Corporate Responses to Performance Declines: Evidence from the UK

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Abstract

This study documents the operational and financial responses of UK companies that experience a large decline in operating performance between 1992 and 1998. We present evidence that firms sell divisions, withdraw from lines of business, reduce employment and, in some cases, expand in response to poor performance. Whilst we find no evidence that board structure plays an important role in firm responses, external control threats appear to increase the likelihood of downsizing, forced CEO turnover, and rates of director removals and appointments. Finally, sample matching techniques provide limited evidence of increases in operating performance following various corporate restructuring actions.

1 Introduction

The manner in which a company responds to a major decline in operating performance can provide insights into the effectiveness of its organizational and corporate governance structure. In this paper, we document how firms react to a decline in operating performance in a market very similar to the US, but one in which external takeover activity has little or no disciplinary role.

Empirical studies of US firms have shown that external control threats have a significant impact on managerial discipline following periods of poor performance (e.g., Kang and Shivdasani, 1997; and Denis and Kruse, 2000). In addition, both Berger and Ofek (1999) and Denis and Shome (2005) document the role played by external control threats in initiating large-scale corporate refocusing and asset downsizing programmes.

From an international perspective, other attributes of domestic governance are thought to substitute for the disciplinary role of takeovers. For example, Kang and Shivdasani (1997) compare the responses of Japanese firms to their US counterparts and find significant differences in the way that companies react to poor performance. Other factors such as banking, ownership, and trading relationships between firms were found to compensate for this lack of external market discipline.

Companies that experience poor performance can respond in a variety of ways. They may decide to restructure their operations through selling off assets, increasing their industrial focus, and/or reducing expenditures on employment and investment (e.g., John, Lang, and Netter, 1992; Ofek, 1993; Kang and Shivdasani, 1997; and Denis and Kruse, 2000). They may also implement some form of internal board discipline such as removing the incumbent chief executive (see Gilson, 1989; Franks, Mayer and Renneboog, 2001; and Dedman and Lin, 2002).

In this study, we document the responses of UK firms to a major decline in operating performance. The UK is very similar to the US with respect to the governance, regulatory and organizational characteristics of firms. However, it also has a weak external disciplinary takeover market, with other internal and external governance characteristics substituting

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for this role.[1]

With the term, *disciplinary takeover*, we specifically mean the role of corporate takeovers in the removal of a poorly performing top manager. The research of Franks and Mayer (1996) and Franks, Mayer and Renneboog (2001) highlights the impact of takeovers on the removal of top management, but they fail to find any evidence that this occurs in response to poor performance amongst their sample companies. Therefore, while we recognize the important role played by an active takeover market in the UK, current empirical research has failed to document that such takeovers play an important role in the disciplining of *poorly performing* top managers.

The present study contrasts with Denis and Kruse (2000), who examine the responses of US firms to a performance decline during low and high takeover activity periods. They find that, although the incidence of disciplinary events is significantly lower in periods of low takeover activity, there is still a substantial level of performance enhancing corporate restructuring in response to the performance decline. It could be argued, however, that although there were sustained periods of low takeover activity in the US, for managers running firms during this time, the *ex-ante* threat of external control contests was probably still high. An analysis of a country, such as the UK, that has shown little disciplinary effect from takeovers may provide a stronger insight into managerial discipline in this context.

In addition to examining the role of external capital markets in managerial discipline, we also examine the role of internal corporate governance. Following the publication of the Cadbury Report (1992), UK companies have increased their willingness to separate the roles of the CEO and the Chairman of the Board, and to employ non-executive directors (see Dahya, McConnell and Travlos, 2002). At the heart of the proposals contained in this report is a presumption that better governance will be associated with better corporate decision making. While past research by Weisbach (1988), Dahya, McConnell and Travlos (2002), and Helland and Sykuta (2005) highlights an important role for independent company

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[1]Franks, Mayer and Renneboog (2001) suggest that neither UK minority protection laws nor the takeover environment have the same role as they would in the US. Rather, both Black and Coffee (1994) and Franks, Mayer and Renneboog suggest that strong pre-emption rights provisions allow distressed equity issues to perform the disciplinary function of capital markets in the UK.

boards in corporate monitoring, there is little evidence that directly relates to the role of internal governance in corporate restructuring decisions. We aim to provide further research on this issue.

The results presented here indicate that even though the disciplinary role of the external takeover market is not strong in the UK, firms still undertake significant corporate restructuring in response to a major decline in operating performance. Responses include the restructuring of assets, cutting of employment, cutting of dividends, and the replacement of top management. There is also a significant proportion of firms that respond by expanding their asset base.

We find mixed evidence on the role of governance structures in initiating firm responses. Higher leverage, particularly short-term loans, increases the likelihood of a firm reducing its asset base without simultaneously expanding during the year of poor performance. Poorer liquidity also increases the likelihood of asset contraction policies. However, there is no evidence that board structure affects the likelihood of operational or financial responses.

We also present evidence that capital market discipline plays an important role in firm responses. Providing managers with new equity increases the likelihood of expansionary policies during the year of poor performance. However, equity issuance also increases the likelihood of forced CEO replacement and board appointments during the distress year. Furthermore, corporate control threats lead to an increase in the likelihood of downsizing, forced CEO turnover, and rates of director appointments and departures.

We conclude by examining the performance consequences of various operational restructuring actions. Our sample exhibits large increases in raw and industry-adjusted return on assets relative to performance during the distress year of poor performance. However, results using Barber and Lyon's (1996) control firm approach suggest that this can largely be attributed to mean reversion in earnings following the performance shock.

The remainder of this paper is structured as follows. Section 2 describes the data used in this analysis and Section 3 outlines the responses of sample companies to a performance decline. Section 4 examines the impact of corporate governance and Section 5 examines

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changes in various measures of operating performance following company responses. Section 6 concludes our analysis.

2   Sample Data

We construct our sample by tracking non-financial companies listed on the London Stock Exchange (LSE) from 1992 onwards. In order to remain in the sample, firms must survive until at least 1994, after which time they may drop from the sample as they become delisted. This procedure is designed to ensure that observed governance structures are not due to impending firm failure or the threat of takeover. The time frame for our analysis is dictated by the requirement to have company announcements of corporate restructuring available from FT Extel News Reports. The provision of this data in CD format was discontinued at the end of 1998, which necessitates our sample period ending at this point in time.

Our study aims to examine the responses of companies that were originally healthy but suffered a year of poor performance. To achieve this aim, companies are selected on the basis that they have an industry-adjusted return on assets (IROA) that is above the median IROA of all companies listed on the LSE for that year. We define this as the *base year* of strong performance for our sample companies. From these companies, firms with an operating performance decline are taken to be those that then suffer a year of poor performance, defined as IROA in the bottom quartile of all companies listed on the LSE. We label this as the *distress year* of poor performance. Return on assets (ROA) is measured as the ratio of earnings before interest and taxes (EBIT) for the financial year divided by the book value of assets at the beginning of the year. Adjustment for industry is made by deducting the ROA of the median firm in the same FTSE Level 4 industry group from th! e ROA of the sample company.

The sampling procedure is similar to that used by John, Lang and Netter (1992), Ofek (1993), Kang and Shivdasani (1997), and Denis and Kruse (2000). The use of a one-year performance decline allows for the selection of firms that need to respond immediately to a decline in value, and removes the danger of including companies that altered their

governance structures following a period of sustained poor performance. Kang and Shivdasani (1997), and Denis and Kruse (2000) advocate the use of accounting measures of performance over stock price based measures on the grounds that stock prices may already incorporate the relationship between governance mechanisms and the likelihood of firm responses, and therefore distort the sample selection process.

The procedure results in a final sample of 154 companies. In order to verify that the sample selection criteria chose appropriate firms, Table 1 reports various measures of performance between the distress year and the year prior.[2]

Results are reported for three measures of operating performance in Panel A of Table 1. These are ROA, IROA and a control group adjusted return on assets (CROA) based on Barber and Lyon (1996). The CROA measure is calculated by subtracting the ROA of a firm matched on the basis of industry and operating performance in the distress year from the ROA of the sample company. Specifically, companies are selected from the same FTSE Level 4 industry group and must have return on assets within +/- 10% of the sample company. Where no match can be found, firms are matched on the basis of Level 3 industry codes, and if still no match can be found companies are matched only on the basis of distress year ROA.

As can be seen from Table 1, each performance measure significantly declines from the base year to the distress year. This decline is significant in terms of mean and median changes for all three measures of operating performance.

[Insert Table 1 about here]

As a further test, Panel B of Table 1 reports buy-and-hold abnormal stock returns (BHARs) for sample companies. BHARs are calculated by matching each sample firm with a control firm, which provides a measure of expected performance against which abnormal stock returns can be measured. This matching procedure is based on selecting a control firm at the end of the distress year on the basis of its market value of equity being within

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[2]In untabulated testing, we examine the distribution of sample firms across our overall period of study. We find no apparent clustering between various firm years. The number of firms in the sample for each base year is as follows: 1992 - 28, 1993 - 26, 1994 - 29, 1995 - 24, 1996 - 23, and 1997 - 24.

+/- 30% of the sample company and having the market-to-book ratio that is closest to that of the sample firm from within this group. Barber and Lyon (1997) find that this procedure produces test-statistics that are well specified.

The results presented in Panel B indicate that sample firms underperform relative to their control firm by a mean (median) of 27% (21%) during the year in which the company experiences the decline in operating performance. However, we find no evidence of abnormal performance during our base year.

As a final test of our selection procedure, Panel C reports managerial turnover rates for the sample companies during the base year and the distress year. Warner, Watts and Wruck (1988), Franks, Mayer and Renneboog (2001), and Dedman and Lin (2002) amongst others find that CEO turnover is inversely related to company performance. The results in Panel C verify these findings where total CEO turnover, forced CEO turnover and total board turnover rates experience a significant increase from the base year to the distress year.

Table 2 presents information on the financial and governance characteristics of the firms used in this sample at the end of the base year. The mean (median) firm has assets valued at £393million (£47.6million), indicating that this sample includes a larger number of smaller firms in comparison to past research by John, Lang and Netter (1992), Kang and Shivdasani (1997), and Denis and Kruse (2000).

[Insert Table 2 about here]

The mean (median) ownership of the CEO is 7.72% (0.83%), and the average board has 6.84 members. Of this, outside directors comprise an average of 26.9% of the overall board.[3] We also define an indicator variable, *Split*, which is set equal to one where the company separates the roles of the CEO and the Chairman of the Board during the base year, and zero otherwise. 68.2% of our sample companies had separated these roles during the base year.

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[3]Outside directors are defined as non-executive directors without any financial or personal ties to company management.

The mean (median) debt-to-assets and working capital ratios for our sample companies are 0.202 (0.178) and 1.516 (1.380) respectively, suggesting that liquidity and leverage are not a problem for our sample companies during the base year. Although unreported in the table, there is a statistically significant increase (decrease) in the median debt-to-assets (interest coverage ratio) from the base year to the distress year, both p-values equal to 0.00. While there is also a decrease in the working capital ratio, this is marginally insignificant. Thus, it is apparent that the financial health of our sample companies has declined from the base year of above average performance to the distress year of poor performance. Finally, the average Herfindahl Index of revenue concentration value is 0.779, but the median firm operates in a single 3-digit SIC industry.

Data on managerial ownership and company board structure are collected from company annual reports and other financial data are collected from Datastream.

3 Firm Responses to a Decline in Operating Performance

This section details the disciplinary responses of management to the onset of poor performance. Responses are classified into a series of headings based on the nature of the response. Company announcements are collected for the year of the performance decline only.

(1) Asset expansion policies: These include the full acquisition of another company, partial acquisitions, setting up of new joint ventures, announcements of increased investment expenditures, increasing output or the expansion of existing production facilities.

FT Extel News Reports provide details of acquisition, partial acquisition and joint venture announcements under individual news headings. Information collected on internal expansion is taken from statements about the firm's activities, assets, periodical results and AGM, which are again obtained from FT Extel News Reports.

(2) Operational contraction policies: This category includes announcements of asset

sales, spin-offs and divisional divestitures. Information on plant closures, withdrawal from a line of business or some other unspecified cost cutting programme is collected from AGM statements, company results announcements and announcements relating to corporate activities and assets. We classify all of these events under the general heading of asset contraction policies.

Employment cuts are defined where there is no other announcement of an asset contraction and there is a 5% decline in the number of people employed by the company from the base year to the distress year, as reported by Datastream. Ofek (1993) uses a similar procedure to classify companies as having cut their employment.[4] We define employment cuts and asset contract! ion policies under the general heading of operational contraction policies.

(3) Financial policies: Data on dividend cuts from the base year to the distress year are given by the ordinary dividend per share payout taken from Datastream. Announcements of debt issuance, the restructuring of existing debt, rights issues and placings are collected from FT Extel News Reports and the capital history section of FT Extel Company Information Cards.

The mechanics of rights issues in the UK are similar to those that US corporations infrequently employ, where rights are initially distributed on a pro-rata basis to the company's existing shareholders. Any rights not taken up are sold to new shareholders and the proceeds are returned to the company's existing shareholders. A placing in the UK is defined by Slovin, Sushka and Lai (2000) as a fixed-price offering in which an underwriter acquires shares directly from an issuing firm, and then sells the shares to outside investors, primarily institutions, without a commission. In this sense, placings by UK companies are similar to firm commitment offerings in the US.

(4) External control activity: Information on the extent of external control activity is

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[4]Our definition of employment cuts is somewhat arbitrary. However, from our observations of FT Extel it is apparent that companies rarely report information on large-scale employee redundancies, necessitating the approach that we have taken. It is likely that our definition underestimates the true extent of employee redundancies, given that we exclude employment cuts that occur through the disposal of company assets. In addition, we will automatically exclude cases where companies have sold assets, whilst at the same time cutting jobs in other operating divisions of the firm during the distress year.

taken from FT Extel News Reports. No company is subject to a complete takeover during the sample period given the selection criteria that the company must have reported earnings during the distress year.

A block purchase is defined where an individual or another company acquires a disclosable stake of at least 3% of the ordinary shares of the sample firm. These purchases are reported only for non-financial institutions given their dominance of UK equity markets and the high frequency with which these occur. Negotiations over a takeover bid are reported directly from company announcements that the firm is engaged in negotiations, which may or may not lead to a formal offer for the company's shares.

(5) Changes in managerial control: Information is collected on changes in director control by recording changes in the company's top officer during the sample period.[5] This paper uses the treatment that is describ! ed by Huson, Parrino and Starks (2001) to define CEO turnover as forced.

Specifically, if an article indicates that the CEO was 'fired', 'forced out', left following 'policy disagreements', or some other equivalent, then turnover is defined as forced. For the remaining announcements, succession is classified as forced where the CEO is under 60 and the first article reporting the announcement (1) does not report the reason for departure as involving death, poor health or the acceptance of another position (elsewhere or within the firm) or (2) reports that the CEO is retiring within six months of the announcement.

Information on announcements of CEO changes is collected from a variety of sources including FT Extel News Reports, The Financial Times, LexisNexis and McCarthy's News Information Service. In further testing, information is reported on the number of director appointments and departures from the board during the distress year. This information is collected from company annual reports.

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

3.1 *Discussion of company responses*

Table 3 reports the nature of the firms' responses to the onset of poor performance. Approximately 40% expand their asset base, with full acquisitions being the most common response in this category.

External expansion dominates other policies that expand the scope of current products and operations. The extent of expansionary activities differs materially from that reported by Kang and Shivdasani (1997) for large Japanese companies. The expansion of current products and production facilities was the most frequent form of expansion for Japanese firms, while only 9.8% of their sample companies expanded though acquisitions. In addition, 76.1% of their total sample expanded their asset base as compared to 55.3% of US companies, and the 40.3% reported in our own sample.

[Insert Table 3 about here]

Asset contraction policies are the most common response by UK companies to a performance shock. While the majority of these contractions take place through asset sales, a significant proportion are caused by employment cuts and unspecified cost cutting programmes. The rate of asset sales, 29.9%, is comparable to the distress year frequency of 29% reported by Denis and Kruse (2000) between 1985 and 1992 for US companies. It is however, much higher than the 4.3% of Japanese companies that engage in asset sales over the year of, and the year following, a performance shock between 1986 and 1990, as reported by Kang and Shivdasani (1997).

We find that 13.6% of sample companies are classified as cutting their employment, but the true extent of employment cuts is likely to be much larger, given that the definition used here excludes employment cuts amongst firms that also engaged in other forms of asset contraction policies. Almost half of the firms in our sample respond to poor performance by cutting their ordinary dividend from the base year to the distress year. This level is similar to that reported by Ofek (1993) in his sample of companies experiencing a performance shock based on stock prices.

Surprisingly, only a small fraction of our sample companies experience an external control threat. Negotiations occur in seven sample firms, while a non-financial block purchase is experienced by only a single firm. The threat of takeover activity is comparable to Kang and Shivdasani (1997) in their sample of US companies, although block purchases are far less common in the UK. This may be due to the higher costs placed on partial control by the legal system (see Franks, Mayer and Renneboog, 2001).

Finally, it is apparent that our sample firms experience an increase in CEO turnover activity, particularly the possibility that the top executive is forced from their job. Overall, the evidence presented above indicates that our UK companies respond to a decline in operating performance by restructuring their operations, replacing management and cutting dividends.

4   Impact of Corporate Governance

Several studies have documented an important role for corporate governance structures in managerial replacement decisions (see Weisbach, 1988; Gilson, 1989; Martin and McConnell, 1991; Franks, Mayer and Renneboog, 2001; and Dahya, McConnell and Travlos, 2002). There is also evidence of an important role for external corporate governance in initiating corporate restructuring. This is either in the form of external lenders (e.g., Ofek, 1993; Kang and Shivdasani, 1997; and Denis and Shome, 2005) and/or corporate control threats (e.g., Bethel, Liebeskind and Opler, 1998; Berger and Ofek, 1999; and Safieddine and Titman, 1999). However, to date no study has examined the direct relationship between company board structures and corporate restructuring actions. As such, we aim to investigate whether such a relationship potentially exists.

Table 4 presents the results of logit regressions relating the incidence of a restructuring event to a set of governance and financial characteristics. In each case the dependant variable is set equal to one where the company undertakes a specific response during the distress year, and zero otherwise.

Each of the independent variables has been examined in previous corporate governance and restructuring literature. We include a size variable defined as $Ln(Assets)$ because, in general, it is expected that larger firms with greater assets are more likely to have the funds to expand during the year of the performance decline, but at the same time have more assets to dispose. We also include the change in ROA from the base year to the distress year because firms with the largest decline in performance are more likely to replace top management and to downsize in response to a performance decline (see Warner, Watts and Wruck, 1988; Kang and Shivdasani, 1997; and Huson, Parrino and Starks, 2001).

To the extent that managerial preferences are for firm size maximization, as in Jensen's (1986) free cash flow model, we expect a negative relationship between the likelihood of both managerial replacement and operational downsizing, and CEO ownership. We may also expect to observe a positive relationship between institutional monitoring, as proxied by financial blockholdings, and corporate actions. However, Short and Keasey (1999) and Franks, Mayer and Renneboog (2001) argue that UK institutions rarely become involved in the day-to-day operational actions of UK companies, and as such, there may be no relationship that exists between these variables.

We proxy for board structure using the size of the board, the incidence of splitting the roles of the CEO and the Chairman, and the fraction of outside directors serving on the company's board. Weisbach (1988), Yermack (1996), Franks, Mayer and Renneboog (2001), and Dahya, McConnell and Travlos (2002) all report evidence on the relationship between company board structure and top management turnover.

Our proxies for external capital market discipline include dummy variables for placings of new equity, rights offerings and takeover approaches. Easterbrook (1984) proposes that the security issuance process may bring monitoring from external capital markets where management must justify the need for new funding. In addition, Franks, Mayer and Renneboog (2001) find evidence that equity offerings increase the likelihood of performance related top management turnover. Finally, Denis and Serrano (1996), Berger and Ofek (1999), and Denis and Shome (2005) each present evidence on the important role played

by external takeover threats in top management turnover and corporate restructuring.

Finally, we proxy for leverage and liquidity using a number of different measures. Our main proxy is the ratio of total debt-to-total assets. However, in further testing we separately examine the effects of short and long-term debt-to-assets, and also the role of liquidity constraints, as measured by the working capital and interest coverage ratios. Both Ofek (1993) and Denis and Shome (2005) find evidence of the importance of leverage in pressuring companies to respond to poor performance by reducing their asset base.

The results in Table 4 suggest that larger firms are more likely to both expand and contract their assets in response to a performance shock. Firms that contract their assets and operations without also expanding tend to be smaller companies. This will arise because larger companies simply have more assets to dispose of, and greater access to funds for purposes of expansion.

[Insert Table 4 about here]

Higher leverage reduces the likelihood of a company making acquisitions, and increases the likelihood of the company contracting its asset base without also expanding during the distress year. This is consistent with Jensen (1989) who argues that higher debt forces firms to respond more quickly and efficiently to poor performance, due to the increased likelihood of default. Ofek (1993) finds that higher leverage increases the likelihood of asset contractions. While the findings in Table 4 are consistent with this view, it appears that the main benefit from leverage is to reduce management's ability to expand during periods of poor performance.

Model (4) reports evidence on the role of capital market discipline. External control threats reduce the willingness of companies to respond to poor performance by expanding, whilst placings of new equity increase this likelihood. Two competing views concern the role of equity issuance in company responses to poor performance. Firstly, the disciplinary effect of capital markets on companies forced to raise funding should result in actions that are value maximizing (see Easterbrook, 1984; and Franks, Mayer and Renneboog, 2001). However, raising new finance also increases the amount of cash at managers' disposal and

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will both increase the likelihood of expansion and reduce the need for companies to raise cash by selling assets. The results in Table 4 suggest that, for the UK at least, the second effect dominates.

Thus far we have treated CEO turnover as a response to declines in operating performance. However, Berger and Ofek (1999) and Denis and Shome (2005) examine CEO turnover as a rationale for corporate refocusing and asset downsizing actions respectively. As such, it is possible that CEO turnover is a cause of restructuring activity following a decline in operating performance.

We examine this issue by including overall and forced CEO turnover during both the base year and the distress year as additional explanatory variables in Table 4 in further (unreported) testing. We find in regression Models (5) and (6) that CEO turnover during the distress year enters positively and significantly at the 5% level, but that no other measure of CEO turnover has a significant impact on the likelihood of corporate restructuring actions. In addition, our remaining variables are unaffected by the inclusion of this additional explanatory variable.

4.1 *Debt maturity, liquidity and operational responses*

Our results suggest that corporate leverage reduces the likelihood of companies expanding their asset base in response to a decline in performance. However, banking relationships and borrowings that require frequent renewal may potentially play a more prevelant disciplinary role on company management. For example, Kang and Shivdasani (1997) and Franks, Mayer and Renneboog (2001) respectively report evidence on the important role played by banking relationships in Japanese corporate restructuring, and of the impact of poor interest coverage in managerial replacement decisions amongst UK companies. As such, it is expected that shorter term loans and poor liquidity are likely to have a greater impact on corporate restructuring than longer maturity loans.

To examine the roles of leverage and firm liquidity, debt is segregated between long-term loans with a maturity of five years and above, and shorter-term debt, which has a maturity

of less than five years.[6] Liquidity is proxied by the working capital ratio of total current assets divided by total current liabilities in the odd numbered models, and by the interest coverage ratio of EBIT divided by total interest payments in the even numbered models. Results of this analysis are presented in Table 5.

Consistent with Table 4, there is no evidence that leverage of any maturity influences firm decisions to contract their asset base. However, short-term loans do reduce the likelihood of companies expanding their assets following a performance shock, and also increase the likelihood of asset contractions without expansion.

[Insert Table 5 about here]

Model (1) of Table 5 suggests that poor liquidity in the base year increases the likelihood of companies implementing an asset contraction policy, while Model (6) presents marginal evidence that poor interest coverage increases the likelihood of the company contracting its assets without expanding at the same time. Somewhat surprisingly there is also evidence in Model (6) that higher long-term leverage reduces the probability that companies will reduce their asset base without also expanding during the distress year.

Overall, the evidence in Table 5 suggests that liquidity constraints and the need to meet short-term loans are a significant factor in the operational responses of companies to a performance shock. This is in contrast to Ofek (1993) who finds that, for US firms, both short and long-term leverage ratios are positively related to the incidence of corporate restructuring actions.

4.2   *Dividend cuts and managerial turnover*

While companies may respond operationally by expanding and contracting their asset base and laying off company employees, they may also respond financially by cutting their dividend or managerially, by replacing members of the board of directors. Table 6 examines the extent to which this is the case in our sample of UK firms. We estimate logit models

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[6]This definition is based on Datastream's classification of long-term loans with a maturity of greater than 5 years.

where the dependant variable is set equal to one where the company undertakes the specific response during the distress year, and zero otherwise.

Model (1) presents the results of a logit regression estimating the role of governance and financial characteristics in forcing companies to cut their dividend payment. Surprisingly, none of the variables are statistically significant at conventional levels. This result contrasts with Ofek (1993) who finds that in the US, higher levels of leverage induce firms to cut their dividend following one year of poor share price performance.

Model (2) relates to the likelihood of CEO turnover. Of the governance variables considered, higher leverage reduces the probability of CEO turnover, as does previously having split the positions of the CEO and the Chairman.[7] CEO turnover is further classified on the basis of whether or not it was forced and the results are presented in Model (3). Consistent with Warner, Watts and Wruck (1988), and Huson, Parrino and Starks (2001), companies that experience the largest decline in performance are those most likely to experience forced turnover. We also find that capital markets play a role in forced CEO turnover, where rights issues and, on a marginal level, takeover threats increase the likelihood of forced managemen! t changes.

[Insert Table 6 about here]

Finally, Models (4) and (5) present the results of Maximum Likelihood Poisson regressions based on the number of directors appointed to and departing from the board respectively during the distress year. The results indicate that external control threats lead to higher rates of director appointments and departures.

Director departures are more common in companies with higher CEO ownership, larger boards and split capacity of the CEO and the Chairman. We expect that larger boards will have more directors to shed following the onset of poor performance, whilst higher CEO ownership may provide the incumbent CEO with a stronger financial incentive to restructure a failing board following the performance shock. Splitting the top officer position may

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[7]This is consistent with the fact that companies were adopting the proposals enshrined in the Cadbury Report (1992) during the sample period, since one of the report's primary recommendations was that the roles of CEO and Chairman should be separate.

reduce the power of the CEO, as argued by the Cadbury Report (1992), and increase the likelihood of the company restructuring the board to preserve shareholder wealth following the performance shock.

Finally, we find that director appointments are more likely in larger firms and amongst companies that issue equity through placings. There is also evidence that higher institutional ownership reduces the likelihood of the company making director appointments during the distress year. In each of these regressions we find no evidence that leverage impacts top management replacement decisions.

5 Performance Implications of Restructuring

Thus far we have implicitly assumed that operational contractions are a preferred response to the inefficiency or shifting investment opportunity set that has led to a performance decline. This rationale is also assumed in the analysis of Ofek (1993). Examining post-restructuring changes in operating performance provides a means of assessing the extent to which corporate restructuring actions have indeed created value for company shareholders.

Changes in operating performance are measured for one, two and three years relative to the distress year of poor performance. Following Barber and Lyon (1996), the discussion of results focuses on median changes in performance with significance tests based on the Wilcoxon signed rank test.

Panels A and B of Table 7 report results for changes in ROA and IROA respectively, following performance declines. Our evidence indicates that firms respond quickly to the performance decline and experience a significant increase in operating performance. The only group that does not experience a subsequent increase in performance is the group that cuts employment without also announcing other asset contraction policies. The largest increase in performance occurs in sample companies that have contracted their asset base without also expanding, suggesting that downsizing is indeed an efficient response to the onset of poor performance. These results are consistent with Kang and Shivdasani (1997) for a sample of restructuring Japanese companies following a large decline in operating

performance.

However, Barber and Lyon (1996) argue that examining performance changes after adjusting for industry effects suffers from bias due to mean reversion in earnings. This is likely to be of particular concern in this examination where companies that continue to perform poorly will eventually be driven out of business while only those that are able to reverse performance are likely to survive.

To examine this problem, Panels C and D use Barber and Lyon (1996) sample matching techniques to examine changes in performance. Panel C is based on matching by industry and distress year performance. Essentially we compare the performance of firms that experience a large decline in profitability against companies that have performed at least below the median firm in the base year and has ROA within +/- 10% of that of the sample firm in the distress year.

Unfortunately, even this approach may be flawed because it does not consider the operational responses of matched firms when measuring the CROA of sample firms. Therefore, Panel D reports an alternative method of computing CROA. In this case, sample firms that undertake a specific operational response are matched against sample companies that did not respond in this way. Due to the small sample size companies are matched only on the basis of distress year performance, therefore ignoring industry and the year in which the performance decline occurred.

The results presented in Panels C and D are of a much smaller magnitude than those in A and B. Overall, sample firms experience a marginally significant increase in CROA of 1.9% over one and two years following the performance shock. Companies that contract their asset base experience significant increases in performance over one and three years depending on the control matching method used. There is also some evidence that companies that contract their assets without expanding experience significant increases in CROA over one year and those which layoff employees experience a further decline in CROA over two years.

Overall, our evidence is generally supportive of the hypothesis that companies which downsize their operations in response to a decline in operating performance are those which realize the greatest subsequent improvements in operating performance. However, it is apparent that the extent of any performance improvements are much less pronounced than previously documented when the effect of mean reversion in earnings has been controlled for.

6   Conclusions

This study has provided evidence on how UK firms respond operationally, financially and managerially to a substantial decline in operating performance. We present evidence that firms are more likely to experience disciplinary turnover of their CEO and replace board members relative to the pre-shock base year. Companies also respond by cutting their dividend and reducing both their asset base and employment levels during the distress year. However, they also respond by expanding their operations. The extent of restructuring activities mirrors the responses of US companies examined by John, Lang and Netter (1992), Ofek (1993), Kang and Shivdasani (1997), and Denis and Kruse (2000), who document that contraction policies and dividend cuts occur with more regularity than expansionary policies.

We also examine the impact of corporate governance on the likelihood of corporate restructuring. Leverage reduces the likelihood of expansionary policies and increases the likelihood of the firm contracting its asset base without simultaneously expanding during the distress year in a manner consistent with that predicted by Jensen (1989). However, unlike US firms, leverage appears to play no role in initiating dividend cuts or managerial replacement decisions, as found by Ofek (1993) and Gilson (1989) respectively. Further analysis indicates that it is only short-term leverage that affects restructuring decisions, with liquidity needs also playing some role in asset contraction policies. Again, this contrasts with the US where leverage of all maturities increases the likelihood of firm responses (see Ofek, 1993).

Contrary to the recommendations put forward in the Cadbury Report (1992), board independence does not play a role in company responses to poor performance. This would suggest that the role of outside directors may not lie in operational decision making, but rather in their role in facilitating management turnover during 'crisis situations', as argued by Hermalin and Weisbach (2003).

The most significant role in firm responses to poor performance appears to be played by capital markets. The threat of a takeover increases the likelihood of forced CEO turnover, director appointments, director removals, and also reduces the likelihood of firms responding by expanding their operations. Rights issues also increase the likelihood of forced CEO turnover. However, while issues of new equity lead to managerial turnover, they also provide managers with more funds at their disposal, and therefore, increase the likelihood of expansionary policies.

Finally, this paper examines the operating performance changes following corporate restructuring actions. Only firms that cut their employment numbers do not experience a significant increase in raw and industry adjusted ROA, where the largest gains accrue to companies that reduce their asset base without also expanding. However, examination of Barber and Lyon (1996) control firm adjusted ROA suggests that these previously documented performance changes may be due to mean reversion in earnings. There is little evidence of significant increases in control group adjusted performance following various forms of corporate restructuring, although what evidence there is indicates that asset downsizing policies are the most likely to generate performance improvements.

The research presented here fills some important gaps in the empirical literature on how firms respond to poor performance. In a market that is generally held to be similar to the US, but without the same level of disciplinary takeover activity, it appears that UK companies respond to a decline in operating performance in a manner consistent with that documented in previous studies of US corporations.

This study has also provided further evidence on the important role played by capital markets in corporate responses to poor performance. The threat of a takeover, rather than

a takeover itself, induces firms to respond by changing management and adopting policies that are generally regarded as being operationally efficient.

We thus conclude that although some differences exist between the US, which has a strong disciplinary takeover market, and the UK, which does not, essentially firm responses to performance declines are the same. This would suggest that governance systems in the US and UK are inherently efficient and flexible enough to ensure that the principle of shareholder wealth maximization is maintained.

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Table 1
Performance characteristics and managerial turnover for sample firms

The table documents changes in performance for 154 non-financial UK companies that had industry adjusted return on assets (IROA) in the bottom quartile of all listed companies on the London Stock Exchange (LSE) following a year in which their IROA was above the median firm listed on the LSE between 1992 and 1998. The year of above median performance (year -1) is defined as the base year and the year of poor performance (year 0) is labelled the distress year. Return on assets (ROA) is measured as earnings before interest and taxes (EBIT) for the financial year divided by the book value of assets at the beginning of the period. IROA is calculated by deducting the ROA of the median firm in the sample company's FTSE Level 4 industry group from the ROA of the sample firm. Control group adjusted ROA (CROA) is measured as the ROA of the sample firm minus the ROA of a firm matched on the basis of industry and ROA in the distress year (0). Buy-and-hold abnormal returns (BHARs) are measured as the daily buy-and-hold returns on the sample firm during its financial year minus the daily buy-and-hold returns over the corresponding period of a firm matched on the basis of market value of equity and market-to-book ratio at the end of the distress year 0. CEO turnover is defined as any change in the company's top executive. Forced turnover is defined where an article indicates that the CEO was 'fired', 'forced out', left following 'policy disagreements', or some other equivalent. In the remaining announcements, succession is classified as forced where the CEO is under 60 and the first article reporting the announcement (1) does not report the reason for departure as involving death, poor health or the acceptance of another position (elsewhere or within the firm) or (2) reports that the CEO is retiring but does not announce this until at least six months prior to the change. Board turnover is calculated as the number of directors leaving the board during the financial year divided by the number of directors serving on the board at the previous year-end. For BHARs, a student's t-statistic and the p-value of a Wilcoxon signed rank test are reported in parenthesis. [*] indicates significance at the 1% level.

	Year –1		Year 0			
	Mean	Median	Mean	Median	P-value for t-test of Means	P-Value for Wilcoxon signed rank test
Panel A: Operating Performance						
Return on Assets (ROA)	0.186	0.141	-0.038	-0.007	**0.00**	**0.00**
Industry-Adjusted Return on Assets (IROA)	0.084	0.033	-0.142	-0.104	**0.00**	**0.00**
Control Group Adjusted Return on Assets (CROA)	0.194	0.128	0.000	-0.000	**0.00**	**0.00**
Panel B: Buy-and-hold Abnormal Stock Returns (BHAR)						
BHAR	0.056 (0.89)	-0.009 (0.56)	**-0.270 (-3.98)**[*]	**-0.210 (0.00)**		
Panel C: Managerial Turnover Rate						
CEO Turnover Rate	0.110		0.208		**0.02**	
Forced CEO Turnover Rate	0.026		0.084		**0.03**	
Board Turnover Rate	0.134		0.169		**0.09**	

Table 2
Sample firm characteristics

The table reports the characteristics for a sample of 154 non-financial UK companies that experienced a large decline in industry-adjusted return on assets (IROA) from a base year of good performance to a distress year of poor performance between 1992 and 1998. All variables are measured at the end of the base year. Financial data is taken from *Datastream* and data on ownership and board structure is collected from company annual reports. The working capital ratio is defined as total current assets divided by total current liabilities. The revenue based Herfindahl Index is calculated from revenue data for 3-digit SIC lines of business. Financial blockholdings are the ownership of all financial companies with a disclosable interest of greater than 3% of the firm's issued share capital as reported in the firm's annual report. Board size is the total number of directors serving on the company's board. Outside directors are defined as non-executive directors without any financial or personal ties to company management. Such ties are defined where the non-executive is related to any of the company's executive directors, has a tenure exceeding ten years with the company, was formerly an executive director, or has any disclosable business relationships with the company. These include financial contracts disclosed in the company's accounts, such as related party transactions and associations with the company's advisors. Grey directors are non-executives who fail to meet the criteria for being classified as outsiders. *Split* is an indicator variable that takes the value of one where the company had separated the roles of the Chief Executive Officer (CEO) and the company Chairman. CEO and board ownership are the fractional equity ownership of the individual defined as the Chief Executive Officer (CEO) and the board of directors respectively.

	Mean	Median	Maximum	Minimum	St. Dev.
Book Value of Assets (£000's)	392,669	47,631	21,482,000	707	1,821,199
Total Debt / Assets	0.202	0.178	2.155	0	0.215
EBIT / Interest Expense	47.179	7.318	3466.000	0.851	301.673
Working Capital Ratio	1.516	1.38	5.96	0.16	0.779
Revenue Based Herfindahl Index	0.779	1	1	0.218	0.265
Number of Employees	4890	965	219,000	10	19,098
CEO Ownership (%)	7.721	0.825	68.024	0.000	14.699
Board Ownership (%)	14.750	5.320	75.130	0.002	19.658
Financial Blockholdings (%)	29.505	29.550	67.600	0.000	17.320
Board Size	6.844	6.000	16.000	2.000	2.434
Fraction Grey	0.136	0.111	0.615	0.000	0.149
Fraction Outside	0.269	0.286	0.667	0.000	0.168
Split	0.682	n.a.	n.a.	n.a.	n.a.

Table 3
Company responses to decline in performance

The table documents the operational, financial, and managerial responses, and the corporate control targeting for a sample of 154 non-financial UK companies that experienced a large decline in operating performance between 1992 and 1998. Details of company responses are taken from official announcements made by the firm to the London Stock Exchange (LSE) and reported through *FT Extel News Reports*. Actions are not mutually exclusive, and therefore, companies can report several actions within the one general classification grouping.

Reported Action	Number of Firms	Percentage of Total Sample
Asset Expansion Policies		
Full Acquisition	50	32.46
Partial Acquisition	7	4.55
Joint Venture	13	8.44
Increase Investment Expenditures	1	0.65
Increase Output / Expand Production Facilities	4	2.60
Total	62	40.26
Asset Contraction Policies		
Asset Sale / Spinoff / Divestiture	46	29.87
Plant Closure	2	1.30
Withdrawal from Line of Business	11	7.14
Unspecified Cost Cutting Programme	25	16.23
Cut in Employment	21	13.64
Total	101	65.58
Financial Policies		
Cut Dividend	70	45.45
Debt Restructuring / Re-negotiation	3	1.95
Issue Debt	7	4.55
Rights Issue	6	3.90
Placing	10	6.49
Total	84	54.55
External Control Activity		
Non-Financial Block Purchase	1	0.65
Negotiations	7	4.55
Unsuccessful Offer	0	0
Total	7	4.55
Change in Managerial Control		
CEO Turnover	32	20.78
Forced CEO Turnover	13	8.44
Total	32	20.78

Table 4
Change in firm size and employment following operational responses to the performance decline

The table documents changes in the book value of assets and employment for a sample of 154 non-financial UK companies that experienced a substantial decline in industry-adjusted return on assets (IROA) between 1992 and 1998. Year –1 is the base year in which the company experiences IROA greater than the median firm listed on the London Stock Exchange (LSE) and year 0 is the distress year where IROA is in the bottom quartile of all listed companies. Announcements are taken during the distress year in which the company experiences a decline in IROA. Financial data is taken from *Datastream* and announcements of firm policies are taken from official announcements made by the company to the LSE and reported by *FT Extel News Reports*. The table reports p-values for a t-test of sample means and a Wilcoxon signed rank test for median changes in parenthesis. The numbers in brackets represent the number of firms for which data is available for measuring changes from year –1 to [0 / +1] respectively.

	Year –1 to 0		Year –1 to +1	
	Mean	Median	Mean	Median
Panel A: Change in Book Value of Assets (£000's)				
All Firms [154 / 143]	-2,997 (0.99)	**-3,486 (0.01)**	5,700 (0.98)	**-1,015 (0.05)**
Asset Contraction Policy [80 / 73]	-13,208 (0.97)	**-3,589 (0.02)**	-630 (0.99)	-2,118 (0.24)
No Asset Contraction Policy [74 / 70]	8,042 (0.75)	-504 (0.26)	12,303 (0.67)	**-693 (0.07)**
Layoffs [21 / 20]	-598 (0.99)	-2,019 (0.12)	-3,104 (0.95)	**-1,274 (0.02)**
No Layoffs [133 / 123]	-3,375 (0.99)	**-1,370 (0.03)**	7,132 (0.98)	-698 (0.15)
Expansion Policy [62 / 60]	2,523 (0.99)	1,056 (0.57)	34,169 (0.95)	1,144 (0.49)
No Expansion Policy [92 / 83]	-6,717 (0.83)	**-2,459 (0.00)**	-14,879 (0.64)	**-2,118 (0.00)**
Asset Contraction with Expansion [36 / 35]	-12,361 (0.99)	-1,974 (0.70)	29,065 (0.97)	4,313 (0.63)
Asset Contraction with no Expansion [44 / 38]	-13,901 (0.82)	**-4,968 (0.00)**	-27,982 (0.67)	**-4,980 (0.01)**
Panel B: Change in Employment				
All Firms [154 / 143]	-200 (0.92)	1 (0.90)	-449 (0.83)	**-29 (0.02)**
Asset Contraction Policy [80 / 73]	-386 (0.92)	-17 (0.38)	-855 (0.83)	**-107 (0.02)**
No Asset Contraction Policy [74 / 70]	1.4 (0.99)	5.5 (0.12)	-24.5 (0.90)	-8.5 (0.62)
Layoffs [21 / 20]	-184 (0.69)	**-48 (0.00)**	-220 (0.65)	**-74 (0.01)**
No Layoffs [133 / 123]	-202 (0.93)	**9 (0.10)**	-486 (0.84)	-21 (0.11)
Expansion Policy [62 / 60]	-507 (0.92)	**41 (0.02)**	-855 (0.86)	-21 (0.60)
No Expansion Policy [92 / 83]	7.3 (0.99)	**-12 (0.03)**	-155 (0.82)	**-36 (0.00)**
Asset Contraction with Expansion [36 / 35]	-907 (0.91)	29 (0.16)	-1,497 (0.86)	-107 (0.51)
Asset Contraction with no Expansion [44 / 38]	40 (0.98)	**-40 (0.01)**	-265 (0.85)	**-129 (0.01)**

Table 5
Logit regressions of corporate governance and the likelihood of operational responses to the performance decline

The table presents the results of logit regressions estimating the likelihood of corporate restructuring activities during the year of a large decline in performance for a sample of 154 non-financial UK companies between 1992 and 1998. Return on assets (ROA) is measured as earnings before interest and taxes (EBIT) divided by the book value of assets at the beginning of the year. Change in IROA is measured as IROA in the distress year minus IROA in the base year. All financial and governance variables are measured at the end of the base year. Financial data is taken from *Datastream*. Ownership and board structure data is taken from company annual reports. Details of equity issues are taken from the capital history section of *FT Extel Company Information Cards*. Details of external control threats and company responses to the decline in performance are taken from official announcements made by the company to the London Stock Exchange (LSE) and reported by *FT Extel News Reports*. Some values are omitted due to a perfect correlation between the incidence or non-incidence of a firm response to the performance shock and the reported variable. P-values for two-tailed tests of significance are reported in parenthesis.

	Asset Contraction Policy	Employee Layoffs	Any Operational Contraction	Asset Expansion Policy	Asset Contraction without Expansion	Operational Contraction without Expansion
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	**-5.275319**	2.220917	-2.829914	**-7.367510**	1.273796	**2.934512**
	(0.01)	(0.40)	(0.15)	**(0.00)**	(0.45)	**(0.07)**
Ln(Assets)	**0.405413**	-0.259210	**0.321786**	**0.703175**	**-0.278586**	**-0.324702**
	(0.02)	(0.24)	**(0.08)**	**(0.00)**	**(0.07)**	**(0.03)**
Change in IROA	-0.130571	3.136217	0.181320	**-1.647966**	0.884107	1.213231
	(0.85)	(0.16)	(0.80)	**(0.02)**	(0.23)	(0.12)
Debt to Assets	0.868349	-2.787593	-0.000874	**-2.667465**	**1.683199**	0.744740
	(0.31)	(0.35)	(0.99)	**(0.03)**	**(0.04)**	(0.36)
CEO Ownership	**-0.042815**	**0.042950**	-0.006087	-0.013774	-0.058050	-0.014052
	(0.09)	**(0.05)**	(0.73)	(0.57)	(0.15)	(0.38)
Financial Blockholdings	0.014800	0.027060	**0.022450**	0.006226	0.002945	0.008662
	(0.23)	(0.15)	**(0.08)**	(0.63)	(0.80)	(0.44)

Table 5 continued

Board Size	0.060194	-0.141169	-0.023024	-0.115396	0.157456	0.068850
	(0.53)	(0.31)	(0.82)	(0.24)	(0.11)	(0.49)
Fraction Outsiders	1.828122	**-4.332316**	-0.192189	0.773026	0.221512	-0.883123
	(0.16)	**(0.02)**	(0.87)	(0.55)	(0.88)	(0.45)
Split	-0.543844	0.381323	-0.433670	-0.444001	-0.275187	-0.055359
	(0.24)	(0.57)	(0.37)	(0.42)	(0.53)	(0.90)
Placing	-0.309864		-0.705444	**2.963251**	-0.960713	-1.290961
	(0.65)		(0.31)	**(0.01)**	(0.25)	(0.14)
Rights Issue	1.086950		0.206018	1.219538	0.224941	-0.437101
	(0.40)		(0.84)	(0.17)	(0.81)	(0.63)
External Control Threat	0.402704		-0.294653	**-2.550080**	1.064318	0.529876
	(0.67)		(0.78)	**(0.08)**	(0.21)	(0.57)
Number of Observations	153	153	153	153	153	153
Log Likelihood	-84.57452	-46.97366	-91.17997	-82.60829	-84.55619	-96.99649
Probability	**0.00**	**0.00**	0.25	**0.00**	0.21	0.45

Table 6
Logit regressions of corporate governance, firm liquidity and the likelihood of operational responses to the performance decline

The table presents the results of logit regressions estimating the likelihood of corporate restructuring activities during the year of a large decline in performance for a sample of 154 non-financial UK companies between 1992 and 1998. Return on assets (ROA) is measured as earnings before interest and taxes (EBIT) divided by the book value of assets at the beginning of the year. Change in IROA is measured as IROA in the distress year minus IROA in the base year. All financial and governance variables are measured at the end of the base year. Financial data is taken from *Datastream*. Ownership and board structure data is taken from company annual reports. Details of equity issues are taken from the capital history section of *FT Extel Company Information Cards*. Details of external control threats and company responses to the decline in performance are taken from official announcements made by the company to the London Stock Exchange (LSE) and reported by *FT Extel News Reports*. P-values for two-tailed tests of significance are reported in parenthesis.

	Asset Contraction Policy		Asset Expansion Policy		Asset Contraction without Expansion		Operational Contraction without Expansion	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	**-4.637265**	**-7.264211**	**-8.452225**	**-8.028863**	1.648831	0.294992	2.073791	2.178701
	(0.04)	**(0.00)**	**(0.00)**	**(0.00)**	(0.42)	(0.87)	(0.27)	(0.23)
Ln(Assets)	**0.493080**	**0.627537**	**0.753830**	**0.766016**	-0.201772	-0.141592	-0.240045	-0.194430
	(0.01)	**(0.00)**	**(0.00)**	**(0.00)**	(0.23)	(0.43)	(0.14)	(0.25)
Change in IROA	-0.370030	-0.340797	**-1.873857**	**-1.996788**	1.018755	**1.388799**	**1.599401**	**1.725785**
	(0.58)	(0.69)	**(0.01)**	**(0.03)**	(0.21)	**(0.09)**	**(0.09)**	**(0.10)**
CEO Ownership	**-0.039836**	-0.020406	**-0.043718**	**-0.043990**	-0.056730	-0.035890	-0.009975	-0.012722
	(0.10)	(0.37)	**(0.07)**	**(0.07)**	(0.14)	(0.28)	(0.57)	(0.47)
Financial Blockholdings	0.012703	0.018037	0.008821	0.011585	0.000394	0.003130	0.007459	0.005090
	(0.35)	(0.20)	(0.49)	(0.40)	(0.97)	(0.80)	(0.51)	(0.67)
Board Size	0.008455	0.021288	-0.114185	-0.144848	0.132029	0.176582	0.078795	0.049358
	(0.94)	(0.85)	(0.29)	(0.18)	(0.18)	(0.17)	(0.42)	(0.62)
Fraction Outsiders	2.123029	2.198904	1.359212	1.315995	0.346743	0.513190	-0.623405	-0.989393
	(0.14)	(0.12)	(0.37)	(0.39)	(0.81)	(0.74)	(0.61)	(0.42)

Table 6 continued

Split	-0.593595	-0.588738	-0.544874	-0.349383	-0.334261	-0.150285	-0.109389	-0.251661
	(0.23)	(0.24)	(0.28)	(0.49)	(0.44)	(0.74)	(0.81)	(0.57)
Placing	-0.451827	-0.491683	**3.369720**	**3.138939**	-1.025463	-1.299809	-1.296934	-1.363985
	(0.52)	(0.48)	**(0.00)**	**(0.00)**	(0.20)	(0.13)	(0.13)	(0.12)
Rights Issue	0.892810	0.821454	**1.802469**	1.530951	0.066023	-0.035026	-0.492483	-0.481584
	(0.53)	(0.58)	**(0.05)**	(0.11)	(0.95)	(0.98)	(0.62)	(0.62)
External	0.010651	1.332203	**-2.908102**	-2.690927	0.914739	**2.500837**	0.654726	1.079671
Control Threat	(0.99)	(0.19)	**(0.06)**	(0.15)	(0.31)	**(0.01)**	(0.51)	(0.34)
Short-term	0.302779	0.373406	**-16.09009**	**-16.84662**	**2.299799**	**2.268934**	1.833582	1.974730
Loans to Assets	(0.77)	(0.73)	**(0.00)**	**(0.00)**	**(0.07)**	**(0.04)**	(0.17)	(0.13)
Long-term	0.435892	-3.693511	7.990106	8.442997	-6.197549	**-10.37703**	-8.643242	-9.068001
Loans to Assets	(0.91)	(0.37)	(0.19)	(0.16)	(0.25)	**(0.08)**	(0.13)	(0.14)
Working	**-0.729124**		0.356448		-0.426010		0.073453	
Capital Ratio	**(0.06)**		(0.19)		(0.21)		(0.77)	
Interest		-0.015928		0.000202		**-0.043944**		9.10E-06
Coverage Ratio		(0.53)		(0.67)		**(0.09)**		(0.99)
Number of Observations	149	145	149	145	149	145	149	145
Log Likelihood	-78.89385	-75.56912	-67.89013	-65.76348	-80.48024	-75.66152	-92.95775	-89.59086
Probability	**0.00**	**0.00**	**0.00**	**0.00**	0.15	**0.04**	0.36	0.30

Table 7
Corporate governance and the likelihood of dividend cuts and managerial control changes following performance declines

The table presents the results for regressions estimating the likelihood of dividend cuts and managerial turnover during the year of a large decline in performance for a sample of 154 non-financial UK companies between 1992 and 1998. The regressions in Models (1) through (3) are based on logit estimations while Models (4) and (5) present results from Maximum Likelihood Poisson estimators. Return on assets (ROA) is measured as earnings before interest and taxes (EBIT) divided by the book value of assets at the beginning of the year. Change in IROA is measured as IROA in the distress year minus IROA in the base year. All financial and governance variables are measured at the end of the base year. Financial data is taken from *Datastream*. Ownership and board structure data is taken from company annual reports. Details of equity issues are taken from the capital history section of *FT Extel Company Information Cards*. Details of external control threats and company responses to the decline in performance are taken from official announcements made by the company to the London Stock Exchange (LSE) and reported by *FT Extel News Reports*. P-values for two-tailed tests of significance are reported in parenthesis.

	Dividend Cut	CEO Turnover	Forced CEO Turnover	Director Appointments	Director Removals
	(1)	(2)	(3)	(4)	(5)
Intercept	1.654843	-3.516521	-5.073877	-1.123802	**-2.127335**
	(0.31)	(0.13)	(0.17)	(0.24)	**(0.03)**
Ln(Assets)	-0.221647	0.232378	0.273222	**0.189906**	0.049076
	(0.15)	(0.25)	(0.39)	**(0.02)**	(0.58)
Change in IROA	1.009848	-3.898974	**-2.972400**	0.097887	-0.268029
	(0.17)	(0.11)	**(0.04)**	(0.67)	(0.25)
Debt to Assets	0.390470	**-2.439880**	-1.136255	0.171502	0.134920
	(0.65)	**(0.06)**	(0.29)	(0.63)	(0.70)
CEO Ownership	0.002142	-0.002251	-0.034336	0.001308	**0.014324**
	(0.90)	(0.91)	(0.32)	(0.88)	**(0.06)**
Financial Blockholdings	-0.001421	-0.017234	0.001591	**-0.012205**	0.002626
	(0.90)	(0.20)	(0.94)	**(0.06)**	(0.71)

Table 7 continued

Board Size	0.048529	0.083616	-0.065360	-0.057284	**0.172374**
	(0.60)	(0.44)	(0.71)	(0.22)	**(0.00)**
Fraction Outsiders	-0.360681	-1.184657	-0.661619	-0.909998	-0.737062
	(0.76)	(0.37)	(0.74)	(0.11)	(0.23)
Split	0.741480	**-1.019926**	-0.724017	-0.078058	**0.410154**
	(0.12)	**(0.06)**	(0.38)	(0.70)	**(0.02)**
Placing	-0.271278	-0.919935	-0.180931	**0.347128**	0.159687
	(0.73)	(0.52)	(0.92)	**(0.07)**	(0.65)
Rights Issue	-0.719928	1.968975	**2.952070**	0.841976	0.813113
	(0.44)	(0.13)	**(0.03)**	(0.13)	(0.15)
External Control	1.909807	0.768769	**1.881891**	**0.515778**	**0.645878**
Threat	(0.16)	(0.41)	**(0.06)**	**(0.06)**	**(0.09)**
Number of Observations	153	153	153	153	153
Log Likelihood	-100.8260	-67.46513	-35.16775	-205.8212	-201.5175
Probability	0.59	**0.02**	**0.07**	**0.00**	**0.00**

Table 8
Changes in operating performance following operational responses to the performance decline

The table reports the changes in operating performance relative to a distress year (0) for a sample of 154 non-financial UK companies experiencing a large decline in industry-adjusted return on assets (IROA) between 1992 and 1998. ROA is measured as earnings before interest and taxes (EBIT) for the financial year divided by beginning of the year book value of assets. IROA is calculated by deducting the ROA of the median firm in the same FTSE Level 4 industry group from the ROA of the sample company. Control Group Adjusted Return on Assets (CROA) is calculated by deducting the ROA of a control firm matched on industry and ROA in the year of the performance decline (0) from that of the sample firm. Alternative CROA is based on matching sample companies who initiated a specific response to the decline in performance against a sample company that did not implement this response during the distress year. All financial data are taken from *Datastream*. Information on the operational responses of sample companies to the decline in performance are taken from official announcements made by the company to the London Stock Exchange (LSE) and reported through *FT Extel News Reports*. Sample sizes, and p-values for a two-tailed t-test of means and a Wilcoxon signed rank test are reported in parentheses below mean (median) changes in measures of ROA.

	Δ 0 to +1	Δ 0 to +2	Δ 0 to +3
Panel A: Change in ROA			
All Firms	**0.074 (0.069)** (143, **0.00, 0.00**)	**0.064 (0.073)** (132, **0.04, 0.00**)	**0.071 (0.084)** (120, **0.00, 0.00**)
Asset Contraction	**0.081 (0.074)** (73, **0.01, 0.00**)	**0.091 (0.074)** (71, **0.00, 0.00**)	**0.086 (0.091)** (62, **0.01, 0.00**)
Employee Layoffs	0.026 (0.048) (20, 0.62, 0.12)	-0.106 (0.035) (20, 0.55, 0.31)	0.005 (0.038) (19, 0.93, 0.32)
Expansion Policy	**0.072 (0.062)** (60, **0.00, 0.00**)	**0.061 (0.056)** (56, **0.04, 0.00**)	**0.050 (0.063)** (50, **0.03, 0.00**)
Asset Contraction without Expansion	**0.079 (0.097)** (38, **0.09, 0.00**)	**0.128 (0.078)** (36, **0.00, 0.00**)	**0.098 (0.127)** (33, **0.07, 0.01**)
Operational Contraction without Expansion	**0.063 (0.089)** (53, **0.10, 0.00**)	0.050 (**0.076**) (51, 0.48, **0.00**)	**0.080 (0.112)** (47, **0.06, 0.00**)
Panel B: Change in IROA			
All Firms	**0.068 (0.060)** (143, **0.00, 0.00**)	**0.062 (0.064)** (132, **0.04, 0.00**)	**0.081 (0.086)** (120, **0.00, 0.00**)
Asset Contraction	**0.074 (0.063)** (73, **0.01, 0.00**)	**0.086 (0.058)** (71, **0.00, 0.00**)	**0.091 (0.078)** (62, **0.00, 0.00**)
Employee Layoffs	0.025 (0.055) (20, 0.64, 0.12)	-0.103 (0.047) (20, 0.56, 0.29)	0.019 (0.084) (19, 0.75, 0.21)
Expansion Policy	**0.065 (0.053)** (60, **0.00, 0.00**)	**0.060 (0.056)** (56, **0.04, 0.00**)	**0.062 (0.076)** (50, **0.01, 0.00**)
Asset Contraction without Expansion	0.072 (**0.080**) (38, 0.13, **0.00**)	**0.120 (0.065)** (36, **0.00, 0.00**)	**0.102 (0.115)** (33, **0.06, 0.00**)
Operational Contraction without Expansion	0.058 (**0.077**) (53, 0.14, **0.00**)	0.046 (**0.065**) (51, 0.52, **0.00**)	**0.088 (0.115)** (47, **0.04, 0.00**)

Table 8 continued

Panel C: Change in CROA

All Firms	0.029 **(0.019)** (143, 0.16, **0.01**)	0.012 **(0.019)** (132, 0.74, **0.09**)	0.038 (0.027) (120, 0.24, 0.15)
Asset Contraction	0.042 **(0.017)** (73, 0.18, **0.06**)	0.028 (0.013) (71, 0.39, 0.30)	0.008 (0.010) (62, 0.81, 0.42)
Employee Layoffs	-0.053 (0.004) (20, 0.32, 0.78)	-0.167 (0.048) (20, 0.36, 0.90)	-0.065 (-0.013) (19, 0.32, 0.98)
Expansion Policy	0.045 (0.009) (60, 0.12, 0.20)	0.033 (0.002) (56, 0.37, 0.42)	0.075 (0.010) (50, 0.19, 0.43)
Asset Contraction without Expansion	0.058 **(0.037)** (38, 0.27, **0.09**)	0.055 (0.041) (36, 0.25, 0.18)	-0.006 (-0.007) (33, 0.91, 0.82)
Operational Contraction without Expansion	0.026 (0.035) (53, 0.54, 0.11)	-0.021 (0.046) (51, 0.79, 0.19)	-0.015 (-0.007) (47, 0.75, 0.68)

Panel D: Change in Alternative CROA

All Firms	0.029 **(0.019)** (143, 0.16, **0.01**)	0.012 **(0.019)** (132, 0.74, **0.09**)	0.038 (0.027) (120, 0.24, 0.15)
Asset Contraction	0.009 (-0.001) (73, 0.77, 0.94)	0.112 (0.016) (70, 0.11, 0.18)	0.049 **(0.058)** (62, 0.13, **0.02**)
Employee Layoffs	-0.079 (-0.045) (20, 0.21, 0.44)	-0.237 **(-0.059)** (20, 0.15, **0.08**)	-0.088 (-0.001) (19, 0.18, 0.48)
Expansion Policy	-0.011 (0.004) (56, 0.76, 0.50)	-0.026 (-0.017) (51, 0.48, 0.64)	-0.024 (0.002) (46, 0.46, 0.53)
Asset Contraction without Expansion	-0.021 (-0.009) (38, 0.64, 0.78)	0.015 (0.014) (36, 0.58, 0.68)	0.032 (0.051) (33, 0.54, 0.15)
Operational Contraction without Expansion	-0.033 (-0.002) (53, 0.39, 0.71)	-0.066 (0.016) (51, 0.36, 0.92)	0.016 (0.036) (47, 0.71, 0.26)