AN ANALYSIS OF STOCK PRICE REACTION TO MANAGEMENT CHANGE IN DISTRESSED FIRMS

Karl-Adam BONNIER and Robert F. BRUNER

University of Virginia, Charlottesville, VA 22906, USA

Received August 1986, final version received July 1988

This study analyzes excess returns to shareholders at announcement of a change in senior management of distressed firms. Excess returns are significantly positive, which is consistent with the internal corporate control hypothesis that management change following poor performance is associated with gains to shareholders. Cross-sectional tests of the effects reveal a significant title effect and significant interactions between title and appointment of an outside successor and title and firm size. These findings present new insights into the circumstances in which external vs. internal markets for managers will affect shareholder wealth.

1. Introduction

Hiring and firing of top managers by the board of directors is one of the most important—and possibly beneficial—internal mechanisms of corporate control [Manne (1965), Alchian and Demsetz (1972), and Fama (1980)]. Yet empirical research gives conflicting results about the possible benefits of such internal control. Warner, Watts, and Wruck (1988) find a significant association between poor stock performance and the frequency of management turnover but find no significant excess returns to shareholders at the announcement of management change. Reinganum (1985) and Borst (1985) also find none except in specific circumstances related to executive title, firm size, or origin of successor. Beatty and Zajac (1985) find an insignificant negative return at management change announcements. Furtado and Rozell (1987) and Weisbach (1988) report significantly positive returns at the management-change announcement.

We submit that this inconsistency in results arises from a confounding information effect associated with the announcement of management change. As Warner et al. (1988) and Jensen and Warner (1988) note, the abnormal return at announcement of a management change is the sum of an information

*We thank Michael Berry, Gary Schlarbaum, Robert Lamy, Wayne Marr, Ross Watts, and especially Jerry Warner (the referee) for comments. The Sponsors of the Colgate Darden Graduate School of Business Administration provided financial assistance. None of these parties is responsible for any errors that may remain.

effect and a real effect. The information effect could be negative if the change suggests that the firm’s performance was worse than the market had realized. The real effect would be positive if the change is in shareholders’ interest. The combination of real and information effects would produce a wide range of results depending on the magnitude of the individual effects.

Our purpose in this study is to isolate and estimate the real effect of management change by using a sample of firms for whom bad performance had already been recognized. We hope to reduce the negative information component and focus on the extent to which the real component was positive. Other researchers suggest that the performance context is important in testing for the benefits of internal control.\(^1\) If there are benefits to shareholders from management change, then the effect of this research design should be to reveal higher positive abnormal returns than presented in other studies.

We used jointly two criteria to identify underperforming firms: (a) negative earnings and (b) dividend omission prior to management change. The negative information content of dividend omission announcements is well-documented [Benesh, Keown, and Pinkerton (1984) and Dielman and Oppenheimer (1984)]. Our earnings criterion should eliminate from the sample any cases of healthy firms that omit dividends.

In the following section, we discuss our sampling methodology in detail and the procedure for estimating shareholder returns. Section 3 presents the empirical results. A summary and synthesis of results are given in section 4.

2. Sample and empirical methodology

2.1. Sample of management changes

We initially examined all firms listed on the New York or American stock exchanges from 1969 to 1983. From this population, we selected all firms that financially underperformed and then had a management change. We defined financial underperformance as negative earnings in the last quarterly report before the management change, accompanied by the elimination of a dividend no earlier than 24 months before the management change, with no reinstatement of the dividend before the change. The event was identified as the date the Wall Street Journal carried the announcement of management change. Prior to the dividend elimination, the firm had to have paid at least four successive dividends. The Standard & Poor’s Security Owner’s Stock Guide

\(^1\)Manne (1965) suggests that mechanisms of control generate benefits when the firm is underperforming. Warner, Watts, and Wruick (1988) and Coughlan and Schmidt (1985) find a significant association between firm underperformance and subsequent management change: underperforming firms are more likely than others to change their senior executives. Weisbach (1988) presents some evidence that firms with the worst prior performance have the largest announcement effect from a top management change.
was used to confirm the earnings rule. These criteria resulted in a sample of 70 firms making a total of 87 management changes over the period.

We defined management change to include any personnel turnover in the positions of chairman, chief executive officer (CEO), or president and in positions having combinations of those titles. Our entire sample consisted of instances in which only one individual departed at the announcement.

2.2. The returns-generating model

The test of gains to shareholders from management-change announcements was structured as an event study of daily excess returns. These returns were generated using the standard market model of security returns\(^2\) [discussed in Fama (1976)]:

\[
R_{it} = a_i + b_i(R_{mt}) + e_{it},
\]

where

\(e_{it}\) = excess returns to shareholders of firm \(i\) at time \(t\) relative to the management-change announcement,

\(R_{it}\) = total daily returns to shareholders of firm \(i\) adjusted for dividends and stock splits, and

\(R_{mt}\) = total daily returns on the equally-weighted market portfolio.

Eq. (1) was estimated\(^3\) by ordinary least-squares regression over 100 trading days (from day \(-200\) to day \(-101\)) before the management-change event. Daily returns on each security were obtained from the daily returns database produced by the Center for Research in Securities Prices, University of Chicago.

The returns were averaged across the observations according to

\[
AR_i = \frac{1}{N} \sum_{i=1}^{N} e_{it}.
\]

\(^2\)We also estimated excess returns using a simple market-adjusted model and a modified market model to account for a shift in the intercept following dividend omission. The resulting returns are immaterially different from those reported here and for brevity are not presented.

\(^3\)We tested for the stability of the market model parameters following dividend omission and management change using the Fisher (1970) test. These tests revealed that shifts in the intercept were not material. The regression coefficient shifted significantly (at the 5% level) following dividend omission in 18% of the cases, and following management change in 9% of the cases. The returns estimated by the varying-coefficients model differ immaterially from those reported here.
These average daily returns were tested for significance according to

\[ t_{AR} = \frac{AR_i}{S_{AR}} \]  

(3)

where \( S_{AR} = [\text{var}(AR_i)]^{1/2} \) with var estimated over the 100 days, \(-200\) to \(-101\).

In addition, cumulative average excess returns (CARs) were calculated over various holding periods from day \( K \) to day \( L \):

\[ CAR_{KL} = \sum_{t=K}^{L} AR_t \]  

(4)

These \( CARs \) were tested for statistical significance using the following [see Ruback (1982)]:

\[ t_{CAR_{KL}} = \frac{CAR_{KL}}{S(CAR_{KL})} \]  

(5)

where \( S(CAR_{KL}) = [\text{var}(AR_i) + 2(T - 1) \text{cov}(AR_i, AR_{i-1})]^{1/2} \), with var and cov estimated over the 100 days \(-200\) to \(-101\), and \( T = L - K + 1 \).

3. **Empirical results**

3.1. **Excess returns at management-change event**

Table 1 presents the excess returns around the announcement day for the sample of 87 cases. The returns at the event itself are significantly positive. On day \(-1\) the average excess return is 1.566\% (median = 0.4\%) with a \( t \)-statistic of 3.79. The average return for day 0 is 0.913\% (median = 0.7\%) with a \( t \)-statistic of 2.21. The significantly positive event-day returns contrast with the insignificant returns reported by Borst (1985), Reinganum (1985), and Warner et al. (1987) and with the negative returns of Beatty and Zajac (1987). Furtado and Rozell (1988) report positive two-day returns of 0.95\% \((t = 2.78)\), while Weisbach (1988) reports a two-day return for his entire sample of 0.28\% \((t = 1.77)\). These latter two studies compare with a two-day return for this sample of 2.479\% \((t = 4.39)\).

Generally, the five-day \( CARs \) before the event are small and insignificant, which is consistent with Warner et al., who report an insignificant excess return over the 60 days preceding the announcement. The preponderance of negative excess returns before the announcement may reflect the financially distressed condition of the sample firms.

For days \(-4\) through 0, the cumulative return is relatively large and significant (3.518\%, \( t = 4.02 \)). This does not appear to be the result of outliers: the median value is 1.50\%.

\[ ^{4} \text{var' was calculated to be 0.0000171; 'cov' was -0.0000001.} \]

\[ ^{5} \text{A test for variance shifts between a holdout period \textit{ex ante} and the observation period revealed no significant differences. For brevity the results are not presented here.} \]
Table 1
Excess returns to shareholders around the management-change announcement.

<table>
<thead>
<tr>
<th>Returns period (from day $K$ to $L$)</th>
<th>Mean excess returns</th>
<th>$t$-statistica</th>
<th>Percent positive</th>
<th>Median excess returns</th>
<th>Minimum excess returns</th>
<th>Maximum excess returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>$-54, -50$</td>
<td>-0.00652</td>
<td>-0.75</td>
<td>0.41</td>
<td>-0.014</td>
<td>-0.206</td>
<td>0.238</td>
</tr>
<tr>
<td>$-49, -45$</td>
<td>-0.00114</td>
<td>-0.13</td>
<td>0.38</td>
<td>-0.016</td>
<td>-0.176</td>
<td>0.243</td>
</tr>
<tr>
<td>$-44, -40$</td>
<td>-0.00250</td>
<td>-0.29</td>
<td>0.47</td>
<td>0.005</td>
<td>-0.167</td>
<td>0.402</td>
</tr>
<tr>
<td>$-39, -35$</td>
<td>-0.00897</td>
<td>-1.03</td>
<td>0.36</td>
<td>-0.019</td>
<td>-0.276</td>
<td>0.449</td>
</tr>
<tr>
<td>$-34, -30$</td>
<td>0.00605</td>
<td>0.69</td>
<td>0.44</td>
<td>-0.005</td>
<td>-0.245</td>
<td>0.370</td>
</tr>
<tr>
<td>$-29, -25$</td>
<td>-0.01348</td>
<td>-1.54</td>
<td>0.39</td>
<td>-0.016</td>
<td>-0.197</td>
<td>0.328</td>
</tr>
<tr>
<td>$-24, -20$</td>
<td>-0.00909</td>
<td>-1.04</td>
<td>0.44</td>
<td>-0.014</td>
<td>-0.225</td>
<td>0.234</td>
</tr>
<tr>
<td>$-19, -15$</td>
<td>-0.00244</td>
<td>-0.28</td>
<td>0.44</td>
<td>-0.007</td>
<td>-0.190</td>
<td>0.232</td>
</tr>
<tr>
<td>$-14, -10$</td>
<td>-0.00945</td>
<td>-1.08</td>
<td>0.44</td>
<td>-0.012</td>
<td>-0.268</td>
<td>0.211</td>
</tr>
<tr>
<td>$-9, -5$</td>
<td>-0.00497</td>
<td>-0.57</td>
<td>0.45</td>
<td>-0.018</td>
<td>-0.245</td>
<td>0.297</td>
</tr>
<tr>
<td>$-4, 0$</td>
<td>0.03518</td>
<td>4.02b</td>
<td>0.56</td>
<td>0.015</td>
<td>-0.155</td>
<td>0.322</td>
</tr>
<tr>
<td>$1, 5$</td>
<td>0.02479</td>
<td>4.39b</td>
<td>0.51</td>
<td>0.011</td>
<td>-0.210</td>
<td>0.265</td>
</tr>
<tr>
<td>$6, 10$</td>
<td>0.01566</td>
<td>3.79b</td>
<td>0.59</td>
<td>0.004</td>
<td>-0.143</td>
<td>0.194</td>
</tr>
<tr>
<td>$11, 15$</td>
<td>0.00913</td>
<td>2.21c</td>
<td>0.59</td>
<td>0.007</td>
<td>-0.172</td>
<td>0.091</td>
</tr>
<tr>
<td>$16, 20$</td>
<td>-0.00852</td>
<td>-0.97</td>
<td>0.37</td>
<td>-0.019</td>
<td>-0.177</td>
<td>0.458</td>
</tr>
<tr>
<td>$21, 25$</td>
<td>0.00331</td>
<td>0.38</td>
<td>0.55</td>
<td>0.007</td>
<td>-0.336</td>
<td>0.458</td>
</tr>
<tr>
<td>$26, 30$</td>
<td>0.00856</td>
<td>0.99</td>
<td>0.45</td>
<td>-0.003</td>
<td>-0.352</td>
<td>0.303</td>
</tr>
<tr>
<td>$31, 35$</td>
<td>0.01920</td>
<td>2.19c</td>
<td>0.51</td>
<td>0.002</td>
<td>-0.194</td>
<td>0.950</td>
</tr>
<tr>
<td>$36, 40$</td>
<td>0.00083</td>
<td>0.09</td>
<td>0.47</td>
<td>-0.001</td>
<td>-0.310</td>
<td>0.319</td>
</tr>
<tr>
<td>$41, 45$</td>
<td>0.00687</td>
<td>0.79</td>
<td>0.47</td>
<td>-0.001</td>
<td>-0.266</td>
<td>0.357</td>
</tr>
<tr>
<td>$46, 50$</td>
<td>-0.00813</td>
<td>-0.93</td>
<td>0.47</td>
<td>-0.003</td>
<td>-0.179</td>
<td>0.291</td>
</tr>
</tbody>
</table>

a The standard deviation used for the five-day return was 0.00875. For the two-day return, it was 0.00565. The one-day standard deviation was 0.00414.
b Significant at 0.01 level.
c Significant at 0.05 level.

3.2. Cross-sectional hypotheses

Shareholders of distressed firms appear to gain from a change in senior managers. We hypothesize that three factors could explain cross-sectional variation in the event-day returns: origin of the successor, title of the position, and firm size.6

6 A fourth possible explanation of cross-sectional variation in this sample is the effect of the market response to the earlier dividend omission announcement. In extreme form, the internal control hypothesis could be interpreted to suggest an inverse relationship between these events, i.e., value lost at the dividend omission (due to a release of new information about poor management) is regained at the management change. Accordingly, we regressed the two-day ($-1, 0$) and five-day ($-4$ to $0$) management-change event CARs against three separate measures of the dividend cut: (a) the dividend omission event CARs of similar length, (b) the dollar reduction in the dividend, and (c) the annualized dividend yield before the omission. In none of the regressions was the measure of the dividend cut significant in explaining CARs at the management-change event.
3.2.1. Origin of successor

Previous studies have suggested that the origin of the successor is a critical variable in explaining a firm's performance after executive change.\textsuperscript{7} In general, the appointment of an outsider is hypothesized to have a negative effect on performance because (a) inside successions are less disruptive than outside successions; (b) outsiders have none of the firm-specific human capital\textsuperscript{8} of insiders; (c) the board of directors knows insiders better than outsiders (and hence may be less likely to make a bad appointment); (d) internal promotion gives incentives to junior executives, whereas outside appointments may reduce these incentives; and (e) the appointment of an outsider may signal negative information: that the current situation of the company is so bad that a more qualified manager had to be brought in from outside the firm.

The alternative hypothesis about the appointment of outsiders is that it has a positive effect. Because outsiders may not be committed to the firm's past policies, they may be the agents of change, altering the mission, objectives, investment/production strategy, and internal organization. This alternative hypothesis may be especially relevant for our sample of financially distressed firms.\textsuperscript{9}

3.2.2. Title and power

Some senior management positions have more power than others to lead the firm and effect change through mechanisms of internal control. Job title may be a proxy for this power. Therefore consistent with the internal control hypothesis, we anticipate an association between changes in more powerful titles and the benefits from management change. This anticipation is implicit in the studies of Warner et al., Reinganum, and Borstad, who partition event returns by various titles. It is also implicit in the exclusive focus on CEO changes in the studies of Beatty and Zajac (1987), Coughlan and Schmidt (1985), Weisbach (1988), and Lubatkin et al. (1986).

There is no straightforward theory about which titles are associated with greater power. In the spirit of the earlier research, we partition the sample by whether or not the title contained the designation 'chief executive officer', and assume that this title proxies for greater power to exercise internal control. No

\textsuperscript{7}Much of this literature is summarized in Reinganum (1984) and Lubatkin et al. (1986). Also, a number of the arguments presented here were advanced in Furtado and Rozell (1987).

\textsuperscript{8}Such firm-specific human capital would include expertise about a firm's products, customers, competitors, and employees, as well as an informal network of people providing information and support.

\textsuperscript{9}Reinganum uses this 'new broom' argument in discussing his finding of higher returns associated with outsiders. And more pertinent to this study was his finding an average -7.66% return two months before the announcement of change in cases where stock price rose 6.29% in the announcement month. He suggested that this negative performance may have been one of the reasons why the Board of Directors hired an outsider.
difference between returns for the CEO and non-CEO categories would reject the hypothesis that the power of the position is associated with the magnitude of event returns. Lower returns for the CEO category would be consistent with Warner et al.'s information content hypothesis that the position is more powerful than the others and that a change here signals that the company must be performing more poorly than previously perceived. Higher returns would be associated with the CEO category if the position is more powerful than the others, and personnel changes in this category were perceived by investors to represent a more material and positive redirection of the firm than represented by changes in non-CEO positions.

3.2.3. Firm size

Reinganum suggests that small firms may have less complex control structures than large firms and that therefore the effect of a change in one management position will be more meaningful in a small firm than a large firm. If this is true for our sample of distressed firms and if there are benefits to management change, then the announcement day excess returns should be inversely related to firm size.

3.2.4. Interaction effects

The possible interaction among origin, size, and title effects has drawn the attention of previous researchers. An interaction effect would exist where the association between announcement returns and one independent variable depends on the level of another independent variable.

(i) Origin and Size. Furtado and Rozeff hypothesized that external hiring will be more beneficial as firm size declines. They argued that maintaining an internal labor market is costly and uneconomic in small firms.

(ii) Origin and Title. Reinganum presented evidence suggesting this interaction. For our sample of distressed firms, we hypothesize that a change in CEOs will be more beneficial if an outsider is appointed since the outsider would represent a more significant break with the policies that led the firm into distress.

(iii) Title and Size. Following Reinganum, as described above under main effects, a change in CEOs would be more beneficial in smaller firms,

---

10Reinganum and Furtado and Rozeff present evidence supporting interaction effects. Warner et al. reported that attempts to find differential impacts of combinations of hypothesized effects failed.

11Reinganum's table 1 partitions announcement-day returns by origin of the appointee and the title of the position. The table reveals that in only one cell is the return significant and positive: chairmanships filled by external appointment (2.18%, t = 2.69). For none of the other origin/title subgroups are the returns significant.
where one new and well-positioned individual could have a relatively larger effect. However, in a study focusing on CEOs, Lubatkin et al. found that CEO change was associated with more significantly positive returns where the firm was large rather than small. This would be consistent with the existence of systems of monitoring and corporate control\textsuperscript{12} in large firms which serve to heighten the effectiveness of the leader.

3.3. Cross-sectional analysis

A hierarchical multiple regression was employed to examine both the direct as well as interactive effects of size, title, and origin on excess returns. Hierarchical regression provides significance tests of the increments in variance accounted for first by all main effects and then by any interaction effects. In the present study, the first set of variables entered included the main effects of size, title, and origin; the second set included in addition the three two-way interactions as carried by the product term (size $\times$ title, size $\times$ origin, and origin $\times$ title). For completeness, the three-way interaction (size $\times$ title $\times$ origin) was also examined. In addition to variance accounted for, the betas obtained via hierarchical multiple regression provide an indication of the direction of the effect of interest.

The fullest equation estimated was

$$ER_i = a + b_1(S_i) + b_2(T_i) + b_3(O_i) + b_4(S_iT_i) + b_5(S_iO_i) + b_6(O_iT_i) + b_7(S_iO_iT_i) + e_i,$$

where

$ER_i$ = excess return for firm $i$ over days $-1$ and $0$,
$S_i$ = relative size of firm $i$ as measured by the ratio of firm $i$'s sales to the sales of the largest firm in the sample,\textsuperscript{13}
$T_i$ = dummy variable taking the value of 1 if the title included ‘Chief Executive Officer’, and zero otherwise,
$O_i$ = the origin of the incoming executive as measured by a dummy variable taking the value 1 if the new appointee came from outside the firm, and zero otherwise.

\textsuperscript{12} Examples would be advanced management information systems, headquarters staff, internal auditors, computer networks, external advisors (lawyers, accountants, consultants, bankers), and external sources of specialized information about the firm and its industry (e.g., market share information). While presumably small firms are free to obtain these too, the attendant costs practically may rule them out.

\textsuperscript{13} The largest firm in the sample had sales of $12.004$ billion.
Table 2
Hierarchical regression analysis of firm size, origin, and title effects on announcement-day 
(−1 and 0) returns.¹

<table>
<thead>
<tr>
<th>Variables entered on step 1</th>
<th>Beta</th>
<th>t-test of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>0.008</td>
<td>( t = 0.07 )</td>
</tr>
<tr>
<td>Origin</td>
<td>0.056</td>
<td>( t = 0.51 )</td>
</tr>
<tr>
<td>Title</td>
<td>0.226</td>
<td>( t = 2.02^{b} )</td>
</tr>
</tbody>
</table>

Step 1 \( R^2 = 0.06 \)
Equation \( F = 1.74, \) \( df = 3, 81 \)

<table>
<thead>
<tr>
<th>Variables entered on step 2</th>
<th>Beta</th>
<th>t-test of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size × Origin</td>
<td>0.005</td>
<td>( t = 0.03 )</td>
</tr>
<tr>
<td>Origin × Title</td>
<td>0.546</td>
<td>( t = 2.85^{c} )</td>
</tr>
<tr>
<td>Size × Title</td>
<td>1.093</td>
<td>( t = 3.35^{c} )</td>
</tr>
</tbody>
</table>

Step 2 \( R^2 = 0.25, \) \( R^2 \) increase step 2 = 0.19 (\( p \leq 0.001 \))
Equation \( F = 4.36^{c}, \) \( df = 3, 78 \)
Change in \( F = 6.62^{c}, \) \( df = 3, 78 \)

<table>
<thead>
<tr>
<th>Variable entered on step 3</th>
<th>Beta</th>
<th>t-test of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size × Origin × Title</td>
<td>0.262</td>
<td>( t = 0.522 )</td>
</tr>
</tbody>
</table>

Step 3 \( R^2 = 0.25 (p \leq 0.05) \)
\( R^2 \) increase step 3 = 0.003 (\( p = ns \))
Equation \( F = 3.74^{c}, \) \( df = 7, 77 \)
Change in \( F = 0.274, \) \( df = 1, 77 \)

¹Origin = origin of the incoming executive, measured by a dummy variable taking the value 1 if 
the new appointee came from outside the firm, and 0 otherwise. Title = title of the management 
position in which change occurred, measured by a dummy variable taking the value 1 if the title 
included 'Chief Executive Officer', and 0 otherwise. Size = relative size of firm \( i \)'s measured by the 
ratio of firm \( i \)'s sales to the sales of the largest firm in the sample.
²Significant at the 0.05 level.
³Significant at the 0.01 level.

3.4. Results of cross-sectional analysis

Table 2 presents the results from the hierarchical multiple regression. At 
step 1, the main effects of size, origin, and title entered the equation. The 
overall \( R^2 \) obtained on this step obtains no significant increase from zero. 
However, examination of the individual beta weights suggests that when the 
effects of size and origin are partialled from excess returns, title retains a 
significant positive effect on returns (\( t = 2.02 \)). Changes in CEOs are associated 
with a significantly higher return by 2.4% (3.643% for CEOs versus 
1.232% for other senior officers). The appointment of outsiders results in a 
return higher by 1.99% (3.486% for outsiders versus 1.494% for insiders).
Executive changes in large firms are associated with returns higher by 0.782% (2.569% for firms larger than the median versus 1.787% for firms smaller than the median). At first, the statistical insignificance of the origin effect seems anomalous, since the origin effect has a trend similar to the title effect (which is significant). But inspection of the interaction effects reveals that this origin effect is actually driven by an interaction with the title effect.

At step 2, the three two-way interactions were allowed to enter the regression. The results presented in table 2 indicate that a significant increase in the overall $R^2$ was obtained on this step. Specifically, the positive betas associated with the origin $\times$ title and the size $\times$ title interactions both attained significance at the 1% level. In both cases, the association between CEO and excess returns varies materially by the level of size or origin.

If the new appointee comes from within the firm, the returns associated with CEO status are 0.599% lower than the returns associated with non-CEO titles. But when the new appointee comes from outside the firm, the difference in returns associated with the two title categories is large: an excess return of 5.395% is associated with appointments of outsiders to CEO positions versus 0.266% associated with appointments of outsiders to other senior positions.

Among small firms, the effect of title is not material (1.779% for CEOs versus 1.794% for other senior titles). But among the larger firms in the sample, the effect of title is large. CEO changes in large firms are associated with an announcement day return of 4.954%, while changes in other titles in large firms are associated with a return of $-1.454$%.

These test results support the title hypothesis and reject the direct hypotheses about firm size and origin of the new appointee; in our sample, size and origin seem to matter only in interaction with title. The benefits of changing CEOs in distressed firms are positively amplified by the appointment of outsiders and by large firm size.

4. Discussion and conclusions

Our research results must be interpreted in light of the most important difference between this study and previous studies: we used a sample of manifestly distressed firms in an effort to minimize the information component of the abnormal stock returns and instead focus on the 'real' component.

The returns for the entire sample are interesting because of their large size: an average abnormal return of 2.479% over the days $-1$ and 0 ($t = 4.39$). The next highest return reported in research on this subject was 0.95% ($t = 2.78$) as given by Furtado and Rozell. The difference between our results and those of Furtado and Rozell is consistent with Warner et al.'s hypothesized negative information content of management change announcements, i.e., that management change is in shareholders' interest but that it conveys bad news about the
firm's performance. Our results provide stronger evidence about the real effects of management change.

Second, the power of the position being filled (as measured by our proxy, the CEO title) has a large positive significant effect on the announcement returns. This contrasts with Reinganum and Warner et al., who give evidence of no main effect associated with different titles, and with Beatty and Zajac, who did focus on CEO changes but found insignificantly negative returns.

Third, we find that the effects of size and origin are positive and significant but only in interaction with the title effect. The size result contrasts with Furtado and Rozell's finding of a significant negative direct effect. The origin effect contrasts with Reinganum and Warner et al., who report a positive and significant direct effect associated with the appointment of outsiders—irrespective of the position being filled. Our results also suggest that origin is important but that its importance depends on the position being filled.

We find two positive and significant interaction effects: (a) title and origin and (b) title and size.14 Through these interaction effects, title emerges even more powerfully as an explanation of cross-sectional variation in returns. The positive interaction between size and title is consistent with the existence of systems of internal control in large firms which serve to heighten the effectiveness of the CEO. The positive interaction between origin and title suggests that an outside appointment to CEO amplifies the benefits from a break with the firm's past policies.

We conclude that these findings are consistent with hypothesized benefits from internal mechanisms of corporate control in management change. More research on the determinants of shareholder benefits from management change is warranted. New insights may derive from focusing as we did on a sample where internal control may be presumed to be at work and the information effects are reduced, and from employing cross-sectional analysis.

References

Borstadt, L., 1985, Stock price reactions to management changes, Unpublished paper (University of Utah, Salt Lake City, UT).

14 We find the interaction between size and origin to be insignificant, in contrast to the results presented in Reinganum and Furtado and Rozell, where the effect of the interaction is positive and significant.