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# FINANCIAL DISTRESS AND CORPORATE GOVERNANCE: AN EMPIRICAL ANALYSIS

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***Abstract*** *Relationships between corporate governance characteristics and financial distress status are examined for a sample of Canadian firms. Results from logit regression analysis of 46 financially distressed and 46 healthy firms lead us to conclude that the board of director's composition explains financial distress, beyond an exclusive reliance on financial indicators. Additionally, supplemental results indicate that outside directors' ownership and directorship affect the likelihood of financial distress. Furthermore, splitting financially distressed firms based on chief executive officer change as a proxy of turnaround strategies provides useful insights on corporate governance characteristics in financial distress.*

***Keywords*** *Financial management, Directors, Top management, Corporate governance, Audit committees*

## Introduction

Capital markets, users of financial statements and the accounting profession have recently expressed some concerns on firms' failure and the weaknesses in firms' corporate governance structures. During the late 1980s and the 1990s, with corporate bankruptcies reaching epidemic proportions (Boritz, 1991; Altman, 1993; Gales and Kesner, 1994), criticism relative to weaknesses of corporate governance structures has been commensurate. Board of directors' characteristics was the primary target of corporate governance reform criticism (Geneen, 1984; Kesner *et al.*, 1986; Lorsch, 1989; Levitt, 1998). In response to this wave, the Ontario Exchange Commission (in 1994), the Quebec Exchange Commission and the Canadian Institute of Chartered Accountants (CICA) (one year later) produced some guidelines for improved corporate governance in Canada.

Notwithstanding these guidelines, a growing body of literature has specifically questioned the effectiveness of firms' monitoring by boards of directors in preventing bankruptcy (Gilson, 1990; Hambrick and d'Aveni, 1992; Gales and Kesner, 1994; Daily and Dalton, 1994a, 1994b; Daily, 1995, 1996; Levitt, 1998). Hambrick and d'Aveni (1992) find a decrease in the number of outside directors in the years preceding a bankruptcy filing. Daily and Dalton (1994a) find that firms with a lower proportion of independent directors and with the chief executive officer (CEO) acting as chair of the board of directors are more likely to go bankrupt.

Expanding our knowledge of the impact of the composition and structure of boards of directors on financial distress is important, due to the influence that directors may exert over firms' outcomes. Existing studies provide valuable insights on the association between board characteristics and the incidence of bankruptcy. However, they are limited by an exclusive focus on bankruptcy as a general category of failure. This study completes previous research in two ways. First, it focuses on financially distressed firms that have not reached the stage of bankruptcy. Second, it assesses the relationship between the financial distress status and some corporate governance characteristics of Canadian firms such as their board composition, board size, ratio of outsiders to total members of the board, CEO-board chair duality, and audit committee composition.

This paper continues as follows: the next section presents a review of the theory underlying the financial distress process and the board structure, and establishes several hypotheses related to governance characteristics

and financial distress. Then, after outlining the methodology, an analysis of data and a discussion of results are presented. Finally, the study concludes with remarks on implications of the paper for researchers and practitioners.

## Theory and hypotheses development

### Financial distress process

According to Baldwin and Scott (1983, p. 505), "when a firm's business deteriorates to the point where it cannot meet its financial obligations, the firm is said to have entered the state of financial distress. The first signals of distress are usually violations of debt covenants coupled with the omission or reduction of dividends". Whitaker (1999) defines entry into financial distress as the first year in which cash flows are less than current maturities' long-term debt. As long as cash flow exceeds current debt obligations, the firm has enough funds to pay its creditors. The key factor in identifying firms in financial distress is their inability to meet contractual debt obligations. However, financial distress symptoms are not limited to firms that default on their debt obligations. Substantial financial distress effects are incurred well prior to default[1]. Wruck (1990) argues that firms enter financial distress as the result of economic distress, declines in their performance and poor management. Boritz (1991) depicts a process of a financial distress that begins with an incubation period characterized by a set of bad economic conditions and poor management who commit costly mistakes. For the purpose of this study, firms that have experienced long-run negative earnings per share are considered financially distressed.

> "The inability of insiders to monitor the CEO and their lack of involvement in strategic decision making may be extremely harmful to the firm during a period of financial distress."

### Financial distress and board structure

The theoretical linkage between corporate governance and financial distress originates from organizational theory literature. In declining or crisis periods, organizations often engage in a "mechanistic shift", from which centralization of authority is the most widely recognized outcome (Staw *et al.*, 1981). Daily and Dalton (1994a) argue that centralized authority has particular applications to the relationship between governance structure and bankruptcy. The issue of centralization of authority is applicable to the agency problem[2]. Judge and Zeithaml (1992) find that high insider representation on boards is associated with lower board involvement in strategic decision making. Insiders are not in a position to monitor the CEO, and the domination of the board of directors by top management can lead to collusion and transfer of stockholder wealth (Fama, 1980). The inability of insiders to monitor the CEO and their lack of involvement in strategic decision making may be extremely harmful to the firm during a period of financial distress. Baysinger and Butler's (1985) results indicate that the degree of financial health is affected by board composition because firms with above average performance have higher percentages of outside directors than firms with below average performance. Outside directors are believed to provide several advantages, as compared to their insider counterparts.

It may be characteristic of firms in persistent financial distress to have weak corporate governance, as measured by board composition and structure. In fact, Hambrick and d'Aveni (1992) report that dominant CEOs are more likely to be associated with firm bankruptcy. Pfeffer (1972) finds that the percentage of insider directors is higher on boards of declining firms. Expanding this rationale to financial distress, one can assume that financially distressed firms would more likely have boards of directors containing fewer outsiders. Therefore, an insider-dominated board may be a potential explanation of distress. Based on this theoretical framework between financial distress and board of directors composition and structure, it is hypothesized that:

*H1*: The proportion of outside directors is negatively associated with financial distress status.

*H2*: Financially distressed firms have a greater incidence of joint CEO-board chair structure than healthy firms.

While it is reasonable to believe that financially distressed firms may present a weakness in their corporate governance structure, it is plausible that these firms are, typically, in need of more outside representatives on their boards in order to provide access to valuable resources and information[3]. Directors' counselling and resource roles may be particularly important for financially distressed firms. In addition to the increased need for continued support from external constituencies, distressed firms may benefit from the expertise and advice of directors with no employment ties to the firm. Gilson (1990) finds that a firm's financial distress is associated with board composition

changes; boards shift to higher numbers of directors who are creditor blockholders subsequent to the onset of financial distress.

Turnaround literature adds a valuable insight to this perspective (Pearce and Robins, 1993). In fact, turnaround strategies typically include the removal of current management (Argenti, 1986a; 1986b); it is viewed as the source of the firm's problems and therefore has little credibility to solve them (Whetten, 1987). Turnover of CEOs for poorly performing firms is higher for boards with a large proportion of outside directors (Weisbach, 1988), and is more likely for boards whose chairs are not combining CEO responsibilities (Morck *et al.*, 1989). In other words, when insiders dominate their boards of directors, financially distressed firms are less likely to experience a change in CEO. One would expect a significant difference between the board composition and structure of financially distressed firms that have experienced a change in CEO (CEO turnover) and those that have not. CEO turnover is viewed here as an indicator of the effectiveness of financially distressed firms' boards of directors. Based on this reasoning, it is hypothesized that:

*H3*: The proportion of outside directors is positively associated with the status of financially distressed firms that have experienced a CEO change.

*H4*: Financially distressed firms that have experienced a CEO change have a lower incidence of the joint CEO-board chair structure.

## Methodology

### Sample selection and data collection

The sample used in this study consists of 92 Canadian publicly traded firms, 46 of which are in financial distress because they have experienced negative earnings per share during the last five years (1994-1998). Each of the financially distressed firms is matched with a healthy firm, creating a choice-based sample of 46 distressed and 46 healthy Canadian firms. Only publicly traded firms are considered because the study uses information available in proxy and financial statements filed with the Ontario Securities Commission and the Quebec Securities Commission. The Stock Guide Database was screened to identify 75 firms presenting negative earnings per share in each of the five years from 1994 to 1998[4]. A total of 14 American firms are excluded because of the focus on the Canadian context. Five firms that belong to the financial institutions industry are excluded due to particularities in their financial reporting. Four financially distressed firms that experienced CEO change either in 1994 or 1995 are omitted, as our research covers the period 1996 to 1998. A final sample of 46 financially distressed firms with complete data is used to test the research hypotheses, after excluding six financially distressed firms for which matching healthy firms cannot be identified. Each of the 46 financially distressed firms is then matched with a healthy one based on the following requirements:

(1) *Condition*. Healthy firms are defined as those presenting positive earnings per share in each of the five years from 1994 to 1998.

(2) *Firm size and industry*. Healthy firms in the same industry as distressed firms are selected if they are similar in size. Firms are considered to be similar in size if their total assets are within the range of distressed firms' mean total assets ± one standard deviation.

(3) *Time period*. A healthy firm identified in steps (1) and (2) is included in the final sample if its proxy and financial statement data are available over the time period covered by this study (1996-1998).

### Test specification

The study uses dichotomous dependent variables. Given the nature of these dependent variables and a mix of both dichotomous and interval level independent variables, a pooled cross-sectional logit regression analysis is used (see Stone and Rasp, 1991). Maddada (1991) states that logit regression is the appropriate procedure where disproportionate sampling from two populations (i.e. the financially distressed and healthy populations) is used. The following logit pooled cross-sectional regression models are used to test the hypothesized relations between the board of director composition and structure and the dependent variables:

$$\begin{aligned}\text{DISTRESS}_{it} = {} & \alpha_0 + \alpha_1 \%\text{OUTSIDE}_{it} + \alpha_2 \text{BOSS}_{it} \\ & + \alpha_3 \text{AUDITCOM}_{it} + \alpha_4 \text{BLOCKHLD}_{it} \\ & + \beta_1 \text{LIQUIDITY}_{it} + \beta_2 \text{LEVERAGE}_{it} + \varepsilon_{it} \end{aligned} \quad (1)$$

where i = firm 1 through 1992, and t = year 1996 through 1998. For a total of a pooled cross-sectional sample of 276 firm-year observations.

$$\begin{aligned}\text{CEOCHANGE}_{it} = {} & \alpha_0 + \alpha_1 \%\text{OUTSIDE}_{it} \\ & + \alpha_2 \text{BOSS}_{it} + \alpha_3 \text{AUDITCOM}_{it} + \alpha_4 \text{BLOCKHLD}_{it} \\ & + \beta_1 \text{LIQUIDITY}_{it} + \beta_2 \text{LEVERAGE}_{it} + \varepsilon_{it} \end{aligned} \quad (2)$$

where i = firm 1 through 46, and t = year 1996 through 1998. For a total of a pooled cross-sectional sample of 138 firm-year observations.

### Dependent variables

Two dependent variables are used in these analyses. The first (used in equation (1)) is the financial distress status of the firm. Financially distressed firms are coded 1 and healthy firms are coded 0. The other focus of this study is corporate governance characteristics related to CEO turnover in financially distressed firms. The second

dependent variable (used in equation (2)) is 1 for those distressed firms that have experienced a CEO turnover in the period of our study and 0 for those without CEO turnover. Equation (1) is used to test hypotheses *H1* and *H2*, and equation (2) to test hypotheses *H3* and *H4*.

**Independent variables**

Variables of interest in this study are %OUTSIDE and BOSS. %OUTSIDE represents the percentage of the board members who are considered outside directors. The definition of outside directors used in this study is consistent with some prior research[5]. It treats all directors who are not currently employed by the firm as outsiders, and treats all current employees as insiders. In subsequent analysis, the definition is aligned with that of the Toronto Stock Exchange (TSE), where independent directors are those with no affiliation to the firm. Following Weisbach (1988), Vicknair *et al.* (1993) and Beasly (1996), "grey directors" are also considered. Grey directors are outsiders who are a potential source of violation of board independence because of their affiliation with management. While they are not current employees of the firm, as relatives of managers, consultants and suppliers to the firm, outside attorneys, retired executives, etc., their independence may be impaired. BOSS is a dummy variable with a value of 1 if the chair of the board is also the CEO or president, and a value of 0 otherwise.

Additionally, four control variables related to other governance mechanisms and to financial indicators are used. The audit committee is a valuable monitoring system that has been the subject of particular scrutiny (Levitt, 1998). The role that the audit committee plays in monitoring firms' financial status makes this group particularly well positioned to protect shareholders' interests. Since financial decline can occur as early as ten years prior to the point at which a firm files bankruptcy (Hambrick and d'Aveni, 1988), a critical aspect of monitoring firms' financial reports, particularly in the financially distressed firm, is to detect causes of decline. Directors who maintain independence from firm management are more likely to uncover signs of decline and will be more aggressive in confronting problems (Daily, 1996). The definition of the audit committee composition used is consistent with TSE requirements of an audit committee composed only of outside directors. AUDITCOM is a dummy variable with a value of 1 if the audit committee is totally composed of outsiders, and a value of 0 otherwise. BLOCKHLD is the cumulative percentage of common shares held by shareholders with more than 20 percent of shares and who are not affiliated with management. Blocks held by family trusts, company employee stock ownership plans and retirement plans are excluded because top management generally controls their voting rights. Finally, liquidity and leverage are used to control for financial indicators. LIQUIDITY is the ratio of current assets to current liabilities, and LEVERAGE is the ratio of long-term debts, including their current portion of total assets. In the next section, we present and discuss our results.

**Results**

Descriptive statistics and results in mean difference tests on variables are presented in Table I. These results indicate that healthy firms have a high proportion of outsiders on their boards (73.7 percent for healthy firms versus 64.7 percent for financially distressed firms). There is no difference in CEO-board chair duality between these two groups. For the other corporate governance variables, we notice that healthy firms have

**Table I — Firm characteristics, means, standard deviations, medians and t-statistics for the variables**

| Variables | *N* | Mean | Standard deviation | Median | Test of difference in means[a] |
|---|---|---|---|---|---|
| **Earnings per share** | | | | | |
| Distressed | 138 | –0.732 | 2.080 | 0.660 | –3.562 |
| Healthy | 138 | 0.709 | 1.773 | 0.280 | *(0.000)*** |
| Total | 276 | –0.011 | 1.750 | 0.004 | |
| **Liquidity** | | | | | |
| Distressed | 138 | 1.420 | 2.080 | 0.660 | –3.562 |
| Healthy | 138 | 2.996 | 4.758 | 1.765 | *(0.000)*** |
| Total | 276 | 2.208 | 3.749 | 1.215 | |
| **Leverage** | | | | | |
| Distressed | 138 | 0.564 | 1.841 | 0.060 | 2.253 |
| Healthy | 138 | 0.208 | 0.243 | 0.135 | *(0.012)** |
| Total | 276 | 0.386 | 1.322 | 0.100 | |
| **%OUTSIDE** | | | | | |
| Distressed | 138 | 0.647 | 0.176 | 0.667 | –4.890 |
| Healthy | 138 | 0.737 | 0.126 | 0.750 | *(0.000)*** |
| Total | 276 | 0.692 | 0.159 | 0.714 | |
| **BOSS** | | | | | |
| Distressed | 138 | 0.590 | 0.490 | 1.000 | 0.485 |
| Healthy | 138 | 0.560 | 0.500 | 1.000 | *(0.314)* |
| Total | 276 | 0.570 | 0.500 | 1.000 | |
| **AUDITCOM** | | | | | |
| Distressed | 138 | 0.550 | 0.500 | 1.000 | –1.597 |
| Healthy | 138 | 0.640 | 0.480 | 1.000 | *(0.056)** |
| Total | 276 | 0.600 | 0.490 | 1.000 | |
| **BLOCKHLD** | | | | | |
| Distressed | 138 | 0.330 | 0.470 | 0.000 | –5.018 |
| Healthy | 138 | 0.620 | 0.490 | 1.000 | *(0.000)*** |
| Total | 276 | 0.480 | 0.500 | 0.000 | |
| **CEOCHANGE** | | | | | |
| Distressed | 138 | 0.520 | 0.500 | 1.000 | 6.493 |
| Healthy | 138 | 0.170 | 0.380 | 0.000 | *(0.000)*** |
| Total | 276 | 0.350 | 0.480 | 0.000 | |

**Notes:**

[a] Paired *t*-tests for difference in means

* Statistically significant at less than 0.05 level based on one-sided tests

** Statistically significant at less than 0.01 level based on one-sided tests

more audit committees composed totally of outsiders, and they seem to have more external blockholders. A total of 52 percent of financially distressed firms (24 firms) experienced CEO turnover during the period 1996-1998, with the corresponding turnover rate when firms are not in distress being only 17 percent (eight firms). Gilson (1989, 1990) reports similar results. These results are consistent with turnaround strategies that typically involve the removal of the current management (see, for example, Argenti, 1986a, 1986b; Whetten, 1987). Finally, results show higher leverage for distressed firms (56.4 percent versus 20.8 percent for healthy firms) and lower levels of liquidity.

Table II presents results from logit regressions to test hypotheses *H1* and *H2*, and Table III presents those to test hypotheses *H3* and *H4*. Model 1 represents a preliminary step, while Model 2 is the full model.

### Difference in board composition

The composition of the board of directors differs between financially distressed and healthy firms on both univariate and multivariate levels. This is consistent with hypothesis *H1*. Boards of financially distressed firms have significantly fewer outside members. The coefficient of %OUTSIDE is negative and statistically significant ($p < 0.01$). When focusing on financially distressed firms to test whether those that have experienced a CEO change have more outsiders, results from multivariate logit regressions provide no support to hypothesis *H3* (see Table III). There is no difference in board composition between financially distressed firms based on corporate CEO turnover dichotomy.

**Table II — Board composition and structure logit regression results testing *H1* and *H2***

| Coefficients | Independent variables | Predicted relation | Model 1 | Model 2 |
|---|---|---|---|---|
| $\alpha_0$ | INTERCEPT | ? | 4.292 *(0.000)*** | 4.960 *(0.000)*** |
| $\alpha_1$ | %OUTSIDE | – | –4.817 *(0.000)*** | –5.149 *(0.000)*** |
| $\alpha_2$ | BOSS | + | 0.017 *(0.950)* | –0.042 *(0.885)*** |
| $\alpha_3$ | AUDITCOM | – | –0.385 *(0.202)* | –0.592 *(0.065)** |
| $\alpha_4$ | BLOCKHLD | – | –2.913 *(0.000)*** | –3.011 *(0.000)*** |
| $\beta_1$ | LIQUIDITY | – | | –0.217 *(0.003)*** |
| $\beta_2$ | LEVERAGE | + | | 0.491 *(0.086)** |
| **Pseudo $R^2$** | | | 0.274 | 0.354 |
| **Chi-square test of model's fit** | | | 63.394 *(0.000)*** | 85.088 *(0.000)*** |
| **Classification performance (%)** | | | 70.65 | 72.10 |
| ***N*** | | | 276 | 276 |

**Notes:**
The sample is composed of 46 financially distressed and 46 healthy firms. The dependent variable is 1 for firms in financial distress and 0 for healthy firms. The study covers the period 1996-1998. For a total of a pooled cross-sectional sample of 276 firm-year observations.
* Statistically significant at less than 0.1 level based on two-sided tests
** Statistically significant at less than 0.01 level based on one-sided tests

**Table III — Board composition and structure logit regression results testing *H3* and *H4***

| Coefficients | Independent variables | Predicted relation | Model 1 | Model 2 |
|---|---|---|---|---|
| $\alpha_0$ | INTERCEPT | ? | 0.245 *(0.795)* | 0.706 *(0.486)* |
| $\alpha_1$ | %OUTSIDE | + | 0.226 *(0.857)* | 0.165 *(0.898)* |
| $\alpha_2$ | BOSS | – | –1.101 *(0.006)** | –1.200 *(0.004)** |
| $\alpha_3$ | AUDITCOM | + | –0.494 *(0.257)* | –0.528 *(0.235)* |
| $\alpha_4$ | BLOCKHLD | + | 4.030 *(0.000)** | 3.951 *(0.000)** |
| $\beta_1$ | LIQUIDITY | ? | | –0.101 *(0.327)* |
| $\beta_2$ | LEVERAGE | ? | | –0.535 *(0.136)* |
| **Pseudo $R^2$** | | | 0.304 | 0.339 |
| **Chi-square test of model's fit** | | | 35.735 *(0.000)** | 40.512 *(0.000)** |
| **Classification performance (%)** | | | 76.09 | 73.91 |
| ***N*** | | | 138 | 138 |

**Notes:**
The sample is composed of 24 financially distressed firms with CEO turnover and 22 financially distressed firms without CEO turnover. The dependent variable is 1 for distressed firms with CEO turnover and 0 for distressed firms with no CEO turnover. The study covers the period 1996-1998. For a total of a pooled cross-sectional sample of 138 firm-year observations
* Statistically significant at less than 0.01 level based on two-sided tests

### Difference in board structure

CEO-board chair structure (BOSS) is used to test for the board structure and domination by the CEO. Neither univariate nor multivariate analysis succeeded in showing any difference regarding this variable between financially distressed and healthy firms. More than 50 per cent of firms in each group have CEOs combining the two positions (59 per cent for financially distressed firms versus 56 per cent for healthy firms, see Table I). Therefore, the results provide no support for hypothesis *H2*. While there is no difference on CEO-board chair structure between healthy and financially distressed firms, there is a significant difference in this variable between financially distressed firms that have experienced CEO turnover and those that have not, see Table III. Financially distressed firms with CEO turnover seem to have significantly fewer boards dominated by CEOs as measured by CEO-board chair structure. These results are consistent with hypothesis *H4*. To sum up, the multivariate logit analyses

conducted on both distressed firms versus healthy firms (see Table II), and distressed firms with CEO turnover versus those without CEO turnover (see Table III), provide support for hypotheses *H1* and *H4*, but not for hypotheses *H2* and *H3*.

**Control variables and overall assessment**

Two control variables related to corporate mechanisms other than the board of directors are audit committee composition (AUDITCOM) and external blockholdings (BLOCKHLD). Results from Table II show a significant difference for these variables. Financially distressed firms seem less likely to have audit committees composed totally of outsiders, and to be less likely to have blockholders with more than 20 per cent of outstanding common shares and who are not affiliated with management. When focusing on financially distressed firms that have experienced CEO turnover and those that have not, see Table III, the first sub-group is more likely to have outside blockholdings. There is no significant difference between these two sub-groups regarding audit committee composition. Two remaining control variables are LIQUIDITY and LEVERAGE. Results from Table III indicate no significant difference in these variables between the two sub-groups of financially distressed firms. Logit models in Table III are significant. For the overall model (equation (2)), the chi-square of the model's fit is significant (40.512, $p < 0.01$). The pseudo $R^2$ of 33.9 per cent is high considering the structure of the model, and it performs relatively well in distinguishing between the two sub-groups of financially distressed firms (classification performance of 73.91 per cent). Results from Table II indicate that financially distressed firms have significantly higher leverage and less liquidity than healthy firms. For the overall model (equation (1)), the chi-square of the model's fit is significant (85.088, $p < 0.01$). The pseudo $R^2$ of 35.4 per cent is high, and the model performs well in distinguishing between financially distressed and healthy firms (classification performance of 72.1 per cent).

**Supplemental analysis of other board characteristics**

An additional logit regression is estimated in order to analyze the impact of separating outside directors into independent and grey outsiders, and the impact of the size of the board on the likelihood of financial distress[6]. This regression is based on a logit model similar to the one in equation (1), except that the variable %OUTSIDE is replaced by two variables, namely INDEPENDENT and GREY, and the variable SIZE is included for the board size. Results from this analysis indicate a significant difference for INDEPENDENT (coefficient = –4.877, $p < 0.01$) and GREY (coefficient = 5.500, $p < 0.01$) variables. Financially distressed firms are less likely to have independent directors on their boards and more likely to have grey directors among outsiders than healthy firms. There is no significant difference between the board sizes of these two groups of firms.

Other than the greater presence of outside directors on the board of healthy firms relative to financially distressed firms, little is known about the characteristics of outside directors who serve. Prior experiences as directors and incentives for monitoring management likely affect their performance on a particular board. A supplemental logit analysis is performed to obtain additional knowledge about how certain characteristics of outside directors affect the likelihood of financial distress. This supplemental analysis is based on a logit model similar to the one in Table II, except it also includes two characteristics of outside directors:

(1) *OWN*: representing the cumulative percentage of common stock shares of the firm held by outside directors.

(2) *DIRSHIP*: representing the average number of directorships in other firms held by outside directors.

Jensen and Meckling (1976) argue that encouraging outside directors to hold substantial equity interest in the firm would provide better incentives for monitoring top management and would challenge management's proposals. On the other hand, Fama (1980) notes that the market provides incentives for outside directors to monitor management. Therefore, the number of additional outside directorships held by each outside director serves as a measure of the director's reputation as a monitor (Beasley, 1996). As the number of additional directorships on other firms' boards increases, demands on the individual board member's time decrease the amount of time available for the director to fulfill monitoring responsibilities at a single firm. The variables OWN and DIRSHIP are included in the supplemental logit model to determine whether the ownership and the number of additional directorships held by outside directors significantly affect the likelihood of financial distress.

Table IV presents the results from the supplemental logit regression model. Not only do the results continue to support hypothesis *H1* with a significant negative coefficient for %OUTSIDE, but they also indicate that certain characteristics of outside directors significantly affect the likelihood of financial distress. The negative and significant ($p < 0.01$) coefficient for OWN suggests that as the level of ownership of the firm's common stock held by outside directors increases, the likelihood of financial distress decreases. This result is consistent with the view that increases in outside directors' ownership in a firm strengthen incentives for outside directors to

**Table IV — Supplemental analysis of outside director characteristics logit regression results**

| Coefficients | Independent variables[a] | Predicted relation | Model 1 | Model 2 |
|---|---|---|---|---|
| $\alpha_0$ | INTERCEPT | ? | 3.925 *(0.000)*** | 4.212 *(0.000)*** |
| $\alpha_1$ | %OUTSIDE | – | –4.332 *(0.000)*** | –4.994 *(0.000)*** |
| $\alpha_2$ | OWN | – | –2.936 *(0.000)*** | –3.363 *(0.000)*** |
| $\alpha_3$ | DIRSHIP | + | 0.867 *(0.039)*** | 0.976 *(0.046)*** |
| $\alpha_4$ | BOSS | + | 0.014 *(0.966)* | 0.009 *(0.988)* |
| $\alpha_5$ | AUDITCOM | – | –0.315 *(0.274)* | –0.428 *(0.094)** |
| $\alpha_6$ | BLOCKHLD | – | –2.318 *(0.000)**** | –3.433 *(0.000)**** |
| $\beta_1$ | LIQUIDITY | – | | –0.278 *(0.006)**** |
| $\beta_2$ | LEVERAGE | + | | 0.437 *(0.082)** |
| **Pseudo $R^2$** | | | 0.347 | 0.436 |
| **Chi-square test of model's fit** | | | 72.227 *(0.000)**** | 89.954 *(0.000)**** |
| **Classification performance (%)** | | | 72.58 | 76.40 |
| ***N*** | | | 276 | 276 |

**Notes:**
The sample is composed of 46 financially distressed and 46 healthy firms. The dependent variable is 1 for firms in financial distress and 0 for healthy firms. The study covers the period 1996-1998. For a total of a pooled cross-sectional sample of 276 firm-year observations

* Statistically significant at less than 0.1 level based on two-sided tests

** Statistically significant at less than 0.05 level based on one-sided tests

*** Statistically significant at less than 0.01 level based on one-sided tests

monitor management for the prevention of financial distress. The positive and significant ($p < 0.05$) coefficient for DIRSHIP indicates that the likelihood of financial distress increases as outside directors hold more directorship responsibilities in other firms. This result is consistent with the view that additional directorships held by outside directors of financially distressed firms distract those directors from their monitoring responsibilities, thereby increasing the likelihood of financial distress.

## Discussion

The reported results suggest a relationship between the composition of the board of directors and financial distress. The overwhelming support for independent outside directors is typically a key factor for enhancing firms' financial conditions. As previously noted, the prevailing belief is that inside directors lack objectivity and independence from management. This lack of independence may be critical for the board of directors, which is designed as a means to protect shareholders from managerial self-interest. The results fail to detect any difference between financially distressed and healthy firms regarding CEO-board chair structure. While these results are surprising, it should be noted that there is no consensus regarding a recommendation for independent CEO-board chair structure. Many prior studies have advocated that separation is better for these two key roles, especially when a firm faces a period of decline (Hambrick and d'Aveni, 1992). A relatively powerful CEO serving simultaneously as board chair may use his or her influence not to effect change, but to stay the course. Hambrick and d'Aveni (1988) conduct a content analysis of failing firms' annual reports and find that management refuses to accept responsibility for crises and shifts explanations of declines toward external factors. On the other hand, some evidence and discussions support CEO duality[7]. Our results are an illustration of this lack of consensus. When we divide the financially distressed firms into two groups based on the occurrence of CEO turnover, we find support for the separation perspective. Financially distressed firms that have experienced a CEO turnover seem to separate these two roles more.

## Limitations

Although these results are promising, they should be interpreted with caution and not extended beyond the focused context provided here. The distinction between financially distressed firms based on CEO turnover is one contribution of this study. This event proxies for effective firms' turnaround strategies. However, this proxy suffers some limitations. First, while it is based on the proposition that "problem causers have little credibility as problem solvers" (Whetten, 1987), it is not obvious that a turnaround strategy must necessarily result in a CEO change. CEOs are not always the cause of a firm's troubles, and a change in board composition can be implemented without a change of CEO. We cannot ignore the fact that such a decision is costly to the firm. Second, given the event of CEO change, one must observe the dynamics of board composition around this event (before, within and after). These results ignore this dynamic. It would be fascinating to explore the dynamics surrounding a CEO turnover event in future research.

## Summary and conclusion

The purpose of this study was to determine whether board composition and structure contribute to an explanation of financial distress status. Results from this study lead us to conclude that board composition does, in fact, contribute to explain financial distress beyond financial indicators. However, the distinction between financially distressed firms based on CEO changes as a proxy of turnaround strategies provides useful insights on corporate governance characteristics in a financial

distress context. Notwithstanding these promising results, we still know little about the processes and dynamics of boards, particularly information describing how differing levels of board composition affect the nature of board activities. Furthermore, insights about the process that outside directors use to exert control over board activities (the nature of information presented to the board, the frequency of meetings) will contribute to existing knowledge. Hopefully, these results will benefit financial analysts, investors and accounting professionals. These practitioners can enhance their decision process and evaluation of financially distressed firms. ■

**Notes**

1. Gilson *et al.* (1990) find that much of the loss in firm value occurs during the years preceding default or bankruptcy, rather than after.
2. For an overview of agency theory, see Jensen and Meckling (1976) and Eisenhardt (1989).
3. This explanation is derived from the resource dependence perspective (see Zahra and Pearce (1989) for a review). It views outside directors as a critical link to the external environment. Directors with ties to the firm's external environment may be especially critical during crisis periods such as financial distress (Gales and Kesner, 1994).
4. Stock Guide Database provides fundamental data on more than 1,200 companies listed with the Toronto, Montreal, Vancouver and Alberta Stock Exchanges. The data is collected from official documents filed with the Securities Commissions of these markets.
5. See, for example, Daily (1995, 1996), Beasley (1996), Gales and Kesner (1994).
6. Results from this analysis are not presented in this paper. However, they are available upon request.
7. See, for example, Baysinger and Hoskisson (1990).

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