00	64.0700	0.00
Disclosure dummy	-5.4827	0.33	-5.3182	0.51	-4.3605	0.48	-6.5226	0.45	-13.9756	0.16
Total sales (log)	1.19E-07	0.85	3.12E-08	0.96	-3.08E-07	0.55	-1.80E-08	0.98	-2.60E-06	0.65
F-test	0.001		0.001		0.001		0.001		0.1	
Rsqr adj	15.4		17.6		20.8		20.9		11.9	