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UNIVERSITY OF ALBERTA

CORPORATE LEADERS, FIRM PERFORMANCE AND ACCOUNTING EARNINGS

BY

© CAMERON KEITH JOSEPH MORRILL

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY in ACCOUNTING.

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ABSTRACT

Accounting researchers have been concerned for some time with how accounting choices are made by top corporate management. A subset of this research has demonstrated that many unusual accounting decisions seem to occur immediately following an executive turnover. This thesis reports the results of an investigation into the association between chief executive officer (CEO) turnover and "unusual" accounting decisions.

A model of CEO turnover is developed which distinguishes between routine and non-routine turnover. Non-routine turnover arises as a response to firm underperformance and is associated with imminent organizational change. The new CEO makes income-decreasing accounting decisions as one means of explaining what has been wrong with the firm and setting out his or her vision of the future. Routine turnover is associated with satisfactory organizational performance and continuity and, therefore, an absence of unusual accounting decisions.

A sample of 283 pairs of turnover and matched non-turnover firms is identified from Forbes Magazine 500 over the period 1975 to 1986. The turnover firms are split into routine and non-routine based on (1) the age of the outgoing CEO and the origin of the incoming CEO and (2) the tenure of the outgoing CEO. The most consistent results were found for the age/origin dichotomy. Probit results demonstrate that non-routine firms underperform relative to control firms over the fiscal year prior to turnover (using stock market returns as a performance measure); while routine turnover firms outperform control firms in terms of accounting performance measures. Evidence of income-decreasing accounting decisions was found following non-routine turnover, but not following routine turnover. Only weak evidence was found in support of the notion that the stock market views non-routine turnover as a signal of imminent organizational change. Following non-routine turnover, decreased accounting income is associated with positive abnormal stock returns.

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Finally, I do not think that I can overstate the importance of my wife, Janet Ashford Morrill, to this work and to the period of my life that has been invested in it. She has helped in every conceivable way, including general discussions and comments, proofreading, photocopying and giving birth to and taking care of our daughter Susanne singlehandedly while I finished this dissertation. For the honour she did me in marrying me, and the constant help and love she has given me since I have known her, I will always be grateful.

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CHAPTER 1. INTRODUCTION

Increasingly in recent years, accounting academics have focused on the influence of top executives on corporate financial statements. Within the constraints of generally accepted accounting principles, managers have considerable discretion over accounting methods and have a profound impact on the form of the information released. Which principles they choose, and the effects of those choices, is of considerable interest to standard-setters who must define the available choices and to investors and creditors who use the resulting financial statement information.

Accounting researchers have approached this issue from a number of perspectives: income smoothing (e. g., Ronen and Sadan, 1981); the economic consequences or "positive accounting" literature (e. g., Holthausen and Leftwich, 1983; Watts and Zimmerman, 1986); and microeconomic modelling (e. g., Dye, 1985; Verrecchia, 1986; Trueman and Titman, 1988). In general, research into the ways in which accounting numbers are managed has been hampered by an inability to identify precisely the motivation of corporate managers in this regard.

The study of leadership in organizations is an established research tradition in organization theory, where many researchers have attempted to assess the impact of leadership by examining instances of leader turnover. Following that example, this dissertation advances a model of CEO turnover which has implications for accounting decisions. Evidence is presented to support the hypothesis that poor corporate performance prompts the board of directors to dismiss the incumbent CEO and hire a replacement to improve performance. The new CEO makes

substantive changes in the operation of the firm, and makes accounting policy decisions that help to explain and justify those changes to organizational constituents (shareholders, creditors, labour). This model is laid out schematically in Figure 1-1.

The research proceeds by developing a model of CEO turnover, with a particular emphasis on the influence of an incoming CEO on firm performance. The focus will be on understanding the impact of the incoming CEO; and from this understanding, predicting CEO accounting policy decisions. The empirical portion of the dissertation consists of three connected studies, and will (1) examine the effect of CEO turnover on reported net income and a variety of accounting variables; (2) assess stock market reaction to CEO turnover; and (3) study the relationship between accounting earnings figures and stock market returns realized after a CEO turnover.

This research builds on work by Morrill and Waterhouse (MW, 1988), a study of CEO turnover among Forbes 500 firms. MW distinguished between routine and non-routine CEO turnover, where a routine turnover is one in which the outgoing CEO is 60 years of age of older and the incoming CEO is promoted from within the firm; and a non-routine turnover is one in which at least one of these conditions is violated, i. e., the outgoing CEO is less than 60 years of age and/or the incoming CEO is recruited from outside the firm. MW found that (1) non-routine CEO turnover was associated with positive (not significant) abnormal stock returns in the year following turnover, while routine turnover was not; and (2) non-routine turnover was associated with a significantly lower net-income-to-sales ratio than routine and non-change firms. The

authors concluded that non-routine turnover is associated with substantive organizational change, change that is accompanied by unusual accrual policy decisions on the part of the incoming CEO.

This research refines and extends MW in several ways. First, a matched pairs design is used to gain better control over confounding variables. Second, the analysis of accounting items is extended to several individual balance sheet and income statement items. Third, the relationship between accounting information and abnormal market returns is analyzed in greater detail. Finally, the analysis is extended to include study of accounting information in the period leading up to, as well as the period after, the turnover.

The research presented here is of interest to accountants from several perspectives. First, it explores in more precise detail (and with greater theoretical justification) the well-documented finding that management turnover is often associated with discretionary asset write-offs/write-downs and accounting policy decisions. Second, it offers insight into how managers use the flexibility inherent in financial accounting to explain and justify CEO and organizational change (or lack of it). Third, it identifies one instance in which the classic Ball and Brown (1968) finding linking accounting earnings announcements and stock market returns does not hold.

The dissertation is organized as follows. This chapter presents a review of two fairly distinct bodies of literature. The first is the extensive body of previous accounting research on earnings "management" or "manipulation" on the part of corporate management. In general, this literature demonstrates that management can exercise substantial

discretion and judgement in the selection and presentation of accounting information; and does so under reasonably predictable circumstances. The latter part of the chapter reviews economic and organization theory research on CEO turnover, and outlines a model of the accounting and capital market implications of non-routine CEO turnover. Chapters 2, 3, and 4 present empirical results of tests suggested by the turnover model.

PRIOR RESEARCH: EARNINGS MANAGEMENT

Earnings management and accounting policy choice together make up one of the most consistently active research areas in accounting over the past 20 years. Theories of the impact of managers on accounting numbers have focused on management compensation in one form or another, leverage and political costs. This section of the paper reviews the major theoretical and empirical movements that have emerged in this area, which include research into the "big bath" phenomenon, income smoothing and positive accounting theory.

One form of earnings management that has received considerable attention in the popular press is the financial "big bath," an event in which a firm writes off or writes down several assets on the balance sheet, or makes provisions for future expenses or losses. These decisions serve to decrease income or increase losses for the current period while relieving future income of expenses that it would otherwise have to absorb. In effect, "taking a bath" tends to increase future income at the expense of current income.

In one of the earliest studies of financial baths, Copeland and Moore (1972) studied annual accounting reports for 907 companies over

the period 1966-1970. Company-years were classified as bath years if, in that year, non-exchange-based extraordinary items were reported on the income statement that served to reduce net income by 10% or more. In all, 3% to 7% of the sample were classified as bath years. Findings indicated (1) that bath companies had greater declines in net income (before extraordinary items) over the previous year than did non-bath firms; (2) a greater proportion of bath companies incurred losses than did non-bath firms; and (3) two-thirds of firms in the sample identified as undergoing top management turnover took baths (see also Moore [1973] for similar findings, especially regarding management turnover).

In a more recent study, Elliott and Shaw (1988) studied firms which reported special items of a discretionary nature on the income statement that constituted at least one percent of end-of-year total assets. Of 240 bath firms identified over the period 1982-1985, 91 (39%) experienced changes in the CEO, president and/or chief financial officer during the year of the bath. For the 240 firms, Elliott and Shaw found that the growth rates of market value, assets, and sales all decline steadily over the three-year period leading up to and including the year of the write-off. Throughout this three-year period and for six months after the write-offs, bath firms experienced negative stock returns relative to an industry average. These findings seem to confirm conventional wisdom concerning financial baths: Firms take baths when they are having a bad year anyway, and so try to ensure better times (in accounting terms at least) in the future; and new management takes a bath immediately upon taking control of the firm, when the adverse consequences on income can be blamed on the previous management.

Financial baths are only the most dramatic of the alleged management manipulations of accounting numbers. The income smoothing literature in accounting is based on the premise that strategic management of accounting numbers is more subtle and more pervasive than financial baths. Proponents of this literature argue that accounting choices are made to reduce fluctuations in earnings around some target (see Ronen and Sadan, 1981, for a review). Several possible motivations for smoothing were advanced some time before any empirical work was conducted in the area. Hepworth (1953) suggested that management might smooth income in order to (1) reduce taxes; (2) inspire investor confidence; and (3) prevent worker demands for higher wages. Gordon (1964) specifically argued that management welfare is a positive function of management job security, level and rate of growth of compensation, and level and rate of growth of organizational size. These factors are all dependent at least in part upon shareholder satisfaction, which in turn increases with rate of growth in net income and the stability of that growth (Trueman and Titman [1988] demonstrate that income smoothing can have a positive effect on a firm's market value in this regard). Thus, management will adopt accounting principles that will help smooth reported income and income growth.

The extensive empirical literature in income smoothing began to appear in published form around the mid-1960's. An empirical study of this sort generally used some variation of the following strategy. First, an object of smoothing was identified (e. g., net income before extraordinary items). An expectations model for the object was estimated (e. g., a linear trend over time, or function of the industry

leader's income). Deviations from this expectation were identified, and some measure of association between the deviations and some smoothing instrument(s) (e. g., extraordinary items, expense items, accounting policy changes) was calculated. If a significant correlation was obtained, smoothing was deemed to have occurred.

A number of studies have examined the use of accounting policy choices in income smoothing. Gordon, Horwitz, and Meyers (1966) examined the choice of flow-through vs. allocation of the investment tax treatment in 21 firms in the chemical industry over 1962-1963; and found some support for the hypothesis that firms use the flow-through method when current earnings per share is below target (using three different methods of estimating the target), and allocation when earnings per share is above target.

A couple of studies have examined the issue of accounting for investment in unconcolidated subsidiaries. Copeland and Licastro (1968) examined 20 New York Stock Exchange firms that accounted for unconsolidated subsidiaries on the cost basis, but found no evidence that these firms "arranged" for subsidiaries to declare dividends needed to smooth income. Barefield and Comiskey (1972), however, found modest evidence that firms choose the method of accounting for investment in unconsolidated subidiaries (equity vs. cost) that results in the lowest earnings variability (defined as the mean squared error of earnings about a linear trend over time).

A number of studies have studied changes in accounting policy. Of a sample of 55 firms that switched back to straight-line from accelerated depreciation, Archibald (1967) found that 40% earned less

income in the year of the change compared to the previous year. Cushing (1969) studied accounting policy changes made by firms over the period 1955-1966. Cushing defined policy changes as smoothing if earnings per share (EPS) after the change was closer to target (defined as previous year's EPS plus weighted average growth in EPS over the previous four years) than EPS before the change. Of 249 material changes, 167 were classified as smoothing.

A couple of studies focused on classificatory income smoothing, the practice of smoothing operating income by classifying certain income statement items as extraordinary. In effect, extraordinary items absorb the variation in reported income. Barnea, Ronen and Sadan (1976) studied a sample of firms from the paper, chemicals, rubber and air transport industries over the period 1950 to 1970. Expected ordinary income per share was estimated as a linear function of the industry leader's income per share. Residuals from this regression were found to be correlated with unexpected extraordinary items (also derived from a regression expectations model), suggesting that management within these industries practiced income smoothing. Ronen and Sadan (1975) found similar results.

Other studies have examined a broad sweep of potential smoothing instruments. Dascher and Malcom (1970) investigated the use of pension costs, subsidiary dividend revenues, extraordinary charges and research and development expense in income smoothing among firms in the chemical industry. They report strong evidence of smoothing behavior. Beidleman (1973) found evidence that firms smoothed income with the following instruments: research and development, sales and advertising, incentive

compensation, and pension expense.

In spite of a large number of studies offering similar results, several writers have been critical of the income smoothing literature and methodology (Gibbins, 1977; Ball and Foster, 1982; Moses, 1987). There is little agreement on the part of researchers on how to identify smoothing behavior empirically. Consequently, many of the results reported may be simply artifacts of the way that smoothing is measured, rather than actual smoothing on the part of the firm. Also, it is difficult to determine whether the apparent smoothing behavior observed occurs naturally, i. e., is caused by the technology of the firm or linkages with its environment, or is deliberately engineered by management. In the Beidleman (1973) study, for example, the finding that incentive compensation acts like a smoothing device is equivalent to the conclusion that incentive compensation is directly tied to reported earnings. The fact that many firms have explicit or implicit earnings-based bonus plans seems a much more obvious explanation for this finding than income smoothing.

The final difficulty with this literature involves the motivation of corporate executives. Even if intentional smoothing could be identified, that identification by itself may not tell us why smoothing behavior is practiced. Ronen and Sadan (1981) suggest that smoothing could be motivated by a number of factors, including taxation, labor negotiations, executive compensation and signaling issues; but research in this area has not, in general, factored any of these motivations into research designs used. Exceptions to this trend include Smith (1976) and Kamin and Ronen (1978), both of whom found that management-

controlled firms tend to exhibit a greater degree of smoothing behavior than do owner-controlled firms; and Moses (1987), who found that income smoothing through accounting policy changes was significantly and positively related to firm size, the existence of an earnings-based bonus plan and earnings variability.

The economic consequences literature in accounting (or "positive accounting theory") concerns itself explicitly with the economic incentives of firm managers regarding accounting issues (Holthausen and Leftwich, 1983; Watts and Zimmerman, 1986). Proponents of this view argue that contracting and monitoring costs determine the optimal form of contract between economic agents, which in turn determines agent incentives. Financial accounting is important here as an information system on which agents contract (e. g., earnings-based bonus plans, debt covenants). With sufficient knowledge of the contracting and monitoring costs and the arrangements in place to deal with them, it should be possible to predict top management accounting policy and accrual decisions.

The theory posits that CEOs are motivated to choose income-increasing policies if their compensation is tied to accounting earnings, and to ease debt covenant restrictions. CEOs are motivated to choose income-decreasing policies if high and/or variable income is apt to draw the unsympathetic attention of regulators or consumer groups.

It is not immediately obvious that CEOs can accomplish all of the objectives set out above through arbitrary selection of and change in accounting policies when these choices and the effects of these choices are usually clear to any interested observers. At least two

explanations for this phenomenon have been advanced. First, the cost to individual shareholders or consumers of unravelling the effects of accounting policy and accrual decisions is prohibitively high (the effect of nonzero information costs). Secondly, Lambert (1984) has shown that, in the context of management compensation, giving the manager discretion to smooth income can result in a more efficient risk-sharing arrangement between the manager and shareholders.

One set of empirical studies in this area has attempted to explain firms' choices of accounting techniques as a function of political visibility (using measures such as size and concentration ratio as proxies), management compensation plan, and firm leverage. Hagerman and Zmijewski (1979) and Zmijewski and Hagerman (1981) used the above explanatory variables to predict choices in accounting for inventory, depreciation, pension and the investment tax credit. Other accounting policy choices examined within this framework include: capitalization vs. expensing of interest costs related to assets not yet in service (Bowen, Noreen, and Lacey, 1981); full cost vs. successful efforts methods of capitalizing oil exploration costs (Deakin, 1979; Dhaliwal, 1980); capitalization vs. expensing of research and development costs (Daley and Vigeland, 1983); and accelerated vs. straight-line depreciation methods (Holthausen, 1981; Dhaliwal, Salamon, and Smith, 1982).

Few consistent empirical results have emerged from the early work in this literature. Generally, the estimated prediction models have shown poor predictive power, and only size and leverage have proven to be consistently associated with accounting technique choice (Holthausen

and Leftwich, 1983).

One of the principal difficulties noted by researchers in this area lies in the crude operationalization of factors like management compensation plans and debt covenants. In the Hagerman and Zmijewski studies, for example, management compensation in a firm was operationalized as a dummy variable taking a value one if an accounting earnings-based bonus was part of the executive's compensation package, and zero if not. The actual terms of the bonus plan, and all other components of the executive's compensation package, were ignored.

More recent studies in this area have paid closer attention to the operationalization of these variables, especially management compensation. Healy (1985) notes that a typical executive bonus plan specifies some level of firm income below which no bonus is paid. Between this lower limit and some upper limit, the bonus is some positive linear function of firm net income. Above the upper limit, no further bonus is awarded. An executive has an incentive to increase reported income only if current or expected income falls within these two limits. Otherwise, the executive has an incentive to lower current income in order to increase the value of expected future firm income and, therefore, future bonuses (the financial bath argument). Healy obtained individual firm bonus plan provisions from proxy statements, and found evidence of an association between total accruals and the hypothesized income-reporting incentives under the bonus plan.

A weakness in Healy's study is the use of total accruals to proxy for discretionary accruals, a criticism that has been levelled against much of the income-smoothing literature. One recent study has attempted

to distinguish more rigorously between the discretionary component of a particular accrual, which is determined by the manager, and the nondiscretionary component, which is determined by economic events. In a study of the provision for bad debts as a smoothing instrument, McNichols and Wilson (1988) modelled the nondiscretionary component of the provision for bad debts as a function of the current beginning balance in the allowance for bad debts, the current and the next period's write-offs of uncollectible accounts. Prediction errors were deemed to be discretionary accruals. The authors found that managers seem to choose income-decreasing accruals when income is either extremely high or extremely low, a result that is consistent with the hypothesis that managers make accrual decisions that maximize their bonus income.

Management Compensation: A Closer Look. As noted earlier, in order to perform a convincing and powerful test of the earnings management hypothesis, it is vital to understand CEOs' incentives. Management compensation is probably the most important and obvious extrinsic source of CEO motivation (e. g., Lambert, 1984), and it is not surprising that accounting researchers have investigated this issue extensively over the last few years.

One of the most interesting recent results in this area relates to the operationalization of executive compensation incentives in accounting decisions. The studies reviewed so far assumed that these incentives were tied exclusively to the nature (or simple existence) of the executive's earnings-based bonus plan. Antle and Smith (1985) note that an executive's compensation package may include any or all of the

following: salary, bonus plan, loans to the executive at less than market rate of interest, pension benefits, shares granted in stock options and long-term benefits, dividends, stock holdings, a variety of fringe benefits, and the executive's share of the corporate bonus pool. To focus on the bonus plan as the link between accounting measures and executive compensation is to ignore the possibility that implicit contracting, involving other components of compensation, might serve either (1) to reinforce or nullify the effect of an existent bonus plan; or (2) to tie executive compensation to accounting income, even if there is no explicit earnings-based bonus plan. Antle and Smith estimated current income equivalents of annual compensation package benefits received by each of the top three executives in 39 firms, over the period 1947-1977. Of 16 firms with explicit bonus plans, only 8 showed a significant correlation between management compensation as measured by Antle and Smith and return on assets as derived from the financial statements. Of 18 firms without a bonus plan, 15 had a significant correlation between compensation and return on assets.

In recent studies, researchers have attempted to include more of the components of executive compensation in the analysis, and have attempted to test the bonus hypothesis in a manner different from earlier studies. Abdel-khalik, Chi and Ghicas (1987) examine two competing hypotheses of executive compensation: the accounting bonus hypothesis and what the authors call the rational incentives hypothesis. The bonus hypothesis posits that compensation (operationalized as salary plus bonus) is a function of reported accounting income, and that executives have an incentive to use accounting policies to increase

reported income. The rational incentives hypothesis suggests that compensation is a function of cash flows; and that the executive's compensation package is renegotiated at intervals in a manner consistent with ex post settling up.

Abdel-khalik, Chi and Ghicas (1987) studied the relationship between salary and bonus and reported income for a sample of firms, (1) both the year before and the year after the firm switched from FIFO to LIFO (income-decreasing); or (2) before and after an income-increasing switch in pension accounting policy. The authors conclude that their results support the rational incentives hypothesis. In a similar study, Healy, Kang and Palepu (1987) studied firms that changed from FIFO to LIFO (income-decreasing) and accelerated to straight-line depreciation (income-increasing). They found that subsequent to these changes salary and bonus were based on reported earnings rather than earnings under the original accounting method, a result consistent with the bonus hypothesis. The authors add, however, that the compensation effect of these changes was small compared to the effect of industry- and economy-wide changes in compensation.

Taken together, the evidence regarding the effect of accounting policy decisions on management compensation is still inconclusive. Ignoring the finding that a large part of executive compensation lies in holdings of common stock and stock options (O'Toole, 1984; Murphy, 1985), there is at least some evidence that executive salary and bonus is more closely related to corporate cash flows and stock performance than to accounting earnings. While it seems likely that accounting decisions (with no cash flow effects) do have some effect on executive

compensation, it also seems likely that this effect is small.

To summarize the literature reviewed in this section, there is evidence that managers make discretionary accounting policy and accrual decisions, and attach some importance to them. There is weak evidence that managers are motivated at least partly by self-interest when making these decisions. Finally, there is evidence that some of the most dramatic discretionary accounting decisions are made immediately following top executive turnover. The next section of this paper reviews sociological and economic literature on firm leadership and executive turnover, and suggests a motivation for at least one class of accounting decisions.

PRIOR RESEARCH: CEO SUCCESSION

This section reviews literature in organizational sociology, finance and accounting that deals with the leadership and succession issue. Two issues regarding succession are of particular importance to the research reported here. First, factors that seem to be associated with income-decreasing decisions on the part of management, particularly poor financial performance, are also likely to be associated with CEO turnover. In order to control for these potentially confounding variables, it is necessary first to identify these factors. Second, an understanding of the likely mandate of the incoming CEO officer can provide at least a partial understanding of the objectives of that individual. If the CEO's accounting decisions reflect self-interest, as suggested in the economic consequences literature, an understanding of those objectives can be used to predict accounting decisions. A

discussion of studies that bear upon the prediction of CEO succession is presented first, followed by a discussion of those that discuss the effect of CEO succession on organizations after the succession event.

Causes of CEO Turnover. A review of the literature on CEO turnover reveals three principal factors that increase the likelihood of turnover: (1) age of the outgoing CEO (the normal retirement phenomenon); (2) organizational size; and (3) poor organizational performance. Normal retirement has attracted little research interest, while the latter two have received relatively greater attention from academics.

Grusky (1960) was among the first to offer a model of administrative turnover, and postulated an explicit relationship between turnover and organizational size. Grusky noted that top administrative succession almost always leads to organizational instability (which can be functional and/or dysfunctional for the organization), but that this instability is attenuated if the organizational is highly bureaucratized. In this case, the roles of individuals within the organization, including that of the chief executive, are prescribed in detail. The individual holding the position has little personal discretion, and so the identity of the individual is unimportant. Since large organizations tend to more bureaucratized, administrative turnover in large organizations should be less disruptive; and the board of directors should be less reluctant to initiate a turnover.

Additionally, larger firms tend to have longer promotion ladders, which necessarily implies that internally promoted CEOs in large organizations are often quite close to retirement age by the time they

are appointed to the CEO position (Vancil, 1987). This in turn implies that turnover should be a more frequent event in larger firms.

A number of studies provide evidence that support this size-turnover linkage. Grusky (1961) found that large firms are more likely than small ones to have top executive turnover, even after controlling for the age of the executive. Kriesberg (1962) reported similar findings in a study of heads of American state public and mental health programs. In a study of the top 300 U. S. firms (in terms of 1964 sales revenue), James and Soref (1981) found that total assets was significantly and positively related to the probability of dismissal of top executives. Harrison, Torres and Kukalis (1988) found that the probability of CEO and/or Board Chairman turnover among Compustat firms was positively related to firm size (measured by the logarithm of sales revenue), controlling for age of the incumbent.

The most obvious and intuitively appealing reason for CEO turnover is poor firm performance (Fredrickson, Hambrick and Baumrin, 1988). The board of directors of a firm is charged with monitoring firm performance and assessing the effectiveness of the CEO. Poor financial performance implies an ineffective CEO, which in turn prompts the board to dismiss. A substantial body of literature has developed that supports this point of view.

In a survey study, Meindl, Ehrlich and Dukerich (1985) found that people tend to attribute unusual outcomes (either positive or negative, relative to some industry average) to the personal efforts of the manager. This study supports the general notion that leaders are perceived to have a substantial impact on organizational outcomes and

might be held accountable for them by organizational participants.

A number of recent studies have examined corporate performance prior to CEO turnover. Salancik and Pfeffer (1980) studied the relationship between firm performance and CEO tenure among a random sample of firms in the 1972 Fortune 500. They found that profit margin (net income divided by sales revenue) was positively related to tenure for externally controlled firms, but found no relationship between total return on common stock and tenure.

James and Soref (1981) studied firings of top executives among large U. S. firms in 1965. Probit results showed that return on assets (net income divided by total assets), operationalized both as a levels and a difference or trend variable, was significantly and negatively associated with subsequent executive dismissal. The authors found that firm control (management vs. owner) was not associated with the probability of turnover.

Osborn, Jauch, Martin and Glueck (1981) performed structured content analysis on Fortune magazine case histories of 313 firms. The authors found a negative association between prior return on assets as reported by Moody's and subsequent CEO turnover (i. e., lower return on assets was associated with subsequent turnover).

Allen and Panian (1982) studied the incidence of CEO turnover among 242 major industrial corporations over the period 1971 to 1980. The measures of performance used were (1) the sign of net income (i. e., whether positive net income or a loss was reported for the year) and (2) return on equity relative to the firm's own return on equity time series. The proportion of firms turning over their CEOs was much higher

among firms defined as underperforming.

Wagner, Pfeffer and O'Reilly (1984) studied turnover among top management in 31 Fortune 500 firms over the period 1976 to 1980. These authors found a negative association between return on investment (ROI) less industry ROI (it is not clear whether this ROI is an accounting or stock market measure) and turnover among members of top management.

In a study of 671 Compustat firms over the period 1978-1980, Harrison, Torres and Kukalis (1988) found that return on assets (net income divided by total assets) was negatively related to the probability of CEO turnover; and turnover was more likely if the outgoing CEO was of retirement age.

More recent studies into this issue have focused on stock market returns as the principal measure of firm performance. Coughlan and Schmidt (1985) studied turnover among Forbes 500 firms over the period 1977 to 1980. They found that market model cumulative abnormal stock returns realized over the during the fiscal year prior to turnover were significantly negatively related to turnover, but only for firms whose outgoing CEO was less than 63 years of age.

Warner, Watts and Wruck (1988) studied CEO changes among a random sample of 269 NYSE and ASE firms over the period 1963 to 1978. Performance measures used included total stock returns of the firm over the periods of varying length leading up to the turnover announcement in the Wall Street Journal, and returns to the CRSP equally-weighted market index over the same periods. Logit results showed that turnover was negatively associated with the firm's own stock returns, and positively associated with returns to the market index; but this only held for

returns measured over the period immediately prior to the turnover announcement.

Weisbach (1988) studied CEO changes among 495 firms appearing in the Forbes 500 lists over the period 1974 to 1983, deleting from his sample any turnovers in which the outgoing CEO was 64, 65 or 66 years of age. Performance measures used here included return on common stock less the return to the CRSP value-weighted market portfolio and change in earnings before income and taxes deflated by total assets (EBIT) less the industry average EBIT. Weisbach found that both the accounting and stock market measures of performance were negatively associated with the probability of turnover (logit model results), and that these relationships were especially strong for firms with relatively large numbers of outsiders on the board of directors.

Taken together, these studies provide strong evidence that CEO turnover is associated with prior firm performance, whether measured by accounting or stock market variables. There is also evidence, however, that not all turnovers are the same in this regard. Turnovers in which the outgoing CEO is of approximate retirement age (what might be termed routine turnovers) are not so closely associated with prior firm performance. As well, there seems to be some evidence that some CEOs are able to insulate themselves from performance pressures. This seems to be especially the case among firms with relatively low numbers of outsiders among their directors, and among firms where the CEO is a major stockholder. The hypotheses derived from this literature are

stated below in the alternative form[1]:

Hypothesis 2.1: The likelihood of CEO turnover is an increasing function of organizational size.

Hypothesis 2.2: Non-routine CEO turnover is preceded by poor corporate performance, relative to otherwise similar non-turnover firms.

Hypothesis 2.3: Routine CEO turnover firms are indistinguishable, in terms of corporate performance, from otherwise similar non-turnover firms.

The Organizational Impact of CEO Turnover. Two basic lines of thought have emerged from the sociological research on executive succession. The first is that leadership does not make a difference in an organization and, therefore, neither does leadership turnover. The second is that executive turnover has a disruptive effect on an organization, and may be associated with either deterioration or enhancement of organization performance. The next section of this chapter reviews the evidence supporting each of these views.

Pfeffer (1977) argues that the effect of leaders on organizational outcomes is minimal because (1) selection processes (both self and organizational) make all leaders alike; (2) expectations from subordinates, superiors and peers constitute important constraints on leader behavior; and (3) many of the factors that influence organizational performance, both internal and external, are beyond the control of the leader.

A considerable body of empirical literature supports this view. In a study of 26 National Football League teams in existence from 1970

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[1]The hypotheses presented here are numbered in a manner consistent with the chapters of the thesis. For example, tests of hypotheses 2.1, 2.2 and 2.3 are presented in Chapter 2. There is no hypothesis 1.

to 1978, Brown (1982) found that head coach succession had a small but statistically significant effect on team performance (measured by winning percentage). Brown also found, however, that turnover was generally preceded by slump, and that performance in the season following the turnover was equal to pre-slump performance. Brown concluded that the presence of the slump permitted the illusion of improvement after turnover, but the long-run performance of the team was unchanged. Similar findings have been reported among professional baseball teams (Gamson and Scotch, 1964; Allen, Panian and Lotz, 1979); and college basketball teams (Eitzen and Yetman, 1972). The turnover event is a scapegoating ritual designed to satisfy disgruntled fans, but has no meaning aside from that.

Similar results have been reported in studies of corporate performance. Lieberson and O'Connor (LO, 1972) studied three dimensions of corporate performance - profit, sales, and profit divided by sales - in 167 corporations over the period 1946 to 1965. After removing year, industry and company effects, the authors found that leadership accounted for only seven to fifteen percent of the variance in these performance measures. LO conclude that firm performance is governed chiefly by environmental and organizational influences, which minimize the impact that a leader can have.

More recent studies have focused on stock market reaction to turnover announcements in the popular press. The assumption here is that the stock market impounds an unbiased appraisal of the effect of the turnover on future firm cash flows through stock price adjustments immediately following the announcement. The absence of abnormal returns

to a firm reporting a turnover reflects the market's indifference to the information. Reinganum (1985) only found significant abnormal returns for small firms announcing a turnover in which an outsider was appointed to the CEO position. Warner, Watts and Wruck (1988) found no abnormal returns to the announcements in their sample (their study is reviewed above). These findings suggest that the stock market regards many top management turnovers to be non-events, consistent with the findings of LG.

In contrast to this first line of thought, many writers argue that executive turnover does make a difference, that it can be a vehicle for organizational change. Change is not an easy thing for organizations. Starbuck, Greve and Hedberg (1978) and Starbuck (1983) argue that the perceptual filters and programmed behaviors used by managers to understand and work within their environments may serve to blind managers to critical movements in the environment. The filters and programs that are vital for an organization to succeed in its environment cripple its ability to recognize and adapt to changes within the environment. Change may also require that incumbent managers indict their past actions, a behavior which is psychologically difficult (Tichy and Ulrich, 1984). Finally, managers may be reluctant to allow change for fear of upsetting their power position within the organization (Pfeffer and Salancik, 1978).

These arguments suggest two related contentions. First, incumbent managers are either unwilling or unable to effect meaningful organizational change. Second, significant change within an organization is brought about primarily through managerial succession.

Pfeffer and Salancik (1978) posit a model of executive turnover as a mechanism for environmental effects. Environmental factors determine the distribution of power within organizations, which in turn leads to selction and removal of executives, which in turn determines organizational actions and structures.

This notion has received some empirical support. In a study of U. S. city, county and state finance departments, Meyer (1975) found that time series autocorrelations of structural variables were positively associated with leader tenure. Change in organizational structures were more pronounced if turnover occurred or if the leader was not a political appointee (and therefore dependent on some outside patron).

In an attempt to rework the LO study, Weiner and Mahoney (WM, 1981) studied the performance of 193 firms over the period 1956 through 1975. Rather than using year, industry, and company to proxy for contextual determinants of organizational performance as LO did, WM used specific environmental and organizational variables - gross national product, industry sales, industry concentration, corporate size and corporate technology. After controlling for these contextual variables, WM found that leadership accounted for 44% of the variation in return on assets in the sample, and 47% of the variation in stock prices.

There is some evidence that equity investors associate news of an executive turnover with an improvement in the firm's prospects. Furtado and Rozeff (1987) studied stock market reactions to a sample of appointments to and dismissals from any of the Chairman, Vice-Chairman, President or CEO positions announced in the Wall Street Journal over the

period 1975 to 1982. Their results indicate that appointment announcements are on average associated with small but statistically significant positive abnormal stock returns, except for large firms appointing an outsider (a relatively infrequent occurrence).

Other studies, however, suggest that the alleged changes brought about through turnover are not beneficial. Grusky (1963) found that the frequency of manager turnover on professional baseball teams was inversely related to team performance, which he blamed on the disruptive effects of turnover. Carroll (1984) found that publisher succession increased the probability of death among U. S. newspapers, especially if the outgoing publisher was unusually dominant within the organization and/or was the founder of the organization. In a study of 209 turnovers identified in the Wall Street Journal over the two years 1979 and 1980, Beatty and Zajac (1987) found significant negative abnormal market returns to firms announcing CEO turnover, regardless of whether the new CEO was promoted from inside the firm or recruited from outside.

In an attempt to reconcile the sometimes conflicting executive succession findings, a number of CEO turnover studies have focused on the organizational conditions surrounding succession. Recent empirical work on CEO succession indicates that it is important to distinguish between routine and non-routine CEO replacements. Starbuck, Greve and Hedberg (1978) argue that routine turnovers, wherein the incoming CEO has been carefully selected and brought up within the company, tend to perpetuate current organizational practices. Here, the new CEO shares the perceptual filters and policies of the outgoing CEO, and the CEO turnover is essentially a non-event. Substantive change requires new

management or at a minimum a clear break with the past. A clear break may be attempted by discrediting the policies of a CEO through dismissal and promoting an internal candidate who has a different set of policies, or by hiring a new CEO from outside the organization (Grusky, 1960; Helmich and Brown, 1972; Helmich, 1974; Vancil, 1987).

While the operationalization of "routine" vs. "non-routine" varies widely across studies, one of the most widely used has been the origin of the new executive (whether he/she comes from outside or inside the organization). In a study of professional baseball teams, Grusky (1964) found that inside turnover (the new manager was promoted from within the organization) was associated with improved team performance, while outside turnover was associated with deterioration. Helmich and Brown (1972) found that outside succession (the new president is appointed from outside the firm) in a sample of corporations was associated with organizational change (measured by personnel turnover in the executive constellation), while inside succession was not. Helmich (1974) found that outside succession was associated with higher growth in the number of corporation subsidiaries and size of the board of directors, both of which (Helmich argues) reflect greater concern with growth and managing the firm's environment. Reinganum (1985) observed positive abnormal returns associated with the announcement of a change in leadership on corporate performance, but only for small firms where the new leader was appointed from outside.

More recent studies seem to show that stock market reaction to a turnover announcement is dependent at least in part on firm performance prior to the announcement. The assumption underlying these studies is

that non-routine turnover is appropriate if the firm is doing badly, and inappropriate if the firm is doing well. Lubatkin, Chung, Rogers and Owers (1989) found that outside CEO succession in Forbes 500 firms tend to experience higher abnormal returns than do inside succession firms during trading days surrounding a turnover announcement, especially if the turnover is preceded by poor financial performance. Weisbach (1988) reported similar results for underperforming turnover firms with a large number of outside directors on their Boards. Bonnier and Bruner (1989) found that Wall Street Journal turnover announcements for underperforming firms (firms suspending dividends or reporting a net loss for the quarter immediately before the announcement) were associated with positive abnormal stock returns. Friedman and Singh (1989) show that turnovers initiated by the board of directors (i.e., dismissals) that were also preceded by poor organizational performance (measured by net income divided by owners' equity) tend to be associated with positive abnormal stock returns.

To summarize, the preceding discussion once again underlines the need to distinguish between routine and non-routine types of turnover. Routine turnovers are generally associated with continuity, while non-routine turnover is associated with some sort of organizational change. This suggests the following hypotheses, stated in the alternative form:

Hypothesis 3.1: The announcement of non-routine CEO turnover is associated with imminent and substantive organizational change.

Hypothesis 3.2: The announcement of routine CEO turnover is associated with maintenance of the organization as it is.

CEO SUCCESSION, EARNINGS AND FIRM PERFORMANCE

Organizational Change and Accounting. Assuming that changes can be made, what can a new CEO do to successfully change an organization? MW suggest that there are essentially two sets of activities that a new CEO will engage in. First are the substantive changes to the organization's policies and direction that may include new definitions of the central problem of the organization and new objectives for it to pursue. Second, a new CEO will signal whether or not change has occurred through such means as financial statement changes, press releases, advertisements and other public disclosures.

Pettigrew (1986) argues that in order to implement change a new CEO must gain credibility and legitimacy with relevant external and internal groups. Two related activities are involved here. First, the new CEO must convince organizational constituents that he/she understands whatever difficulties that the firm has had in the past, and knows how to lead the firm into the future (Salancik and Meindl, 1984). Secondly, constituents must be persuaded to break commitments to the organization as it was, and build new commitments to the organization that will be. In order to accomplish this, it is important to summarize the past (Albert, 1984). In order to change, those affected must be led to "say good-bye" to the past. This is only possible if some acceptable historical account, either fictional or non-fictional, is put together.

If Albert is correct, accounting information may have an important role to play in organizational change processes. Accounting information is used to provide an ex post rational account of the activities of the organization. This role of accounting information may take on

particular importance around the time of a change in corporate leadership. After a CEO change, the financial statements may be used to summarize the past and to explain the change in leadership. One explanation for change is that the finances of the organization were in poor shape and hence drastic action was necessary. Another possibility would be that continuity is in order and that the change in CEO does not signal change in the organization's policies. The different effects (change versus continuity) will be apparent depending on whether the CEO change was routine or not.

Managers have some discretion in their choice of how to account for organizational activities. In particular, discretion exists over the timing of when a variety of costs become expenses. I expect that it is in this area of discretionary accounting policy that the signals regarding organizational change will be seen. If the executive change is non-routine, the incoming CEO can indicate the errors of the past administration through asset write-downs or write-offs. The past CEO can be blamed for past mistakes and the way can be prepared for future success. Similarly, future directions can be charted by making provisions in the current financial statements for future restructuring costs, or provisions for expected losses on planned future disposals. If the turnover is routine, the incoming CEO will signal a continuation of the successful past by maintaining past accounting policies.

Hypothesis 3.3: Non-routine CEO turnover is associated with income decreasing accounting decisions on the part of the new CEO, relative to otherwise similar non-turnover firms.

Hypothesis 3.4: Routine CEO turnover is not associated with unusual accounting decisions relative

to otherwise similar non-turnover firms.

Accounting Change and Organizational Performance. A remaining question is: what is the association between signals which are sent via the manager's choice of discretionary accounting decisions and substantive organizational change and performance? In this study, this question is considered from two different perspectives.

The first deals explicitly with whether or not discretionary accounting changes reflect "real" changes in the firm. The discussion leading up to hypothesis 3 suggests that accounting information plays principally a ceremonial role in the process of organizational change. While organizational change might trigger a general class of (income decreasing) accounting decisions, specific accounting decisions might be entirely unrelated to the specific organizational change strategy.

At the same time, it is clear that at least some nonaccounting management decisions (e. g., increased research and development, disposal of a division, advertising) can have a significant impact on the current period's income. Thus, it is possible that "big baths" observed around the time of CEO turnover may be (at least partly) due to nonaccounting decisions on the part of the firm, and may not reflect any discretionary accounting decisions on the part of the manager. This project will explore the relationship among specific accounting decisions, nonaccounting management decisions and substantive changes in organizational performance.

The second perspective is concerned with what has become more of a research tradition in accounting. Research by Ball and Brown (1968) and Beaver, Clarke and Wright (1979), among others, has demonstrated a

relationship between unexpected earnings and abnormal security returns. Positive unexpected earnings are associated with positive abnormal market returns in the twelve month period leading up to the earnings announcement. Conversely, earnings that are lower than expected are associated with lower than normal stock returns. These findings are robust and generally are stronger for large firms than for small firms (Freeman, 1987). Generally, studies that have examined the relationship between unanticipated earnings and prices have presumed that "business is as usual." The relationship between unanticipated earnings and prices under the condition of some change in the firm's leadership or structure has not been explicitly examined before MW.

The arguments above suggest that non-routine changes in leadership are more likely to produce substantive changes in firm policies than are routine leader changes. In addition, the new leader in a non-routine change situation will signal that a break with the past has occurred by making discretionary accounting accruals that decrease net income. If this is correct, the resulting earnings signal will be associated with different security returns than it would be under normal circumstances. Specifically, it is expected that lower than anticipated net earnings will be associated with higher stock returns in non-routine change companies. "Bad news" for these companies will be associated with positive abnormal returns because it indicates a break with the unsuccessful past.

There is at least some recent empirical evidence that supports this kind of relationship between stock returns and accounting performance measures following substantive organizational change. In a

study of incidents of corporate restructurings in 179 firms over the period 1980 to 1984, Brickley and Van Drunen (1990) found that firms that announced restructurings typically suffered negative abnormal stock returns up to the point of the announcement of the restructuring in the Wall Street Journal, but then enjoyed positive abnormal returns during the period around the announcement in spite of the fact that industry-adjusted return on equity for these firms tended to decline in the years following the announcement. If non-routine turnover is a signal of imminent and substantial organizational change, a similar relationship between earnings and stock returns should be observed.

The relationship between unanticipated earnings and stock prices should be similar in routine CEO change firms and in non-change firms.

Like Ball and Brown, I am not attempting to show that the release of earnings data conveys information to the market (for examples of work in this area, see Beaver, 1968; Patell and Wolfson, 1984; and Foster, Olsen and Shevlin, 1984). Rather, the suggestion is that executive decisions in a non-routine turnover firm tend to cause both a positive stock market reaction and lower than expected earnings (where the expectations model is a random walk). Thus, the focus is on the long-term association between earnings and security returns, and not on any short-run causal relationship between the two.

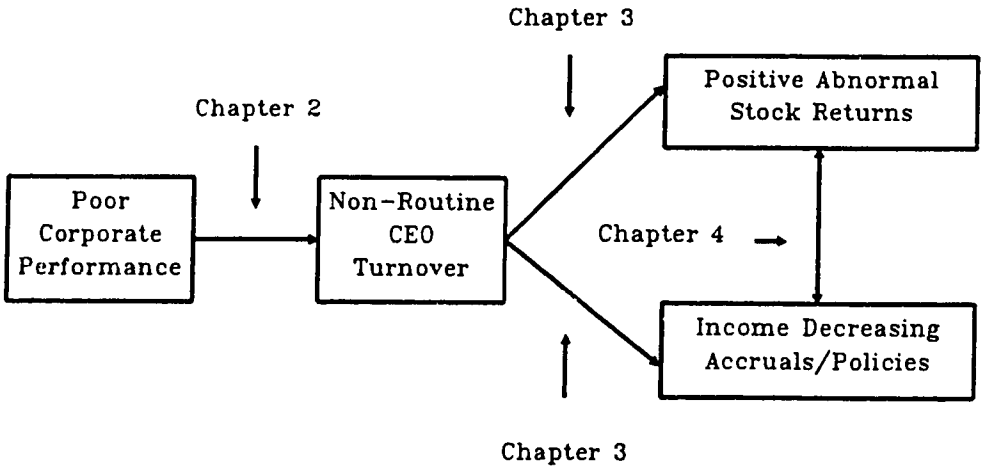
This last line of argument suggests the following hypothesis, stated in the alternative form:

Hypothesis 4: The association between earnings reports and abnormal stock market returns is dependent upon the occurrence or non-occurrence of non-routine CEO turnover.

To summarize, the organizational sociology literature suggests

that non-routine CEO turnover is preceded by poor organizational performance and associated with some change in the operation and/or goals of the organization. The agenda of the new non-routine CEO is change, and he/she uses channels of communications like financial statements to convince important organizational constituents (e. g., investors, creditors, workers) to support this agenda. The result is income decreasing accounting and accrual decisions. If the new CEO is successful, the firm's common stock should earn positive abnormal security returns. The diagram in Figure 1 represents schematically the model of non-routine CEO turnover advanced in this dissertation.

Figure 1-1. Model of Non-Routine CEO Turnover



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CHAPTER 2. FINANCIAL RATIOS AND THE PREDICTION OF CEO TURNOVER

One of the most widely documented findings in chief executive officer (CEO) turnover research is that (especially non-routine) turnover is preceded by poor financial performance on the part of the firm and/or unusual volatility in the firm's environment. This chapter reports the results of an empirical analysis of the relationships among a variety of accounting and market variables and CEO turnover. In its focus and approach, it has much in common with the bankruptcy prediction studies that have appeared in the accounting and finance literatures (e. g., Beaver, 1966; Altman, 1968; and Ohlson, 1980). This approach has been extended in recent years to prediction of takeover targets (Palepu, 1986), audit qualification (Dopuch, Holthausen, and Leftwich, 1987), and multi-state financial distress (Lau, 1987).

Literature reviewed in Chapter 1 argued and found empirical evidence that CEO turnover is associated with poor corporate performance and that this proposition is likely to be especially true if the turnover in question is non-routine (e. g., the incumbent CEO is fired), but not if the turnover is a routine retirement and promotion of an internal candidate. Additionally, larger firms are in general more likely to experience CEO turnover than smaller ones. In this chapter, I explicitly test these notions, stated below in the alternative hypothesis form:

Hypothesis 2.1: The likelihood of CEO turnover is an increasing function of organizational size.

Hypothesis 2.2: Non-routine CEO turnover is preceded by poor corporate performance, relative to otherwise similar non-turnover firms.

Hypothesis 2.3: Routine CEO turnover firms are indistinguishable, in terms of corporate performance, from otherwise similar non-turnover firms.

Predicting non-routine CEO turnover is potentially of interest for a couple of reasons. First, in large organizations non-routine turnover is a rare event and usually significant in the evolution of the organization. The second reason is more directly relevant to the research reported here. Separate prior work has shown that poor economic performance is associated with both CEO turnover (e. g., Coughlan and Schmidt, 1985; Warner, Watts and Wruck, 1988) and big baths (Copeland and Moore, 1972; Elliott and Shaw, 1988). However, to this point the effect of turnover on accounting decisions, after controlling for the economic conditions that tend to produce turnover, has not been explicitly examined. An important contribution of this dissertation is the identification of financial variables that are associated with CEO turnover, and the use of statistical techniques to control for the effects of these variables on subsequent accounting decisions.

The results reported here indicate that it is possible to distinguish between turnover and non-turnover firms (matched on industry, year and fiscal year end) in terms of accounting and stock market variables. Generally, turnover firms tend to be larger than non-turnover firms. Additionally, non-routine turnover firms tend to experience relatively lower stock returns in the fiscal year prior to the year of turnover, while the return on assets for routine turnover firms tends to be higher than that of non-turnover firms. Leverage and liquidity measures were not useful in distinguishing between turnover and non-turnover firms.

These results have the following important implications. First, they are consistent with recent findings in economics, finance and organization theory that executives seem to be held responsible for the firm's stock market performance; and executive dismissal seems to be used by the market to discipline ineffective management. Second, it is clear that any empirical investigation of the effect of executive turnover on accounting decisions must control for prior stock performance, which has already been shown to be associated with financial baths. Finally, the finding that routine turnover is associated with high return on assets relative to control firms is a surprising result that merits further investigation.

The chapter is organized as follows. First, the data selection is described; dependent and independent variables are defined; and the analysis design is outlined. Next, the probit results are presented and discussed. Finally, conclusions are offered.

DATA

The universe of firms considered is those listed in the 1986 Forbes Magazine "Who Gets the Most Pay?", an annual feature which ranks the top 800 (approximately) CEOs in the United States in terms of annual compensation. This list provides the age and corporate background of the CEO, along with number of years spent with the company and number of years in the position of CEO. From this information, I am able to discern the age of an outgoing CEO and whether or not the incoming CEO was recruited from outside the organization. "Who Gets the Most Pay?" offers several advantages in this kind of research. First, it allows the researcher to compile a list of CEO turnovers with relative ease,

and identify firms which have undergone turnovers in rapid succession (these firms were eliminated to prevent potential confounding caused by successive turnover events). Second, and more importantly, it provides a convenient database of non-turnover firms from which control firms might be chosen. Finally, the researcher can be reasonably assured that all of these firms have a reasonably high public profile so that firm performance and CEO turnovers will be followed by the financial community with keen interest.

Those turnovers included in the final sample met the following conditions: (1) the firm was not a financial institution (to ensure that all firms in the sample used roughly comparable accounting methods); (2) there were no other CEO changes reported for the firm during the two years before, the year of, and the two years following the turnover (to prevent confounding caused by consecutive turnovers); and (3) annual financial statement data was available on COMPUSTAT for two years before, the year of, and the year following the turnover.

Additionally, for each turnover identified, a non-turnover control firm was chosen at random from all firms with available data that matched the turnover firm on fiscal year-end, industry (four-digit SIC code), and real time. A control firm must have had no CEO turnover within two years of the turnover in question. If possible, this control firm was selected from the Forbes 500. If no Forbes 500 firm qualified to be a control firm, a non-Forbes COMPUSTAT firm was selected at random from those available. If no control firms were available at all, the turnover was deleted from the final sample.

This procedure yielded 283 turnovers. Table 2-1 breaks down these

turnovers by year and major industry group. A turnover is deemed to have occurred in a given year if the successor took office during that fiscal year. The breakdown demonstrates that the turnovers are more or less evenly spread across 1975 to 1985. The small number of turnovers in 1974 and 1986 is an artifact of the sample selection procedure that only sampled a portion of the total turnovers occurring in those two years.[2]

Descriptive statistics for the 283 turnover companies are presented in Table 2. Interestingly, mean and median revenue increased over the period leading up to the turnover for the 283 turnover firms, while mean and median income has decreased over the same period. This finding is at least superficially consistent with the idea of "big baths" occurring around the time of CEO turnover.

Routine vs. Non-routine Turnover. Two different ways of distinguishing between routine and non-routine CEO turnover are used in this paper. The first is similar to that used by Morrill and Waterhouse (1988): A CEO turnover is deemed to be routine if (1) the outgoing CEO is of retirement age or older, and (2) the incoming CEO is promoted from within the firm. These circumstances presumably reflect the normal retirement of the outgoing CEO and promotion of the successor from within the firm. If either (or both) of these conditions is violated,

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[2]During the data collection phase, I arbitrarily decided to include any turnover as long as the turnover firm's fiscal year that ended nine to 21 months after the turnover was between 1975 and 1986 inclusive. Thus, for example, a turnover occurring after March, 1974 for a December fiscal-year-end firm was included in the sample, but not one that occurred in the first three months of 1974. Similarly, only turnovers occurring in the first three months of 1986 (assuming again a December fiscal year end) were included in the final sample.

the turnover is considered to be non-routine. This dichotomy is consistent with the inside/outside distinction made by several researchers (e. g., Helmich and Brown, 1972; Reinganum, 1985); and the retirement age phenomenon noted by others (e. g., Coughlan and Schmidt, 1985).

Determination of retirement age is difficult because firms have different retirement policies. Figure 2-1 shows the distribution of outgoing CEO ages for the 283 turnovers in this sample. A very large proportion of outgoing CEOs were aged 64-66, so age 64 was arbitrarily chosen to be "retirement age." This age/origin dichotomy divides the 283 turnovers into 171 routine and 112 non-routine turnovers.

There are at least two difficulties with this classification scheme. First, some organizations might routinely recruit new CEOs from outside.[3] Secondly, it is likely that some of the "non-routine" turnovers in this sample legitimately represent early retirement or retirement for health reasons. Unfortunately, North American business norms often make it impossible to determine with certainty the difference between voluntary early retirement and dismissal (Vancil, 1987; Weisbach, 1988). Finally, and perhaps most significantly, an incumbent CEO is often able to institutionalize power through large stock holdings and/or sympathetic members on the board of directors; and is able to withstand internal pressure to leave (Pfeffer and Salancik, 1978). In some cases. succession may only occur after the CEO

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[3]It seems unlikely that many of the organizations in this study fall into this category. Most large organizations tend to promote CEOs from within their ranks, believing that it is difficult to attract and hold top managerial talent without the possibility of promotion to the CEO position (Vancil, 1987).

voluntarily retires or dies. Here, the turnover appears to be routine but could well be associated with significant organizational change.[4]

To address this issue, a second classfication scheme is used in this study, this one based on outgoing CEO tenure. Other things being equal, the longer the incumbent CEO remains in office (and perpetuates the same organizational policies and behaviors), the more likely the organization is to grow out of synchronization with its environment. Outgoing CEO tenure could therefore proxy for degree of organizational change required, as well as degree of entrenchment of incumbent power. Figure 2-2 displays the frequency distribution of tenure of outgoing CEOs among the 283 turnovers examined here. Since no standard exists defining the "right" tenure, a turnover is arbitrarily classified as non-routine if the outgoing CEO's tenure (in the position of CEO) is within the top quintile (i. e., if the outgoing CEO's tenure is greater than or equal to fifteen years). This tenure dichotomy divides the 283 turnovers into 233 "normal tenure" and 50 "long tenure" turnovers.

Tables 2-3 and 2-4 present a breakdown of the total sample of turnovers by turnover type (using both dichotomies proposed here) and industry type. Chi-square tests show that turnover type (i. e., routine vs. non-routine; and normal vs. long tenure) and industry are independent for both dichotomies. This gives some assurance that any

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[4]For example, the stock of Gulf and Western Industries rose 50% during the month following the sudden death of CEO and founder Charles Bludhorn in early 1983. Johnson et al (1985) find evidence of less dramatic but significantly positive abnormal returns in a sample of 53 sudden executive deaths.

The extent to which this is a serious problem is not clear, however. If a CEO is able to resist normal pressures to leave a firm in spite of continued underperformance, he/she can still be removed through means such as hostile takeover (Morck, Shleifer and Vishny, 1989).

turnover type effects detected are not confounded with industry effects.

Independent Variables. A number of accounting and stock market variables are used as independent variables, measuring various aspects of corporate size, financial performance, leverage and liquidity.

SIZE. As noted in Chapter 1, large organizations are arguably able to change top executives more easily than small organizations because the greater bureaucracy associated with large organizations tends to lessen the disruptive effects of turnover. As well, the firm's internal pool of managerial talent can be expected to increase with firm size, expanding the group of candidates for top managerial positions available to the organization. Other things being equal, then, CEO turnover can be expected to occur more frequently in larger organizations. Total assets is a measure of organizational size that is widely used in the accounting literature (Watts and Zimmerman, 1986), and has been used in the turnover prediction literature (James and Soref, 1981). Total assets as at the end of the fiscal year prior to turnover is used as a measure of firm size here.

FINANCIAL PERFORMANCE. The most widely documented finding in the executive succession prediction literature is that succession is generally preceded by a period of poor organizational performance. Poor performance, measured by either stock market or accounting variables, is generally taken to be an objective signal that change is required; and non-routine turnover is effected to instigate that change. Additionally, poor stock performance and accounting performance have been shown to be associated with big baths and income-decreasing accounting policy changes. Thus, it is important to detect any

significant differences between turnover and non-turnover firms with regard to these variables before going on to assess the effect of turnover on subsequent accounting decisions.

Both accounting and stock market measures of performance have been used in the executive succession literature as predictors of turnovers. It is important to note the important difference between the two. Accounting performance measures like income defined under generally accepted accounting principles are measures of past performance. Stock prices in an efficient capital market impound all information available to the market pertaining to the distribution of future returns (of dividends and capital gains) to the prospective shareholder (Fama, 1976). While a strong association between the two measures has been documented in the accounting literature (e. g., Easton, 1985), it has generally been shown that stock prices largely anticipate information contained in earnings releases (e. g., Ball and Brown, 1968; Beaver, Lambert and Morse, 1980; Freeman, 1987) and reflect more information than do earnings. This strongly accepted assertion on the part of accounting and finance academics, together with the wider availability of security price data and event study methodology, help explain why more recent turnover prediction studies have focused on stock market returns as a measure of firm performance over accounting-based measures that dominated turnover prediction studies published prior to 1985.

At the same time, there is some evidence that security price data do not impound all turnover prediction information contained in earnings. Weisbach (1988) found that both returns and accounting earnings can be statistically associated with subsequent turnover, and

each had incremental discriminatory power over the other.

Both accounting and stock market measures of performance are used in this analysis. Accounting measures include: return on assets (income from continuing operations divided by total assets) for the fiscal year prior to turnover; income trend (income from continuing operations in fiscal year prior to turnover less ordinary income in year two years prior; these two measures are similar to that used by James and Soref [1981]; Weisbach [1988]; and Harrison, Torres and Kukalis [1988]); and whether or not a loss before extraordinary items and discontinued operations was recorded in the fiscal year prior to turnover (similar to the approach taken by Allen and Panian [1982]).[5] Total return on common stock (dividends paid plus change in stock price during the fiscal year prior to turnover) is used to measure stock market performance prior to turnover.[6]

LEVERAGE. More highly levered firms tend to be riskier, and can face distress through violation of debt covenants. A change in CEO might serve to assure both shareholders and creditors that the firm is moving to resolve its problems. Thus, closeness to accounting constraints implied by debt covenants is expected to be associated with non-routine turnover. Pfeffer and Leblebici (1973) found that leverage was

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[5]Identical analyses were run using net income in the computation of these accounting variables, rather than ordinary income. The results obtained were the same as those presented here.

[6]Total returns are used here, rather than abnormal returns generated by the market model. The reason for this is that if the market model is estimated over some period prior to the turnover, estimates of the intercept term would likely be biased downward for underperforming firms. The residual stock returns generated by this model would probably not reflect accurately firm-specific performance.

negatively associated with CEO tenure.

Press and Weintrop (1990) investigate the association between seven different measures of leverage and closeness to accounting constraints in public and private debt agreements. Their results indicate that the total-debt-to-total-assets ratio is significantly correlated with closeness to accounting constraints. The total-debt-to-total-assets ratio (as at the end of the fiscal year prior to the turnover) is used here as a proxy for closeness to accounting-based debt constraints.[7]

LIQUIDITY. Liquidity is a measure of the ability of a firm to meet its short-term financial obligations. An inability to meet these obligations threatens the existence of the firm, which might replace its CEO in an effort to improve firm performance and/or convince creditors that firm prospects are improving. Thus, low liquidity is expected to be associated with non-routine CEO turnover. In this study, the current ratio (current assets divided by current liabilities) as at the end of the fiscal year prior to the turnover is used to measure liquidity.

The precise computational formulae for all of these independent variables are presented below:

UROA: ordinary income divided by total assets for fiscal year t-1 (t=fiscal year of turnover).
UDOA: total liabilities divided by total assets (as at t-1 year end).
ULCRAT: logarithm of current assets divided by current liabilities (as at t-1 year end).
ULTREV: logarithm of ordinary income for t-1 less ordinary income for t-2, divided by net revenue for t-2.
ULRET: logarithm of common stock price at end of t-1 plus dividends per share paid during t-1, less stock price at end of t-2, divided

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[7]Press and Weintrop also examined market-based leverage measures. The substitution of a market-based leverage measure for total-debt-to-assets had no impact on the statistical results that follow.

by stock price at end of t-2 (adjusted for stock splits and dividends).

ULAST: logarithm of total assets ($million) as at t-1 year end.

UNINC: dummy variable set to 1 if ordinary income for fiscal year t-1 is negative, set to 0 if ordinary income is greater than or equal to 0.

In an effort to adjust skewed distributions of some of these variables, natural logarithm transformations were performed on the current ratio, income trend, common stock return and total assets variables. Descriptive statistics for the continuous explanatory variables are presented in Table 2-5.

UNIVARIATE RESULTS

Table 2-6 provides means and standard deviations for each of the explanatory variables for the change and control firms. The univariate paired samples t-test results reported in this table indicate that change firms tend to have lower current ratios (UCRAT), lower returns on common stock (ULRET), and tend to be larger (measured by the logarithm of total assets, ULAST) than their matched non-turnover firms.

Pearson correlations are used to assess how closely the selected non-turnover firms match their respective change firms. The procedure here treats each turnover as a single case with two observations for each explanatory variable - one for the change firm and one for its control firm. The Pearson correlation for each variable is the correlation between the turnover firm's score on that variable and its control firm's score, across all 283 turnovers. High positive correlations indicate high linear associations between the turnover and control firms on the independent variables used here, and suggest that the matching procedure used in this work has managed to capture

important industry and year effects.[8]

Descriptive statistics for the four groups of firms defined by the age/origin dichotomy (change and control firms in each of the routine and non-routine groups) are presented in Table 2-7. The results are very similar to those presented for the total sample in Table 2-6, with a couple of important exceptions. First, firm size (ULAST) is now the only variable that differs consistently between change and control firms. Secondly, the return on common stock (ULRET) for non-routine change firms is significantly less than that of their matched control firms; while there is no statistical difference between routine turnover firms and their control firms in terms of ULRET.

Descriptive statistics for the four groups of firms defined by the tenure dichotomy (change and control firms in each of the routine and non-routine groups) are presented in Table 2-8. These statistics indicate some interesting features of long tenure turnover firms. The univariate t-test results show that long tenure turnover firms experience lower common stock returns in the year prior to turnover than do matched non-turnover firms but are not significantly smaller; the relatively fewer significant inter-cell correlations indicate that the control firms do not match the turnover firms very closely.

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[8]Note that a perfect intercell correlation would imply that the score of the turnover firm is linearly related to the score of its matched control firm, i. e.,

$$X_{change} = \alpha + \beta X_{control}.$$

In the extreme case where $\alpha=0$ and $\beta=1$, the turnover firm score is always identical to that of the control firm and the variable has no discriminatory power. In any other case, the variable will have at least some discriminatory power. For example, if $\alpha=2$ and $\beta=1$, the turnover firm's score is always 2 higher than the control firm. The intercell correlation is still 1, and the variable discriminates perfectly between the change and control firms in each matched pair.

Regarding normal turnover and matched control firms, change firms tend to be larger; have lower current ratios than control firms; and underperform, in stock market terms, relative to control firms. The inter-cell correlations indicate a close match between change and control firms. The univariate results for normal tenure firms are very similar to those for the total sample of turnover firms.

MULTIVARIATE ANALYSIS

In order to assess the association between each of the independent variables and turnover, controlling for the effect of all the other independent variables, probit analysis is used to distinguish between turnover and matched non-turnover firms. A number of alternative statistical procedures are available, including ordinary least squares and logit. Under conditions typically encountered, either probit or logit is conceptually superior to ordinary least squares (Maddala, 1983; Aldrich and Nelson, 1984),[9] although there is generally little difference among the models in terms of practical effectiveness (e. g., Noreen, 1988). All of the models presented here were estimated using ordinary least squares, logit and probit, with all methods producing essentially the same results.

Zmijewski (1984) notes that the use of a matched-pairs design in

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[9]One of the assumptions underlying ordinary least squares regression is that the relationship between the dependent and independent variables is linear. If this assumption is incorrect, least squares estimates (1) have no known distributional properties, (2) are sensitive to the range of the data, (3) may grossly understate the magnitude of true effects, and (4) systematically yield probability predictions outside the range of 0 and 1 (Aldrich and Nelson, 1984, p. 30). Logit and probit procedures assume a non-linear relationship between the dependent and independent variables, which is likely to be more appropriate when the dependent variable is dichotomous.

distress prediction studies generally leads to oversampling of the distressed firms (a matched-pairs design produces a sampl that is 50% distressed firms and 50% control firms, when the proportion of distressed firms in the population is almost always much less than 50%). This oversampling causes parameter and probability estimates to be biased, a bias Zmijewski was able to overcome by using the method of weighted exogenous sample maximum likelihood. Zmijewski's results show, however, that this choice-based sample bias generally does not affect the statistical inferences concerning parameter estimates. Since this work is concerned exclusively with statistical inferences, and not with making predictions for a hold-out sample, the choice-based sample bias can be ignored here.

One of the strengths of this research is the matched-pairs sample selection procedure which is used here to control for potentially confounding year and industry effects. The approach used in this paper assumes the following model:

$$UX_{ijk} = UX_{0j} + \alpha_{jk} + \theta_{ij} + \epsilon_{ijk} \qquad (2.1)$$

where UX_{ijk} is the unadjusted value of independent variable j for either the turnover (i=1) or the control firm (i=2), for pair k (k ranges from 1 up to 283);

UX_{0j} is the overall or grand mean;

α_{jk} is the pair effect for variable j and pair k;

θ_{ij} is turnover vs. control effect for variable j;

and ϵ_{ijk} is a random error term with expected value zero.

If this model is assumed, any differences between turnover and control firms can be attributed to the turnover effect. In order that the

following analysis focuses solely on this turnover effect, all of the independent variables are transformed as follows:

$$X_{ijk} = UX_{ijk} - [(UX_{1jk} + UX_{2jk})/2] \quad (2.2)$$

This procedure removes the grand mean and "pair effect" from each variable, eliminating any variation due to industry and year. Each of the independent variables is now some measure of financial performance or condition relative to a randomly chosen firm in the same industry over the same time period. All probit analyses that follow are performed using these transformed independent variables.

The probit method proceeds by assuming that the turnover event (when the dichotomous variable Y=1) is a function of an underlying (and unobservable) response variable Y^*, which is in turn a linear combination of some set of k independent variables, as shown below:

$$Y^* = \Sigma\beta_k X_k - U, \quad (2.4)$$

where the β_k are coefficients, X_k are independent variables and U is a random error term. If Y is equal to one (i. e., turnover occurs) when $Y^*>0$, then the following probabilistic statment can be made:

$$P(Y=1) = P(Y^*>0) = P(U<\Sigma\beta_k X_k) = P(U<Z) = F(Z) \quad (2.5)$$

where notation is simplified by using $Z=\Sigma\beta_k X_k$; and F(.) is the cumulative distribution of the random variable U. Under the assumptions of probit, U is further assumed to be normally distributed, then F(.) is the cumulative normal distribution function (Aldrich and Nelson, 1984).

Five different probit analyses are performed, each one estimating the following model:

$$\text{Prob(Turnover)} = \Phi(\text{CONSTANT} + \beta_1*\text{DOA} + \beta_2*\text{LCRAT} + \beta_3*\text{LTREV} + \beta_4*\text{NINC} + \beta_5*\text{ROA} + \beta_6*\text{LRET} + \beta_7*\text{LAST}) \quad (2.6)$$

where Prob(Turnover) is the probability of CEO turnover;

$\Phi(.)$ is the standard normal distribution function;

and DOA, LCRAT, LTREV, NINC, ROA, LRET, and LAST are the independent variables as defined in Table 2-6 and transformed in (2.2) above.

In the first analysis, the total sample of 283 turnovers is used. Subsequent analyses use different subsets of the total sample of turnovers, in an effort to test whether different variables are significant predictors of different types of turnover. The second analysis is performed on non-routine turnover firms (using the age/origin dichotomy dichotomy; n=112 turnovers); the third is performed on routine turnover firms (age/tenure dichotomy; n=171); the fourth is performed on non-routine turnover firms (tenure; n=50); the fifth is performed on routine turnover firms (tenure; n=233). In each analysis, the estimation sample is made up of the turnover firms and their matched control firms.

Collinearity Diagnostics. Collinearity diagnostics recommended by Belsley, Kuh and Welsch (1980) were generated for each of the five subsets of data. These diagnostics determined that collinearity among the explanatory variables was not present here.

RESULTS

Total Sample. Results for each of six probit analyses of the entire sample of turnover and control firms are presented in Table 2-9. Model 1 contains all of the independent variables. Subsequent models are reduced by dropping those variables with the lowest asymptotic t-statistics. Variables with a positive coefficient are positively

associated with the likelihood of turnover, while those with a negative coefficient are negatively associated with that likelihood.

The results concerning individual variable coefficients are consistent across all models. ROA, LRET and LAST are all statistically significant[10] predictors of CEO turnover. Organizations that experience turnover tend (1) to be larger than non-turnover firms; (2) to have a higher return on assets in the year prior to turnover; and (3) to experience poorer stock market performance over the fiscal year prior to turnover.

A number of measures of goodness of fit are presented in the table. All of the models were able to classify correctly at least 64% of the cases, significantly outperforming a naive classification strategy.[11] The pseudo R^2 for these models ranges from 0.15 to 0.17.[12]

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[10]The statistics given in the tables with each estimated coefficient are asymptotic t-statistics. The distribution of an asymptotic t-statistic approaches that of the standard normal z-statistic when the number of cases is sufficiently large. With a small n, the properties of the distribution are not certain. Since sample size is at least 100 in all analyses presented here, the t-statistics can be interpreted like z-statistics, i. e., in a standard test of the coefficient, a value of t greater than or equal to 1.96 (1.65) is associated with $p < 0.05$ for a two-tailed test (one-tailed test).

[11]The probability of correctly classifying 360 or more of 566 cases through random assignment, assuming a binomial distribution with $p = 0.5$, is less than 0.001.

[12]The pseudo R^2 reported in this study is one proposed by Aldrich and Nelson (1984), and is defined as follows:

$$\text{pseudo } R^2 = c/(N + c),$$

where N is the total number of cases in the estimation sample (both turnover and control firms), and c is the likelihood ratio statistic

$$c = -2\log(L0/L1)$$

where L1 is the value of the likelihood function for the full model as fitted and L0 is the value of the likelihood function if all coefficients except the intercept are zero.

The Chi-square statistics presented test the hypothesis that the current model provides significant incremental predictive power over the subsequent restricted model (the degrees of freedom represent the number of additional parameters estimated in the full model).[13] For example, the Chi-square statistic of 6.04 reported for Model 5 shows that the addition of the variable ROA provides significant incremental predictive power over Model 6, which does not include ROA. With the addition of LRET, Model 4 has significantly better predictive power than Model 5. Results for Models 1, 2 and 3 show that DOA (leverage), LCRAT (liquidity), LTREV and NINC provide no additional predictive power. Note that the results of the Chi-square tests agree with those implied by the asymptotic t-statistics.

Age/Origin Dichotomy. For this part of the analysis, the total sample of turnovers is split into two groups - routine and non-routine turnover - based on the age/origin dichotomy described earlier in this chapter. AGE/ORIGIN DICHOTOMY: NON-ROUTINE TURNOVER. The estimates and results of six probit models are presented in Table 2-10. The dependent variable is again a dummy variable coded zero if the firm is a control firm and one if the firm is a turnover firm. The sample is restricted to non-routine turnover firms and their matched control firms.

The results show that non-routine turnover firms tend to be larger than their matched control firms, but that they experience significantly poorer stock market performance in the fiscal year prior to turnover. None of the other independent variables provide any significant

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[13]This Chi-square is the likelihood ratio statistic c described in footnote 12.

incremental predictive power. Model 5 is able to classify correctly 154 of 224 cases, significantly outperforming a naive classification model ($p < 0.001$, assuming a binomial probability distribution with probability = 0.5), and has a pseudo $R^2 = 0.18$.

In an effort to determine whether the statistically significant result concerning stock market return is driven by outliers (either a few underperforming turnover firms or a few overperforming control firms), cases were grouped by RDRET (common stock return less median four-digit SIC industry stock return) decile. The results of this grouping, shown in Table 2-11 and Figure 2-3, demonstrate that a decidedly larger proportion of firms in the bottom quintile (underperforming firms) are turnover firms (31 of 45); while turnover firms constitute only 11 of 44 firms in the top quintile. A Chi-square test rejects the null hypothesis that stock market performance quintile and turnover vs. control are independent dimensions for these 89 firms (Chi-square, 1 df = 15.48; $p < 0.001$).

AGE/ORIGIN DICHOTOMY: ROUTINE TURNOVER. The results of the probit analyses on the sample of routine turnover and matched control firms are presented in Table 2-12. The results indicate that firm size (LAST) and return on assets (ROA) are the only statistically significant predictors; routine turnover firms tend to be larger and have higher relative return on assets than do matched control firms. Model 5 has only ROA and LAST as independent variables, and is able to classify correctly 226 of 342 cases (outperforming the naive model; $p < 0.001$).

Tenure Dichotomy

TENURE DICHOTOMY: LONG TENURE TURNOVER. The probit results in Table 2-

13 show that common stock return is the only variable that can distinguish between change and control firms, and that a model that includes this variable can correctly classify 66 of 100 cases (outperforming the naive model; $p < 0.01$).

TENURE DICHOTOMY: NORMAL TENURE TURNOVER. The probit results indicate that the best model (Model 4, Table 2-14) is one that has ROA, LRET and LAST as independent variables, and is able to classify correctly 318 of 466 cases (outperforming the naive model; $p < 0.001$). Only ROA and LAST, however, are statistically significant independent variables.

DISCUSSION

In general, the findings reported provide strong support for at least the first two hypotheses tested here. The most pervasive appears to be that larger firms are more likely than smaller firms to turn over their CEO (Hypothesis 2.1). There are a number of possible explanations for this finding. First, larger organizations tend to have a greater internal pool of managers from which a successor may be drawn, which can ease the turnover process considerably. Indeed, in order to attract top managerial talent large firms might find it necessary to limit CEO tenure, to convince prospective employees that there is a reasonable chance of one day becoming CEO. Second, larger, more bureaucratized firms may be better able to withstand the unsettling effects of succession. Finally, larger organizations tend to have longer promotion ladders, implying that future CEOs must spend a considerable number of years with the firm before being promoted to CEO. The longer the promotion ladder, the more likely the candidate is to be near retirement age by the time he/she is finally promoted to CEO. The findings in this

regard are consistent with those of Grusky (1961); James and Soref (1981); and Harrison, Torres and Kukalis (1988).

Given the arguments outlined above, it is not surprising that there is at least weak evidence here that CEO tenure seems to be inversely related to organizational size.[14] Long tenure turnover firms (those in which the outgoing CEO had been in power for 15 or more years) were not significantly larger than their matched control firms; while for every other turnover classification change firms were significantly larger than their control firms.

It is possible, however, that the size effect detected here is a result of the sample selection procedure used. All 283 turnover firms were drawn from the Forbes 500, while 41 of the 283 non-turnover firms were not from this population of firms and were, therefore, clearly smaller than their matched turnover firms. To assess the extent to which the probit results reported here are driven by these non-Forbes 500 control firms, the probit analyses were run again, deleting the 41 non-Forbes 500 control firms and their matched turnover firms. The probit results obtained from the reduced set of 242 turnover firms and their matched non-turnover firms are presented in Tables 2-15 to 2-19. In general, the pseudo R^2 statistics and classification efficiencies of these reduced-sample models were lower than those of their full-sample counterparts. However, the statistical inferences regarding independent variable parameter estimates are essentially unchanged, and lend further credibility to the results reported here.

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[14]The Pearson correlation between outgoing CEO tenure and logarithm of firm assets in the last year of the CEO's tenure is negative for this sample of 283 turnover firms, but not significantly different from zero.

Return on common stock proved to be a significant predictor of CEO turnover. Breaking the turnovers down into routine and non-routine turnovers (using the age/origin dichotomy), however, showed that this finding was driven by underperforming non-routine turnover firms. Return on common stock was not useful in distinguishing between routine turnover and non-turnover firms. This finding provides strong support for hypotheses 2.2 and 2.3; and is consistent with the findings of most of the more recent work in CEO turnover prediction (Coughlan and Schmidt, 1985; Warner, Watts and Wruck, 1988; Weisbach, 1988).

Interestingly, the accounting performance measures did not provide any additional discriminatory power over the market returns variable. While this is inconsistent with the findings of Weisbach (1988), it is consistent with the notion that stock returns are a better indicator of financial performance than are concurrent accounting measures.

Using the age/origin dichotomy also showed that return on assets for routine turnover firms was significantly higher than for control firms, after controlling for size, a result that is quite surprising and not consistent with any previous work in this area. One possible explanation for this result is that CEOs approaching retirement might have an incentive to report the highest income possible in order to maximize bonus income. The costs usually associated with this strategy include: (1) ex post settling up; (2) reputation effects; and (3) lower income in the future (the opposite of the bath effect. A CEO about to retire, however, is able to avoid most, and perhaps all, of these costs. At least one recent study reports results consistent with this view. Dechow and Sloan (1991) find evidence that CEOs in their final years of

office tend to decrease research and development expense, a finding consistent with the hypothesis that CEOs approaching manage discretionary expenditures to improve short-term earnings performance.

The only other independent variable that appeared to differ between turnover and control firms was the current ratio. Univariate paired samples t-tests showed that change firms had a lower mean current ratio than did control firms for the total sample of firms and the normal tenure turnover firms. A plot of the current ratios revealed that these results were driven by three outliers. Once these cases were removed, the current ratio results disappeared. The presence or absence of these three cases had no impact on the other findings reported in this chapter.

Aside from the result concerning size and non-routine change firms, the tenure dichotomy did not produce any interesting results. The probit analysis of normal-tenure turnover firms vs. control firms produced essentially the same results as that of the total sample, implying that a number of non-routine turnovers have been included among the normal tenure turnovers. The results of the long-tenure turnover analysis indicate that firms about to retire long-tenured CEOs tend to underperform relative to their industry and randomly chosen control firms, which is consistent with hypothesis [illegible].

A crosstabulation of the two turnover dichotomies is presented in Table 2-20. The cell frequencies show that the two schemes are independent of each other. The distinction between routine and non-routine predicted by hypotheses 2.2 and 2.3 is much sharper with the age/origin dichotomy, suggesting that the age/origin scheme is a better

proxy for the routine vs. non-routine turnover distinction than is tenure.

CONCLUSION

Arguments raised in Chapter 1 of this thesis suggest that non-routine turnover is preceded by poor organizational performance, while routine turnover is not. Probit analysis of a sample of turnover firms together with a sample of matched control firms, without regard for whether the turnover firms were routine or non-routine, seemed to suggest that turnover firms outperformed matched control firms in terms of accounting performance measures. At the same time, however, turnover firms were outperformed by their respective industry and matched control firms in terms of stock market returns.

This paradox was resolved by breaking the turnover firms down into routine and non-routine turnovers, based on the age of the outgoing CEO and the origin of the incoming CEO. As predicted, non-routine turnover firms tended to exhibit lower returns on common stock in the fiscal year prior to turnover; while routine turnover firms tended to exhibit higher accounting measures of performance in the fiscal year prior to turnover.

Table 2-1. Turnovers Sorted by Industry and Fiscal Year

	Year													
Industry	74	75	76	77	78	79	80	81	82	83	84	85	86	ROW
Mining/ Construction (SIC 1040-1540)	0	0	0	2	1	1	0	0	1	0	2	1	0	8
Food/Paper (SIC 2000-2750)	0	4	4	1	1	5	2	3	2	4	5	1	2	34
Chemical (SIC 2800-2890)	1	0	5	3	5	5	1	3	4	3	2	4	0	36
Petroleum Refining (SIC 2911)	1	1	0	0	2	0	3	1	3	3	2	3	2	21
Refining (SIC 3000-3452)	0	1	1	0	1	1	1	0	1	5	2	2	2	17
Machinery/ Appliances (SIC 3510-3681)	0	3	2	2	0	0	2	5	4	6	2	3	1	30
Transportation (SIC 4011-4830)	1	2	0	3	3	5	5	2	4	2	1	5	4	37
Electric Services (SIC 4911)	1	1	4	2	2	3	5	0	3	5	4	5	1	36
Other Utilities (SIC 4922-4931)	2	3	1	4	5	3	5	2	1	3	4	2	1	36
Merchandising (SIC 5065-5411)	2	1	3	2	3	3	3	2	2	3	3	1	0	28
Year Totals	8	16	20	19	23	26	27	18	25	34	27	27	13	283

Table 2-2. Turnovers: Descriptive Statistics

N=283

Variable	Mean	Median	Min	Max	Std Deviation
TEN	10.8	9	2	50	7.5
AGE	63.3	64	45	83	7.5
$ASST_t$	5028.0	2382.4	115.6	113769.0	9332.1
$ASST_{t-1}$	4598.8	2285.5	102.6	103224.0	8469.8
REV_t	5355.2	2443.0	145.1	62698.5	9286.5
REV_{t-1}	5049.7	2309.4	117.8	57728.5	8916.8
IBX_t	270.1	121.0	-1097.3	6555.0	652.9
IBX_{t-1}	273.6	123.2	-762.5	6582.0	666.9
COUNT	22.4	[illegible]	?	68	20.8

NOTES

TEN: number of years in which the outgoing CEO held the office [illegible]50.
AGE: age in years of the outgoing CEO in the year of turnover.
ASST: total assets ($million) of the firm as at the end of the fiscal year of turnover (year t); or as at the end of the fiscal year ending immediately before turnover (t-1).
REV: net revenues ($million) for the fiscal year.
IBX: net income before extraordinary items ($million) for the fiscal year.
COUNT: number of COMPUSTAT firms with the same 4-digit SIC code as the turnover firm.

Table 2-3. Turnovers Sorted by Industry and Type (Age/Origin Dichotomy)

Industry	Type of Turnover: Routine	Non Routine	Industry Total
Mining/Construction (SIC 1040-1540)	6	2	8
Food/Paper (SIC 2000-2750)	24	10	34
Chemical (SIC 2800-2890)	19	17	36
Petroleum Refining (SIC 2911)	15	6	21
Refining (SIC 3000-3452)	11	6	17
Machinery/Appliances (SIC 3510-3681)	18	12	30
Transportation (SIC 4011-4830)	24	13	37
Electric Services (SIC 4911)	23	13	36
Other Utilities (SIC 4922-4931)	16	20	36
Merchandising (SIC 5065-5411)	15	13	28
Totals	171	112	283

NOTES

Routine turnover: A turnover in which the outgoing CEO is 64 years of age or older and the new CEO is hired from within the firm.

Non-routine turnover: A turnover in which the outgoing CEO is under 64 years of age and/or the new CEO is recruited from outside of the firm.

Table 2-4. Turnovers Sorted by Industry and Type (Tenure Dichotomy)

Industry	Type of Turnover: Normal Tenure	Type of Turnover: Long Tenure	Industry Total
Mining/Construction (SIC 1040-1540)	6	2	8
Food/Paper (SIC 2000-2750)	31	3	34
Chemical (SIC 2800-2890)	33	3	36
Petroleum Refining (SIC 2911)	13	8	21
Refining (SIC 3000-3452)	15	2	17
Machinery/Appliances (SIC 3510-3681)	24	6	30
Transportation (SIC 4011-4830)	28	9	37
Electric Services (SIC 4911)	29	7	36
Other Utilities (SIC 4922-4931)	32	4	36
Merchandising (SIC 5065-5411)	22	6	28
Totals	233	50	283

NOTES

Normal tenure turnover: A turnover in which the outgoing CEO held the office of CEO for less than 15 years.

Long tenure turnover: A turnover in which the outgoing CEO held the office of CEO for 15 or more years.

Table 2-5. Descriptive Statistics: Turnover and Control Firms

Variable	Mean	Median	Minimum	Maximum	Std dev
All Turnover and Control Firms (N=566)					
UROA	.058	.054	-.173	.232	.044
UDOA	.460	.471	.095	.833	.109
ULCRAT	.963	.958	.000	2.212	.272
ULTREV	.150	.150	.005	.287	.026
ULRET	.658	.652	-.001	1.502	.186
ULAST	7.452	7.555	2.182	11.546	1.359
Routine Turnover and Control Firms (N=342)					
UROA	.059	.055	-.173	.190	.042
UDOA	.454	.462	.095	.777	.113
ULCRAT	.976	.973	.000	2.212	.282
ULTREV	.150	.151	.005	.287	.027
ULRET	.660	.661	.191	1.295	.180
ULAST	7.447	7.585	2.182	11.546	1.414
Non-routine Turnover and Control Firms (N=224)					
UROA	.057	.051	-.154	.232	.047
UDOA	.468	.482	.187	.833	.101
ULCRAT	.943	.930	.399	1.784	.255
ULTREV	.151	.150	.032	.279	.025
ULRET	.655	.643	-.001	1.502	.195
ULAST	7.459	7.527	3.032	10.664	1.273
Normal Tenure Turnover and Control Firms (N=466)					
UROA	.055	.054	-.171	.232	.043
UDOA	.459	.466	.095	.833	.104
ULCRAT	.967	.965	.279	2.212	.268
ULTREV	.150	.150	.005	.281	.025
ULRET	.659	.652	-.001	1.502	.187
ULAST	7.459	7.559	2.182	11.546	1.376
Long Tenure Turnover and Control Firms (N=100)					
UROA	.058	.052	-.173	.198	.049
UDOA	.463	.492	.112	.731	.127
ULCRAT	.945	.933	.000	1.845	.293
ULTREV	.149	.148	.052	.287	.031
ULRET	.653	.652	.122	1.499	.180
ULAST	7.419	7.530	3.848	10.640	1.284

NOTES

UROA: ordinary income divided by total assets for fiscal year t-1 (t=fiscal year of turnover).

UDOA: total liabilities divided by total assets (as at t-1 year end).

ULCRAT: logarithm of current assets divided by current liabilities (as at t-1 year end).

ULTREV: logarithm of ordinary income for t-1 less ordinary income for t-2, divided by net revenue for t-2.

ULRET: logarithm of common stock price at end of t-1 plus dividends per share paid during t-1, less stock price at end of t-2, divided by stock price at end of t-2 (adjusted for stock splits and dividends).

ULAST: logarithm of total assets ($million) as at t-1 year end.

Table 2-6. Cell Statistics: Turnover vs. Control Firms

Cell Means (Standard Deviations) and Inter-Cell Correlations

	Total Sample (N=283)		
	Change	Control	Correlation+
UROA	0.059	0.058	0.273**
	(0.047)	(0.040)	
UDOA	0.456	0.464	0.376**
	(0.107)	(0.110)	
ULCRAT	0.948	0.978[ac]	0.567**
	(0.258)	(0.286)	
ULTREV	0.149	0.151	0.154**
	(0.024)	(0.029)	
ULRET	0.643	0.674[bd]	0.512**
	(0.184)	(0.184)	
ULAST	7.791	7.112[bd]	0.304**
	(1.062)	(1.530)	
UNINC++	16	14	0.226**

NOTES

UROA: ordinary income divided by total assets for fiscal year t-1 (t=fiscal year of turnover).
UDOA: total liabilities divided by total assets (as at t-1 year end).
ULCRAT: logarithm of current assets divided by current liabilities (as at t-1 year end).
ULTREV: logarithm of ordinary income for t-1 less ordinary income for t-2, divided by net revenue for t-2.
ULRET: logarithm of common stock price at end of t-1 plus dividends per share paid during t-1, less stock price at end of t-2, divided by stock price at end of t-2 (adjusted for stock splits and dividends).
ULAST: logarithm of total assets ($million) as at t-1 year end.
UNINC: dummy variable set to 1 if ordinary income for fiscal year t-1 is negative, set to 0 if ordinary income is greater than or equal to 0.

+--Kendall's Tau-B is reported for NINC; Pearson's r is reported for all other variables.
++--numbers reported are frequencies of cases where NINC=1 in each cell.
a(b)--denotes that difference in cell means is significant at $p<0.05$ ($p<0.01$), using a one-tailed paired samples t-test.
c(d)--denotes that the median of the population of differences is not zero at $p<0.05$ ($p<0.01$), using a one-tailed Wilcoxon matched-pairs signed-ranks test.
**--denotes that correlation is signficantly different from zero at $p<0.05$.

Table 2-7 Cell Statistics: Turnover vs. Control Firms (Age/Origin Dichotomy)

Cell Means (Standard Deviations) and Inter-Cell Correlations

	Routine Turnover (N=171)			Non-routine Turnover (N=112)		
	Change	Control	Correlation+	Change	Control	Correlation+
UROA	0.062	0.057[c]	0.273**	0.055	0.059	0.281**
	(0.044)	(0.048)		(0.050)	(0.043)	
UDOA	0.448	0.462	0.346**	0.469	0.468	0.432**
	(0.113)	(0.113)		(0.097)	(0.106)	
ULCRAT	0.960	0.993	0.555**	0.931	0.955	0.584**
	(0.271)	(0.293)		(0.236)	(0.273)	
ULTREV	0.149	0.150	0.158**	0.149	0.153	0.146
	(0.025)	(0.029)		(0.022)	(0.027)	
ULRET	0.654	0.666	0.594**	0.625	0.686[bd]	0.418**
	(0.176)	(0.185)		(0.196)	(0.189)	
ULAST	7.798	7.097[bd]	0.300**	7.780	7.136[bd]	0.314**
	(1.106)	(1.594)		(0.996)	(1.433)	
UNINC++	7	8	0.094	9	6	0.367**

NOTES

UROA: ordinary income divided by total assets for fiscal year t-1 (t=fiscal year of turnover).
UDOA: total liabilities divided by total assets (as at t-1 year end).
ULCRAT: logarithm of current assets divided by current liabilities (as at t-1 year end)
ULTREV: logarithm of ordinary income for t-1 less ordinary income for t-2, divided by net revenue for t-2.
ULRET: logarithm of common stock price at end of t-1 plus dividends per share paid during t-1, less stock price at end of t-2, divided by stock price at end of t-2 (adjusted for stock splits and dividends).
ULAST: logarithm of total assets ($million) as at t-1 year end.
UNINC: dummy variable set to 1 if ordinary income for fiscal year t-1 is negative, set to 0 if ordinary income is greater than or equal to 0.

+--Kendall's Tau-B is reported for NINC; Pearson's r is reported for all other variables.
++--numbers reported are frequencies of cases where NINC=1 in each cell.
a(b)--denotes that difference in cell means is significant at $p<0.05$ ($p<0.01$), using a one-tailed paired samples t-test.
c(d)--denotes that the median of the population of differences is not zero at $p<0.05$ ($p<0.01$), using a one-tailed Wilcoxon matched-pairs signed-ranks test.
**--denotes that correlation is signficantly different from zero at $p<0.05$.

Table 2-8. Cell Statistics: Turnover vs. Control Firms (Tenure Dichotomy)

Cell Means (Standard Deviations) and Inter-Cell Correlations

	Normal Tenure Turnover (N=233)			Long Tenure Turnover (N=50)		
	Change	Control	Correlation+	Change	Control	Correlation+
UROA	0.059	0.058	0.320**	0.057	0.058	0.111
	(0.047)	(0.046)		(0.053)	(0.046)	
UDOA	0.456	0.463	0.389**	0.458	0.467	0.340**
	(0.101)	(0.108)		(0.135)	(0.121)	
ULCRAT	0.949	0.986[bd]	0.389**	0.947	0.943	0.368**
	(0.252)	(0.281)		(0.283)	(0.305)	
ULTREV	0.149	0.151	0.166**	0.146	0.151	0.128
	(0.022)	(0.028)		(0.034)	(0.029)	
ULRET	0.647	0.672[ac]	0.522**	0.623	0.683[ad]	0.473**
	(0.187)	(0.187)		(0.171)	(0.186)	
ULAST	7.828	7.089[bd]	0.341**	7.616	7.221	0.141
	(1.059)	(1.549)		(1.072)	(1.449)	
UNINC++	13	11	0.044	3	3	0.000

NOTES

UROA: ordinary income divided by total assets for fiscal year t-1 (t=fiscal year of turnover).
UDOA: total liabilities divided by total assets (as at t-1 year end).
ULCRAT: logarithm of current assets divided by current liabilities (as at t-1 year end).
ULTREV: logarithm of ordinary income for t-1 less ordinary income for t-2, divided by net revenue for t-2.
ULRET: logarithm of common stock price at end of t-1 plus dividends per share paid during t-1, less stock price at end of t-2, divided by stock price at end of t-2 (adjusted for stock splits and dividends).
ULAST: logarithm of total assets ($million) as at t-1 year end.
UNINC: dummy variable set to 1 if ordinary income for fiscal year t-1 is negative, set to 0 if ordinary income is greater than or equal to 0.

+--Kendall's Tau-B is reported for NINC; Pearson's r is reported for all other variables.
++--numbers reported are frequencies of cases where NINC=1 in each cell.
a(b)--denotes that difference in cell means is significant at $p<0.05$ ($p<0.01$), using a one-tailed paired samples t-test.
c(d)--denotes that the median of the population of differences is not zero at $p<0.05$ ($p<0.01$), using a one-tailed Wilcoxon matched-pairs signed-ranks test.
**--denotes that correlation is signficantly different from zero at $p<0.05$.

Table 2-9. Probit Results: Turnover vs. control firms (Total sample)

Prob(Turnover) = Φ(CONSTANT + β_1*DOA + β_2*LCRAT + β_3*LTREV + β_4*NINC + β_5*ROA + β_6*LRET + β_7*LAST)

Estimated Coefficients (asymptotic t-statistics)

	Model					
	1	2	3	4	5	6
Variables						
CONSTANT	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (-0.00)
DOA	-1.76 (-1.37)	-1.94 (-1.53)	-1.63 (-1.39)			
LCRAT	-0.35 (-0.60)	-0.36 (-0.63)				
LTREV	-0.46 (-0.12)					
NINC	0.48 (0.92)					
ROA	6.43 (1.92)	4.66 (1.74)	4.72 (1.76)	6.69 (2.95)	5.40 (2.46)	
LRET	-1.57 (-2.13)	-1.56 (-2.17)	-1.60 (-2.23)	-1.71 (-2.40)		
LAST	0.74 (8.03)	0.74 (8.11)	0.76 (8.63)	0.75 (8.61)	0.78 (9.08)	0.74 (8.98)
Cases Correct	382	382	376	380	369	360
%	67%	67%	66%	67%	65%	64%
Pseudo R^2	0.17	0.17	0.17	0.17	0.16	0.15
Log Likelihood	-333.55	-334.00	-334.19	-335.17	-338.15	-341.17
Chi-square+	0.90	0.40	1.95	5.97*	6.04*	
df	2	1	1	1	1	

+--the Chi-square statistic reported is a test of the null hypothesis that the current model does not provide statistically significant incremental discriminatory power over the restricted model to the right.
*--denotes value of Chi-square is statistically significant, $p<0.05$.

Table 2-10. Probit Results: Non-routine Turnover vs. Control firms (Age/Origin Dichotomy)

Prob(Turnover) = Φ(CONSTANT + β_1*DOA + β_2*LCRAT + β_3*LTREV + β_4*NINC + β_5*ROA + β_6*LRET + β_7*LAST)

Estimated Coefficients (asymptotic t-statistics)

	Model					
	1	2	3	4	5	6
Variables						
CONSTANT	-0.00 (-0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
DOA	-1.49 (-0.60)	-1.66 (-0.74)				
LCRAT	-0.10 (-0.01)					
LTREV	-3.83 (-0.60)					
NINC	0.74 (0.81)	0.69 (0.76)	0.93 (1.08)			
ROA	5.74 (1.00)	4.93 (0.89)	7.25 (1.59)	4.34 (1.20)		
LRET	-2.59 (-2.41)	-2.69 (-2.54)	-2.71 (-2.56)	-2.52 (-2.42)	-2.34 (-2.30)	
LAST	0.75 (4.59)	0.75 (4.73)	0.73 (4.75)	0.75 (4.71)	0.70 (4.86)	0.81 (5.77)
Cases Correct %	154 69%	156 70%	153 68%	151 67%	154 69%	144 64%
Pseudo R^2	0.19	0.18	0.18	0.18	0.18	0.16
Log Likelihood	-127.73	-129.91	-130.19	-130.77	-131.48	-134.29
Chi-square	0.37	0.55	1.18	1.42	5.61*	
df	2	1	1	1	1	

+--the Chi-square statistic reported is a test of the null hypothesis that the current model does not provide statistically significant incremental discriminatory power over the restricted model to the right.
*-denotes that value of chi-square is significant at $p<0.05$.

Table 2-11. Non-routine Change and Control Firms Grouped by Decile (based on return less industry median return)

Decile	Mean RDRET	Change firms	Control firms	Total
1	-0.423	13	9	22
2	-0.218	18	5	23
3	-0.107	9	13	22
4	-0.051	11	10	21
5	-0.013	11	13	24
6	0.004	16	7	23
7	0.044	10	12	22
8	0.102	13	10	23
9	0.175	5	17	22
10	0.671	6	16	22
Total		112	112	224

RDRET= firm return on common stock over fiscal year prior to fiscal year of turnover less median industry return on common stock over the same time period

Table 2-12. Probit Results: Routine turnover vs. control firms (Age/Origin Dichotomy)

$$\text{Prob(Turnover)} = \Phi(\text{CONSTANT} + \beta_1*\text{DOA} + \beta_2*\text{LCRAT} + \beta_3*\text{LTREV} + \beta_4*\text{NINC} + \beta_5*\text{ROA} + \beta_6*\text{LRET} + \beta_7*\text{LAST})$$

Estimated Coefficients (asymptotic t-statistics)

	Model					
	1	2	3	4	5	6
Variables						
CONSTANT	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (-0.00)
DOA	-2.06 (-1.31)	-2.26 (-1.50)	-2.26 (-1.51)	-1.75 (-1.26)		
LCRAT	-0.60 (-0.86)	-0.64 (-0.93)	-0.64 (-0.92)			
LTREV	-0.95 (-0.18)					
NINC	0.45 (0.64)	0.50 (0.75)				
ROA	7.31 (1.69)	6.62 (1.69)	5.17 (1.52)	5.16 (1.53)	7.40 (2.58)	
LRET	-0.35 (-0.32)					
LAST	0.70 (6.30)	0.71 (6.38)	0.71 (6.42)	0.74 (6.98)	0.74 (7.01)	0.70 (6.91)
Cases Correct %	226 66%	222 65%	220 64%	220 64%	226 66%	216 63%
Pseudo R^2	0.17	0.17	0.17	0.17	0.16	0.15
Log Likelihood	-201.76	-201.85	-202.13	-202.55	-203.35	-206.70
Chi-square	0.18	0.56	0.85	1.61	6.69*	
df	2	1	1	1	1	

+--the Chi-square statistic reported is a test of the null hypothesis that the current model does not provide statistically significant incremental discriminatory power over the restricted model to the right.
*--denotes that value of chi-square is significant at $p<0.05$.

Table 2-13. Probit Results: Long Tenure Turnover vs. Control firms

$$Prob(Turnover) = \Phi(CONSTANT + \beta_1*DOA + \beta_2*LCRAT + \beta_3*LTREV + \beta_4*NINC + \beta_5*ROA + \beta_6*LRET + \beta_7*LAST)$$

Estimated Coefficients (asymptotic t-statistics)

	Model					
	1	2	3	4	5	6
Variables						
CONSTANT	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (-0.00)	-0.00 (-0.00)
DOA	-3.24 (-1.29)	-4.57 (-2.06)	-3.69 (-1.81)	-3.24 (-1.59)		
LCRAT	0.94 (0.87)					
LTREV	16.86 (1.69)	15.96 (1.75)	12.56 (1.47)			
NINC	1.58 (1.38)	1.13 (1.15)				
ROA	4.50 (0.69)					
LRET	-9.18 (-3.23)	-8.02 (-3.08)	-7.30 (-2.93)	-5.05 (-2.73)	-4.57 (-2.58)	-5.24 (-3.00)
LAST	0.39 (1.98)	0.35 (1.83)	0.37 (1.94)	0.34 (1.80)	0.26 (1.50)	
Cases Correct %	66 66%	65 65%	64 64%	58 58%	62 62%	66 66%
Pseudo R^2 Log Likelihood	0.17 -58.72	0.17 -59.41	0.16 -60.08	0.14 -61.17	0.12 -62.52	0.10 -63.69
Chi-square df	1.39 2	1.33 1	2.18 1	2.69 1	2.34 1	

+--the Chi-square statistic reported is a test of the null hypothesis that the current model does not provide statistically significant incremental discriminatory power over the restricted model to the right.
*--denotes value of Chi-square is statistically significant, $p<0.05$.

Table 2-14. Probit Results: Normal tenure turnover vs. control firms

$$Prob(Turnover) = \Phi(CONSTANT + \beta_1*DOA + \beta_2*LCRAT + \beta_3*LTREV + \beta_4*NINC + \beta_5*ROA + \beta_6*LRET + \beta_7*LAST)$$

Estimated Coefficients (asymptotic t-statistics)

	Model					
	1	2	3	4	5	6
Variables						
CONSTANT	-0.00 (-0.00)	-0.00 (-0.00)	-0.00 (-0.00)	-0.00 (-0.00)	-0.00 (-0.00)	-0.00 (-0.00)
DOA	-1.08 (-0.67)					
LCRAT	-0.53 (-0.74)	-0.32 (-0.49)				
LTREV	-0.93 (-0.21)					
NINC	0.54 (0.86)	0.65 (1.07)	0.65 (1.07)			
ROA	8.54 (2.09)	9.95 (3.00)	9.72 (2.96)	7.79 (2.87)	7.21 (2.70)	
LRET	-0.77 (-0.95)	-0.88 (-1.13)	-0.90 (-1.15)	-0.91 (-1.16)		
LAST	0.86 (7.82)	0.87 (7.98)	0.88 (8.42)	0.88 (8.49)	0.91 (8.81)	0.85 (8.74)
Cases Correct %	320 69%	322 69%	316 68%	318 68%	316 68%	306 66%
Pseudo R^2	0.20	0.19	0.19	0.19	0.19	0.18
Log Likelihood	-266.47	-266.73	-266.85	-267.43	-268.10	-271.73
Chi-square	0.52	0.24	1.15	1.35	7.26*	
df	2	1	1	1	1	

+--the Chi-square statistic reported is a test of the null hypothesis that the current model does not provide statistically significant incremental discriminatory power over the restricted model to the right.
*--denotes value of Chi-square is statistically significant, $p<0.05$.

Table 2-15. Probit Results: Turnover vs. control firms (Forbes 500 only sample)

Prob(Turnover) = Φ(CONSTANT + β_1*DOA + β_2*LCRAT + β_3*LTREV + β_4*NINC + β_5*ROA + β_6*LRET + β_7*LAST)

Estimated Coefficients (asymptotic t-statistics)

	Model					
	1	2	3	4	5	6
Variables						
CONSTANT	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (-0.00)
DOA	-1.34 (-1.01)	-1.08 (-0.85)	-1.23 (-0.99)			
LCRAT	-0.41 (-0.64)					
LTREV	-0.29 (-0.07)					
NINC	0.39 (0.68)	0.41 (0.73)				
ROA	6.51 (1.85)	6.46 (1.89)	5.16 (1.78)	6.67 (2.71)	5.68 (2.36)	
LRET	-1.54 (-1.91)	-1.64 (-2.13)	-1.60 (-2.09)	-1.66 (-2.18)		
LAST	0.49 (4.45)	0.51 (4.80)	0.51 (4.82)	0.50 (4.78)	0.52 (5.03)	0.47 (4.71)
Cases Correct	312	310	308	302	291	280
%	64%	64%	63%	62%	60%	58%
Pseudo R^2	0.07	0.07	0.07	0.06	0.06	0.05
Log Likelihood	-317.79	-318.00	-318.26	-318.76	-321.16	-323.93
Chi-square	0.42	0.53	0.99	4.81*	5.54*	
df	2	1	1	1	1	

+--the Chi-square statistic reported is a test of the null hypothesis that the current model does not provide statistically significant incremental discriminatory power over the restricted model to the right.
*--denotes value of Chi-square is statistically significant, $p<0.05$.

Table 2-16. Probit Results: Non-routine Turnover vs. Control firms (Age/Origin Dichotomy; Forbes 500 only sample)

$Prob(Turnover) = \Phi(CONSTANT + \beta_1*DOA + \beta_2*LCRAT + \beta_3*LTREV + \beta_4*NINC + \beta_5*ROA + \beta_6*LRET + \beta_7*LAST)$

Estimated Coefficients (asymptotic t-statistics)

	Model					
	1	2	3	4	5	6
Variables						
CONSTANT	-0.00 (-0.00)	-0.00 (-0.00)	0.00 (0.00)	-0.00 (-0.00)	0.00 (0.00)	0.00 (0.00)
DOA	-1.23 (-0.48)	-1.22 (-0.51)	-1.57 (-0.71)			
LCRAT	-0.15 (-0.14)					
LTREV	-1.91 (-0.29)					
NINC	0.40 (0.41)	0.38 (0.39)				
ROA	6.64 (1.09)	6.30 (1.06)	4.89 (1.05)	6.42 (1.56)		
LRET	-2.29 (-2.03)	-2.35 (-2.13)	-2.29 (-2.10)	-2.23 (-2.05)	-2.04 (-1.90)	
LAST	0.62 (3.37)	0.62 (3.46)	0.62 (3.48)	0.61 (3.44)	0.54 (3.22)	0.60 (3.61)
Cases Correct	129	132	128	123	126	118
%	66%	67%	65%	63%	62%	60%
Pseudo R^2	0.10	0.09	0.09	0.09	0.08	0.07
Log Likelihood	-125.57	-125.62	-125.69	-125.94	-127.17	-129.02
Chi-square	0.09	0.15	0.50	2.45	3.71	
df	2	1	1	1	1	

+--the Chi-square statistic reported is a test of the null hypothesis that the current model does not provide statistically significant incremental discriminatory power over the restricted model to the right.
*-denotes that value of chi-square is significant at $p<0.05$.

Table 2-17. Probit Results: Routine turnover vs. control firms (Age/Origin Dichotomy; Forbes 500 only sample)

$$Prob(Turnover) = \Phi(CONSTANT + \beta_1*DOA + \beta_2*LCRAT + \beta_3*LTREV + \beta_4*NINC + \beta_5*ROA + \beta_6*LRET + \beta_7*LAST)$$

Estimated Coefficients (asymptotic t-statistics)

	Model					
	1	2	3	4	5	6
Variables						
CONSTANT	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (-0.00)
DOA	-1.76 (-1.08)	-1.96 (-1.26)	-2.01 (-1.29)	-1.54 (-1.03)		
LCRAT	-0.75 (-0.93)	-0.84 (-1.06)	-0.84 (-1.06)			
LTREV	-0.66 (-0.12)					
NINC	0.51 (0.68)	0.56 (0.78)				
ROA	6.53 (1.47)	5.93 (1.43)	4.42 (1.22)	4.01 (1.11)	6.03 (2.01)	
LRET	-0.48 (-0.39)					
LAST	0.40 (2.89)	0.40 (2.90)	0.40 (2.92)	0.45 (3.44)	0.44 (3.40)	0.40 (3.17)
Cases Correct %	170 59%	170 59%	167 58%	161 56%	174 60%	162 56%
Pseudo R^2	0.06	0.06	0.05	0.05	0.05	0.03
Log Likelihood	-190.90	-191.02	-191.32	-191.88	-192.42	-194.43
Chi-square	0.22	0.60	1.13	1.08	4.02*	
df	2	1	1	1	1	

+--the Chi-square statistic reported is a test of the null hypothesis that the current model does not provide statistically significant incremental discriminatory power over the restricted model to the right.
*--denotes that value of chi-square is significant at $p<0.05$.

Table 2-18. Probit Results: Long Tenure Turnover vs. Control firms (Tenure Dichotomy; Forbes 500 sample only)

$$Prob(Turnover) = \Phi(CONSTANT + \beta_1*DOA + \beta_2*LCRAT + \beta_3*LTREV + \beta_4*NINC + \beta_5*ROA + \beta_6*LRET + \beta_7*LAST)$$

Estimated Coefficients (asymptotic t-statistics)

	Model					
	1	2	3	4	5	6
Variables						
CONSTANT	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (-0.00)
DOA	-2.39 (-0.97)	-2.62 (-1.12)	-3.42 (-1.60)	-2.62 (-1.33)		
LCRAT	0.42 (0.33)					
LTREV	21.99 (1.97)	21.73 (1.96)	23.02 (2.10)	19.44 (1.89)	18.52 (1.82)	
NINC	1.61 (1.34)	1.60 (1.33)	1.12 (1.07)			
ROA	5.72 (0.85)	6.06 (0.92)				
LRET	-9.34 (-3.22)	-9.14 (-3.22)	-8.52 (-3.13)	-7.78 (-2.99)	-7.06 (-2.85)	-4.09 (-2.22)
LAST	-0.00 (-0.01)					
Cases Correct %	54 61%	56 64%	54 61%	56 64%	58 66%	54 61%
Pseudo R^2	0.13	0.12	0.12	0.11	0.09	0.06
Log Likelihood	-54.71	-54.77	-55.20	-55.77	-56.69	-58.40
Chi-square	0.12	0.86	1.13	1.03	3.42	
df	2	1	1	1	1	

+--the Chi-square statistic reported is a test of the null hypothesis that the current model does not provide statistically significant incremental discriminatory power over the restricted model to the right.
*--denotes value of Chi-square is statistically significant, $p<0.05$.

Table 2-19. Probit Results: Normal Tenure Turnover vs. Control Firms (Tenure Dichotomy; Forbes 500 only sample)

$$\text{Prob(Turnover)} = \Phi(\text{CONSTANT} + \beta_1*\text{DOA} + \beta_2*\text{LCRAT} + \beta_3*\text{LTREV} + \beta_4*\text{NINC} + \beta_5*\text{ROA} + \beta_6*\text{LRET} + \beta_7*\text{LAST})$$

Estimated Coefficients (asymptotic t-statistics)

	Model					
	1	2	3	4	5	6
Variables						
CONSTANT	-0.00 (-0.00)	-0.00 (-0.00)	-0.00 (-0.00)	-0.00 (-0.00)	-0.00 (-0.00)	-0.00 (-0.00)
DOA	-0.69 (-0.41)					
LCRAT	-0.55 (-0.72)	-0.43 (-0.61)				
LTREV	-1.38 (-0.30)					
NINC	0.48 (0.70)	0.59 (0.91)	0.58 (0.90)			
ROA	9.07 (2.09)	9.85 (2.83)	9.51 (2.76)	7.94 (2.71)	7.62 (2.61)	
LRET	-0.70 (-0.81)	-0.80 (-0.94)	-0.85 (-1.02)	-0.86 (-1.02)		
LAST	0.64 (5.04)	0.65 (5.10)	0.67 (5.42)	0.67 (5.42)	0.69 (5.62)	0.61 (5.27)
Cases Correct %	258 65%	261 66%	256 65%	249 63%	246 62%	238 60%
Pseudo R^2	0.09	0.09	0.09	0.09	0.08	0.07
Log Likelihood	-255.10	-255.23	-255.42	-255.82	-256.35	-259.75
Chi-square	0.27	0.37	0.80	1.05	6.81*	
df	2	1	1	1	1	

+--the Chi-square statistic reported is a test of the null hypothesis that the current model does not provide statistically significant incremental discriminatory power over the restricted model to the right.
*--denotes value of Chi-square is statistically significant, $p<0.05$.

Table 2-20. Turnover Dichotomies: Age/Origin vs. Tenure

Cell Frequencies

		Age/Origin		
		Routine	Non-routine	Total
Tenure	Normal tenure	137	96	233
	Long tenure	34	16	50
Total		171	112	283

Figure 2-1. Age of Outgoing CEO

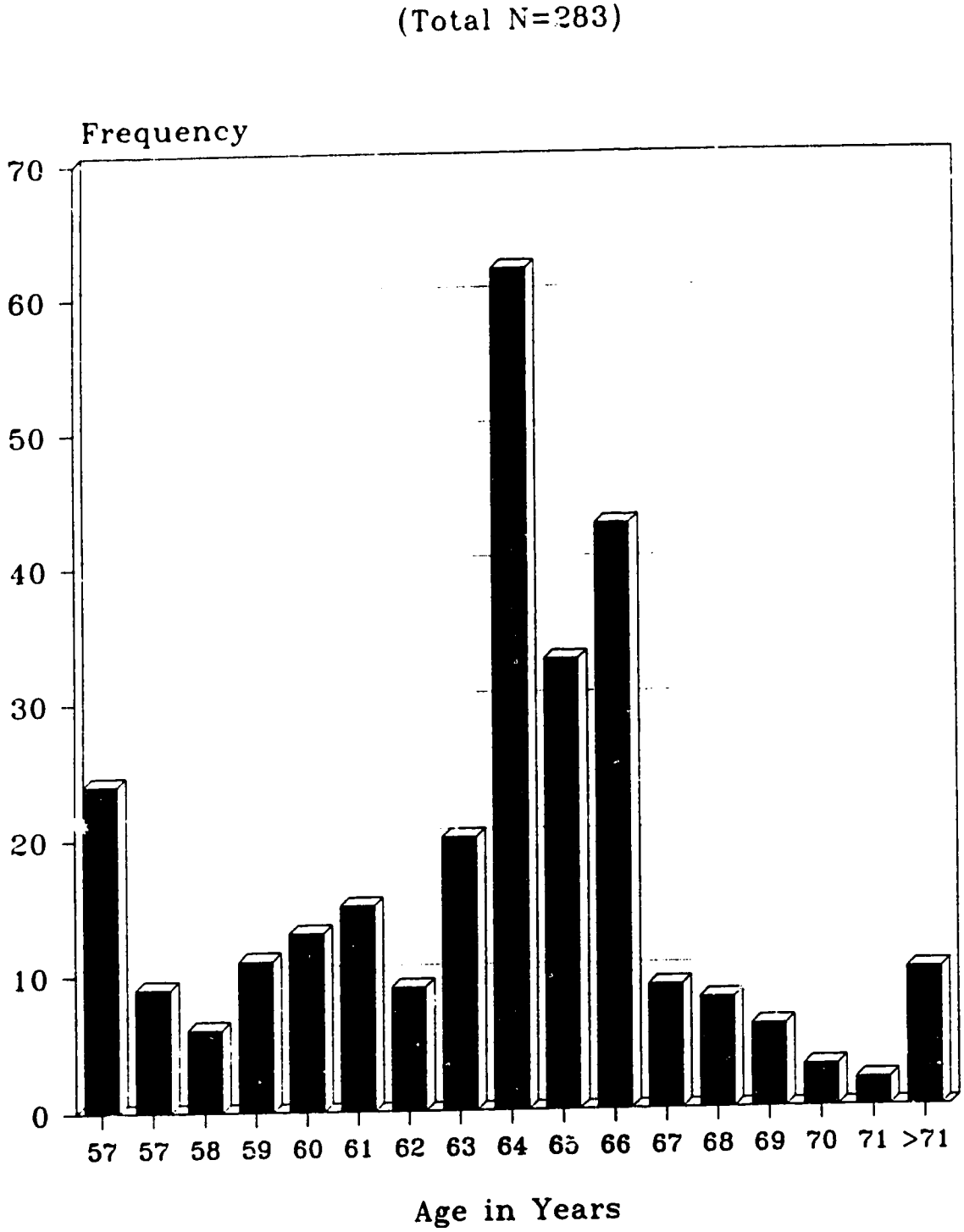


Figure 2-2. Tenure of Outgoing CEO

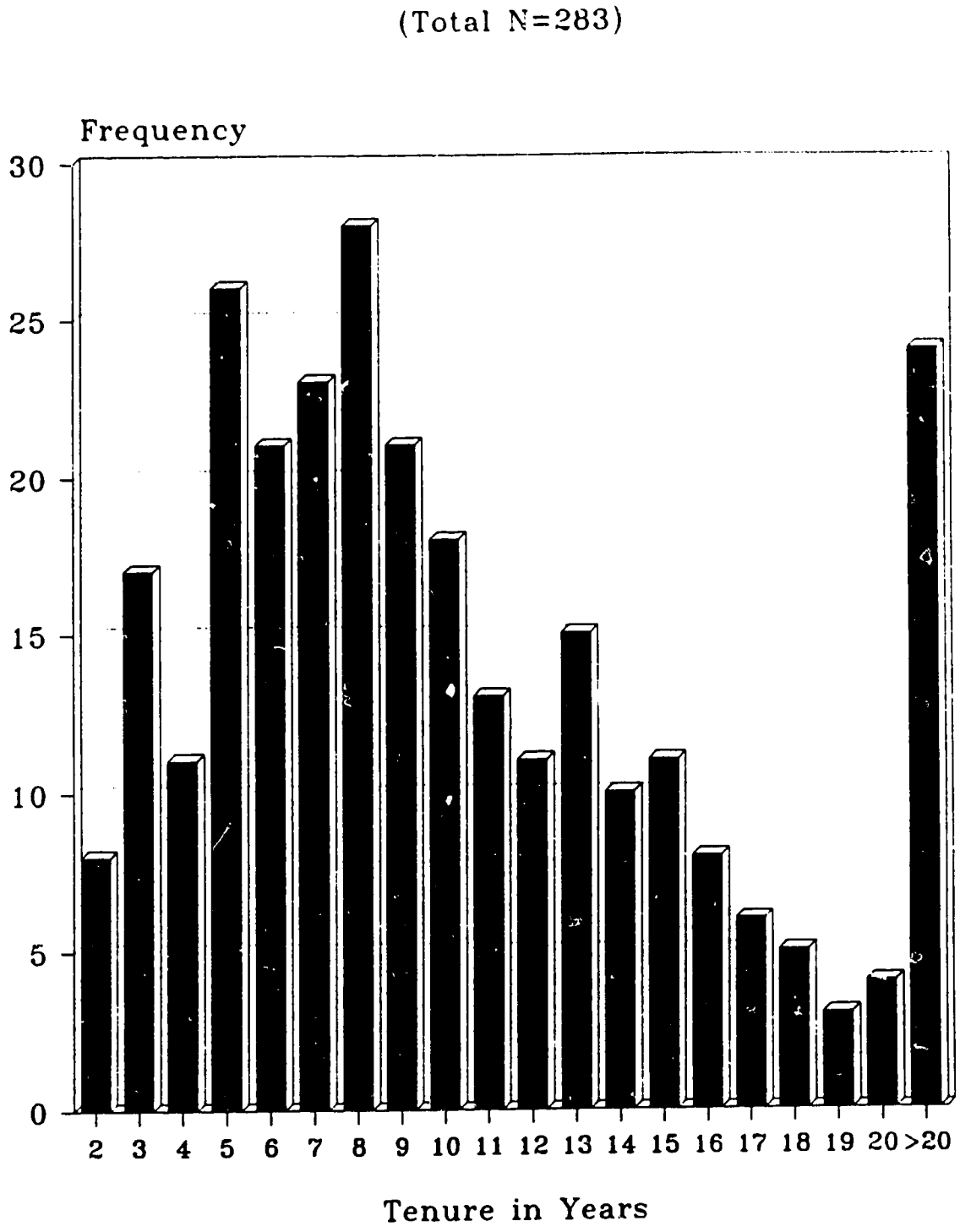
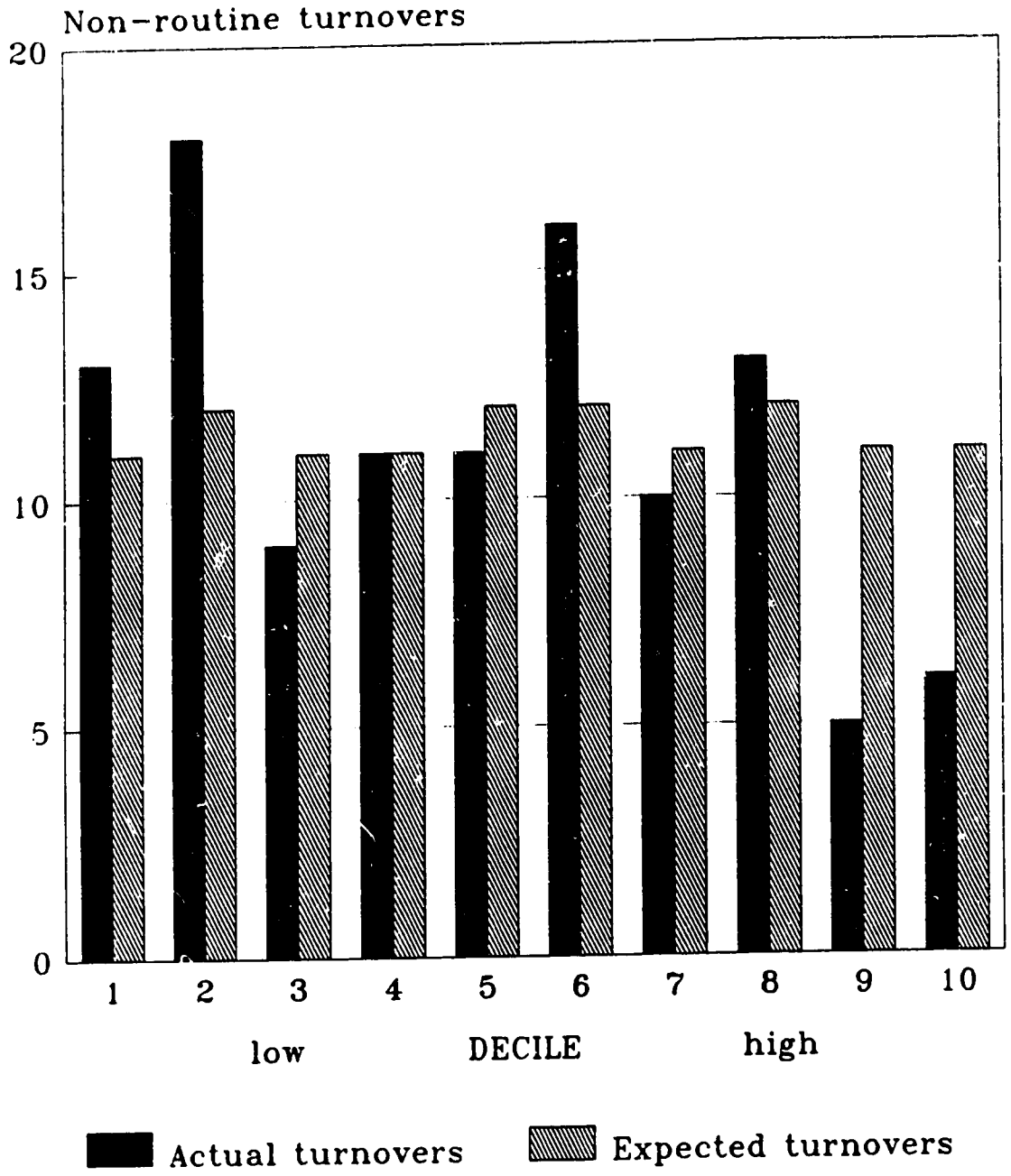


Figure 2-3. Incidence of Turnover Among Non-routine Change and Control Firms Grouped by RDRET Deciles



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CHAPTER 3. CEO TURNOVER: ACCOUNTING DECISIONS AND MARKET REACTIONS

Literature reviewed in Chapter 1 suggests that significant organizational change is often caused by top executive turnover. Indeed, many of the writers cited argue that profound change is impossible without an infusion of new top executive talent free of prevailing biases within the organization. A Board of Directors that is convinced that the organization must change can be expected to recruit a new Chief Executive Officer (CEO) from either outside the organization or outside the incumbent CEO's executive constellation.

The results reported in Chapter 2 are consistent with this view. Corporations that underwent non-routine CEO turnover had on average lower returns on common stock in the fiscal year prior to turnover than did matched non-turnover firms. This finding is consistent with the notion that corporate Boards seem to view firm stock market performance as an important factor in the decision whether or not to fire an incumbent CEO. Alternatively, perhaps both the Board and investors react to poor firm performance - investors by bidding down the price of company stock and the Board by firing the CEO.

There is some question, however, as to precisely what the turnover decision represents. Some writers argue that the dismissal represents ritual scapegoating, that the new CEO will not have (and is not expected to have) any substantive impact on organizational performance (e. g., Gamson and Scotch, 1964; Lieberson and O'Connor, 1972). Others contend that the mandate of the new CEO, under non-routine circumstances at least, is to change or "revitalize" the organization (e. g., Starbuck, 1983).

This chapter specifically examines the role of the new CEO following turnover by bringing empirical evidence to bear on two questions. First, does non-routine CEO turnover in itself signal substantive change in future organizational performance? And (2) after non-routine CEO turnovers, do incoming CEOs make "unusual" accounting decisions that reflect a special mandate?

Based on the discussion in Chapter 1, four hypotheses are advanced and stated below in the alternative form:

Hypothesis 3.1: The announcement of non-routine CEO turnover is associated with imminent and substantive organizational change.

Hypothesis 3.2: The announcement of routine CEO turnover is associated with maintenance of the organization as it is.

Hypothesis 3.3: Non-routine CEO turnover is associated with income decreasing accounting decisions on the part of the new CEO, relative to otherwise similar non-turnover firms.

Hypothesis 3.4: Routine CEO turnover is not associated with unusual accounting decisions relative to otherwise similar non-turnover firms.

Researchers have for some time recognized the profound impact that CEOs have on financial statements, and have expended a great deal of effort in trying to understand the incentives that drive CEO accounting decisions. Accounting research in CEO turnover has already demonstrated that turnover is often accompanied by unusual asset write-downs and accounting policy changes. This study makes an important contribution to this area of research in that it identifies a possible motivation for at least some of these accounting decisions and provides empirical tests of the implied hypotheses.

The results reported here indicate that the announcement of CEO turnover is not associated with stock returns that differ from those of matched non-turnover firms, whether routine or non-routine. These findings are consistent with hypothesis 3.2, but not 3.1. However, there is strong evidence that non-routine turnover CEOs do make income-decreasing accounting decisions after coming to power, while routine turnover CEOs do not. Consistent with hypothesis 3.3, non-routine turnover firms experience a significant drop in the income-to-sales ratio in the year of a CEO turnover, which is accompanied by an increase in research and development expense and the allowance for doubtful accounts; and negative unusual items. Routine turnover firms do not experience any significant change in income-to-sales following a turnover, a finding that is consistent with hypothesis 3.4.

The chapter is divided into two parts. In the first, the market returns tests of hypotheses 3.1 and 3.2 are described, and the results presented and discussed. Next, the tests of hypotheses 3.3 and 3.4 are described, and the results presented and discussed. Finally, conclusions are offered.

I. MARKET REACTION TO TURNOVER ANNOUNCEMENT

Equity investors' evaluation of each turnover is assessed by examining daily stock market returns in the period surrounding the date of the turnover announcement in the Wall Street Journal. Under the capital asset pricing model, the value of a firm at any point in time is the risk-adjusted present value of expected future cash flows, conditional on the information available to market participants (Fama, 1976). If the announcement of CEO turnover is perceived by the market

to have favourable implications for future cash flows, the market price of the firm will increase immediately after the turnover news is communicated to the market. Thus, an examination of stock market returns around the date of the turnover announcement should reveal the market's assessment of the turnover event.

There are some difficulties with this event study approach. First, the set of information available to the market prior to the announcement cannot be known with certainty. If turnover can be predicted (and the results of the previous chapter indicate that at least some variables are associated with subsequent turnover), then the turnover will have been anticipated by the market and the announcement will convey no new information to traders. Arguably, then, the use of market data to detect an expected change in firm performance associated with turnover is likely to be conservative.

Even if it is assumed that (1) the announcement is unanticipated and (2) the market perceives that the turnover signals some fundamental change in firm strategy, the impact of change, i. e., whether it is to the benefit or detriment of the firm, may not be clear to the market at the time of the announcement. The organization theory literature is split regarding the benefits to the firm of executive turnover (Reinganum, 1985), and it seems reasonable that the market will be as ambiguous. Any ambiguity that does exist in the mind of market participants will further decrease the probability of accepting the alternative hypothesis.

Finally, it might not be possible to untangle the potentially confounding information effects of a turnover announcement. Bonnier and

Bruner (1989) argue that the turnover announcement contains both a real and an information effect. The real effect is the implication that the turnover has for future firm performance, and will be positive if the change is in the shareholders' interest. But the announcement also might convey what Bonnier and Bruner call an information effect, in that the turnover might signal that firm performance was worse than the market had realized. In this case, market reaction to the announcement would be difficult or impossible to interpret.

With these difficulties in mind, the analysis proceeds as follows. Two dependent variables are used: (1) total returns on common stock, which is simply the sum of daily returns on the trading days surrounding the WSJ announcement date; and (2) cumulative abnormal returns (CAR).

CARs are computed in the following way. Abnormal returns are calculated from equation (3.1) below:

$$AR_{jt} = R_{jt} - (\alpha + \beta R_{mt}) \qquad (3.1)$$

where AR_{jt} is the abnormal return for stock j on day t; R_{jt} is the actual return for stock j on day t; R_{mt} is the return on an equally weighted portfolio of all NYSE and ASE stocks on day t; and α and β are market model parameters estimated over the 200 trading days between t-240 and t-41 inclusive,[15] where t is the date of the turnover announcement.

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[15]The mean (median, standard deviation) of the market model parameter estimates generated across the 476 regressions estimated here were -0.000 (-0.000, 0.001) for the estimate of α; and 0.928 (0.884, 0.438) for the estimate of β. The turnover and control firms did not differ significantly in terms of mean α and β estimates, no matter how the firms were broken down in terms of routine, non-routine, normal- and long-tenure turnover. The mean (median, standard deviation) R^2 for the 476 regressions was 0.160 (0.148, 0.091).

Abnormal returns are computed for each trading day in the period t-20 up to t+240. CAR is simply the sum of these abnormal returns taken over several different time periods.

If hypothesis 3.1 is correct and the organizational change was ultimately successful, at least some of these returns variables can be expected to be positive for non-routine change firms, and mean returns for non-routine change firms should be significantly higher than that for matched control firms. If hypothesis 3.2 is correct, there should be no difference between market returns for routine turnover and matched control firms.

Data. The data used here are the same as those described in Chapter 2, with the exception that daily stock returns from the CRSP database and the date of the turnover announcement in the Wall Street Journal are required to test hypotheses 3.1 and 3.2. These additional requirements cut the sample size to 238 turnover firms and matched control firms (the matching procedure is outlined in Chapter 2).

Routine vs. Non-routine Turnover. All of the procedures described above were performed twice, once for each of the two classification schemes (age/origin and tenure) outlined in Chapter 2.

Results. The results of the market returns analysis are presented in Tables 3-1 (age/origin) and 3-2 (tenure). Returns are cumulated over seven different intervals surrounding the turnover announcement date, ranging in duration from five to 261 trading days. The only statistically significant result is for normal tenure turnover firms, whose total returns over the full 261-day period is significantly less than that of matched control firms ($p<0.05$). As this is the only

statistically significant result among 56 t-tests, it is not a meaningful result.

As in Chapter 1, the high and statistically significant inter-cell correlations reported here indicate that the control firms and turnover firms are reasonably well matched on stock returns. Put another way, the abnormal stock returns generated by the market model seem to contain a substantial industry component.

Chow tests were performed to test whether the market model parameters changed significantly after the turnover announcement. A significant result here could imply that investors expected significant changes in the firm, and could explain the lack of a significant difference in cumulative abnormal returns behavior between turnover and control firms. The Chow test was performed for each of the turnover and control firms over the periods t-240 to t-41 and t+41 to t+240. The null hypothesis that the market model parameters are the same in both periods was only rejected for eighteen of the 476 firms -- eight routine (seven normal tenure) turnover firms, five non-routine (six long tenure) turnover firms and five control firms (using Kmenta's [1986] suggested critical value for the Chow test). This suggests that the market model parameters were reasonably stationary over the entire interval.

II. ACCOUNTING EFFECTS OF TURNOVER

Accounting research into the big bath phenomenon has found that baths seem to be associated with top executive turnover (Elliott and Shaw, 1988). Arguments presented in Chapter 1 suggest that this will be particularly true for non-routine turnovers, and not routine turnovers. The hypotheses of interest in this section of the chapter are restated

below:

Hypothesis 3.3: Non-routine CEO turnover is associated with income decreasing accounting decisions on the part of the new CEO, relative to otherwise similar non-turnover firms.

Hypothesis 3.4: Routine CEO turnover is not associated with unusual accounting decisions relative to otherwise similar non-turnover firms.

The principal approach used to test these hypotheses is to examine certain financial ratios for each company and how these ratios change following a CEO turnover. The central dependent variable of interest is change in net-income-to-sales, computed as follows:

$$INC = \text{Net Income}_{AT}/\text{Sales}_{AT} - \text{Net Income}_{BT}/\text{Sales}_{BT}, \quad (3.2)$$

where Net Income is net income; sales is net revenue; BT signifies the fiscal year prior to the year of the turnover; and AT refers to either the fiscal year of the turnover or the one after (this is made clear later). If a linear relationship between income and sales, and relatively low fixed expenses, are assumed, then the income-to-sales ratio should be reasonably constant across fairly wide ranges of sales volume. Sizeable decreases in this ratio from one year to the next reflect either a sudden decrease in profitability (e. g., through increased competition within the industry), or the inclusion of unusual expense items in the year's income. Through the use of a matched-pairs design, it should be possible to control for environment-driven changes in income-to-sales and isolate changes in this ratio that result strictly from company-specific increased expenses

There is some question as to whether the central dependent variable should be income from continuing operations or income after

extraordinary items and discontinued operations (net income). Much of the income smoothing literature has focused on ordinary income (income before extraordinary items and, presumably, discontinued operations) on the assumption that this is the figure (managers believe) financial statement users are interested in. At the same time, an extraordinary item is by its nature dramatic, and the literature reviewed in Chapter 1 suggests that a new CEO might be interested in drama. Both ordinary income and net income will be included here in different versions of this first dependent variable.

The changes in income-to-sales variables can be regarded as a measure of the overall or cumulative income decreasing decisions on the part of the CEO. In an effort to perceive more clearly any patterns of accounting decisions taken by the CEO, the following individual financial statement items are also analyzed:

(1) accounts receivable divided by total assets
(2) allowance for doubtful accounts divided by accounts receivable
(3) inventories divided by total assets
(4) income taxes payable divided by total assets
(5) accounts payable divided by total assets
(6) depreciation expense divided by total assets
(7) deferred tax expense divided by sales revenue

These seven items are included in Healy's (1985) definition of total accruals. Each is operationalized as a ratio of the difference in numerator term between the year before and the year following the turnover, divided by the value of the denominator in the year prior to turnover (to control for firm size). Two further income statement items are included:

(8) special items divided by sales revenue
(9) extraordinary items (including discontinued operations) divided by sales revenue

These two items are operationalized simply as the numerator item divided by the denominator, both taken from the year following the turnover. Special items is the focus of Elliott and Shaw (1988); and extraordinary items is the central item studied by Copeland and Moore (1972) and is included in Healy's (1985) list of accrual items.

A second category of financial statement items include non-accrual discretionary expense items that could influence the income-to-sales ratio:

(10) advertising expense divided by sales revenue
(11) research and development expense divided by sales revenue

These items are of a different nature than are those described above in that they are associated with real expenditures on the part of the firm.

In general, income decreasing accounting decisions are consistent with (1) a decrease in asset balances (e. g., inventory is written down or decreased as cost of goods sold is increased; accounts receivable decrease if revenue recognition is deferred); (2) an increase in liability balances (to reflect earlier recognition of expenses); (3) an increase in expenses; and (4) special and/or extraordinary losses. The computational formulae for the dependent variables studied here are presented in Table 3-3.

Changes in the financial ratios have been calculated over two time periods. The first is the change in each ratio or item between the fiscal year ending before the turnover and the fiscal year of the turnover. It seems reasonable to expect, however, that the new CEO would require some time in power before making any changes that will affect the financial statements. Therefore, a second interval, the fiscal year ending nine to 21 months after the turnover vs. the fiscal

year ending before the turnover, is also used.

Regression analysis is used to test for differences between turnover and non-turnover firms while controlling for potentially confounding variables. The matched pairs design used in this study controls for variables like year, industry and fiscal year end. However, results in Chapter 2 indicate that turnover firms do differ from control firms along other important dimensions. Non-routine turnover firms tended to underperform (in terms of stock market returns) relative to control firms in the fiscal year before turnover; and routine turnover firms tended to have a higher return on assets in the year prior to turnover than did control firms. As well, turnover firms were in general larger than control firms. There is a danger, then, that the turnover vs. non-turnover distinction actually proxies for firm size and prior stock market and accounting performance differences between the firms. This is particularly dangerous here, as previous accounting research into financial baths has shown that financial baths tend to be preceded by poor accounting and stock market performance.

To control for this potential source of bias, regression equations are estimated which include the significant independent variables from Chapter 2. For each set of turnover firms and their control firms, the following equation is estimated:

$$Y = \beta_0 + \beta_1 CH + \beta_2 ROA + \beta_3 LRET + \beta_4 LAST + \epsilon^{16} \qquad (3.3)$$

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[16]A full regression model, including interactions between CH and the other independent variables, was estimated as follows:
$Y = \beta_0 + \beta_1 CH + \beta_2 ROA + \beta_3 LRET + \beta_4 LAST + \beta_5 CHxROA + \beta_6 CHxLRET + \beta_7 CHxLAST + \epsilon$.
The interaction terms were not statistically significant in any of the models estimated and had no impact on β_0 through β_4. For ease of presentation, only the results of the restricted model 3.3 are presented

where Y is one of the thirteen dependent variables used in this study; CH is a dummy variable=1 if the firm is a turnover firm and =0 if the firm is a control firm; ROA is income from continuing operations divided by total assets for the fiscal year ending prior to turnover; LRET is the logarithm of total firm return on common stock over the fiscal year prior to the year of the turnover; LAST is the logarithm of total assets of the firm as at the end of the fiscal year prior to the turnover; and ϵ is an independently normally distributed error term. Cook's D is used to identify potential outliers.

As in Chapter 2, the "pair effect" is removed from each of the dependent and independent variables (except CH) before the regression models are estimated (see equation 2.2). The "U" prefix is used to denote that the variable is unadjusted, i. e., the pair effect has not been removed. All of the descriptive statistics presented in Tables 3-4 to 3-11 are for unadjusted data.

To complement the statistical analysis, a search was conducted of the financial statements of non-routine turnover firms (the only firms for which apparent income decreasing accounting decisions were detected). This search served two purposes. First, it serves as a test of the validity of the accounting variables used in this chapter. Secondly, information from the financial statements can give more specific information regarding specific accrual decisions, changes in estimates, accounting policy decisions and the components of any special and extraordinary items than can be derived from the statistical analysis.

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in this chapter.

The search procedure involved reading through the financial statements of the non-routine change firms for the fiscal year of, and the fiscal year following, the turnover. These reports were available in either the University of Alberta or Queen's University collection of financial statements (69 of the 112), or in Moody's Industrial Manuals (37 of the remaining 43). The reports and footnotes were carefully scanned for any indications of unusual accounting decisions: e. g., unusual asset write-downs or write-offs, accounting policy changes, changes in estimates, and discontinued operations.

Data. The full sample of 283 turnover firms and matched control firms is used to test hypotheses 3.3 and 3.4; the financial statement data required to compute the dependent variables was obtained from COMPUSTAT.

Routine vs. Non-routine Turnover. All of the procedures described below were performed for each of the two classification schemes outlined in Chapter 2.

Results: Financial Statement Ratios. The results of the analyses of the accounting variables defined in Table 3-3 are discussed next. A discussion of the univariate results is followed by the multiple regression results.

UNIVARIATE RESULTS. Descriptive statistics for these unadjusted accounting variables are presented in Tables 3-4 through 3-7. In general, the median value for each of the variables across both turnover and control firms is zero.

Tables 3-8 through 3-11 breaks the data down further by turnover and control firms across both dichotomies and over both time periods. The tables present results of both parametric and non-parametric

univariate paired samples tests of the differences in the accounting variables between turnover and control firms. Table 3-8 shows that non-routine turnover firms experienced a decrease in both net-income- and ordinary-income-to-sales in the fiscal year of turnover vs. the year before, although only the change in ordinary-income-to-sales (INCBX) is statistically significant. This finding is accompanied by larger special expenses/losses (SI) for non-routine turnover firms; increased research and development expense; and lower increase in accounts receivable, all relative to matched control firms. Routine turnover firms were not significantly different from their matched control firms on any of the accounting variables.

Similar, although weaker, results were found for differences in these financial statement ratios taken from the fiscal year ending nine to 21 months after the turnover vs. those from the fiscal year prior to the turnover (table 3-9). For non-routine turnover vs. control firms, change in ordinary-income-to-sales, and change in inventories is significant in the hypothesized direction at the five percent level. These findings support the contentions that any income decreasing decisions made by the CEO (1) occur very soon after the CEO assumes his/her office and (2) have their most consistent impact on income from continuing operations.

Routine turnover firms differed significantly from control firms in terms of special items and inventory, but these differences did not result in a statistically significant difference in either of the income-to-sales ratios.

Paired tests results for the tenure dichotomy firms are presented

in Tables 3-10 and 3-11. For normal tenure firms, the univariate results are similar to those obtained for non-routine (age/origin) turnover and control firms. This seems to mirror the findings in Chapter 1 that normal tenure firms seem to have many of the characteristics of both routine and non-routine turnover firms.

The results for long tenure turnover firms are quite interesting. Table 3-11 shows that the income-to-sales ratios for turnover firms increase dramatically in the fiscal year ending 9 to 21 months after turnover vs. the fiscal year prior to turnover, a result opposite that predicted by hypothesis 3-3.[17]

MULTIVARIATE RESULTS. The results of these regressions are displayed in tables 3-12 to 3-19. Table 3-12 contains the results for the non-routine turnover and control firms, where the dependent variables are computed as the change in financial ratios between the fiscal year of the turnover and the fiscal year prior to that turnover. The models estimated have at best modest explanatory power,[18] and the independent variable CH is statistically significant ($p<0.05$) in models of change in ordinary-income-to-sales, change in research and development expense, and special items. If the change in financial variables is calculated

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[17]Note that the result is not considered statistically significant since the t-tests in Table 3-11 are one-tailed, i. e., the test is significant only if a significant <u>decrease</u> in the income-to-sales ratio is detected.

[18]The objective of this work is not to model the changes in each of the financial ratios presented here, but rather to assess the impact of CEO turnover on the ratios in an unbiased manner. It seems clear that there are one or more omitted variables that would help explain some of the variance that is unexplained by the models estimated here; but hopefully these variables are uncorrelated with the turnover event and do not, therefore, bias the test of the turnover effect.

over the period from the fiscal year prior to turnover to the fiscal year ending nine to 21 months after turnover (table 3-13), CH is statistically significant in the change in allowance for doubtful accounts and change in inventory, but does not have a significant impact on change in income-to-sales. Interestingly, turnover is associated with positive extraordinary items and discontinued operations.

As predicted by hypothesis 3-4, turnover is not a significant explanatory variable in any of the income-to-sales regressions estimated on the sample of routine turnover and control firms (Tables 3-14 and 3-15). While certain of the component items seem to be affected by turnover (deferred tax expense in Table 3-14; and special items in Tables 3-14 and 3-15), these results do not seem to be part of a coordinated "big bath" strategy.

Regression results for the tenure dichotomy firms are presented in tables 3-16 to 3-19. Once again, the long tenure firms offer surprising and puzzling results (tables 3-16 and 3-17). Both income-to-sales ratios increase by better than a full percentage point after turnover, controlling for size, prior income and stock market performance and pair effects. This finding is contrary to hypothesis 3.3, implying either a substantial increase in profitability or income-increasing accounting decisions. Except for total receivables in the fiscal year of turnover, however, none of the other accrual/expense items behave in a manner consistent with income increasing accounting decisions.

The normal tenure turnover results (tables 3-18 and 3-19) are similar to those of non-routine (age/origin) turnover results in that ordinary-income-to-sales declines following turnover while extroardinary

items and discontinued operations is positive.

The possibility of discontinued operations presents a special problem in this analysis. Once firm management decides that an activity will be discontinued, all assets and liabilities associated with it are removed from the balance sheet, and any income or loss associated with the operation (together with any expected loss or gain on disposal) are shown separately on the income statement as a below tax item. This can have two potential results. First, the removal of liabilities biases against finding evidence of income-decreasing accruals involving liabilities, while the removal of assets tends to bias in favour of finding income-decreasing accruals involving assets. Secondly, any gain on disposal of discontinued operations will serve to increase net-income-to-sales.

To guard against this possibility, any turnover firms reporting discontinued operations, and their associated control firms, were dropped from the sample and all of the regressions were re-estimated. The only set of results that were changed by this procedure were for those accounting variables computed for the fiscal year of turnover vs. the fiscal year prior to turnover, for non-routine turnover and control firms. These results are presented in Table 3-20. The only differences between these results and those of the full sample (Table 3-12) are (1) the increase in the allowance for doubtful accounts following turnover becomes statistically significant and (2) the coefficient for CH in the special items regression becomes insignificant, once the discontinued operations firms are dropped.

Financial Statement Effects. As a check on and elaboration of the

results of the statistical analysis discussed above, the financial statements of the non-routine turnover firms were examined for evidence of unusual accounting decisions. Of the 112 non-routine turnover firms, full financial statements for the year of and following the turnover were available for 69 of them, and abbreviated versions of the financial statements were available for 37 more in Moody's Industrial Manual. The results of an investigation of these statements are presented in Table 3-21.

The first striking feature of these statements was the extremely tactful manner in which the outgoing CEO was treated in the letter to the shareholders. In 35 cases, no mention was made of the outgoing CEO at all; and in only one case was explicit mention made of "past managerial mistakes." This is consistent with Vancil's (1987) finding that the culture of large American organizations generally prohibits explicit denunciation of outgoing executives. At the same time, however, there was frequent mention made of the need to restructure, reorganize and revitalize; and of the need to "get back to [the company's] roots."

In many cases, the exhortations in the new CEO's letter to shareholders were accompanied by specific income statement charges. In seventeen cases, organizational restructuring was mentioned as a priority and/or accompanied by a special item charge on the income statement. Twenty-four firms disposed of operations or charged estimated losses from future disposals as extraordinary items. Eleven firms announced accounting policy changes.

Seven firms described the turnover as routine (the outgoing CEO

typically going on to become the Chairman of the Board of Directors). This is likely the result of (1) the crude operationalization of routine vs. non-routine turnover used in this research and/or (2) at least some element of the "good manners" discussed earlier.

One last observation relates to the timing of the new CEO's impact on financial statements. Most of the obvious effects of the new CEO on the financial statements occurred in the fiscal year of the turnover, even if the turnover occurred quite late in the year. This suggests that many non-routine new CEOs do not need a great deal of time to decide on what their plans for the corporation are, and set about them immediately.

Consistent with the regression results presented in this chapter, 20 firms reported special charges for restructuring costs, asset write-downs and other provisions for future losses. Eleven firms reported accounting policy changes, but six of them were income increasing and five were income decreasing. Thus, it is not clear that accounting policy changes are systematically used by management to reduce reported income after turnover. Finally, there was no disclosure in any of the financial statements regarding changes in accounting estimates or discretionary accrual decisions. This is consistent with either (1) managers do not use these options to manage income; or (2) managers do not disclose it in the financial statements if they do.

DISCUSSION

No support at all was found for hypothesis 3.1, that predicted that equity investors would interpret the announcement of a non-routine CEO turnover as evidence that the firm was about to make substantive

(and ultimately successful) changes in its operations. There are a number of possible explanations for this finding. The Wall Street Journal announcement of the turnover always preceded the actual turnover event, sometimes by as much as six months or more. It might take the market considerably longer, in many cases, to determine the intentions of the new CEO and, therefore, how the company's prospects have changed. Alternatively, the market might have been able to forecast the turnover some time before the actual announcement, and already impounded its assessment before the announcement in the Wall Street Journal.

It is important to reconcile the absence of significant results here with the number of recent studies of CEO turnover which have found significant positive market reaction to non-routine turnover. The results reported here are consistent with Warner, Watts and Wruck (1988), who found no significant abnormal returns associated with the announcement of turnover. Reinganum (1985) found a significant market reaction to outside turnover, but only for small firms which he defines as firms whose common stock has a total market value of less than $65.5 million. Lubatkin, Chung, Rogers and Owers (1989) note that, during the period 1971-1985, fewer than 5% of the Forbes 500 firms, from which my sample of turnover firms is drawn, are of such a small size. Indeed, only four among the sample of turnover firms in this study would be classified as small by Reinganum. Thus, the results found here are consistent with those of Reinganum.

Lubatkin et al. found that Forbes 500 firms on average enjoyed positive abnormal returns following an outside turnover. However, Lubatkin et al. did not explicitly control for industry and year effects

as is done here. Indeed, this criticism can be levelled at most of the empirical studies that have been conducted in this area (Weisbach, 1988; Bonnier and Bruner, 1989). The high correlations reported between turnover and control firm total and abnormal returns (in Tables 3-1 and 3-2) suggest that it is probably inappropriate to rely on the market model to remove all potentially confounding systematic effects.

The results reported here are consistent with many of the studies cited in Chapter 1 that found that executive succession has little effect on organizational performance. This coupled with the finding that new CEOs make income decreasing accounting decisions after coming to power suggest that these accounting decisions may be largely ceremonial, and the succession process may be simply some form of scapegoating (Gamson and Scotch, 1964).

There is much stronger evidence in support of hypothesis 3.3 that new non-routine CEOs make income decreasing accounting decisions upon assuming the office of CEO. Non-routine turnover firms experience a substantial drop in the ordinary income-to-sales ratio in the year of the turnover. This drop is accompanied by a significant increase in the allowance for doubtful accounts (wnich, other things being equal, is matched by an increase in bad debt expense). These results are consistent with those found by McNichols and Wilson (1988), who argue that discretionary decisions regarding the provision for doubtful accounts can have a substantial impact on accounting earnings.

Elliott and Shaw (1988) found that a large proportion of firms that charged special expense or loss items in a given year also experienced top management turnover during that year. The results

reported here suggest that this is particularly the case if the turnover involves the CEO and the circumstances of the turnover are non-routine (dismissal and/or outsider replacement). Routine turnover CEOs also seem to charge special expense items, but not until the year following the turnover. Additionally, these special items do not seem to filter through to the income-to-sales variables. Thus, there is mixed support for hypothesis 3.4.

The final interesting result regarding non-routine turnover firms is that non-routine turnover firms significantly increase research and development spending in the year of turnover. As argued in the introduction to this chapter, research and development probably represents real expenditures on the part of the firm and not accounting manipulations; but is consistent with the notion of a new CEO trying to chart new directions for the firm. This finding contrasts with the routine turnover case, where firms experience a decrease in research and development expense after controlling for prior return on assets, stock market return and corporate size. This is consistent with recent findings by Dechow and Sloan (1991) who find that CEOs in their final years tend to decrease discretionary expenditures (specifically research and development expense) to manage short-term earnings performance.

It is interesting that the turnover effect is much stronger on income from continuing operations than net income. The only difference between the two incomes is extraordinary items (which includes discontinued operations), and a number of turnover firms explicitly reported extraordinary items in the financial statements following the turnover. In many cases, however, the disposal of discontinued

operations netted an extraordinary accounting gain for the firm, arising because of the difference between the market and book values of the operations sold off (i. e., this gain is an artifact of accounting and is not a reflection on the profitability or value of the operations in question). Here, substantive organizational change on the part of the CEO can result in increases in accounting income.

As in the previous chapter, results for the normal tenure turnover firms were similar to those of the non-routine (age/origin) tenure firms and were inconsistent with hypotheses 3.4. Once again, this seems to reflect the schizoid nature of the population firms in the normal tenure group. As shown in Table 2-20, 96 of the 233 normal tenure turnovers are classified as non-routine under the age/origin dichotomy. The results for long tenure firms indicate that income-to-sales increases following turnover (in violation of hypothesis 3.3), although this is not accompanied by any detectable special accounting items or changes in accrual items. The absence of statistically significant stock returns around the announcement of turnover implies that this is not associated with any unexpected change in economic performance on the part of the firm.

CONCLUSION

The organizational sociology literature reviewed in Chapter 1 was divided over the effects of CEO turnover on firm performance. The stock returns results reported here suggest that the market does not perceive that news of a turnover has any implications for future firm performance. However, non-routine turnover CEOs in particular do seem to make income decreasing accounting decisions shortly after coming to

power that are consistent with an agenda for substantive organizational change. The next chapter explicitly investigates the relationship between accounting earnings reported after CEO turnover and stock returns.

Table 3-1. Stock Market Returns: Turnover vs. Control Firms - Age/Origin Dichotomy

Cell Means (Standard Deviations) and Inter-Cell Correlations

I. Cumulative Total Returns

	Routine Turnover (N=144)			Non-routine Turnover (N=94)		
Interval#	Change	Control	Pearson r	Change	Control	Pearson r
[-2,+2]	0.002 (0.039)	0.000 (0.038)	0.390**	-0.003 (0.057)	0.000 (0.047)	0.512**
[-5,+5]	0.004 (0.054)	0.009 (0.058)	0.368**	-0.008 (0.078)	-0.002 (0.075)	0.608**
[-20,+5]	0.026 (0.084)	0.026 (0.101)	0.546**	-0.002 (0.114)	0.002 (0.141)	0.705**
[-20,+20]	0.035 (0.107)	0.040 (0.117)	0.551**	0.009 (0.133)	0.015 (0.138)	0.643**
[-20,+60]	0.061 (0.157)	0.068 (0.153)	0.594**	0.031 (0.186)	0.043 (0.177)	0.577**
[-20,+120]	0.107 (0.184)	0.117 (0.184)	0.407**	0.068 (0.257)	0.096 (0.236)	0.558**
[-20,+240]	0.167 (0.235)	0.199 (0.226)	0.450**	0.174 (0.291)	0.212 (0.338)	0.440**

II. Cumulative Abnormal Returns

	Routine Turnover (N=144)			Non-routine Turnover (N=94)		
Interval#	Change	Control	Pearson r	Change	Control	Pearson r
[-2,+2]	0.002 (0.036)	0.000 (0.033)	0.221**	-0.006 (0.047)	-0.002 (0.038)	0.178
[-5,+5]	-0.001 (0.054)	0.002 (0.052)	0.272**	-0.013 (0.067)	-0.006 (0.064)	0.299**
[-20,+5]	0.006 (0.083)	0.003 (0.098)	0.438**	-0.013 (0.094)	-0.008 (0.103)	0.205**
[-20,+20]	0.005 (0.118)	0.007 (0.120)	0.431**	-0.014 (0.124)	-0.012 (0.115)	0.308**
[-20,+60]	0.007 (0.171)	0.009 (0.168)	0.359**	-0.019 (0.191)	-0.025 (0.176)	0.416**
[-20,+120]	0.015 (0.216)	0.021 (0.256)	0.368**	-0.008 (0.257)	-0.017 (0.236)	0.260**
[-20,+240]	0.004 (0.344)	0.030 (0.389)	0.481**	0.049 (0.412)	0.019 (0.371)	0.198

NOTES

#--the numbers in square brackets represent the beginning and ending trading dates (relative to the date of the turnover announcement in the Wall Street Journal) of the interval over which daily returns are cumulated.

a(b)--denotes that difference in cell means is significant at $p<0.05$ ($p<0.01$), using a two-tailed paired samples t-test.

c(d)--denotes that the median of the population of differences is not zero at $p<0.05$ ($p<0.01$), using a two-tailed Wilcoxon matched-pairs signed-ranks test.

**--denotes that correlation is signficantly different from zero at $p<0.05$.

Table 3-2. Stock Market Returns: Turnover vs. Control Firms - Tenure Dichotomy

Cell Means (Standard Deviations) and Inter-Cell Correlations

I. Cumulative Total Returns

	Normal Tenure Turnover (N=193)			Long Tenure Turnover (N=45)		
Interval#	Change	Control	Pearson r	Change	Control	Pearson r
[-2,+2]	0.002 (0.047)	0.002 (0.040)	0.470**	-0.011 (0.046)	-0.010 (0.048)	0.364**
[-5,+5]	-0.002 (0.065)	0.006 (0.064)	0.521**	0.003 (0.062)	-0.005 (0.067)	0.443**
[-20,+5]	0.015 (0.096)	0.021 (0.111)	0.604**	0.017 (0.106)	-0.002 (0.148)	0.757**
[-20,+20]	0.025 (0.115)	0.034 (0.122)	0.593**	0.023 (0.135)	0.015 (0.142)	0.625**
[-20,+60]	0.050 (0.162)	0.062 (0.162)	0.507**	0.046 (0.201)	0.043 (0.168)	0.634**
[-20,+120]	0.098 (0.211)	0.120 (0.211)	0.494**	0.060 (0.235)	0.059 (0.178)	0.461**
[-20,+240]	0.177 (0.266)	0.219[ac] (0.276)	0.475**	0.142 (0.224)	0.138 (0.264)	0.256**

II. Cumulative Abnormal Returns

	Normal Tenure Turnover (N=193)			Long Tenure Turnover (N=45)		
Interval#	Change	Control	Pearson r	Change	Control	Pearson r
[-2,+2]	0.000 (0.041)	0.001 (0.033)	0.258**	-0.005 (0.041)	-0.005 (0.040)	-0.010
[-5,+5]	-0.008 (0.060)	0.000 (0.057)	0.337**	0.005 (0.060)	-0.004 (0.059)	0.112
[-20,+5]	-0.007 (0.085)	-0.001 (0.097)	0.374**	0.024 (0.096)	0.000 (0.113)	0.238
[-20,+20]	-0.009 (0.115)	-0.002 (0.115)	0.392**	0.024 (0.139)	0.005 (0.132)	0.366**
[-20,+60]	-0.009 (0.173)	-0.003 (0.168)	0.386**	0.020 (0.202)	-0.011 (0.190)	0.403**
[-20,+120]	0.002 (0.228)	0.013 (0.249)	0.346**	0.021 (0.252)	-0.023 (0.263)	0.245**
[-20,+240]	0.007 (0.369)	0.030 (0.384)	0.363**	0.086 (0.383)	0.005 (0.373)	0.348**

NOTES

#--the numbers in square brackets represent the beginning and ending trading dates (relative to the date of the turnover announcement in the Wall Street Journal) of the interval over which daily returns are cumulated.

a(b)--denotes that difference in cell means is significant at $p<0.05$ ($p<0.01$), using a two-tailed paired samples t-test.

c(d)--denotes that the median of the population of differences is not zero at $p<0.05$ ($p<0.01$), using a two-tailed Wilcoxon matched-pairs signed-ranks test.

**--denotes that correlation is signficantly different from zero at $p<0.05$.

Table 3-3. Financial Statement Analysis: Dependent Variables

Variable	Description	Expected Sign*
UINC	Change in net-income-to-sales ratio $= \frac{\text{Net income}_{AT}}{\text{Sales}_{AT}} - \frac{\text{Net income}_{BT}}{\text{Sales}_{BT}}$	(-)
UINCBX	Change in income-from-continuing-operations-to-sales ratio $= \frac{\text{Ordinary income}_{AT}}{\text{Sales}_{AT}} - \frac{\text{Ordinary income}_{BT}}{\text{Sales}_{BT}}$	(-)
UREC	Change in accounts receivable $= \text{Accounts receivable}_{AT} - \text{Accounts receivable}_{BT}$ Denominator: Total assets_{BT}	(-)
URCD	Change in allowance for doubtful accounts $= \text{Doubtful accounts}_{AT} - \text{Doubtful accounts}_{BT}$ Denominator: $\text{Accounts receivable}_{BT}$	(+)
UINV	Change in inventories $= \text{Inventory}_{AT} - \text{Inventory}_{BT}$ Denominator: Total assets_{BT}	(-)
UITP	Change in income taxes payable $= \text{Income taxes payable}_{AT} - \text{Income taxes payable}_{BT}$ Denominator: Total assets_{BT}	(+)
UAP	Change in accounts payable $= \text{Accounts payable}_{AT} - \text{Accounts payable}_{BT}$ Denominator: Total assets_{BT}	(+)
UDEP	Change in depreciation expense Numerator: $\text{Depreciation}_{AT} - \text{Depreciation}_{BT}$ Denominator: Total Assets_{BT}	(+)
UDTX	Change in deferred income tax expense $= \text{Deferred Income Tax Expense}_{AT}$ $- \text{Deferred Income Tax Expense}_{BT}$ Denominator: $\text{Sales Revenue}_{BT}$	(+)

NOTES
BT--refers to the fiscal year ending prior to the fiscal year of turnover.
AT--refers to the fiscal year of the turnover, or the fiscal year ending 9 to 21 months after the turnover.
*Expected sign refers to the expected sign of the mean value of the dependent variable for non-routine change firms less that for control firms.

Table 3-3 (continued). Financial Statement Analysis: Dependent Variables

Variable	Description	Expected Sign*
UADV	Change in advertising expense = Advertising expense$_{AT}$ - Advertising expense$_{BT}$ Denominator: Sales revenue$_{BT}$	(+)
URD	Change in research and development expense = Research and development$_{AT}$ - research and development$_{BT}$ Denominator: Sales revenue$_{BT}$	(+)
USI	Special items = Special items$_{AT}$/Sales revenue$_{AT}$	(-)
UXTI	Extraordinary items and discontinued operations = Extraordinary items$_{AT}$ and discontinued operations$_{AT}$ Denominator: Sales revenue$_{AT}$	(-)

NOTES
BT--refers to the fiscal year ending prior to the fiscal year of turnover.
AT--refers to the fiscal year of the turnover, or the fiscal year ending 9 to 21 months after the turnover.
*Expected sign refers to the expected sign of the mean value of the dependent variable for non-routine change firms less that for control firms.

Table 3-4. Descriptive Statistics for Change in Financial Ratios: Fiscal Year of Turnover vs. Fiscal Year Prior to Turnover (Age/Origin Dichotomy)

Routine Turnover and Control Firms

Variable*	Mean	Median	Minimum	Maximum	Std dev	N+
UINC	.000	.000	-.340	.358	.038	342
UINCBX	.001	.000	-.169	.329	.031	342
UREC	.021	.014	-.059	1.105	.077	268
URCD	.003	.002	-.018	.045	.008	162
UINV	.021	.012	-.131	1.246	.086	270
UITP	.005	.001	-.038	.213	.021	262
UAP	.015	.009	-.092	.476	.040	270
UADV	.003	.001	-.010	.080	.007	180
UDEP	.005	.004	-.014	.062	.007	342
URD	.004	.002	-.009	.031	.006	146
UDTX	.002	.000	-.092	.082	.018	308
USI	-.002	.000	-.204	.101	.021	238
UXTI	.000	.000	-.076	.068	.009	342

Non-Routine Turnover and Control Firms

Variable*	Mean	Median	Minimum	Maximum	Std dev	N+
UINC	-.002	-.001	-.237	.123	.036	224
UINCBX	-.002	-.002	-.088	.114	.024	224
UREC	.009	.008	-.116	.174	.036	162
URCD	.000	.001	-.103	.049	.016	100
UINV	.010	.004	-.149	.228	.051	162
UITP	-.001	.000	-.058	.061	.014	158
UAP	.008	.005	-.177	.113	.030	162
UADV	.003	.001	-.022	.031	.007	118
UDEP	.005	.004	-.046	.031	.007	224
URD	.002	.001	-.010	.012	.003	92
UDTX	.002	.000	-.049	.107	.016	208
USI	-.004	.000	-.106	.044	.016	146
UXTI	.000	.000	-.199	.199	.025	224

*-the "U" prefix on all of these variables denotes that these variables are unadjusted. As in Chapter 2, the "pair effect" will be removed from each of these variables before the regression equations (Tables 3-12 to 3-20) are estimated.
+-for each variable, turnover firms and their associated control firms are included only if valid data for that variable is available from COMPUSTAT for BOTH firms in the matched pair.

Table 3-5. Descriptive Statistics for Change in Financial Ratios: Fiscal Year Ending 9 to 21 Months After Turnover vs. Fiscal Year Prior to Turnover (Age/Origin Dichotomy)

Routine Turnover and Control Firms

Variable*	Mean	Median	Minimum	Maximum	Std dev	N+
UINC	.001	.000	-.212	.358	.039	342
UINCBX	.002	.001	-.169	.329	.036	342
UREC	.031	.022	-.148	1.105	.081	268
URCD	.005	.002	-.039	.124	.017	160
UINV	.029	.018	-.131	1.246	.090	270
UITP	.005	.003	-.035	.213	.021	260
UAP	.020	.013	-.235	.476	.047	270
UADV	.004	.001	-.009	.080	.010	174
UDEP	.008	.006	-.014	.096	.012	342
URD	.005	.003	-.009	.031	.007	142
UDTX	.004	.001	-.061	.122	.021	312
USI	-.002	.000	-.204	.044	.018	232
UXTI	.000	.000	-.039	.039	.006	342

Non-Routine Turnover and Control Firms

Variable*	Mean	Median	Minimum	Maximum	Std dev	N+
UINC	-.001	-.001	-.206	.128	.036	224
UINCBX	-.003	.000	-.170	.114	.031	224
UREC	.019	.013	-.147	.174	.048	160
URCD	.001	.002	-.121	.034	.019	98
UINV	.020	.009	-.202	.462	.074	162
UITP	.001	.001	-.049	.061	.015	158
UAP	.013	.007	-.225	.208	.041	162
UADV	.004	.002	-.031	.044	.010	114
UDEP	.007	.006	-.046	.034	.010	224
URD	.003	.001	-.010	.025	.006	90
UDTX	.006	.001	-.049	.180	.025	212
USI	-.002	.000	-.104	.044	.015	138
UXTI	.000	.000	-.044	.068	.009	224

*-the "U" prefix on all of these variables denotes that these variables are unadjusted. As in Chapter 2, the "pair effect" will be removed from each of these variables before the regression equations (Tables 3-12 to 3-20) are estimated.
+-for each variable, turnover firms and their associated control firms are included only if valid data for that variable is available from COMPUSTAT for BOTH firms in the matched pair.

Table 3-6. Descriptive Statistics for Change in Financial Ratios: Fiscal Year of Turnover vs. Fiscal Year Prior to Turnover (Tenure Dichotomy)

Normal Tenure Turnover and Control Firms

Variable*	Mean	Median	Minimum	Maximum	Std dev	N+
UINC	.000	.000	-.240	.358	.035	466
UINCBX	.000	.000	-.169	.329	.028	466
UREC	.017	.011	-.070	1.105	.069	354
URCD	.002	.001	-.103	.028	.010	208
UINV	.018	.009	-.149	1.246	.079	354
UITP	.003	.001	-.058	.213	.020	344
UAP	.013	.008	-.067	.476	.036	354
UADV	.003	.001	-.022	.080	.007	252
UDEP	.004	.004	-.046	.062	.007	466
URD	.003	.002	-.010	.029	.005	202
UDTX	.003	.001	-.059	.107	.016	420
USI	-.002	.000	-.204	.101	.019	318
UXTI	.001	.000	-.089	.199	.013	466

Long Tenure Turnover and Control Firms

Variable*	Mean	Median	Minimum	Maximum	Std dev	N+
UINC	-.007	-.002	-.237	.123	.046	100
UINCBX	-.003	-.001	-.131	.091	.031	100
UREC	.015	.014	-.116	.174	.044	76
URCD	.003	.002	-.066	.049	.016	54
UINV	.014	.009	-.140	.228	.053	78
UITP	.003	.001	-.027	.056	.014	76
UAP	.007	.006	-.177	.133	.039	78
UADV	.002	.000	-.010	.020	.005	46
UDEP	.006	.004	-.016	.051	.009	100
URD	.004	.001	-.009	.031	.007	36
UDTX	-.001	-.001	-.092	.064	.021	96
USI	-.004	.000	-.140	.064	.021	66
UXTI	-.004	.000	-.199	.042	.030	100U

*-the "U" prefix on all of these variables denotes that these variables are unadjusted. As in Chapter 2, the "pair effect" will be removed from each of these variables before the regression equations (Tables 3-12 to 3-20) are estimated.
+-for each variable, turnover firms and their associated control firms are included only if valid data for that variable is available from COMPUSTAT for BOTH firms in the matched pair.

Table 3-7. Descriptive Statistics for Change in Financial Ratios: Fiscal Year Ending 9 to 21 Months After Turnover vs. Fiscal Year Prior to Turnover (Tenure Dichotomy)

Normal Tenure Turnover and Control Firms

Variable*	Mean	Median	Minimum	Maximum	Std dev	N+
UINC	.000	.000	-.212	.358	.039	466
UINCBX	.000	.000	-.170	.329	.035	466
UREC	.027	.018	-.148	1.105	.074	354
URCD	.003	.002	-.121	.095	.015	204
UINV	.027	.017	-.202	1.246	.088	354
UITP	.004	.002	-.049	.213	.020	342
UAP	.018	.011	-.075	.476	.043	354
UADV	.004	.002	-.031	.080	.010	244
UDEP	.008	.006	-.046	.096	.011	466
URD	.004	.002	-.010	.029	.007	198
UDTX	.006	.001	-.051	.180	.023	430
USI	-.002	.000	-.204	.044	.017	306
UXTI	.000	.000	-.044	.068	.007	466

Long Tenure Turnover and Control Firms

Variable*	Mean	Median	Minimum	Maximum	Std dev	N+
UINC	.000	-.003	-.153	.142	.035	100
UINCBX	.001	.000	-.131	.132	.032	100
UREC	.021	.014	-.147	.202	.055	74
URCD	.006	.002	-.075	.124	.026	54
UINV	.017	.010	-.187	.228	.065	78
UITP	.004	.001	-.027	.056	.015	76
UAP	.014	.008	-.235	.133	.053	78
UADV	.004	.000	-.003	.048	.009	44
UDEP	.009	.008	-.037	.051	.011	100
URD	.005	.003	-.008	.031	.009	34
UDTX	.002	.000	-.061	.091	.023	94
USI	-.003	.000	-.047	.044	.014	64
UXTI	.000	.000	-.039	.030	.008	100

*-the "U" prefix on all of these variables denotes that these variables are unadjusted. As in Chapter 2, the "pair effect" will be removed from each of these variables before the regression equations (Tables 3-12 to 3-20) are estimated.
+-for each variable, turnover firms and their associated control firms are included only if valid data for that variable is available from COMPUSTAT for BOTH firms in the matched pair.

Table 3-8. Change in Financial Ratios: Fiscal Year of Turnover vs. Fiscal Year Prior to Turnover (Age/Origin Dichotomy)

Cell Means (Standard Deviations) and Inter-Cell Correlations

	Routine Turnover			Non-routine Turnover		
	Change	Control	Pearson r	Change	Control	Pearson r
UINC	0.0008	-0.0008	0.101	-0.0056	0.0009[c]	-0.060
	(0.040)	(0.037)		(0.044)	(0.025)	
UINCBX	0.0003	0.0015	0.112	-0.0067	0.0019[bd]	0.222+
	(0.037)	(0.024)		(0.024)	(0.024)	
UREC	0.0172	0.0253	0.139	0.0046	0.0135[ac]	0.259+
	(0.035)	(0.103)		(0.033)	(0.038)	
URCD	0.0025	0.0038	0.261+	0.0016	-0.0011	0.013
	(0.007)	(0.008)		(0.012)	(0.020)	
UINV	0.0165	0.0261	0.013	0.0055	0.0144	0.414+
	(0.041)	(0.114)		(0.048)	(0.054)	
UITP	0.0044	0.0053	0.035	-0.0011	-0.0003	0.142
	(0.023)	(0.019)		(0.011)	(0.016)	
UAP	0.0130	0.0165	0.052	0.0041	0.0115	0.350+
	(0.029)	(0.049)		(0.031)	(0.028)	
UDEP	0.0050	0.0045	0.242+	0.0038	0.0054	0.000
	(0.007)	(0.007)		(0.008)	(0.007)	
UDTX	0.0028	0.0009	0.215+	0.0004	0.0036	0.201+
	(0.019)	(0.017)		(0.016)	(0.016)	
UADV	0.0028	0.0029	0.327	0.0026	0.0027	0.076
	(0.005)	(0.009)		(0.005)	(0.008)	
URD	0.0030	0.0041	0.133	0.0025	0.0012[ac]	0.294+
	(0.004)	(0.007)		(0.004)	(0.003)	
USI	-0.0040	0.0002	-0.183+	-0.0056	-0.0016[a]	0.226+
	(0.025)	(0.015)		(0.020)	(0.012)	
UXTI	0.0003	-0.0002	0.191+	-0.0005	-0.0001	-0.156
	(0.010)	(0.008)		(0.036)	(0.005)	

NOTES

a(b)--denotes that difference in cell means is significant at $p<0.05$ ($p<0.01$), using a one-tailed paired samples t-test.

c(d)--denotes that the median of the population of differences is not zero at $p<0.05$ ($p<0.01$), using a one-tailed Wilcoxon matched-pairs signed-ranks test.

+--denotes that Pearson correlation is signficantly different from zero at $p<0.05$.

Table 3-9. Change in Financial Ratios: Fiscal Year Ending 9 to 21 months after Turnover vs. Fiscal Year Prior to Turnover (Age/Origin Dichotomy)

Cell Means (Standard Deviations) and Inter-Cell Correlations

	Routine Turnover			Non-routine Turnover		
	Change	Control	Pearson r	Change	Control	Pearson r
UINC	0.0016	0.0006	0.133+	-0.0038	0.0012	0.135
	(0.042)	(0.037)		(0.040)	(0.031)	
UINCBX	0.0015	0.0025	0.177+	-0.0067	0.0016[ac]	0.185+
	(0.040)	(0.032)		(0.034)	(0.028)	
UREC	0.0265	0.0348	0.156+	0.0142	0.0234	0.219+
	(0.041)	(0.107)		(0.050)	(0.046)	
URCD	0.0051	0.0052	0.125	0.0028	-0.0007	0.030
	(0.016)	(0.017)		(0.014)	(0.023)	
UINV	0.0228	0.0346	0.022	0.0102	0.0303[a]	0.321+
	(0.048)	(0.118)		(0.060)	(0.085)	
UITP	0.0046	0.0063	-0.010	0.0020	0.0000	0.234+
	(0.023)	(0.019)		(0.013)	(0.018)	
UAP	0.0182	0.0224	0.111	0.0063	0.0199	0.177
	(0.032)	(0.058)		(0.042)	(0.039)	
UDEP	0.0089	0.0074[c]	0.157+	0.0070	0.0073	0.167+
	(0.013)	(0.010)		(0.011)	(0.009)	
UDTX	0.0043	0.0038	0.212+	0.0055	0.0072	0.118
	(0.022)	(0.020)		(0.027)	(0.023)	
UADV	0.0046	0.0042	0.343+	0.0031	0.0047	-0.003
	(0.009)	(0.010)		(0.008)	(0.011)	
URD	0.0046	0.0057	0.242+	0.0039	0.0025	0.308+
	(0.006)	(0.009)		(0.006)	(0.004)	
USI	-0.0041	0.0007[a]	-0.246+	-0.0021	-0.0017	0.109
	(0.024)	(0.007)		(0.012)	(0.018)	
UXTI	-0.0001	0.0002	-0.025	0.0013	0.0005	-0.143
	(0.006)	(0.006)		(0.010)	(0.008)	

NOTES

a(b)--denotes that difference in cell means is significant at $p<0.05$ ($p<0.01$), using a one-tailed paired samples t-test.

c(d)--denotes that the median of the population of differences is not zero at $p<0.05$ ($p<0.01$), using a one-tailed Wilcoxon matched-pairs signed-ranks test.

+--denotes that Pearson correlation is significantly different from zero at $p<0.05$.

Table 3-10. Change in Financial Ratios: Fiscal Year of Turnover vs. Fiscal Year Prior to Turnover (Tenure Dichotomy)

Cell Means (Standard Deviations) and Inter-Cell Correlations

	Normal Tenure Turnover			Long Tenure Turnover		
	Change	Control	Pearson r	Change	Control	Pearson r
UINC	-0.0005	0.0013[d]	0.118+	-0.0075	-0.0064	-0.194
	(0.038)	(0.032)		(0.056)	(0.034)	
UINCBX	-0.0028	0.0031[bd]	0.205+	-0.0009	-0.0049	-0.059
	(0.033)	(0.022)		(0.032)	(0.031)	
UREC	0.0118	0.0222	0.141+	0.0158	0.0144	0.354+
	(0.034)	(0.091)		(0.038)	(0.051)	
URCD	0.0017	0.0020	0.054	0.0040	0.0018	0.146
	(0.007)	(0.013)		(0.016)	(0.017)	
UINV	0.0130	0.0223	0.081	0.0097	0.0193	0.348+
	(0.043)	(0.103)		(0.048)	(0.057)	
UITP	0.0025	0.0028	0.067	0.0016	0.0051	0.140
	(0.021)	(0.019)		(0.013)	(0.016)	
UAP	0.0110	0.0157	0.096	0.0037	0.0099	0.260
	(0.027)	(0.043)		(0.040)	(0.039)	
UDEP	0.0045	0.0045	0.072	0.0050	0.0065	0.378+
	(0.008)	(0.006)		(0.007)	(0.010)	
UDTX	0.0020	0.0031	0.179+	0.0012	-0.0032	0.270+
	(0.016)	(0.016)		(0.024)	(0.019)	
UADV	0.0028	0.0030	0.251+	0.0025	0.0019	0.105
	(0.005)	(0.009)		(0.005)	(0.005)	
URD	0.0028	0.0027	0.225+	0.0025	0.0047	0.048
	(0.004)	(0.005)		(0.005)	(0.009)	
USI	-0.0041	-0.0004[a]	0.103	-0.0068	-0.0008	-0.742+
	(0.023)	(0.013)		(0.026)	(0.015)	
UXTI	0.0015	-0.0001	0.022	-0.0071	0.0000	-0.026
	(0.018)	(0.005)		(0.040)	(0.013)	

NOTES

a(b)--denotes that difference in cell means is significant at $p<0.05$ ($p<0.01$), using a one-tailed paired samples t-test.

c(d)--denotes that the median of the population of differences is not zero at $p<0.05$ ($p<0.01$), using a one-tailed Wilcoxon matched-pairs signed-ranks test.

+--denotes that correlation is signficantly different from zero at $p<0.05$.

Table 3-11. Change in Financial Ratios: Fiscal Year Ending 9 to 21 months after Turnover vs. Fiscal Year Prior to Turnover (Tenure Dichotomy)

Cell Means (Standard Deviations) and Inter-Cell Correlations

	Normal Tenure Turnover			Long Tenure Turnover		
	Change	Control	Pearson r	Change	Control	Pearson r
UINC	-0.0017	0.0021[d]	0.182+	0.0051	-0.0049	-0.104
	(0.042)	(0.035)		(0.035)	(0.035)	
UINCBX	-0.0032	0.0034[ad]	0.242+	0.0050	-0.0037	-0.096
	(0.039)	(0.030)		(0.032)	(0.032)	
UREC	0.0218	0.0327	0.144+	0.0220	0.0199	0.342+
	(0.042)	(0.095)		(0.058)	(0.052)	
URCD	0.0034	0.0024	-0.056	0.0073	0.0052	0.246
	(0.010)	(0.018)		(0.028)	(0.025)	
UINV	0.0195	0.0353[ac]	0.119+	0.0114	0.0225	0.183
	(0.050)	(0.114)		(0.068)	(0.063)	
UITP	0.0035	0.0042	0.057	0.0041	0.0029	0.050
	(0.021)	(0.019)		(0.013)	(0.017)	
UAP	0.0146	0.0224	0.209+	0.0102	0.0172	-0.091
	(0.033)	(0.051)		(0.052)	(0.054)	
UDEP	0.0080	0.0071	0.121+	0.0090	0.0086	0.350+
	(0.012)	(0.009)		(0.010)	(0.012)	
UDTX	0.0051	0.0062	0.126+	0.0035	0.0004	0.351+
	(0.025)	(0.020)		(0.021)	(0.024)	
UADV	0.0038	0.0045	0.237+	0.0049	0.0038	0.119
	(0.008)	(0.011)		(0.012)	(0.006)	
URD	0.0045	0.0041	0.302+	0.0032	0.0065	0.127
	(0.006)	(0.007)		(0.006)	(0.010)	
USI	-0.0026	-0.0006	-0.014	-0.0068	0.0017	-0.541+
	(0.021)	(0.013)		(0.016)	(0.010)	
UXTI	0.0006	0.0004	-0.082	-0.0003	0.0003	-0.154
	(0.008)	(0.006)		(0.007)	(0.008)	

NOTES

a(b)--denotes that difference in cell means is significant at $p<0.05$ ($p<0.01$), using a one-tailed paired samples t-test.

c(d)--denotes that the median of the population of differences is not zero at $p<0.05$ ($p<0.01$), using a one-tailed Wilcoxon matched-pairs signed-ranks test.

+--denotes that correlation is signficantly different from zero at $p<0.05$.

Table 3-12. Ordinary Least Squares Regression Results: Change in Financial Ratios (Fiscal Year Of Turnover vs. Fiscal Year Prior to Turnover) for Non-routine (Age/Origin) Turnover and Control Firms

$$Y = \beta_0 + \beta_1 CH + \beta_2 ROA + \beta_3 LRET + \beta_4 LAST + \epsilon$$

Dependent Variable	Regression Coefficients (t-statistics)					Adj. R^2
	INT	CH	ROA	LRET	LAST	
INC	0.002	-0.004	-0.271	0.066	0.001	0.12+
	(0.89)	(-1.19)	(-4.40)*	(3.91)*	(0.33)	
INCBX	0.003	-0.007	-0.178	0.041	0.000	0.19+
	(2.44)*	(-3.28)*	(-5.04)*	(4.26)*	(-0.04)	
REC	0.001	-0.002	0.063	0.037	-0.006	0.14+
	(0.50)	(-0.63)	(1.03)	(2.21)*	(-2.70)*	
RCD#	0.000	0.000	-0.009	0.022	0.001	0.02
	(0.00)	(0.00)	(-0.28)	(2.39)*	(0.94)	
INV	0.002	-0.004	0.238	0.042	-0.001	0.12+
	(0.74)	(-0.94)	(3.07)*	(1.98)*	(-0.49)	
ITP	0.000	-0.001	-0.023	-0.009	-0.001	0.00
	(0.26)	(-0.32)	(-0.83)	(-1.26)	(-1.36)	
AP	0.002	-0.004	0.018	0.011	-0.005	0.08+
	(0.99)	(-1.24)	(0.37)	(0.82)	(-2.50)*	
DEP	0.000	-0.001	0.019	0.013	0.000	0.09+
	(0.74)	(-1.00)	(1.50)	(3.77)*	(0.12)	
DTX	0.001	-0.003	-0.013	0.007	0.000	0.01
	(1.30)	(-1.72)	(-0.47)	(0.96)	(-0.16)	
ADV	0.000	0.000	0.005	-0.004	0.000	0.00
	(0.23)	(-0.27)	(0.30)	(-0.85)	(-0.10)	
RD	-0.001	0.001	0.001	-0.002	0.000	0.06
	(-1.86)*	(2.15)*	(0.08)	(-1.03)	(0.31)	
SI	0.002	-0.004	0.029	-0.003	0.000	0.02
	(1.77)*	(-2.19)*	(0.91)	(-0.34)	(0.15)	
XTI	-0.001	0.001	-0.122	0.035	0.000	0.04+
	(-0.30)	(0.40)	(-2.69)*	(2.82)*	(0.01)	

NOTES
*--denotes that t-statistic is significant at $p<0.05$ (one-tailed test).
+--denotes that regression F-statistic is significant at $p<0.05$.
#--denotes that this regression was estimated after deleting two outliers.

Table 3-13. Ordinary Least Squares Regression Results: Change in Financial Ratios (Fiscal Year Ending 9 to 21 Months After Turnover vs. Fiscal Year Prior to Turnover) for Non-routine (Age/Origin) Turnover and Control Firms

$$Y = \beta_0 + \beta_1 CH + \beta_2 ROA + \beta_3 LRET + \beta_4 LAST + \epsilon$$

Dependent Variable	Regression Coefficients (t-statistics)					Adj. R^2
	INT	CH	ROA	LRET	LAST	
INC	0.000	0.001	-0.212	0.041	-0.007	0.10+
	(-0.19)	(0.26)	(-3.74)*	(2.65)*	(-3.03)*	
INCBX	0.001	-0.002	-0.182	0.045	-0.006	0.16+
	(0.67)	(-0.90)	(-3.89)*	(3.52)*	(-3.27)*	
REC	0.001	-0.002	-0.033	0.086	-0.004	0.11+
	(0.29)	(-0.37)	(-0.39)	(3.69)*	(-1.10)	
RCD	-0.003	0.006	-0.039	0.041	-0.001	0.08+
	(-1.86)*	(2.17)*	(-0.79)	(3.03)*	(-0.44)	
INV	0.007	-0.015	0.236	0.028	-0.004	0.07+
	(1.59)	(-2.00)*	(1.85)*	(0.80)	(-0.75)	
ITP	-0.001	0.003	-0.050	-0.006	-0.002	0.02
	(-1.31)	(1.64)	(-1.75)*	(-0.81)	(-1.95)*	
AP	0.005	-0.010	-0.057	0.045	-0.003	0.08+
	(1.68)*	(-2.11)	(-0.74)	(2.14)*	(-0.84)	
DEP	0.000	0.000	0.032	0.013	0.001	0.05+
	(0.00)	(0.00)	(2.03)*	(3.09)*	(1.54)	
DTX	0.000	0.001	-0.055	0.025	-0.002	0.02
	(-0.28)	(0.38)	(-1.30)	(2.15)*	(-1.24)	
ADV	0.001	-0.002	0.026	-0.005	0.001	0.00
	(1.33)	(-1.58)	(1.04)	(-0.75)	(0.74)	
RD	-0.001	0.001	0.002	-0.003	0.000	0.01
	(-1.32)	(1.53)	(0.12)	(-0.80)	(0.34)	
SI	-0.001	0.002	-0.013	0.010	-0.003	0.04
	(-0.94)	(1.15)	(-0.41)	(1.19)	(-2.41)*	
XTI	-0.001	0.002	-0.059	0.006	-0.002	0.06+
	(-1.44)	(1.94)	(-3.47)*	(1.34)	(-2.37)*	

NOTES
*--denotes that t-statistic is significant at $p<0.05$ (one-tailed test).
+--denotes that regression F-statistic is significant at $p<0.05$.

Table 3-14. Ordinary Least Squares Regression Results: Change in Financial Ratios (Fiscal Year of Turnover vs. Fiscal Year Prior to Turnover) for Routine Turnover and Control Firms

$$Y = \beta_0 + \beta_1 CH + \beta_2 ROA + \beta_3 LRET + \beta_4 LAST + \epsilon$$

Dependent Variable	Regression Coefficients (t-statistics)					Adj. R^2
	INT	CH	ROA	LRET	LAST	
INC	-0.001	0.002	-0.277	0.031	0.001	0.06+
	(-0.62)	(0.83)	(-4.91)*	(1.76)*	(0.77)	
INCBX	0.000	0.001	-0.334	0.018	0.000	0.14+
	(-0.27)	(0.35)	(-7.61)*	(1.28)	(-0.14)	
REC	-0.001	0.002	0.168	-0.080	-0.016	0.07+
	(-0.18)	(0.23)	(1.30)	(-2.00)*	(-4.25)*	
RCD	0.001	-0.001	-0.004	0.004	0.000	0.00
	(1.20)	(-1.42)	(-0.28)	(0.81)	(-0.50)	
INV	0.000	0.000	0.255	-0.061	-0.016	0.05+
	(0.04)	(-0.04)	(1.70)*	(-1.30)	(-3.64)*	
ITP	0.000	-0.001	0.005	-0.002	-0.001	0.00
	(0.21)	(-0.27)	(0.12)	(-0.19)	(-0.49)	
AP	0.000	0.000	0.110	-0.026	-0.006	0.04+
	(-0.02)	(0.04)	(1.58)	(-1.22)	(-3.10)*	
DEP	0.000	0.000	0.031	-0.003	0.000	0.02+
	(-0.25)	(0.33)	(3.09)*	(-0.87)	(0.90)	
DTX	-0.002	0.003	-0.047	0.001	-0.002	0.02
	(-1.77)*	(2.34)*	(-1.77)*	(0.06)	(-1.95)*	
ADV	0.000	0.000	0.018	-0.003	0.000	0.00
	(0.28)	(-0.34)	(1.31)	(-0.68)	(0.30)	
RD	0.001	-0.002	0.050	0.000	0.001	0.17+
	(3.09*)	(-3.58)	(4.19)*	(-0.06)	(3.59)*	
SI	0.002	-0.004	0.081	-0.003	0.001	0.02
	(1.44)	(-1.81)	(1.91)*	(-0.19)	(-0.72)	
XTI	0.000	0.001	-0.031	0.003	0.000	0.01
	(-0.96)	(1.29)	(-2.45)*	(0.83)	(-0.70)	

NOTES
*--denotes that t-statistic is significant at $p<0.05$ (one-tailed test).
+--denotes that regression F-statistic is significant at $p<0.05$.

Table 3-15. Ordinary Least Squares Regression Results: Change in Financial Ratios (Fiscal Year Ending 9 to 21 Months After Turnover vs. Fiscal Year Prior to Turnover) for Routine Turnover (Age/Origin) and Control Firms

$$Y = \beta_0 + \beta_1 CH + \beta_2 ROA + \beta_3 LRET + \beta_4 LAST + \epsilon$$

Dependent Variable	Regression Coefficients (t-statistics)					Adj. R^2
	INT	CH	ROA	LRET	LAST	
INC	-0.001	0.002	-0.406	0.041	0.002	0.14+
	(-0.61)	(0.82)	(-7.47)*	(2.41)*	(1.07)	
INCBX	-0.001	0.001	-0.464	0.021	0.000	0.22+
	(-0.42)	(0.55)	(-9.98)*	(1.45)	(0.28)	
REC	-0.001	0.002	0.276	-0.088	-0.019	0.09+
	(-0.26)	(0.34)	(2.08)*	(-2.13)*	(-4.77)*	
RCD	0.000	0.000	-0.019	0.016	0.000	0.00
	(0.00)	(0.00)	(-0.50)	(1.42)	(0.29)	
INV	0.000	0.000	0.326	-0.041	-0.020	0.08+
	(0.00)	(0.01)	(2.11)*	(-0.84)	(-4.36)*	
ITP	0.000	-0.001	0.035	-0.006	-0.001	0.00
	(0.36)	(-0.46)	(0.89)	(-0.53)	(-1.27)	
AP	0.000	-0.001	0.195	-0.027	-0.007	0.05+
	(0.10)	(-0.12)	(2.47)*	(-1.09)	(-3.05)*	
DEP	0.000	0.001	0.059	-0.005	0.000	0.03+
	(-0.83)	(1.12)	(3.50)*	(-0.95)	(0.43)	
DTX	-0.001	0.002	-0.046	-0.006	-0.002	0.00
	(-0.83)	(1.10)	(-1.49)	(-0.59)	(-1.65)*	
ADV	0.000	0.000	0.037	-0.006	0.000	0.01
	(0.01)	(-0.01)	(2.10)	(-1.15)	(0.31)*	
RD	0.001	-0.002	0.053	-0.002	0.001	0.11+
	(2.49)*	(-2.88)	(3.41)*	(-0.38)	(3.05)*	
SI	0.003	-0.005	0.001	-0.001	0.001	0.02
	(2.18)*	(-2.72)	(0.04)	(-0.11)	(0.63)	
XTI	0.000	0.000	-0.032	0.010	0.000	0.05+
	(-0.34)	(0.45)	(-3.36)*	(3.31)*	(-1.36)	

NOTES
*--denotes that t-statistic is significant at $p<0.05$ (one-tailed test).
+--denotes that regression F-statistic is significant at $p<0.05$.

Table 3-16. Ordinary Least Squares Regression Results: Change in Financial Ratios (Fiscal Year of Turnover vs. Fiscal Year Prior to Turnover) for Long Tenure Turnover and Control Firms

$$Y = \beta_0 + \beta_1 CH + \beta_2 ROA + \beta_3 LRET + \beta_4 LAST + \epsilon$$

Dependent Variable	Regression Coefficients (t-statistics)					Adj. R^2
	INT	CH	ROA	LRET	LAST	
INC	-0.003	0.007	-0.456	0.167	0.003	0.24+
	(-0.76)	(1.03)	(-4.[illegible])*	(4.64)*	(0.83)	
INCBX	-0.004	0.008	-0.323	0.078	0.001	0.22+
	(-1.32)	(1.80)	(-5.00)*	(3.31)*	(0.40)	
REC	-0.005	0.011	0.317	0.123	-0.003	0.49+
	(-1.81)*	(2.35)	(4.70)*	(5.03)*	(-1.22)	
RCD	-0.001	0.002	0.071	-0.001	0.001	0.00
	(-0.47)	(0.58)	(1.48)	(-0.04)	(0.62)	
INV	-0.001	0.001	0.230	0.153	-0.004	0.37+
	(-0.18)	(0.24)	(2.62)*	(4.82)*	(-1.06)	
ITP	0.001	-0.002	0.005	0.037	0.002	0.12+
	(0.77)	(-0.99)	(0.14)	(3.10)*	(1.86)*	
AP	0.002	-0.003	0.238	0.055	0.002	0.15+
	(0.47)	(-0.60)	(2.94)*	(1.86)*	(0.53)	
DEP	0.001	-0.001	0.064	0.011	0.001	0.23+
	(0.88)	(-1.20)	(4.53)*	(2.06)*	(1.62)	
DTX	-0.002	0.005	-0.055	-0.003	-0.001	0.01
	(-1.22)	(1.65)	(-1.29)	(-0.18)	(-0.84)	
ADV	-0.001	0.001	0.036	0.012	0.000	0.20+
	(-1.16)	(1.38)	(2.37)*	(2.14)*	(-0.02)	
RD	0.001	-0.002	0.078	0.012	0.002	0.34+
	(1.24)	(-1.40)	(3.60)*	(1.48)	(1.93)*	
SI	0.003	-0.006	0.094	-0.007	-0.001	0.00
	(0.92)	(-1.15)	(1.24)	(-0.25)	(-0.41)	
XTI	0.001	-0.002	-0.148	0.097	0.002	0.17+
	(0.40)	(-0.55)	(-2.37)*	(4.29)*	(0.73)	

NOTES
*--denotes that t-statistic is significant at $p<0.05$ (one-tailed test).
+--denotes that regression F-statistic is significant at $p<0.05$.

Table 3-17. Ordinary Least Squares Regression Results: Change in Financial Ratios (Fiscal Year Ending 9 to 21 Months after Turnover vs. Fiscal Year Prior to Turnover) for Long Tenure Turnover and Control Firms

$$Y = \beta_0 + \beta_1 CH + \beta_2 ROA + \beta_3 LRET + \beta_4 LAST + \epsilon$$

Dependent Variable	Regression Coefficients (t-statistics)					Adj. R^2
	INT	CH	ROA	LRET	LAST	
INC	-0.007	0.014	-0.378	0.078	0.000	0.23+
	(-2.06)*	(2.81)*	(-5.04)*	(2.87)*	(0.03)	
INCBX	-0.006	0.012	-0.326	0.063	-0.001	0.20+
	(-1.95)*	(2.66)*	(-4.70)*	(2.52)*	(-0.31)	
REC	-0.007	0.013	0.158	0.148	-0.005	0.28+
	(-1.57)	(2.01)*	(1.58)	(4.09)*	(-1.40)	
RCD	-0.001	0.002	0.023	0.010	0.002	0.00
	(-0.34)	(0.42)	(0.31)	(0.38)	(0.64)	
INV	-0.001	0.002	0.206	0.164	-0.009	0.23+
	(-0.21)	(0.27)	(1.55)	(3.38)*	(-1.65)	
ITP	-0.001	0.003	-0.003	0.045	0.002	0.11+
	(-0.94)	(1.21)	(-0.07)	(3.38)*	(1.75)*	
AP	0.000	0.000	0.180	0.141	0.004	0.11+
	(-0.03)	(0.04)	(1.35)	(2.91)*	(0.68)	
DEP	0.000	0.000	0.085	0.008	0.002	0.22+
	(-0.13)	(0.18)	(4.77)*	(1.31)	(2.73)*	
DTX	-0.002	0.003	-0.061	-0.001	0.000	0.00
	(-0.82)	(1.10)	(-1.41)	(-0.07)	(-0.19)	
ADV	-0.001	0.002	0.077	0.012	0.000	0.16+
	(-0.85)	(1.00)	(2.77)*	(1.17)	(0.05)	
RD	0.002	-0.003	0.074	0.010	0.002	0.22+
	(1.52)	(-1.72)	(2.56)*	(0.95)	(1.39)	
SI	0.004	-0.008	0.025	-0.007	-0.001	0.08
	(2.13)*	(-2.66)*	(0.51)	(-0.39)	(-0.72)	
XTI	0.000	0.000	-0.057	0.022	0.001	0.14+
	(-0.26)	(0.35)	(-3.33)*	(3.63)*	(0.75)	

NOTES
*--denotes that t-statistic is significant at $p<0.05$ (one-tailed test).
+--denotes that regression F-statistic is significant at $p<0.05$.

Table 3-18. Ordinary Least Squares Regression Results: Change in Financial Ratios (Fiscal Year of Turnover vs. Fiscal Year Prior to Turnover) for Normal Tenure Turnover and Control Firms

$$Y = \beta_0 + \beta_1 CH + \beta_2 ROA + \beta_3 LRET + \beta_4 LAST + \epsilon$$

Dependent Variable	Regression Coefficients (t-statistics)					Adj. R^2
	INT	CH	ROA	LRET	LAST	
INC	0.001	-0.001	-0.201	0.027	0.001	0.04+
	(0.42)	(-0.56)	(-4.52)*	(2.16)*	(0.59)	
INCBX	0.002	-0.005	-0.238	0.025	0.000	0.12+
	(1.97)*	(-2.65)*	(-7.13)*	(2.67)*	(-0.16)	
REC	0.000	0.000	0.020	-0.053	-0.015	0.07+
	(0.07)	(-0.09)	(0.20)	(-1.91)*	(-4.82)*	
RCD	0.000	0.001	-0.051	0.028	-0.001	0.12+
	(-0.73)	(0.85)	(-2.57)*	(5.10)*	(-1.03)	
INV	0.000	-0.001	0.211	-0.054	-0.014	0.05+
	(0.10)	(-0.13)	(1.78)*	(-1.64)	(-3.69)*	
ITP	0.000	0.001	-0.009	-0.016	-0.002	0.01
	(-0.28)	(0.36)	(-0.30)	(-1.87)*	(-1.72)*	
AP	0.000	0.001	0.002	-0.020	-0.008	0.06+
	(-0.14)	(0.18)	(0.04)	(-1.36)	(-4.57)*	
DEP	0.000	0.000	0.011	0.005	0.000	0.01
	(-0.11)	(0.14)	(1.20)	(1.98)*	(0.11)	
DTX	0.000	0.000	-0.016	0.007	-0.001	0.00
	(0.25)	(-0.33)	(-0.75)	(1.12)	(-1.18)	
ADV	0.000	0.000	0.005	-0.006	0.000	0.00
	(0.55)	(-0.65)	(0.38)	(-1.75)*	(0.32)	
RD	0.000	-0.001	0.011	-0.003	0.001	0.04+
	(0.99)	(-1.15)	(1.33)	(-1.40)	(2.86)*	
SI	0.002	-0.004	0.043	-0.003	0.000	0.02
	(1.83)*	(-2.27)*	(1.43)	(-0.35)	(-0.44)	
XTI	-0.001	0.002	-0.050	0.001	-0.001	0.02+
	(-1.84)*	(2.47)	(-2.79)*	(0.26)	(-1.35)	

NOTES
*--denotes that t-statistic is significant at $p<0.05$ (one-tailed test).
+--denotes that regression F-statistic is significant at $p<0.05$.

Table 3-19. Ordinary Least Squares Regression Results: Change in Financial Ratios (Fiscal Year Ending 9 to 21 Months after Turnover vs. Fiscal Year Prior to Turnover) for Normal Tenure Turnover and Control Firms

$$Y = \beta_0 + \beta_1 CH + \beta_2 ROA + \beta_3 LRET + \beta_4 LAST + \epsilon$$

Dependent Variable	Regression Coefficients (t-statistics)					Adj. R^2
	INT	CH	ROA	LRET	LAST	
INC	0.001	-0.002	-0.274	0.042	-0.001	0.07+
	(0.46)	(-0.62)	(-5.87)*	(3.24)*	(-0.66)	
INCBX	0.002	-0.004	-0.323	0.036	-0.002	0.14+
	(1.36)	(-1.82)*	(-8.19)*	(3.34)*	(-1.35)	
REC	0.000	0.000	0.098	-0.037	-0.016	0.06+
	(0.07)	(-0.08)	(0.91)	(-1.24)	(-4.60)*	
RCD	-0.001	0.002	-0.002	0.033	-0.001	0.07+
	(-1.32)	(1.54)	(-1.69)*	(3.91)*	(-0.72)	
INV	0.003	-0.005	0.279	-0.049	-0.016	0.07+
	(0.63)	(-0.79)	(2.15)*	(-1.36)	(-3.99)*	
ITP	0.000	0.001	-0.001	-0.019	-0.003	0.02+
	(-0.37)	(0.47)	(-0.04)	(-2.17)*	(-2.63)*	
AP	0.001	-0.003	0.038	-0.018	-0.008	0.05+
	(0.70)	(-0.89)	(0.63)	(-1.06)	(-3.93)*	
DEP	0.000	0.001	0.031	0.004	0.000	0.01
	(-0.80)	(1.08)	(2.17)*	(1.08)	(0.32)	
DTX	0.000	0.001	-0.041	0.014	-0.002	0.01
	(-0.33)	(0.44)	(-1.34)	(1.62)	(-1.98)*	
ADV	0.001	-0.001	0.017	-0.008	0.001	0.01
	(1.24)	(-1.48)	(1.05)	(-1.74)*	(0.98)	
RD	0.000	0.000	0.015	-0.005	0.001	0.03+
	(0.43)	(-0.49)	(1.30)	(-1.46)	(2.34)*	
SI	0.001	-0.001	-0.012	0.005	-0.001	0.00
	(0.74)	(-0.91)	(-0.39)	(0.55)	(-0.56)	
XTI	-0.001	0.001	-0.037	0.005	-0.001	0.04+
	(-1.73)*	(2.33)	(-3.61)*	(1.60)	(-3.28)*	

NOTES
*--denotes that t-statistic is significant at $p<0.05$ (one-tailed test).
+--denotes that regression F-statistic is significant at $p<0.05$.

Table 3-20. Ordinary Least Squares Regression Results: Change in Financial Ratios (Fiscal Year of Turnover vs. Fiscal Year Prior to Turnover) for Non-Routine Turnover and Control Firms - Discontinued Operations Firms Deleted

$$Y = \beta_0 + \beta_1 CH + \beta_2 ROA + \beta_3 LRET + \beta_4 LAST + \epsilon$$

Dependent Variable	Regression Coefficients (t-statistics)					Adj. R^2
	INT	CH	ROA	LRET	LAST	
INC	0.002	-0.004	-0.078	0.014	-0.003	0.06+
	(1.22)	(-1.65)	(-1.81)*	(1.21)	(-1.97)*	
INCBX	0.003	-0.006	-0.099	0.020	-0.002	0.11+
	(1.96)*	(-2.66)*	(-2.46)*	(1.91)*	(-1.50)	
REC	0.000	0.000	0.031	0.038	-0.007	0.09+
	(-0.03)	(0.04)	(0.38)	(1.83)*	(-2.29)*	
RCD	-0.004	0.008	-0.116	0.066	0.000	0.39+
	(-2.90)*	(3.32)*	(-2.70)*	(5.88)*	(-0.02)	
INV	0.002	-0.003	0.297	0.025	-0.004	0.14+
	(0.53)	(-0.67)	(3.32)*	(1.07)	(-1.20)	
ITP	0.000	0.000	-0.026	-0.003	-0.001	0.00
	(-0.01)	(0.01)	(-0.67)	(-0.26)	(-1.02)	
AP	0.001	-0.001	0.029	-0.015	-0.006	0.05+
	(0.37)	(-0.46)	(0.53)	(-1.05)	(-2.69)*	
DEP	0.000	-0.001	-0.005	0.016	0.001	0.11+
	(0.85)	(-1.15)	(-0.36)	(4.72)*	(1.17)	
DTX	0.001	-0.002	-0.006	0.007	0.000	0.00
	(0.94)	(-1.27)	(-0.17)	(0.84)	(-0.15)	
ADV	0.000	0.000	-0.009	-0.006	0.000	0.00
	(0.27)	(-0.31)	(-0.43)	(-1.06)	(0.22)	
RD	-0.001	0.001	-0.006	-0.004	0.000	0.09+
	(-1.80)*	(2.08)*	(-0.56)	(-1.50)	(0.16)	
SI#	0.000	-0.001	-0.039	0.006	0.001	0.04
	(0.65)	(-0.80)	(-2.23)*	(1.22)	(1.22)	
XTI	0.000	0.001	-0.003	0.003	0.000	0.00
	(-1.21)	(1.64)	(-0.32)	(1.29)	(-0.32)	

NOTES
*--denotes that t-statistic is significant at $p<0.05$ (one-tailed).
+--denotes that regression F-statistic is significant at $p<0.05$.
#--denotes that this regression was estimated after deleting two outliers.

Table 3-21. Features of Sample Firm Financial Statements Following Non-Routine Turnover (N=106 firms)

	Item	Frequency
1.	No mention of change in CEO or firm objectives	35
2.	Turnover portrayed as normal	7
3.	Organizational restructuring/repositioning	
	-only discussed in letter to shareholders	10
	-discussed; and actual or estimated costs charged on income statement	7
4.	Discontinued operations	
	-gain on disposal	8
	-loss on disposal	16
5.	Asset write-downs	9
6.	Accounting policy changes	
	-income decreasing	6
	-income increasing	5
7.	Provision for future losses (other than discontinued operations, restructuring costs or asset write-downs)	4
8.	Project cancellations	2
9.	Specifically mentioned increased expenses	
	-research and development	1
	-advertising	1

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CHAPTER 4. ACCOUNTING EARNINGS AND STOCK MARKET RETURNS

The empirical tests reported in Chapter 3 showed evidence of unusual accounting decisions on the part of incoming, non-routine turnover chief executive officers (CEOs) in the fiscal year that he/she is appointed to the position. The results obtained are consistent with the idea of a new leader attempting to revitalize an organization and using financial statements as a vehicle for persuading organizational constituents to accept the new leadership and the planned changes. This view suggests that a decrease in accounting income following a non-routine turnover might be associated with needed changes in the organization, and might therefore be favourably received by (in particular) equity investors. This chapter explicitly examines the relationship between accounting earnings and common stock prices, in two ways.

The first is in the tradition of the earliest modern empirical capital market research in accounting: the association between abnormal stock market returns and unexpected accounting earnings. The hypothesis of interest nere is stated below, in the alternate form:

> Hypothesis 4: The association between earnings reports and abnormal stock market returns is dependent upon the occurrence or non-occurrence of non-routine CEO turnover.

Research by Ball and Brown (1968) and Beaver, Clarke and Wright (1979) has demonstrated a strong relationship between unexpected earnings and abnormal security returns. Positive unexpected earnings are associated with positive abnormal market returns in the (twelve-month, in the case of Ball and Brown) period leading up to the earnings announcement. Conversely, earnings that are lower than expected are associated with lower than normal stock returns. These results seem to be

stronger for large firms than for small firms (Freeman, 1987), although the pattern seems to be consistent across firms in general.

These studies implicitly assumed that unexpected earnings have the same meaning to investors under all circumstances, i. e., that earnings that are lower than expected are bad, while earnings that are higher than expected are good. The results presented here show that decreasing income following non-routine turnover is associated with positive abnormal returns, suggesting that, under certain conditions, "bad news" can be "good news." Put another way, the results presented here are consistent with the notion that equity investors are sophisticated users of financial statements, and do not mechanistically react negatively to decreased earnings.

The chapter is organized as follows. First, the data and analysis are described. Next, the results are presented and discussed. Finally, conclusions are presented.

DATA

Turnover and control firms used in this study are the same as those used in previous chapters, except that the following additional data were required: (1) the date of the Wall Street Journal (WSJ) announcement of annual earnings for the fiscal year of the turnover; and (2) daily returns on common stock from the CRSP data base, beginning 440 trading days before the earliest WSJ announcement date of interest and ending 120 trading days after the latest announcement date. These requirements reduced the number of turnover (control) firms with available data for the fiscal year of turnover to 246 (250) from the original set of 283 turnover and matched control firms.

A further set of analyses used analyst forecasts as an earnings expectation model. For this analysis, Value Line earnings per share forecasts were required, which further reduced the number of turnover (control) firms to 188 (194).

ANALYSIS

Routine vs. Non-Routine Turnover. Turnovers were classified as routine or non-routine based on the age/origin and tenure dichotomies defined in Chapter 2.

Earnings Announcement [illegible] in Chapter 3, it is not clear precisely when the new CEO will [illegible]ve substantial impact on the financial statements. The results [illegible]ented in Chapter 3 indicate that the incoming CEO's impact on the financial statements is immediate. Thus, the analyses performed here centre around the WSJ announcement of annual earnings for the fiscal year of the turnover.

Market Returns. Abnormal returns were computed using the market model, as described in Chapter 3. The market model parameters for each firm were estimated over the 200 trading days starting 440 days before that firm's annual earnings announcement in the WSJ and ending 241 days before the announcement. Similar to the Ball and Brown study, cumulative abnormal returns (CARs) for each firm were computed by adding together the series of abnormal daily returns beginning 240 trading days before the WSJ earnings announcement and ending 120 trading days after.

Good News/Bad News. The earnings announcement in the WSJ was deemed to be good or bad news on the basis of how those earnings compare with some expectations model. Generally, researchers have assumed that lower than expected earnings represent bad news while higher than expected earnings

represent good news. What remained was to decide upon some earnings expectation model.

Two different expectations models are used here. The first is a random walk model, in which current income before extraordinary items and discontinued operations (called operating income from here on) is expected to be exactly the same as last year's (this is the Ball and Brown approach).[19]

The second is the Value Line forecast earnings per share, made for December fiscal-year-end firms at the end of the third quarter of the fiscal year in question (e. g., Value Line published a forecast of General Motors' 1985 earnings per share at the end of September, 1985). Value Line forecasts were only collected for December fiscal-year-end firms so that the three-month forecast horizon is constant across all firms. To ensure that forecast and actual earnings per share are computed in the same way, actual earnings per share results are also collected from Value Line (actual earnings results were available in Valueline in the second quarter following fiscal year end). Non-December fiscal-year-end firms, and firms which were not followed by Value Line, were dropped from this part of the analysis.

Statistical Analysis. Firms were divided into portfolios on the basis of their turnover type and the classification of their earnings announcement as good vs. bad news. To test the hypothesis that non-routine turnover firms experience a different pattern of abnormal stock returns from other

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[19]All of these analyses were performed using a random walk expectations model, and using (1) net income and (2) primary earnings per share as the earnings variable. The results obtained were essentially the same as those obtained using operating income as the earnings variable, so only the operating income results are reported here.

firms, the following regression model was estimated:

$$CAR_i = \beta_0 + \beta_1 NEWS + \beta_2 CH + \beta_3 CH \times NEWS \quad (4.1)$$

where, NEWS = 0 if actual earnings meet or exceed expectation (good news)

= 1 if actual earnings are less than expectation (bad news)

CH = 0 if firm is a control firm

= 1 if firm is a turnover firm

CAR_i = cumulative abnormal return cumulated over some period varying from 1 to 360 trading days, but always starting 240 days before the WSJ announcement; i ranges from 1 up to 19, and reflects the 19 different cumulation periods used.

This analysis breaks the firms down into four groups and estimates the mean cumulative abnormal return for each group. The mean CAR for the good news/control firms is β_0; for good news/turnover firms, $\beta_0 + \beta_2$; for bad news/control firms, $\beta_0 + \beta_1$; and for bad news/turnover firms, $\beta_0 + \beta_1 + \beta_2 + \beta_3$.

The results of this estimation are presented for (1) the sample of non-routine turnover firms and their control firms, (2) the sample of routine turnover firms and their control firms, (3) the sample of long tenure turnover firms and their control firms, and (4) the sample of normal tenure turnover firms and their control firms; for both expectation models. The hypothesis of interest in this chapter is that non-routine turnover firms experience a different pattern of stock returns around the earnings announcement. Specifically, the coefficient β_3 is expected to be significantly positive for the sample of non-routine turnover and control firms (bad news for any other firm is considered good news for a non-routine turnover firm); and is expected to be zero for the sample of

routine turnover and control firms.

For both sets of firms, β_0 (the mean CAR for good news control firms) is expected to be positive; β_1 (the difference between mean CAR for good news and bad news control firms) is expected to be negative; and the expected sign of β_2 is to be determined by the analysis.

RESULTS

Good News/Bad News and Market Returns. The results of this section of the chapter are presented in two large bodies. The first relates the results pertaining to the relationship between earnings and stock performance for turnover and control firms broken down by the age/origin dichotomy. The second reports results concerned with turnover and control firms broken down by the tenure dichotomy.

Descriptive statistics for CARS of varying duration computed around the announcement of earnings for the fiscal year of turnover are reproduced in Tables 4-1 to 4-5, and plotted in Figures 4-1 to 4-5. All non-routine turnover and control firm CARs are included in Table/Figure 4-1, while two outliers (both non-routine turnover firms with large negative abnormal returns) are deleted in Figure/Table 4-2.[20] The expected

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[20]Univariate measures and Cook's D, a regression influence diagnostic, were used to identify potential outliers for all analyses performed here. The two mentioned here were the only ones identified. The first was Charter Co., which underwent what was deemed to be a non-routine turnover in May, 1984. Charter is an oil company, and was caught in the world-wide oil glut of the early 1980's. Shortly before the turnover the company filed for bankruptcy law protection. Losses and writedowns in the year wiped out owners' equity. Interestingly, the outgoing CEO stayed on as Chairman of the Board.

The second outlier was NL Industries, a mining firm deemed to have undergone a non-routine turnover in 1974. In early 1975, the company began phasing out its zinc operations and suspended output of titanium pigment. At the same time, market prices for antimony oxide and lead were dropping. While NL's case was not as dramatic as Charter's, there is still some evidence that the company was facing difficult times in 1975,

pattern of returns emerges very clearly in Figure 4-2. Bad news control firms suffer negative abnormal returns up until the earnings are actually released (t=0), while the mean bad news turnover firm CAR drifts steadily upward throughout the cumulation period. Removing the two outliers serves to increase the mean CAR for this group of firms while substantially decreasing the dispersion of individual cumulated returns within the group.

Equation 4.1 was estimated on the full (reduced) sample of non-routine turnover and control firms. The results are presented on Table 4-6 (4-7). Note that for the full sample, the turnover-by-news interaction never approaches statistical significance; while the interaction is significant throughout most of the cumulation period once the two points are removed.

Table (Figure) 4-3 contains the descriptive statistics (plot) of routine turnover and control firm CARs. While the turnover bad news mean CAR is slightly negative, the mean CAR for control bad news firms increases substantially after the earnings announcement. While the performance of the control bad news firms is contrary to the Ball and Brown result, the regression results (Table 4-8) indicate that there are no statistically significant differences among the groups.

Tables (Figures) 4-4 and 4-5 present the results of grouping the firms using Value Line forecasts as the expectation model for earnings. Non-routine turnover firms behave "correctly" in that good news firms experience positive abnormal returns while bad news firms experience negative returns, while there seems to be no difference between good and

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when the unusually low abnormal returns were detected.

bad news control firms. This interpretation is supported by regression results (Table 4-9) that indicate a positive turnover effect and negative turnover-by-news effect. There is virtually no distinction among the groups for routine turnover and control firms (Figure 4-5, Tables 4-5 and 4-10).

The next portion of the paper presents and discusses the results of the tenure dichotomy analysis.

Table 4-11 and Figure 4-6 present the mean CARs and standard deviations for the long tenure turnover and control firms and ordinary income news. The control bad news and good news firms are virtually indistinguishable from each other in terms of abnormal returns, but the turnover firms behave "properly" in that good news firms earn positive abnormal returns while bad news firms earn negative abnormal returns.[21] The regression results (Table 4-15) confirm a significant negative turnover-by-news interaction, particularly over the four months immediately preceding the earnings announcement date.

Table 4-12 (Figure 4-7) presents the mean CARs and standard deviations (plots the mean CARs) for the normal tenure turnover and control firms. The four portfolios of firms are indistinguishable from each other, an interpretation supported by the regression results reported in Table 4-16.

The last set of results uses Value Line forecasts as the earnings expectation model. Table 4-13 (Figure 4-8) present the mean CARs and standard deviations (plots the mean CARs) for the long tenure turnover and

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[21]Note, however, that this is contrary to hypothesis 4 which suggests that the association between earnings and stock returns for non-routine turnover firms is not "proper."

control firms. The pattern of returns is similar to that of the classic Ball and Brown finding in that good news firms earn positive abnormal returns while bad news firms earn negative abnormal returns. This pattern really only holds, however, for the turnover firms. The regression results (Table 4-17) indicate a positive turnover effect (good news turnover firms) and a negative turnover-by-news effect (bad news turnover firms).

Finally, the results for normal tenure turnover and control firms, using Value Line forecasts as the expectation model, are presented in Table 4-14 and plotted in Figure 4-9. As with the random walk expectation model, the four portfolios of firms are not well distinguished from each other in terms of abnormal returns, with the exception of bad news turnover firms that earn negative returns in the latter part of the event window. This is supported by a negative news by turnover interaction in the regression results (Table 4-18).

DISCUSSION AND CONCLUSIONS

Focussing strictly on the statistically significant results, it is clear that there is strong support here for the hypothesis advanced at the start of this chapter, at least in terms of the age/origin non-routine dichotomy of turnovers. A statistically significant news by turnover interaction, in the direction predicted, was detected for non-routine turnover firms around the date of announcement of earnings for the fiscal year of the turnover. This interaction was only significant for the sample of non-routine and control firms, and suggests that the market takes a sophisticated view of earnings reports.

As in previous chapters, results concerning the tenure turnover

dichotomy were not so clear. The regression results for normal tenure turnover firms are once again similar to those for non-routine turnover firms, in which a negative news effect and positive news by turnover interaction (neither of them statistically significant, though) were detected. The long tenure turnover results are quite interesting. Good news firms enjoyed positive abnormal returns while bad news firms suffered negative abnormal returns - exactly what one would expect if the turnover had never occurred.

The clear-cut results that came out of this analysis are consistent with the advanced hypothesis and traditional findings in this area. However, several of the analyses produced no clear-cut results. There are many possible explanations for this. First, the numbers of firms used here is very small, and the variance in stock returns quite high. Second, additional data requirements and dividing the firms into good news and bad news portfolios caused the matched-pairs design to break down, which likely injected noise into the findings.

In spite of those limitations, the study does seem to identify one particular instance wherein the classic unexpected earnings-abnormal security returns relationship does not hold. Researchers in the capital markets area must be aware of this phenomenon and be careful in interpreting stock returns.

The news-by-turnover interaction found in non-routine turnover and control firms is not present when Value Line forecasts are used as the proxy for expected earnings. Instead, (especially non-routine) turnover firm abnormal returns behave as might be expected: positive abnormal returns associated with higher than forecast earnings; and negative

abnormal returns associated with lower than forecast earnings. There are at least three possible explanations for this result. First, Value Line generally forecasts earnings before non-recurring items. Thus, any special charges to income taken above the line would have little effect on Value Line forecast errors, but would have a profound impact on forecast errors generated by a random walk model, other things being equal.[22] Additionally, the Value Line forecasts used here were made only three months before the end of the fiscal year while the random walk prediction is produced ten to twelve months prior to the fiscal year end, giving Value Line a substantial timing advantage relative to the random walk model. Finally, recent evidence indicates that security analysts' forecasts are generally superior to those of mechanical models at least partly because analysts better utilize information available to the market at the time of the forecast (Brown, Hagerman, Griffin and Zmijewski, 1987). Thus, there is strong reason to believe that Value Line analysts were able to anticipate the firm's accounting decisions in the year of the turnover and build them into their earnings forecasts.

These results also have an important bearing on the CEO succession issue. In Chapter 3, I found little evidence of any stock market reaction to the appointment of a non-routine CEO. The results derived here indicate that significant abnormal returns may not accrue to shareholders until some considerable time after the turnover. The results here also

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[22]This does not suggest that a special item would have no effect at all on Value Line accuracy. While the special item itself would not affect the actual earnings per share predicted by Value Line, reduced depreciation or amortization charges caused by the special item (e. g., if some fixed or intangible asset was written down) would have some impact on actual earnings per share.

indicate that the earnings announcement may be an especially important event following non-routine turnover. Finally, the results presented here seem to suggest a way of determining the likely effect of a non-routine turnover, at least in terms of stock market reaction.

Table 4-1. CAR Broken Down by Turnover (Non-Routine Turnover vs. Control) and News (Operating Income in Fiscal Year of Turnover vs. Previous Year)+

Trading Interval	Mean CAR (standard deviation)			
	Turnover Firms		Control Firms	
	Good News n=55	Bad News n=42	Good News n=68	Bad News n=31
[-240,-240]	0.000	0.001	-0.002	-0.001
	(0.017)	(0.014)	(0.017)	(0.015)
[-240,-220]	0.005	0.005	0.009	-0.008
	(0.073)	(0.090)	(0.071)	(0.065)
[-240,-200]	-0.008	-0.011	0.005	-0.034
	(0.094)	(0.204)	(0.093)	(0.100)
[-240,-180]	-0.010	-0.003	0.001	-0.050
	(0.125)	(0.226)	(0.113)	(0.123)
[-240,-160]	-0.003	-0.010	-0.000	-0.074
	(0.152)	(0.276)	(0.139)	(0.154)
[-240,-140]	-0.011	-0.036	0.010	-0.075
	(0.175)	(0.301)	(0.168)	(0.205)
[-240,-120]	-0.015	-0.034	0.003	-0.064
	(0.222)	(0.337)	(0.198)	(0.258)
[-240,-100]	0.003	-0.010	0.019	-0.064
	(0.240)	(0.322)	(0.213)	(0.288)
[-240,-80]	0.029	-0.010	0.033	-0.068
	(0.266)	(0.353)	(0.226)	(0.303)
[-240,-60]	0.018	-0.015	0.043	-0.083
	(0.283)	(0.394)	(0.244)	(0.338)
[-240,-40]	0.031	-0.024	0.058	-0.100
	(0.322)	(0.437)	(0.262)	(0.361)
[-240,-20]	0.025	0.025	0.031	-0.095
	(0.312)	(0.390)	(0.279)	(0.389)
[-240,0]	0.015	0.038	0.023	-0.125
	(0.326)	(0.420)	(0.296)	(0.399)
[-240,20]	0.017	0.060	0.019	-0.109
	(0.352)	(0.471)	(0.320)	(0.425)
[-240,40]	0.018	0.054	0.021	-0.104
	(0.391)	(0.512)	(0.340)	(0.478)
[-240,60]	0.043	0.068	0.016	-0.099
	(0.388)	(0.542)	(0.361)	(0.491)
[-240,80]	0.041	0.066	0.018	-0.099
	(0.427)	(0.570)	(0.368)	(0.502)
[-240,100]	0.053	0.072	0.014	-0.102
	(0.446)	(0.614)	(0.395)	(0.538)
[-240,120]	0.059	0.095	0.023	-0.111
	(0.446)	(0.619)	(0.401)	(0.564)

+Good news if operating income in fiscal year of turnover is higher than operating income in previous fiscal year.

Table 4-2. CAR Broken Down by Turnover (Non-Routine Turnover vs. Control) and News (Operating Income in Fiscal Year of Turnover vs. Previous Year)+ - Two Outliers Removed

Trading Interval	Mean CAR (standard deviation)			
	Turnover Firms		Control Firms	
	Good News n=55	Bad News n=40	Good News n=68	Bad News n=31
[-240,-240]	0.000	0.001	-0.002	-0.001
	(0.017)	(0.014)	(0.017)	(0.015)
[-240,-220]	0.005	0.016	0.009	-0.008
	(0.073)	(0.076)	(0.071)	(0.065)
[-240,-200]	-0.008	0.020	0.005	-0.034
	(0.094)	(0.115)	(0.093)	(0.100)
[-240,-180]	-0.010	0.032	0.001	-0.050
	(0.125)	(0.141)	(0.113)	(0.123)
[-240,-160]	-0.003	0.033	-0.000	-0.074
	(0.152)	(0.163)	(0.139)	(0.154)
[-240,-140]	-0.011	0.013	0.010	-0.075
	(0.175)	(0.174)	(0.168)	(0.205)
[-240,-120]	-0.015	0.020	0.003	-0.064
	(0.222)	(0.208)	(0.198)	(0.258)
[-240,-100]	0.003	0.041	0.019	-0.064
	(0.240)	(0.218)	(0.213)	(0.288)
[-240,-80]	0.029	0.047	0.033	-0.068
	(0.266)	(0.239)	(0.226)	(0.303)
[-240,-60]	0.018	0.048	0.043	-0.083
	(0.283)	(0.272)	(0.244)	(0.338)
[-240,-40]	0.031	0.050	0.058	-0.100
	(0.322)	(0.277)	(0.262)	(0.361)
[-240,-20]	0.025	0.087	0.031	-0.095
	(0.312)	(0.277)	(0.279)	(0.389)
[-240,0]	0.015	0.097	0.023	-0.125
	(0.326)	(0.330)	(0.296)	(0.399)
[-240,20]	0.017	0.126	0.019	-0.109
	(0.352)	(0.370)	(0.320)	(0.425)
[-240,40]	0.018	0.124	0.021	-0.104
	(0.391)	(0.404)	(0.340)	(0.478)
[-240,60]	0.043	0.137	0.016	-0.099
	(0.388)	(0.443)	(0.361)	(0.491)
[-240,80]	0.041	0.140	0.018	-0.099
	(0.427)	(0.462)	(0.368)	(0.502)
[-240,100]	0.053	0.151	0.014	-0.102
	(0.446)	(0.501)	(0.395)	(0.538)
[-240,120]	0.059	0.169	0.023	-0.111
	(0.446)	(0.521)	(0.401)	(0.564)

+Good news if operating income in fiscal year of turnover is higher than operating income in previous fiscal year.

Table 4-3. CAR Broken Down by Turnover (Routine Turnover vs. Control) and News (Operating Income in Fiscal Year of Turnover vs. Previous Year)+

Trading Interval	Mean CAR (standard deviation)			
	Turnover Firms		Control Firms	
	Good News n=107	Bad News n=42	Good News n=105	Bad News n=46
[-240,-240]	0.001	-0.000	0.000	-0.002
	(0.016)	(0.019)	(0.015)	(0.028)
[-240,-220]	0.002	-0.011	0.002	-0.020
	(0.066)	(0.051)	(0.078)	(0.087)
[-240,-200]	0.009	-0.025	0.010	-0.034
	(0.089)	(0.112)	(0.116)	(0.121)
[-240,-180]	0.012	-0.020	0.001	-0.029
	(0.113)	(0.129)	(0.136)	(0.157)
[-240,-160]	0.005	-0.029	0.004	-0.020
	(0.128)	(0.151)	(0.155)	(0.188)
[-240,-140]	0.001	-0.053	0.004	-0.012
	(0.159)	(0.152)	(0.171)	(0.206)
[-240,-120]	-0.007	-0.050	0.013	0.014
	(0.179)	(0.170)	(0.199)	(0.264)
[-240,-100]	0.010	-0.026	0.015	0.027
	(0.200)	(0.206)	(0.220)	(0.293)
[-240,-80]	0.025	-0.019	0.023	0.027
	(0.208)	(0.213)	(0.233)	(0.321)
[-240,-60]	0.037	-0.011	0.029	0.032
	(0.225)	(0.238)	(0.246)	(0.347)
[-240,-40]	0.027	0.001	0.031	0.024
	(0.240)	(0.249)	(0.255)	(0.371)
[-240,-20]	0.024	0.003	0.019	0.020
	(0.271)	(0.289)	(0.271)	(0.366)
[-240,0]	0.002	-0.030	0.014	0.025
	(0.297)	(0.314)	(0.310)	(0.407)
[-240,20]	-0.010	-0.037	0.014	0.015
	(0.338)	(0.333)	(0.350)	(0.413)
[-240,40]	-0.022	-0.035	0.011	0.039
	(0.385)	(0.364)	(0.376)	(0.445)
[-240,60]	-0.014	-0.040	0.002	0.055
	(0.406)	(0.378)	(0.393)	(0.476)
[-240,80]	-0.008	-0.044	0.004	0.063
	(0.433)	(0.399)	(0.414)	(0.504)
[-240,100]	0.005	-0.051	0.011	0.072
	(0.469)	(0.408)	(0.443)	(0.525)
[-240,120]	0.008	-0.053	0.015	0.093
	(0.491)	(0.417)	(0.442)	(0.553)

+Good news if operating income in fiscal year of turnover is higher than operating income in previous fiscal year.

Table 4-4. CAR Broken Down by Turnover (Non-Routine Turnover vs. Control) and News (Earnings per Share in Fiscal Year of Turnover vs. Value Line Forecast)+

Trading Interval	Mean CAR (standard deviation)			
	Turnover Firms		Control Firms	
	Good News n=31	Bad News n=45	Good News n=34	Bad News n=43
[-240,-240]	0.001	-0.000	-0.004	-0.000
	(0.021)	(0.013)	(0.018)	(0.016)
[-240,-220]	0.006	0.004	-0.020	0.018
	(0.085)	(0.061)	(0.059)	(0.070)
[-240,-200]	0.007	-0.006	-0.034	0.014
	(0.103)	(0.098)	(0.081)	(0.094)
[-240,-180]	-0.002	-0.016	-0.037	0.002
	(0.145)	(0.112)	(0.104)	(0.117)
[-240,-160]	0.014	-0.031	-0.036	-0.020
	(0.149)	(0.133)	(0.122)	(0.159)
[-240,-140]	0.007	-0.051	-0.024	-0.012
	(0.196)	(0.153)	(0.169)	(0.199)
[-240,-120]	0.013	-0.051	-0.048	0.009
	(0.264)	(0.176)	(0.208)	(0.240)
[-240,-100]	0.052	-0.047	-0.042	0.013
	(0.294)	(0.200)	(0.222)	(0.269)
[-240,-80]	0.089	-0.047	-0.021	0.002
	(0.345)	(0.215)	(0.224)	(0.301)
[-240,-60]	0.121	-0.064	0.001	-0.002
	(0.370)	(0.238)	(0.238)	(0.336)
[-240,-40]	0.138	-0.077	0.022	-0.005
	(0.411)	(0.262)	(0.258)	(0.361)
[-240,-20]	0.152	-0.071	-0.001	-0.016
	(0.392)	(0.253)	(0.256)	(0.387)
[-240,0]	0.141	-0.100	-0.024	-0.027
	(0.410)	(0.268)	(0.277)	(0.404)
[-240,20]	0.168	-0.093	-0.025	-0.019
	(0.427)	(0.314)	(0.302)	(0.419)
[-240,40]	0.164	-0.101	-0.027	-0.012
	(0.474)	(0.358)	(0.327)	(0.467)
[-240,60]	0.211	-0.100	-0.032	-0.020
	(0.469)	(0.371)	(0.327)	(0.500)
[-240,80]	0.216	-0.104	-0.033	-0.027
	(0.511)	(0.392)	(0.333)	(0.514)
[-240,100]	0.231	-0.108	-0.042	-0.028
	(0.535)	(0.421)	(0.367)	(0.547)
[-240,120]	0.246	-0.091	-0.028	-0.024
	(0.541)	(0.420)	(0.375)	(0.562)

+Good news if earnings per share in fiscal year of turnover is greater than or equal to Value Line forecast earnings per share.

Table 4-5. CAR Broken Down by Turnover (Routine Turnover vs. Control) and News (Earnings per Share in Fiscal Year of Turnover vs. Value Line Forecast)+

Trading Interval	Mean CAR (standard deviation)			
	Turnover Firms		Control Firms	
	Good News n=56	Bad News n=66	Good News n=52	Bad News n=65
[-240,-240]	-0.000	0.002	-0.001	-0.002
	(0.019)	(0.015)	(0.016)	(0.018)
[-240,-220]	0.004	0.001	0.007	-0.006
	(0.075)	(0.052)	(0.093)	(0.069)
[-240,-200]	0.008	0.005	0.025	0.003
	(0.107)	(0.086)	(0.121)	(0.101)
[-240,-180]	-0.002	0.018	0.022	-0.003
	(0.130)	(0.102)	(0.138)	(0.125)
[-240,-160]	-0.005	0.009	0.023	-0.005
	(0.155)	(0.120)	(0.145)	(0.153)
[-240,-140]	-0.016	0.001	0.020	-0.002
	(0.190)	(0.138)	(0.171)	(0.165)
[-240,-120]	-0.010	-0.009	0.026	0.014
	(0.219)	(0.149)	(0.200)	(0.198)
[-240,-100]	-0.000	0.017	0.030	0.022
	(0.243)	(0.181)	(0.225)	(0.224)
[-240,-80]	0.021	0.014	0.039	0.034
	(0.243)	(0.196)	(0.243)	(0.232)
[-240,-60]	0.047	0.011	0.066	0.012
	(0.260)	(0.212)	(0.271)	(0.242)
[-240,-40]	0.049	0.013	0.088	0.017
	(0.277)	(0.217)	(0.291)	(0.250)
[-240,-20]	0.051	0.001	0.089	0.013
	(0.309)	(0.252)	(0.294)	(0.271)
[-240,0]	0.029	-0.018	0.077	0.014
	(0.349)	(0.271)	(0.338)	(0.291)
[-240,20]	0.035	-0.024	0.076	0.027
	(0.393)	(0.296)	(0.363)	(0.319)
[-240,40]	0.028	-0.034	0.073	0.037
	(0.451)	(0.330)	(0.398)	(0.345)
[-240,60]	0.039	-0.030	0.063	0.032
	(0.472)	(0.344)	(0.422)	(0.377)
[-240,80]	0.046	-0.030	0.077	0.040
	(0.484)	(0.389)	(0.452)	(0.400)
[-240,100]	0.055	-0.019	0.095	0.044
	(0.527)	(0.411)	(0.473)	(0.416)
[-240,120]	0.060	-0.020	0.112	0.047
	(0.553)	(0.425)	(0.496)	(0.428)

+Good news if earnings per share in fiscal year of turnover is greater than or equal to Value Line forecast earnings per share.

Table 4-6. CAR Regression Results: Non-Routine Turnover and Control Firm Abnormal Returns Cumulated Around Announcement of Earnings for Fiscal Year of Turnover - Operating Income News

CAR [Cumulation Period]#	Independent Variable Regression Coefficients (expected sign) (t-statistics)				R^2
	Int. (+)	News (-)	Turnover (?)	TurnoverXNews (+)	
[-240,-240]	-0.002	0.002	0.003	-0.001	0.000
	(-1.28)	(0.48)	(0.97)	(-0.24)	
[-240,-220]	0.009	-0.017	-0.004	0.017	0.000
	(0.97)	(-1.05)	(-0.28)	(0.75)	
[-240,-200]	0.005	-0.039	-0.013	0.036	0.000
	(0.33)	(-1.43)	(-0.59)	(0.96)	
[-240,-180]	0.001	-0.051	-0.011	0.058	0.000
	(0.06)	(-1.58)	(-0.40)	(1.31)	
[-240,-160]	0.000	-0.074	-0.003	0.067	0.005
	(0.00)	(-1.89)*	(-0.09)	(1.24)	
[-240,-140]	0.010	-0.085	-0.022	0.061	0.004
	(0.41)	(-1.87)*	(-0.57)	(0.96)	
[-240,-120]	0.003	-0.067	-0.017	0.047	0.000
	(0.09)	(-1.23)	(-0.38)	(0.63)	
[-240,-100]	0.019	-0.083	-0.016	0.070	0.000
	(0.61)	(-1.48)	(-0.35)	(0.91)	
[-240,-80]	0.033	-0.102	0.000	0.063	0.002
	(0.98)	(-1.68)*	(-0.08)	(0.75)	
[-240,-60]	0.043	-0.126	-0.026	0.094	0.004
	(1.16)	(-1.90)*	(-0.46)	(1.02)	
[-240,-40]	0.058	-0.158	-0.027	0.102	0.012
	(1.42)	(-2.16)*	(-0.44)	(1.02)	
[-240,-20]	0.031	-0.127	-0.006	0.126	0.003
	(0.78)	(-1.76)*	(-0.11)	(1.27)	
[-240,0]	0.023	-0.149	-0.008	0.171	0.009
	(0.55)	(-1.96)*	(-0.13)	(1.64)	
[-240,20]	0.019	-0.128	-0.003	0.171	0.004
	(0.42)	(-1.54)	(-0.04)	(1.50)	
[-240,40]	0.021	-0.126	-0.003	0.162	0.000
	(0.42)	(-1.39)	(-0.04)	(1.30)	
[-240,60]	0.016	-0.114	0.027	0.140	0.000
	(0.30)	(-1.22)	(0.34)	(1.08)	
[-240,80]	0.018	-0.118	0.023	0.142	0.000
	(0.33)	(-1.19)	(0.28)	(1.05)	
[-240,100]	0.014	-0.116	0.039	0.135	0.000
	(0.23)	(-1.10)	(0.44)	(0.93)	
[-240,120]	0.023	-0.134	0.036	0.169	0.002
	(0.38)	(-1.25)	(0.41)	(1.15)	

#-beginning and ending trading dates in square brackets are relative to annual earnings announcement date in the Wall Street Journal.
+-p<0.05. *-p<0.05 (one-tailed test). **-p<0.01 (one-tailed test).

Table 4-7. CAR Regression Results: Non-Routine Turnover (less two outliers) and Control Firm Abnormal Returns Cumulated Around Announcement of Earnings for Fiscal Year of Turnover - Operating Income News

CAR [Cumulation Period]#	Independent Variable Regression Coefficients (expected sign) (t-statistics)				R^2
	Int. (+)	News (-)	Turnover (?)	TurnoverXNews (+)	
[-240,-240]	-0.002	0.002	0.003	-0.001	0.000
	(-1.28)	(0.47)	(0.97)	(-0.17)	
[-240,-220]	0.009	-0.017	-0.004	0.028	0.000
	(1.02)	(-1.10)	(-0.29)	(1.30)	
[-240,-200]	0.005	-0.039	-0.013	0.067	0.014
	(0.42)	(-1.81)*	(-0.75)	(2.26)*	
[-240,-180]	0.001	-0.051	-0.011	0.093	0.025+
	(0.07)	(-1.90)*	(-0.48)	(2.49)**	
[-240,-160]	0.000	-0.074	-0.003	0.111	0.032+
	(0.00)	(-2.29)*	(-0.11)	(2.45)**	
[-240,-140]	0.010	-0.085	-0.022	0.110	0.014
	(0.48)	(-2.21)*	(-0.68)	(2.06)*	
[-240,-120]	0.003	-0.067	-0.017	0.101	0.000
	(0.10)	(-1.42)	(-0.44)	(1.56)	
[-240,-100]	0.019	-0.083	-0.016	0.121	0.004
	(0.68)	(-1.63)	(-0.38)	(1.72)*	
[-240,-80]	0.033	-0.102	-0.004	0.120	0.008
	(1.08)	(-1.85)*	(-0.09)	(1.57)	
[-240,-60]	0.043	-0.126	-0.026	0.157	0.011
	(1.29)	(-2.10)*	(-0.51)	(1.89)*	
[-240,-40]	0.058	-0.158	-0.027	0.177	0.018
	(1.60)	(-2.43)**	(-0.50)	(1.96)*	
[-240,-20]	0.031	-0.127	-0.006	0.188	0.017
	(0.84)	(-1.90)*	(-0.12)	(2.04)*	
[-240,0]	0.023	-0.149	-0.008	0.230	0.026+
	(0.59)	(-2.08)*	(-0.14)	(2.33)*	
[-240,20]	0.019	-0.128	-0.003	0.237	0.023
	(0.44)	(-1.65)	(-0.04)	(2.21)*	
[-240,40]	0.021	-0.126	-0.003	0.231	0.015
	(0.45)	(-1.48)	(-0.05)	(1.97)*	
[-240,60]	0.016	-0.114	0.027	0.209	0.015
	(0.32)	(-1.29)	(0.36)	(1.70)*	
[-240,80]	0.018	-0.118	0.023	0.217	0.013
	(0.35)	(-1.27)	(0.29)	(1.69)*	
[-240,100]	0.014	-0.116	0.039	0.214	0.013
	(0.25)	(-1.17)	(0.47)	(1.56)	
[-240,120]	0.023	-0.134	0.036	0.243	0.017
	(0.40)	(-1.32)	(0.43)	(1.73)*	

#-beginning and ending trading dates in square brackets are relative to annual earnings announcement date in the Wall Street Journal.
+-$p<0.05$. *-$p<0.05$ (one-tailed test). **-$p<0.01$ (one-tailed test).

Table 4-8. CAR Regression Results: Routine Turnover and Control Firm Abnormal Returns Cumulated Around Announcement of Earnings for Fiscal Year of Turnover - Operating Income News

CAR [Cumulation Period]#	Independent Variable Regression Coefficients (expected sign) (t-statistics)				R^2
	Inc. (+)	News (-)	Turnover (?)	TurnoverXNews (?)	
[-240,-240]	0.000	-0.002	0.001	0.001	0.000
	(0.07)	(-0.67)	(0.32)	(0.21)	
[-240,-220]	0.002	-0.022	0.000	0.008	0.004
	(0.33)	(-1.71)*	(0.00)	(0.45)	
[-240,-200]	0.010	-0.043	-0.001	0.010	0.017+
	(0.93)	(-2.28)*	(-0.08)	(0.37)	
[-240,-180]	0.001	-0.030	0.010	-0.001	0.003
	(0.08)	(-1.31)	(0.58)	(-0.04)	
[-240,-160]	0.004	-0.024	0.001	-0.010	0.000
	(0.29)	(-0.91)	(0.05)	(-0.26)	
[-240,-140]	0.004	-0.015	-0.003	-0.038	0.002
	(0.23)	(-0.51)	(-0.11)	(-0.89)	
[-240,-120]	0.013	0.001	-0.020	-0.044	0.001
	(0.68)	(0.03)	(-0.72)	(-0.87)	
[-240,-100]	0.015	0.012	-0.005	-0.048	0.000
	(0.68)	(0.30)	(-0.16)	(-0.85)	
[-240,-80]	0.023	0.004	0.001	-0.048	0.000
	(1.00)	(0.10)	(0.05)	(-0.80)	
[-240,-60]	0.029	0.003	0.007	-0.051	0.000
	(1.17)	(0.06)	(0.21)	(-0.78)	
[-240,-40]	0.031	-0.007	-0.004	-0.019	0.000
	(1.18)	(-0.14)	(-0.12)	(-0.28)	
[-240,-20]	0.019	0.001	0.005	-0.022	0.000
	(0.69)	(0.02)	(0.13)	(-0.29)	
[-240,0]	0.014	0.011	-0.012	-0.043	0.000
	(0.44)	(0.19)	(-0.27)	(-0.53)	
[-240,20]	0.014	0.002	-0.024	-0.029	0.000
	(0.40)	(0.03)	(-0.49)	(-0.32)	
[-240,40]	0.011	0.028	-0.033	-0.041	0.000
	(0.29)	(0.41)	(-0.62)	(-0.41)	
[-240,60]	0.002	0.053	-0.016	-0.079	0.000
	(0.04)	(0.74)	(-0.28)	(-0.76)	
[-240,80]	0.004	0.059	-0.012	-0.095	0.000
	(0.10)	(0.77)	(-0.21)	(-0.86)	
[-240,100]	0.011	0.062	-0.006	-0.118	0.000
	(0.24)	(0.76)	(-0.09)	(-1.01)	
[-240,120]	0.015	0.079	-0.007	-0.140	0.000
	(0.32)	(0.94)	(-0.10)	(-1.16)	

#-beginning and ending trading dates in square brackets are relative to annual earnings announcement date in the Wall Street Journal.
+-p<0.05. *-p<0.05 (one-tailed test). **-p<0.01 (one-tailed test).

Table 4-9. CAR Regression Results: Non-Routine Turnover and Control Firm Abnormal Returns Cumulated Around Announcement of Earnings for Fiscal Year of Turnover - Value Line Forecast News

CAR [Cumulation Period]#	Independent Variable Regression Coefficients (expected sign) (t-statistics)				R^2
	Int. (+)	News (-)	Turnover (?)	TurnoverXNews (+)	
[-240,-240]	-0.004	0.004	0.005	-0.005	0.000
	(-1.39)	(1.01)	(1.30)	(-0.98)	
[-240,-220]	-0.020	0.039	0.025	-0.041	0.020
	(-1.69)	(2.46)	(1.49)	(-1.51)	
[-240,-200]	-0.035	0.051	0.042	-0.064	0.021
	(-2.21)	(2.38)	(1.80)*	(-2.08)	
[-240,-180]	-0.040	0.045	0.037	-0.058	0.000
	(-1.97)	(1.65)	(1.28)	(-1.50)	
[-240,-160]	-0.039	0.022	0.054	-0.068	0.000
	(-1.64)	(0.63)	(1.53)	(-1.46)	
[-240,-140]	-0.027	0.017	0.034	-0.075	0.000
	(-0.88)	(0.42)	(0.77)	(-1.28)	
[-240,-120]	-0.050	0.062	0.063	-0.126	0.001
	(-1.33)	(1.23)	(1.15)	(-1.75)	
[-240,-100]	-0.045	0.063	0.097	-0.161	0.008
	(-1.09)	(1.11)	(1.60)	(-2.01)	
[-240,-80]	-0.024	0.030	0.113	-0.166	0.013
	(-0.52)	(0.48)	(1.68)*	(-1.86)	
[-240,-60]	-0.003	0.003	0.123	-0.188	0.027
	(-0.05)	(0.05)	(1.68)*	(-1.94)	
[-240,-40]	0.019	-0.023	0.118	-0.192	0.033+
	(0.35)	(-0.31)	(1.48)	(-1.80)	
[-240,-20]	-0.004	-0.011	0.156	-0.213	0.038+
	(-0.07)	(-0.14)	(1.94)*	(-2.00)	
[-240,0]	-0.026	0.002	0.168	-0.243	0.040+
	(-0.46)	(0.02)	(1.98)*	(-2.17)	
[-240,20]	-0.027	0.010	0.195	-0.272	0.042+
	(-0.44)	(0.12)	(2.15)*	(-2.26)	
[-240,40]	-0.031	0.023	0.195	-0.288	0.031
	(-0.45)	(0.24)	(1.93)*	(-2.15)	
[-240,60]	-0.038	0.023	0.249	-0.334	0.047+
	(-0.53)	(0.24)	(2.38)*	(-2.41)	
[-240,80]	-0.038	0.015	0.254	-0.335	0.045+
	(-0.51)	(0.15)	(2.32)*	(-2.31)	
[-240,100]	-0.045	0.019	0.276	-0.359	0.045+
	(-0.56)	(0.18)	(2.36)*	(-2.32)	
[-240,120]	-0.032	0.012	0.279	-0.349	0.043+
	(-0.39)	(0.11)	(2.35)*	(-2.22)	

#-beginning and ending trading dates in square brackets are relative to annual earnings announcement date in the Wall Street Journal.
+-p<0.05. *-p<0.05 (one-tailed test). **-p<0.01 (one-tailed test).

Table 4-10. CAR Regression Results: Routine Turnover and Control Firm Abnormal Returns Cumulated Around Announcement of Earnings for Fiscal Year of Turnover - Value Line Forecast News

CAR [Cumulation Period]#	Independent Variable Regression Coefficients (expected sign) (t-statistics)				R^2
	Int. (+)	News (-)	Turnover (?)	TurnoverXNews (?)	
[-240,-240]	-0.001	0.000	0.002	0.002	0.000
	0.50)	(-0.17)	(0.55)	(0.35)	
[-240,-220]	0.007	-0.013	-0.003	0.010	0.000
	(0.69)	(-0.96)	(-0.22)	(0.52)	
[-240,-200]	0.025	-0.021	-0.016	0.019	0.000
	(1.72)*	(-1.10)	(-0.83)	(0.69)	
[-240,-180]	0.022	-0.025	-0.025	0.047	0.000
	(1.27)	(-1.09)	(-1.05)	(1.48)	
[-240,-160]	0.023	-0.028	-0.031	0.048	0.000
	(1.17)	(-1.07)	(-1.12)	(1.28)	
[-240,-140]	0.020	-0.022	-0.035	0.039	0.000
	(0.88)	(-0.72)	(-1.12)	(0.90)	
[-240,-120]	0.026	-0.011	-0.035	0.012	0.000
	(0.97)	(-0.32)	(-0.97)	(0.25)	
[-240,-100]	0.030	-0.009	-0.029	0.025	0.000
	(1.01)	(-0.22)	(-0.72)	(0.44)	
[-240,-80]	0.039	-0.016	-0.019	0.009	0.000
	(1.25)	(-0.37)	(-0.43)	(0.15)	
[-240,-60]	0.066	-0.055	-0.018	0.015	0.000
	(1.95)*	(-1.20)	(-0.38)	(0.24)	
[-240,-40]	0.088	-0.071	-0.038	0.031	0.001
	(2.46)*	(-1.47)	(-0.77)	(0.47)	
[-240,-20]	0.089	-0.076	-0.036	0.021	0.003
	(2.29)*	(-1.45)	(-0.67)	(0.28)	
[-240,0]	0.077	-0.063	-0.044	0.007	0.000
	(1.79)*	(-1.08)	(-0.74)	(0.09)	
[-240,20]	0.076	-0.049	-0.035	-0.023	0.000
	(1.60)	(-0.77)	(-0.54)	(-0.26)	
[-240,40]	0.073	-0.037	-0.040	-0.038	0.000
	(1.39)	(-0.52)	(-0.55)	(-0.38)	
[-240,60]	0.063	-0.031	-0.017	-0.054	0.000
	(1.13)	(-0.41)	(-0.22)	(-0.52)	
[-240,80]	0.077	-0.038	-0.023	-0.055	0.000
	(1.30)	(-0.47)	(-0.29)	(0.49)	
[-240,100]	0.095	-0.050	-0.032	-0.042	0.000
	(1.50)	(-0.59)	(-0.37)	(-0.35)	
[-240,120]	0.112	-0.065	-0.042	0.035	0.000
	(1.70)*	(-0.73)	(-0.47)	(-0.29)	

#-beginning and ending trading dates in square brackets are relative to annual earnings announcement date in the Wall Street Journal.
+-$p<0.05$. *-$p<0.05$ (one-tailed test). **-$p<0.01$ (one-tailed test).

Table 4-11. CAR Broken Down by Turnover (Long Tenure Turnover vs. Control) and News (Operating Income in Fiscal Year of Turnover vs. Previous Year)+

Trading Interval	Mean CAR (standard deviation)			
	Turnover Firms		Control Firms	
	Good News n=32	Bad News n=11	Good News n=26	Bad News n=19
[-240,-240]	0.004	-0.003	-0.002	0.000
	(0.017)	(0.010)	(0.013)	(0.018)
[-240,-220]	0.007	-0.048	0.014	-0.017
	(0.056)	(0.092)	(0.101)	(0.088)
[-240,-200]	0.009	-0.104	0.023	-0.023
	(0.087)	(0.355)	(0.140)	(0.115)
[-240,-180]	0.014	-0.082	0.016	-0.031
	(0.093)	(0.386)	(0.139)	(0.126)
[-240,-160]	0.010	[illegible]	0.022	-0.012
	(0.125)	(0.466)	(0.164)	(0.171)
[-240,-140]	0.003	-0.180	0.010	-0.003
	(0.150)	(0.483)	(0.183)	(0.189)
[-240,-120]	0.009	-0.189	0.000	-0.009
	(0.166)	(0.515)	(0.194)	(0.245)
[-240,-100]	0.038	-0.162	-0.018	-0.011
	(0.190)	(0.467)	(0.209)	(0.289)
[-240,-80]	0.063	-0.172	-0.007	-0.006
	(0.196)	(0.502)	(0.224)	(0.279)
[-240,-60]	0.081	-0.232	-0.006	-0.002
	(0.233)	(0.523)	(0.232)	(0.300)
[-240,-40]	0.093	-0.231	-0.002	-0.024
	(0.251)	(0.613)	(0.239)	(0.30[illegible])
[-240,-20]	0.104	-0.225	-0.003	-0.017
	(0.288)	(0.[illegible])	(0.271)	(0.342)
[-240,0]	0.089	-0.139	-0.030	-0.032
	(0.307)	(0.489)	(0.289)	(0.362)
[-240,[illegible]	0.084	-0.141	-0.037	-0.013
	(0.363)	(0.567)	(0.334)	(0.374)
[-240,40]	0.085	-0.141	-0.043	-0.017
	(0.402)	(0.592)	(0.347[illegible])	(0.407)
[-240,60]	0.094	-0.167	-0.065	-0.002
	(0.421)	(0.610)	(0.354)	(0.398)
[-240,80]	0.102	-0.158	-0.058	0.018
	(0.470)	(0.705)	(0.373)	(0.410)
[-240,100]	0.106	-0.152	-0.042	0.007
	(0.483)	(0.768)	(0.402)	(0.443)
[-240,120]	0.118	-0.131	-0.025	0.023
	(0.496)	(0.783)	(0.396)	(0.482)

+Good news if operating income in fiscal year of turnover is higher than operating income in previous fiscal year.

Table 4-12. CAR Broken Down by Turnover (Normal Tenure Turnover vs. Control) and News (Operating Income in Fiscal Year of Turnover vs. Previous Year)+

Trading Interval	Mean CAR (standard deviation)			
	Turnover Firms		Control Firms	
	Good News n=130	Bad News n=73	Good News n=147	Bad News n=58
[-240,-240]	-0.000	0.001	-0.001	-0.002
	(0.017)	(0.017)	(0.016)	(0.025)
[-240,-220]	0.002	0.003	0.003	-0.014
	(0.071)	(0.068)	(0.070)	(0.076)
[-240,-200]	0.001	-0.005	0.005	-0.037
	(0.092)	(0.110)	(0.101)	(0.113)
[-240,-180]	0.002	-0.001	-0.002	-0.040
	(0.122)	(0.130)	(0.125)	(0.150)
[-240,-160]	0.000	-0.005	-0.001	-0.052
	(0.139)	(0.156)	(0.146)	(0.178)
[-240,-140]	-0.005	-0.024	0.006	-0.048
	(0.168)	(0.171)	(0.168)	(0.212)
[-240,-120]	-0.014	-0.020	0.011	-0.020
	(0.201)	(0.201)	(0.199)	(0.271)
[-240,-100]	0.000	0.004	0.023	-0.009
	(0.219)	(0.222)	(0.218)	(0.296)
[-240,-80]	0.017	0.009	0.033	-0.013
	(0.236)	(0.239)	(0.231)	(0.321)
[-240,-60]	0.018	0.020	0.042	-0.018
	(0.248)	(0.273)	(0.247)	(0.362)
[-240,-40]	0.012	0.021	0.050	-0.026
	(0.273)	(0.289)	(0.260)	(0.390)
[-240,-20]	0.005	0.050	0.028	-0.030
	(0.282)	(0.303)	(0.275)	(0.391)
[-240,0]	-0.014	0.025	0.026	-0.037
	(0.304)	(0.348)	(0.306)	(0.425)
[-240,20]	-0.022	0.034	0.025	-0.042
	(0.334)	(0.379)	(0.338)	(0.437)
[-240,40]	-0.032	0.032	0.025	-0.019
	(0.380)	(0.417)	(0.364)	(0.480)
[-240,60]	-0.017	0.041	0.020	-0.008
	(0.393)	(0.441)	(0.384)	(0.513)
[-240,80]	-0.014	0.037	0.022	-0.009
	(0.419)	(0.453)	(0.399)	(0.537)
[-240,100]	0.000	0.035	0.021	0.001
	(0.454)	(0.477)	(0.428)	(0.564)
[-240,120]	0.003	0.044	0.026	0.007
	(0.469)	(0.484)	(0.431)	(0.590)

+Good news if operating income in fiscal year of turnover is higher than operating income in previous fiscal year.

Table 4-13. CAR Broken Down by Turnover (Long Tenure Turnover vs. Control) and News (Earnings per Share in Fiscal Year of Turnover vs. Value Line Forecast)+

Trading Interval	Mean CAR (standard deviation)			
	Turnover Firms		Control Firms	
	Good News n=16	Bad News n=20	Good News n=17	Bad News n=20
[-240,-240]	0.004	0.003	0.001	-0.005
	(0.016)	(0.017)	(0.019)	(0.013)
[-240,-220]	0.020	-0.017	0.004	0.005
	(0.058)	(0.036)	(0.122)	(0.080)
[-240,-200]	0.037	-0.021	0.020	0.007
	(0.099)	(0.101)	(0.137)	(0.124)
[-240,-180]	0.038	-0.017	0.010	-0.007
	(0.110)	(0.102)	(0.158)	(0.121)
[-240,-160]	0.054	-0.028	0.008	-0.003
	(0.140)	(0.107)	(0.171)	(0.151)
[-240,-140]	0.029	-0.034	0.021	0.003
	(0.176)	(0.120)	(0.197)	(0.153)
[-240,-120]	0.058	-0.034	-0.005	0.022
	(0.167)	(0.136)	(0.244)	(0.168)
[-240,-100]	0.089	-0.025	-0.039	0.018
	(0.189)	(0.186)	(0.281)	(0.185)
[-240,-80]	0.1[illegible]	0.0[illegible]	-0.025	0.020
	(0.188)	(0.215)	(0.285)	(0.201)
[-240,-60]	0.145	-0.02[illegible]	-0.003	0.017
	(0.224)	(0.249)	(0.317)	(0.208)
[-240,-40]	0.164	-0.016	0.004	0.019
	(0.259)	(0.258)	(0.333)	(0.194)
[-240,-20]	0.193	-0.036	0.027	0.012
	(0.278)	(0.297)	(0.342)	(0.242)
[-240,0]	0.188	-0.045	0.023	-0.027
	(0.310)	(0.306)	(0.378)	(0.252)
[-240,20]	0.205	-0.060	0.045	-0.033
	(0.355)	(0.352)	(0.420)	(0.273)
[-240,40]	0.222	-0.086	0.027	-0.039
	(0.402)	(0.382)	(0.455)	(0.298)
[-240,60]	0.232	-0.079	0.018	-0.040
	(0.378)	(0.416)	(0.446)	(0.321)
[-240,80]	0.258	-0.079	0.039	-0.024
	(0.416)	(0.468)	(0.466)	(0.350)
[-240,100]	0.268	-0.074	0.045	-0.006
	(0.432)	(0.480)	(0.500)	(0.382)
[-240,120]	0.292	-0.072	0.043	0.011
	(0.447)	(0.485)	(0.519)	(0.418)

+Good news if earnings per share in fiscal year of turnover is greater than or equal to Value Line forecast.

Table 4-14. CAR Broken Down by Turnover (Normal Tenure Turnover vs. Control) and News (Earnings per Share in Fiscal Year of Turnover vs. Value Line Forecast)+

Trading Interval	Mean CAR (standard deviation)			
	Turnover Firms		Control Firms	
	Good News n=71	Bad News n=91	Good News n=69	Bad News n=88
[-240,-240]	-0.000	0.001	-0.003	-0.000
	(0.020)	(0.013)	(0.016)	(0.018)
[-240,-220]	0.001	0.006	-0.005	0.003
	(0.082)	(0.058)	(0.070)	(0.068)
[-240,-200]	0.001	0.005	-0.003	0.008
	(0.106)	(0.088)	(0.103)	(0.092)
[-240,-180]	-0.011	0.009	-0.004	0.000
	(0.139)	(0.108)	(0.121)	(0.122)
[-240,-160]	-0.009	-0.003	-0.002	-0.013
	(0.153)	(0.130)	(0.131)	(0.156)
[-240,-140]	-0.016	-0.017	-0.002	-0.008
	(0.195)	(0.152)	(0.165)	(0.184)
[-240,-120]	-0.015	-0.024	-0.003	0.010
	(0.246)	(0.167)	(0.196)	(0.225)
[-240,-100]	0.002	-0.005	0.012	0.018
	(0.274)	(0.193)	(0.210)	(0.247)
[-240,-80]	0.008	-0.009	0.026	0.014
	(0.300)	(0.204)	(0.224)	(0.273)
[-240,-60]	0.057	-0.019	0.051	0.004
	(0.318)	(0.221)	(0.245)	(0.297)
[-240,-40]	0.062	-0.025	0.076	0.006
	(0.345)	(0.236)	(0.264)	(0.317)
[-240,-20]	0.063	-0.026	0.060	-0.001
	(0.352)	(0.245)	(0.267)	(0.337)
[-240,0]	0.043	-0.053	0.040	0.004
	(0.383)	(0.266)	(0.304)	(0.357)
[-240,20]	0.055	-0.050	0.034	0.018
	(0.417)	(0.295)	(0.323)	(0.378)
[-240,40]	0.044	-0.055	0.035	0.030
	(0.470)	(0.334)	(0.353)	(0.416)
[-240,60]	0.070	-0.054	0.027	0.023
	(0.492)	(0.343)	(0.376)	(0.450)
[-240,80]	0.073	-0.056	0.032	0.021
	(0.511)	(0.374)	(0.400)	(0.469)
[-240,100]	0.084	-0.051	0.039	0.021
	(0.551)	(0.403)	(0.424)	(0.491)
[-240,120]	0.089	-0.043	0.060	0.021
	(0.570)	(0.410)	(0.442)	(0.501)

+Good news if earnings per share in fiscal year of turnover is greater than or equal to Value Line forecast.

Table 4-15. CAR Regression Results: Long Tenure Turnover and Control Firm Abnormal Returns Cumulated Around Announcement of Earnings for Fiscal Year of Turnover - Operating Income News

CAR [Cumulation Period]#	Independent Variable Regression Coefficients (expected sign) (t-statistics)				R^2
	Int. (+)	News (-)	Turnover (?)	TurnoverXNews (+)	
[-240,-240]	-0.002	0.003	0.006	-0.009	0.00
	(-0.74)	(0.56)	(1.48)	(-1.31)	
[-240,-220]	0.014	-0.031	-0.007	-0.024	0.03
	(0.84)	(-1.23)	(-0.30)	(-0.62)	
[-240 200]	0.023	-0.046	-0.014	-0.067	0.03
	(0.71)	(-0.94)	(-0.33)	(-0.89)	
[-240,-180]	0.016	-0.047	-0.003	-0.048	0.00
	(0.47)	(-0.89)	(-0.06)	(-0.60)	
[-240,-160]	0.022	-0.034	-0.012	-0.096	0.01
	(0.52)	(-0.53)	(-0.20)	(-0.97)	
[-240,-140]	0.010	-0.013	-0.007	-0.170	0.03
	(0.21)	(-0.19)	(-0.11)	(-1.59)	
[-240,-120]	0.000	-0.009	0.009	-0.189	0.03
	(0.01)	(-0.12)	(0.13)	(-1.60)	
[-240,-100]	-0.018	0.007	0.056	-0.207	0.02
	(-0.34)	(0.08)	(0.80)	(-1.69)	
[-240,-80]	-0.007	0.001	0.070	-0.236	0.03
	(-0.13)	(0.01)	(0.96)	(-1.86)	
[-240,-60]	-0.006	0.004	0.087	-0.317	0.07
	(-0.10)	(0.04)	(1.11)	(-2.31)	
[-240,-40]	-0.002	-0.022	0.095	-0.303	0.06+
	(-0.03)	(-0.22)	(1.11)	(-2.02)	
[-240,-20]	-0.003	-0.014	0.107	-0.315	0.06+
	(-0.05)	(-0.15)	(1.24)	(-2.10)	
[-240,0]	-0.030	-0.002	0.119	-0.226	0.02
	(-0.45)	(-0.02)	(1.32)	(-1.43)	
[-240,20]	-0.037	0.023	0.121	-0.249	0.00
	(-0.48)	(0.20)	(1.18)	(-1.39)	
[-240,40]	-0.043	0.025	0.128	-0.251	0.00
	(-0.52)	(0.20)	(1.16)	(-1.31)	
[-240,60]	-0.065	0.063	0.159	-0.324	0.01
	(-0.78)	(0.49)	(1.42)	(-1.65)	
[-240,80]	-0.058	0.077	0.160	-0.336	0.00
	(-0.64)	(0.54)	(1.30)	(-1.56)	
[-240,100]	-0.042	0.049	0.148	-0.308	0.00
	(-0.43)	(0.33)	(1.13)	(-1.34)	
[-240,120]	-0.025	0.048	0.143	-0.297	0.00
	(-0.25)	(0.31)	(1.06)	(-1.26)	

#-beginning and ending trading dates in square brackets are relative to annual earnings announcement date in the Wall Street Journal.
+-$p<0.05$. *-$p<0.05$ (one-tailed test). **-$p<0.01$ (one-tailed test).

Table 4-16. CAR Regression Results: Normal Tenure Turnover and Control Firm Abnormal Returns Cumulated Around Announcement of Earnings for Fiscal Year of Turnover - Operating Income News

CAR [Cumulation Period]#	Independent Variable Regression Coefficients (expected sign) (t-statistics)				R^2
	Int. (+)	News (-)	Turnover (?)	TurnoverXNews (?)	
[-240,-240]	-0.001	-0.002	0.001	0.002	0.00
	(-0.44)	(-0.56)	(0.30)	(0.60)	
[-240,-220]	0.003	-0.018	-0.001	0.019	0.00
	(0.57)	(-1.60)	(-0.12)	(1.23)	
[-240,-200]	0.005	-0.043	-0.004	0.036	0.01
	(0.63)	(-2.70)*	(-0.32)	(1.67)	
[-240,-180]	-0.002	-0.038	0.004	0.036	0.00
	(-0.15)	(-2.91)*	(0.23)	(1.29)	
[-240,-160]	-0.001	-0.051	0.001	0.046	0.01
	(-0.07)	(-2.18)*	(0.07)	(1.42)	
[-240,-140]	0.006	-0.054	-0.010	0.035	0.00
	(0.40)	(-1.99)*	(-0.49)	(0.93)	
[-240,-120]	0.011	-0.031	-0.025	0.025	0.00
	(0.61)	(-0.94)	(-0.96)	(0.55)	
[-240,-100]	0.023	-0.032	-0.023	0.035	0.00
	(1.19)	(-0.89)	(-0.81)	(0.72)	
[-240,-80]	0.033	-0.046	-0.016	0.038	0.00
	(1.62)	(-1.20)	(-0.54)	(0.73)	
[-240,-60]	0.042	-0.060	-0.024	0.063	0.00
	(1.88)	(-1.44)	(-0.74)	(1.08)	
[-240,-40]	0.050	-0.076	-0.037	0.085	0.00
	(2.07)	(-1.68)	(-1.06)	(1.37)	
[-240,-20]	0.028	-0.058	-0.024	0.103	0.00
	(1.14)	(-1.25)	(-0.65)	(1.61)	
[-240,0]	0.026	-0.063	-0.040	0.102	0.00
	(0.95)	(-1.22)	(-1.00)	(1.44)	
[-240,20]	0.025	-0.067	-0.047	0.123	0.00
	(0.85)	(-1.20)	(-1.09)	(1.60)	
[-240,40]	0.025	-0.044	-0.057	0.108	0.00
	(0.77)	(-0.72)	(-1.19)	(1.28)	
[-240,60]	0.020	-0.028	-0.037	0.086	0.00
	(0.58)	(-0.44)	(-0.73)	(0.97)	
[-240,80]	0.022	-0.031	-0.036	0.082	0.00
	(0.61)	(-0.45)	(-0.69)	(0.88)	
[-240,100]	0.021	-0.021	-0.021	0.056	0.00
	(0.56)	(-0.29)	(-0.38)	(0.56)	
[-240,120]	0.026	-0.018	-0.023	0.059	0.00
	(0.65)	(-0.25)	(-0.40)	(0.58)	

#-beginning and ending trading dates in square brackets are relative to annual earnings announcement date in the Wall Street Journal.
+-p<0.05. *-p<0.05 (one-tailed test). **-p<0.01 (one-tailed test).

Table 4-17. CAR Regression Results: Long Tenure Turnover and Control Firm Abnormal Returns Cumulated Around Announcement of Earnings for Fiscal Year of Turnover - Value Line Forecast News

CAR [Cumulation Period]#	Independent Variable Regression Coefficients (expected sign) (t-statistics)				R^2
	Int. (+)	News (-)	Turnover (?)	TurnoverXNews (+)	
[-240,-240]	0.001	-0.006	0.004	0.002	0.012
	(0.25)	(-1.11)	(.84)	(0.23)	
[-240,-220]	0.003	0.003	0.014	-0.039	0.000
	(0.15)	(0.13)	(0.54)	(-1.05)	
[-240,-200]	0.014	-0.003	0.019	-0.054	0.000
	(0.52)	(-0.07)	(0.49)	(-0.98)	
[-240,-180]	0.002	-0.002	0.029	-0.044	0.000
	(0.05)	(-0.04)	(0.70)	(-0.75)	
[-240,-160]	0.000	0.004	0.038	-0.064	0.000
	(0.00)	(0.08)	(0.79)	(-0.94)	
[-240,-140]	0.014	-0.005	0.013	-0.061	0.000
	(0.36)	(-0.09)	(0.25)	(-0.80)	
[-240,-120]	-0.011	0.041	0.063	-0.131	0.000
	(-0.26)	(0.69)	(1.04)	(-1.55)	
[-240,-100]	-0.046	0.073	0.127	-0.185	0.015
	(-0.92)	(1.06)	(1.81)*	(-1.87)	
[-240,-80]	-0.031	0.059	0.132	-0.181	0.012
	(-0.59)	(0.80)	(1.76)*	(-1.72)	
[-240,-60]	-0.009	0.033	0.147	-0.206	0.027
	(-0.16)	(0.40)	(1.76)*	(-1.76)	
[-240,-40]	0.000	0.024	0.155	-0.205	0.028
	(0.00)	(0.28)	(1.77)*	(-1.67)	
[-240,-20]	0.020	-0.002	0.164	-0.234	0.046
	(0.30)	(-0.02)	(1.70)*	(-1.73)	
[-240,0]	0.016	-0.038	0.166	-0.203	0.047
	(0.21)	(-0.37)	(1.60)	(-1.43)	
[-240,20]	0.035	-0.064	0.169	-0.228	0.055
	(0.43)	(-0.56)	(1.45)	(-1.40)	
[-240,40]	0.016	-0.049	0.202	-0.286	0.059
	(0.18)	(-0.39)	(1.59)	(-1.60)	
[-240,60]	0.004	-0.033	0.228	-0.314	0.064
	(0.04)	(-0.26)	(1.77)*	(-1.73)	
[-240,80]	0.026	-0.040	0.232	-0.333	0.060
	(0.26)	(-0.29)	(1.65)	(-1.69)	
[-240,100]	0.035	-0.035	0.235	-0.350	0.054
	(0.33)	(-0.24)	(1.59)	(-1.68)	
[-240,120]	0.031	-0.011	0.264	-0.400	0.059
	(0.29)	(-0.07)	(1.71)*	(-1.85)	

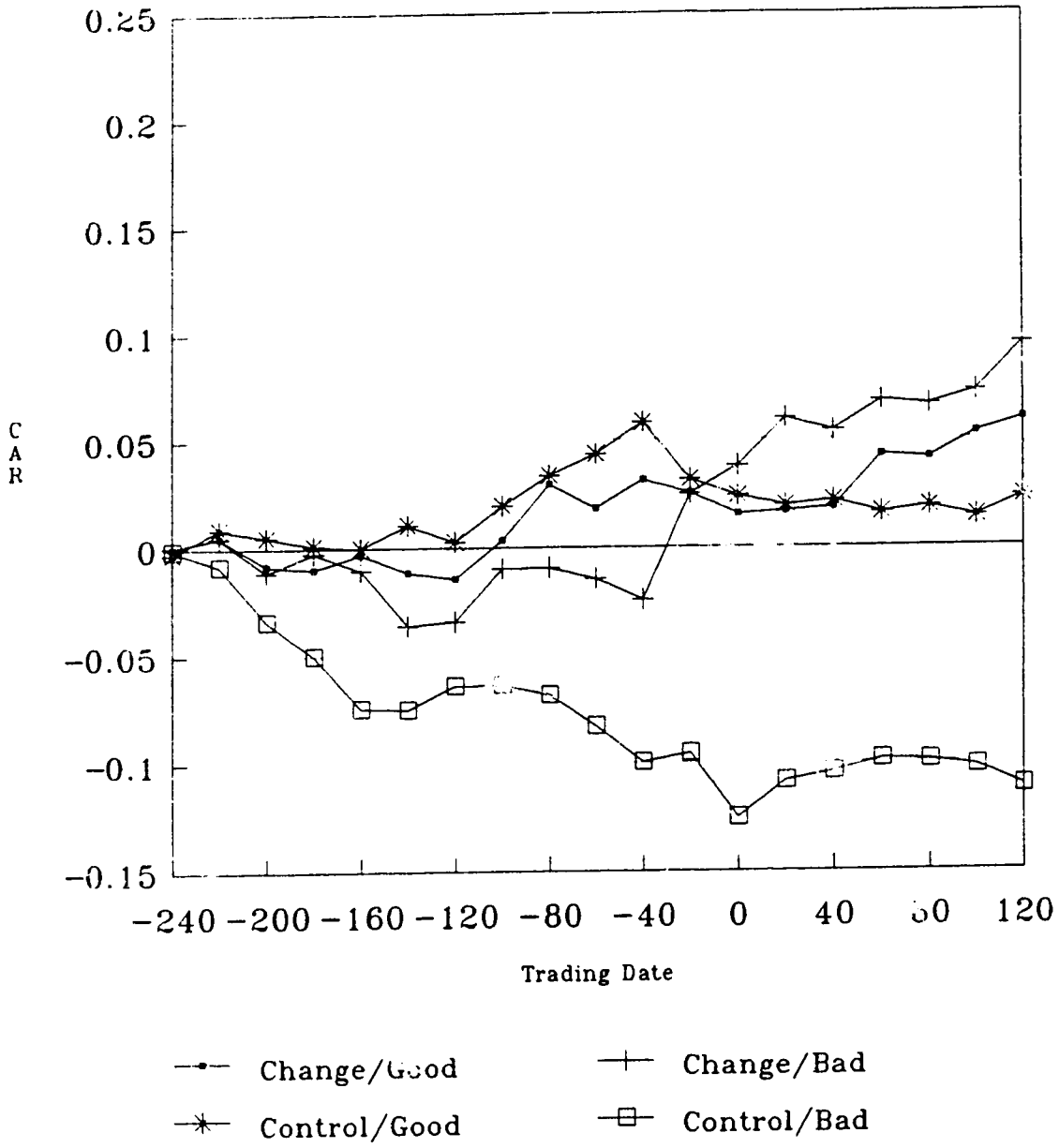
#-beginning and ending trading dates in square brackets are relative to annual earnings announcement date in the Wall Street Journal.
+-$p<0.05$. *-$p<0.05$ (one-tailed test). **-$p<0.01$ (one-tailed test).

Table 4-18. CAR Regression Results: Normal Tenure Turnover and Control Firm Abnormal Returns Cumulated Around Announcement of Earnings for Fiscal Year of Turnover - Value Line Forecast News

CAR [Cumulation Period]#	Independent Variable Regression Coefficients (expected sign) (t-statistics)				R^2
	Int. (+)	News (-)	Turnover (?)	TurnoverXNews (?)	
[-240,-240]	-0.003	0.003	0.003	-0.002	0.000
	(-1.52)	(1.05)	(0.99)	(-0.47)	
[-240,-220]	-0.005	0.009	0.007	-0.004	0.000
	(-0.65)	(0.79)	(0.57)	(-0.25)	
[-240,-200]	-0.003	0.011	0.004	-0.006	0.000
	(-0.26)	(0.69)	(0.25)	(-0.29)	
[-240,-180]	-0.004	0.004	-0.007	0.016	0.000
	(-0.28)	(0.21)	(-0.34)	(0.58)	
[-240,-160]	-0.002	-0.010	-0.007	0.017	0.000
	(-0.14)	(-0.45)	(-0.29)	(0.53)	
[-240,-140]	-0.002	-0.006	-0.014	0.006	0.000
	(-0.09)	(-0.22)	(-0.49)	(0.14)	
[-240,-120]	-0.003	0.013	-0.013	-0.022	0.000
	(-0.11)	(0.39)	(-0.36)	(-0.46)	
[-240,-100]	0.012	0.006	-0.009	-0.014	0.000
	(0.42)	(0.17)	(-0.24)	(-0.27)	
[-240,-80]	0.026	-0.011	0.004	-0.028	0.000
	(0.85)	(-0.28)	(0.10)	(-0.50)	
[-240,-60]	0.051	-0.047	0.016	-0.029	0.004
	(1.56)	(-1.00)	(0.43)	(-0.47)	
[-240,-40]	0.076	-0.070	-0.014	-0.017	0.010
	(2.16)*	(-1.42)	(-0.29)	(-0.25)	
[-240,-20]	0.060	-0.061	0.003	-0.029	0.007
	(1.64)	(-1.25)	(0.06)	(-0.42)	
[-240,0]	0.040	-0.037	0.002	-0.058	0.005
	(1.02)	(-0.70)	(0.04)	(-0.79)	
[-240,20]	0.034	-0.016	0.021	-0.089	0.004
	(0.80)	(-0.28)	(0.35)	(-1.11)	
[-240,40]	0.035	-0.005	0.008	-0.094	0.002
	(0.74)	(-0.08)	(0.13)	(-1.06)	
[-240,60]	0.027	-0.004	0.043	-0.120	0.003
	(0.54)	(-0.06)	(0.71)	(-1.28)	
[-240,80]	0.032	-0.011	0.041	-0.118	0.002
	(0.61)	(-0.15)	(0.55)	(-1.19)	
[-240,100]	0.039	-0.019	0.044	-0.116	0.002
	(0.70)	(-0.25)	(0.56)	(-1.10)	
[-240,120]	0.060	-0.039	0.030	-0.094	0.001
	(1.03)	(-0.50)	(0.36)	(-0.86)	

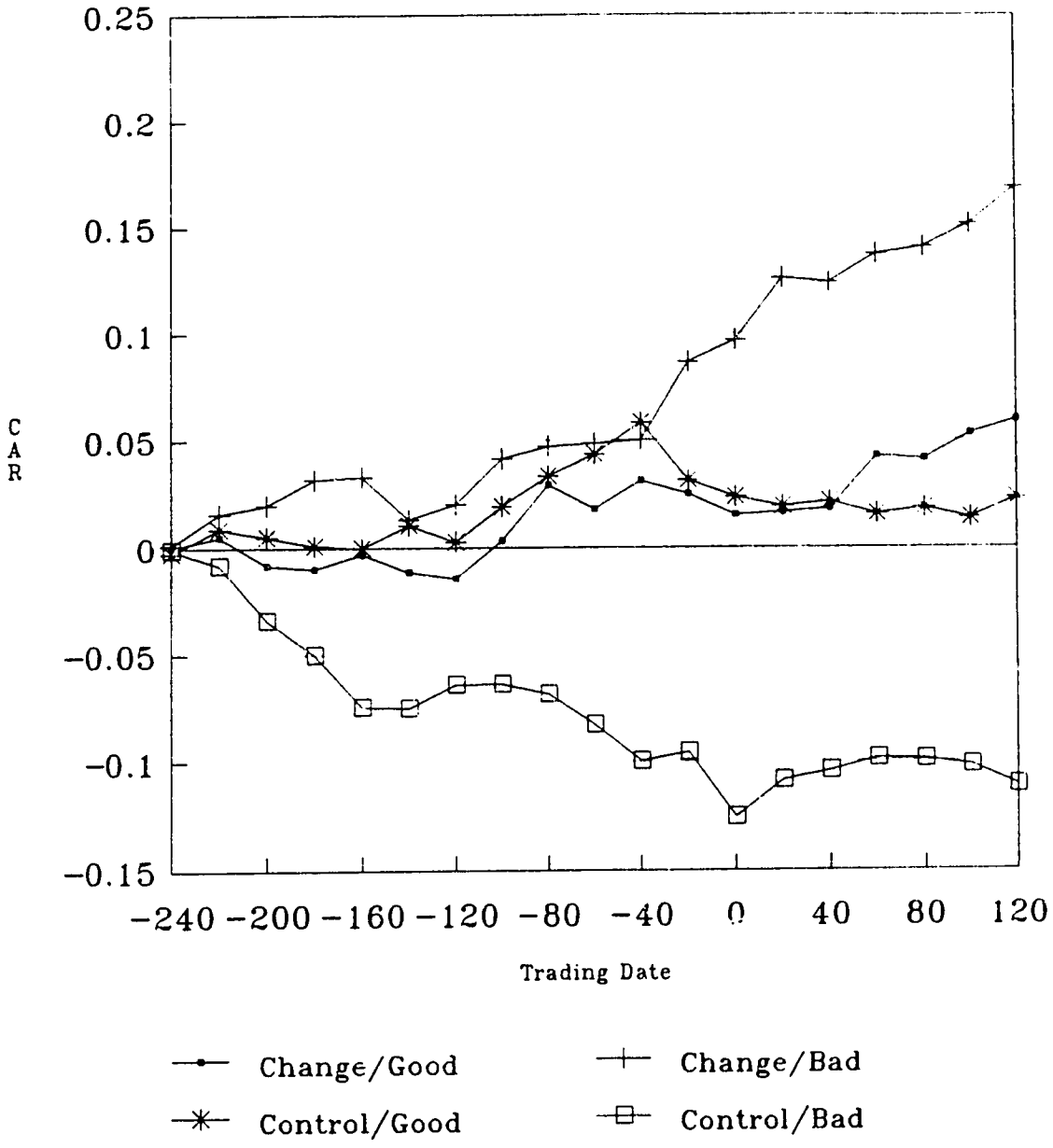
#-beginning and ending trading dates in square brackets are relative to annual earnings announcement date in the Wall Street Journal.
+-p<0.05. *-p<0.05 (one-tailed test). **-p<0.01 (one-tailed test).

Figure 4-1. CAR Broken Down by Turnover (Non-Routine Turnover vs. Control) and News (Operating Income in Fiscal Year of Turnover vs. Previous Year)+



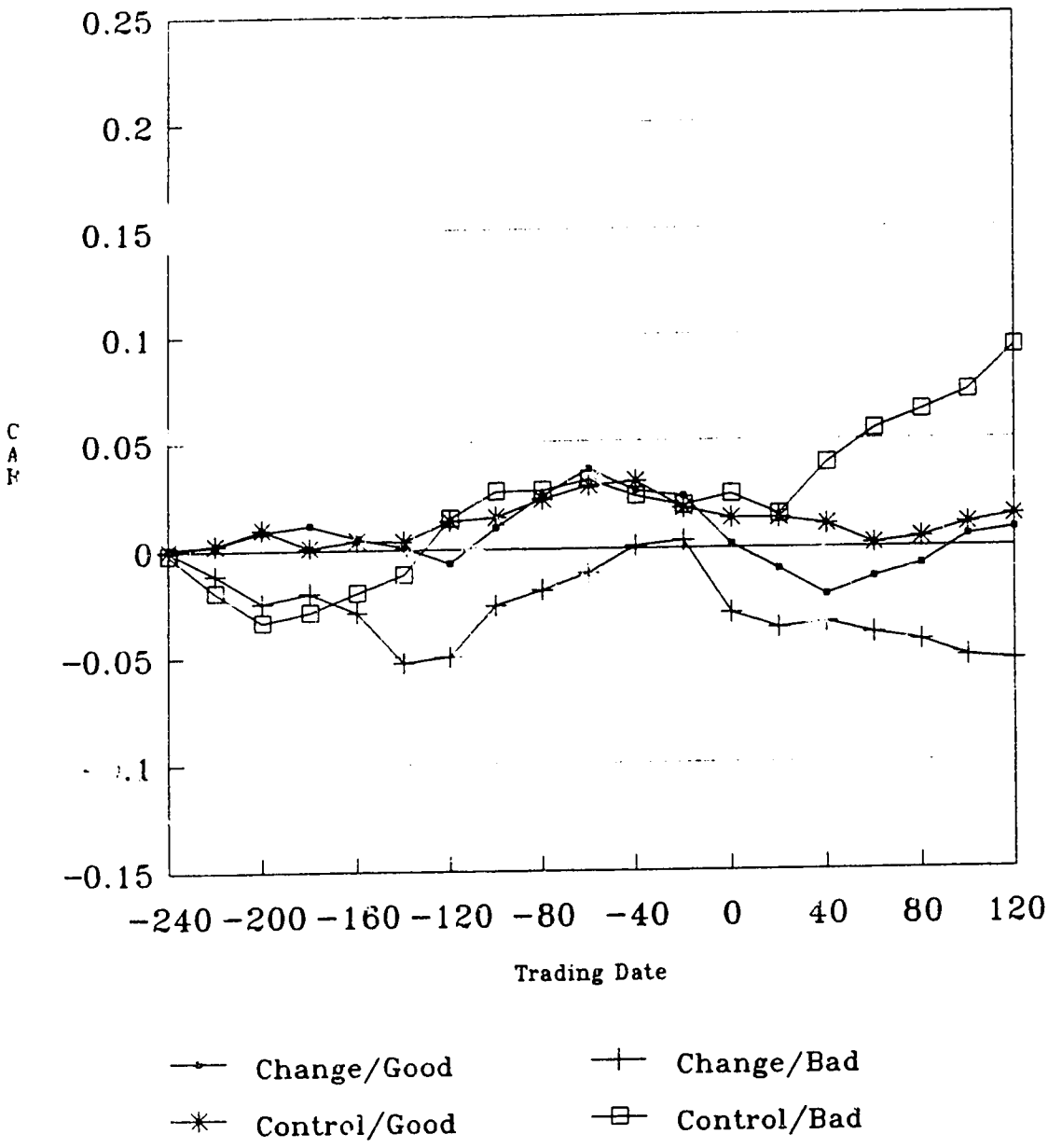
+News is considered good if operating income in fiscal year of turnover is higher than operating income in previous year. Trading dates shown are relative to announcement of earnings for fiscal year of turnover in the Wall Street Journal.

Figure 4-2. CAR Broken Down by Turnover (Non-Routine Turnover vs. Control) and News (Operating Income in Fiscal Year of Turnover vs. Previous Year) - Two Outliers Removed+



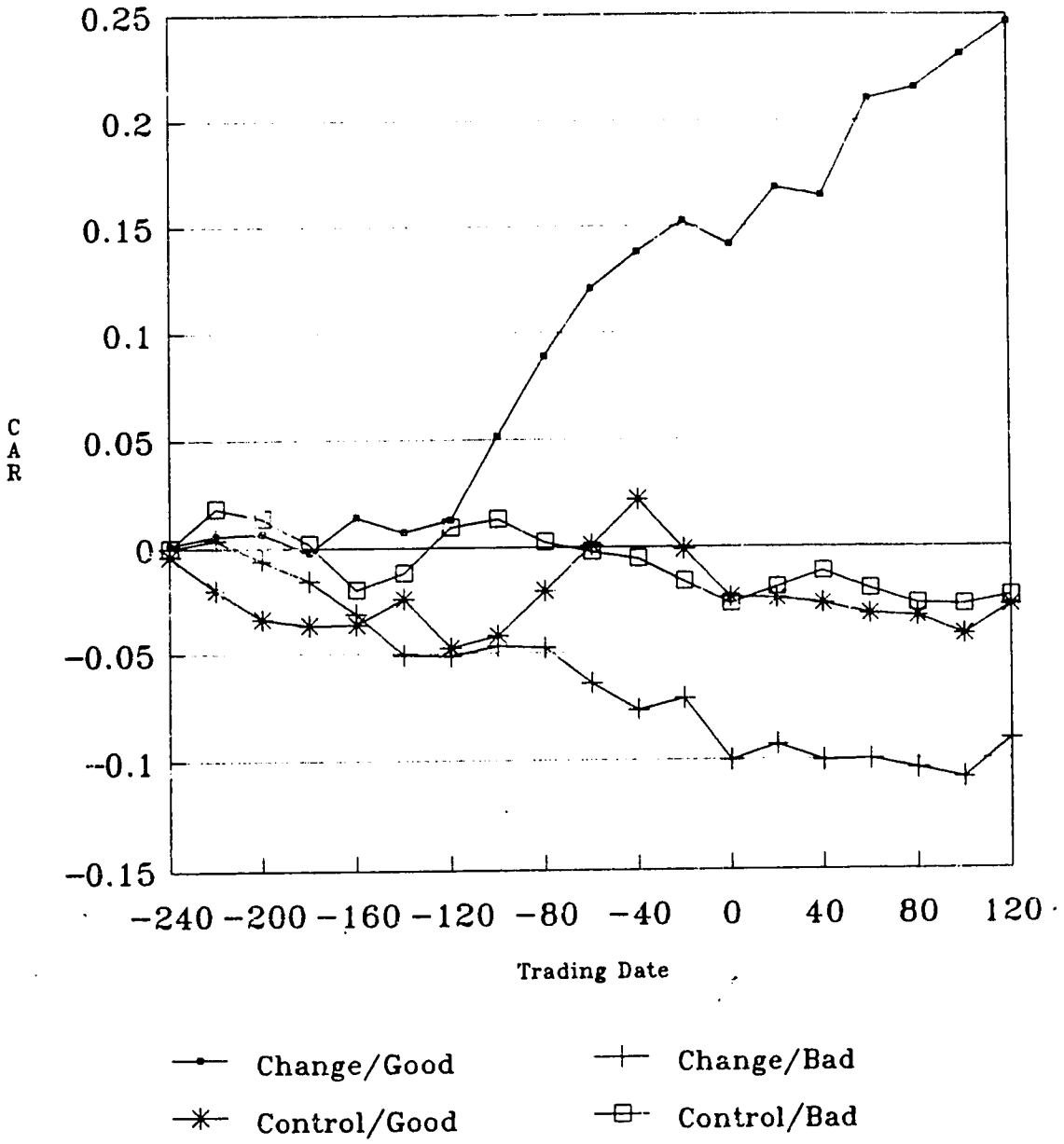
+News is considered good if operating income in fiscal year of turnover is higher than operating income in previous year. Trading dates shown are relative to announcement of earnings for fiscal year of turnover in the Wall Street Journal.

Figure 4-3. CAR Broken Down by Turnover (Routine Turnover vs. Control) and News (Operating Income in Fiscal Year of Turnover vs. Previous Year)+



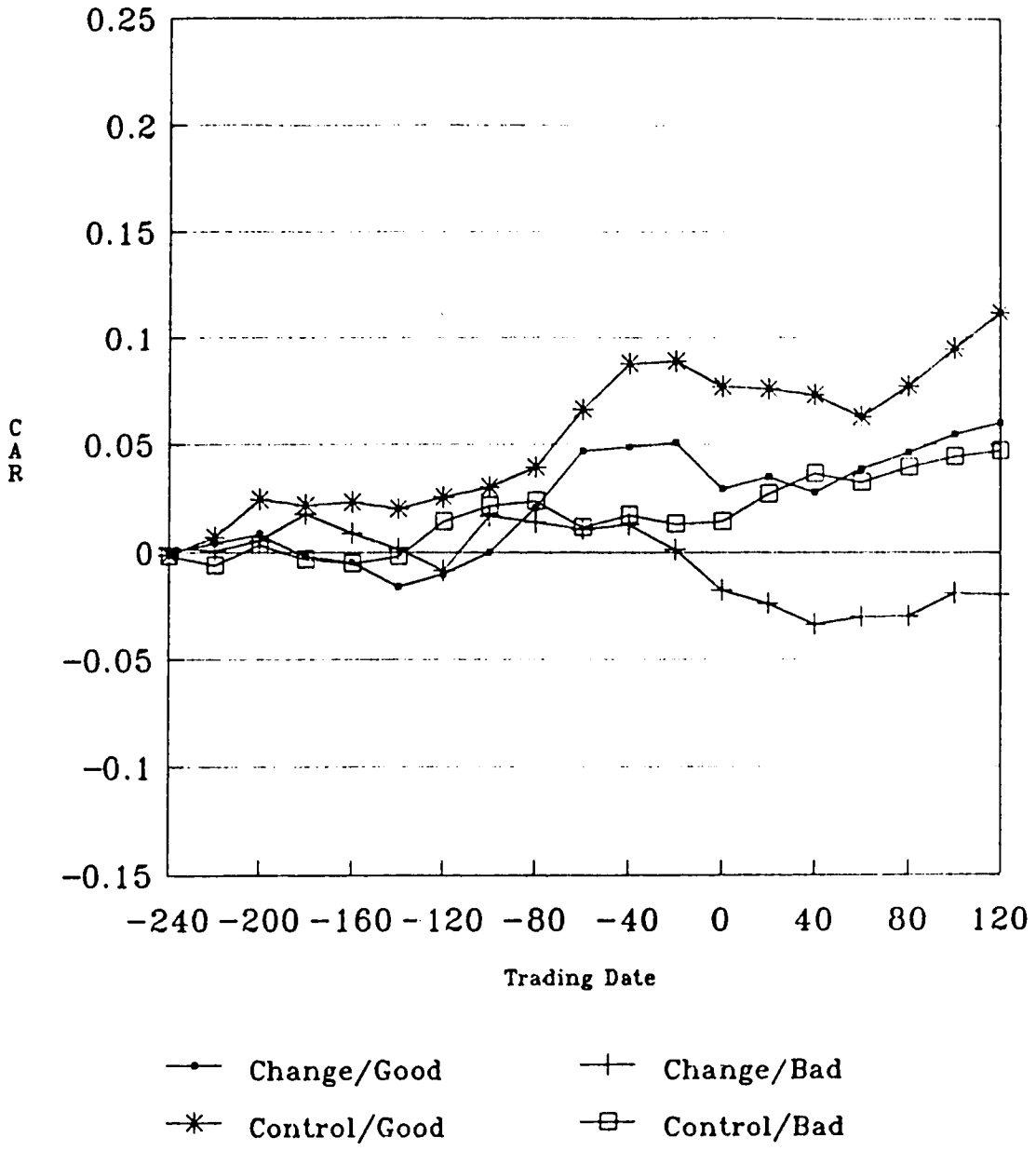
+News is considered good if operating income in fiscal year of turnover is higher than operating income in previous year. Trading dates shown are relative to announcement of earnings for fiscal year of turnover in the Wall Street Journal.

Figure 4-4. CAR Broken Down by Turnover (Non-Routine Turnover vs. Control) and News (Earnings per Share in Fiscal Year of Turnover vs. Value Line Forecast)+



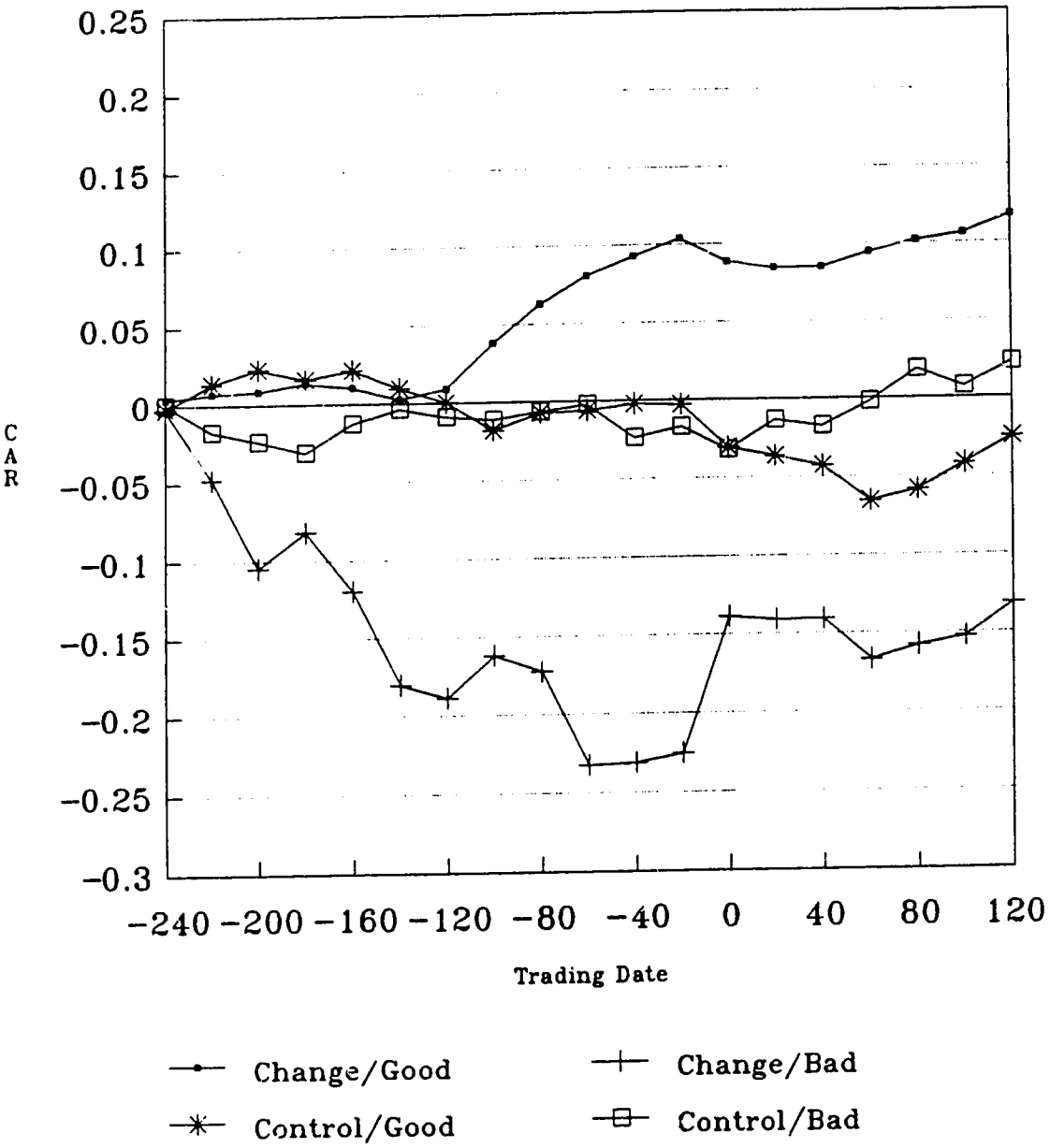
+News is considered good if earnings per share in fiscal year of turnover is greater than or equal to Value Line forecast earnings per share. Trading dates shown are relative to announcement of earnings for fiscal year of turnover in the Wall Street Journal.

Figure 4-5. CAR Broken Down by Turnover (Routine Turnover vs. Control) and News (Earnings per Share in Fiscal Year of Turnover vs. Value Line Forecast)+



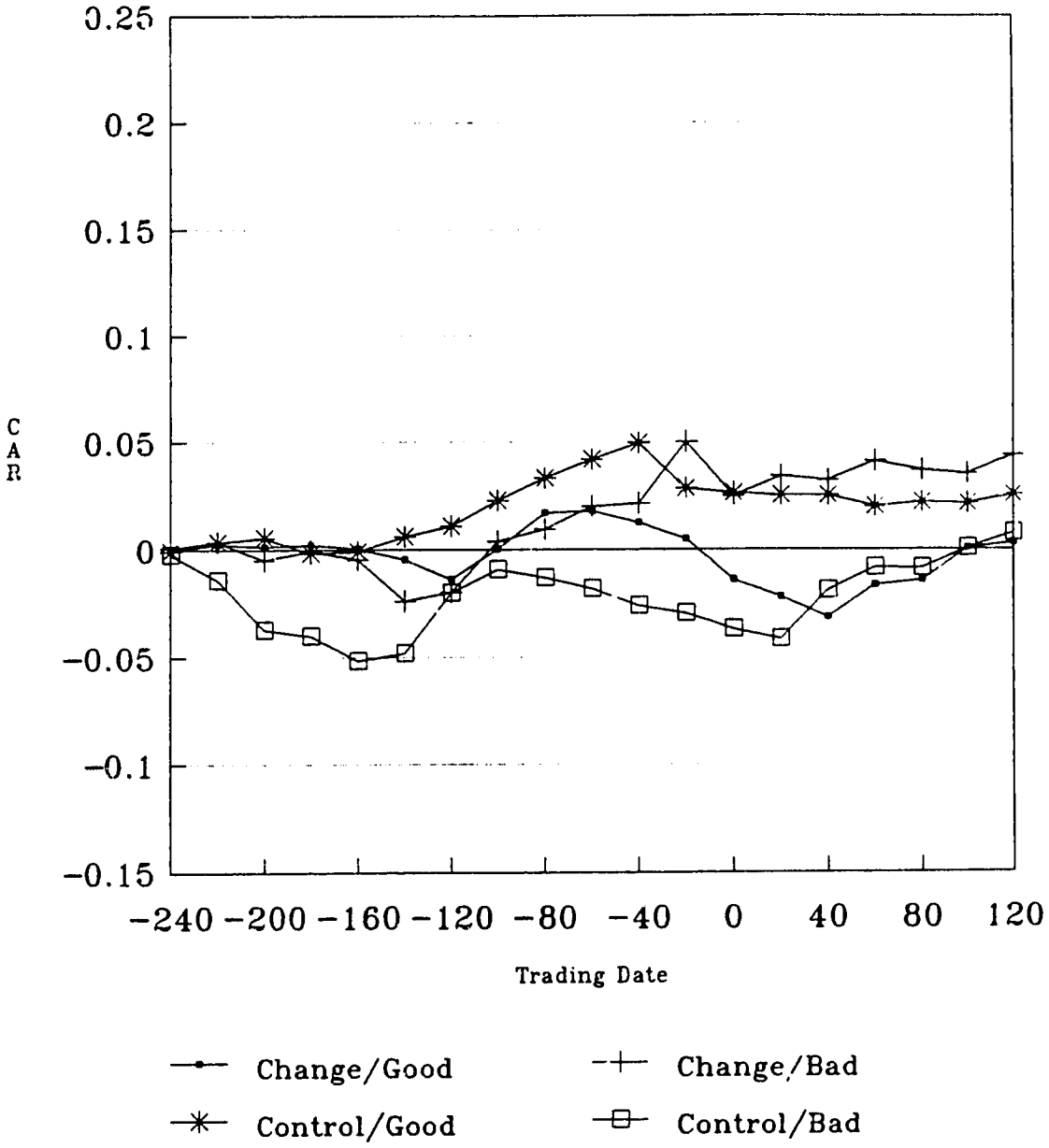
+News is considered good if earnings per share in fiscal year of turnover is greater than or equal to Value Line forecast earnings per share. Trading dates shown are relative to announcement of earnings for fiscal year of turnover in the Wall Street Journal.

Figure 4-6. CAR Broken Down by Turnover (Long Tenure Turnover vs. Control) and News (Operating Income in Fiscal Year of Turnover after Turnover vs. Previous Year)+



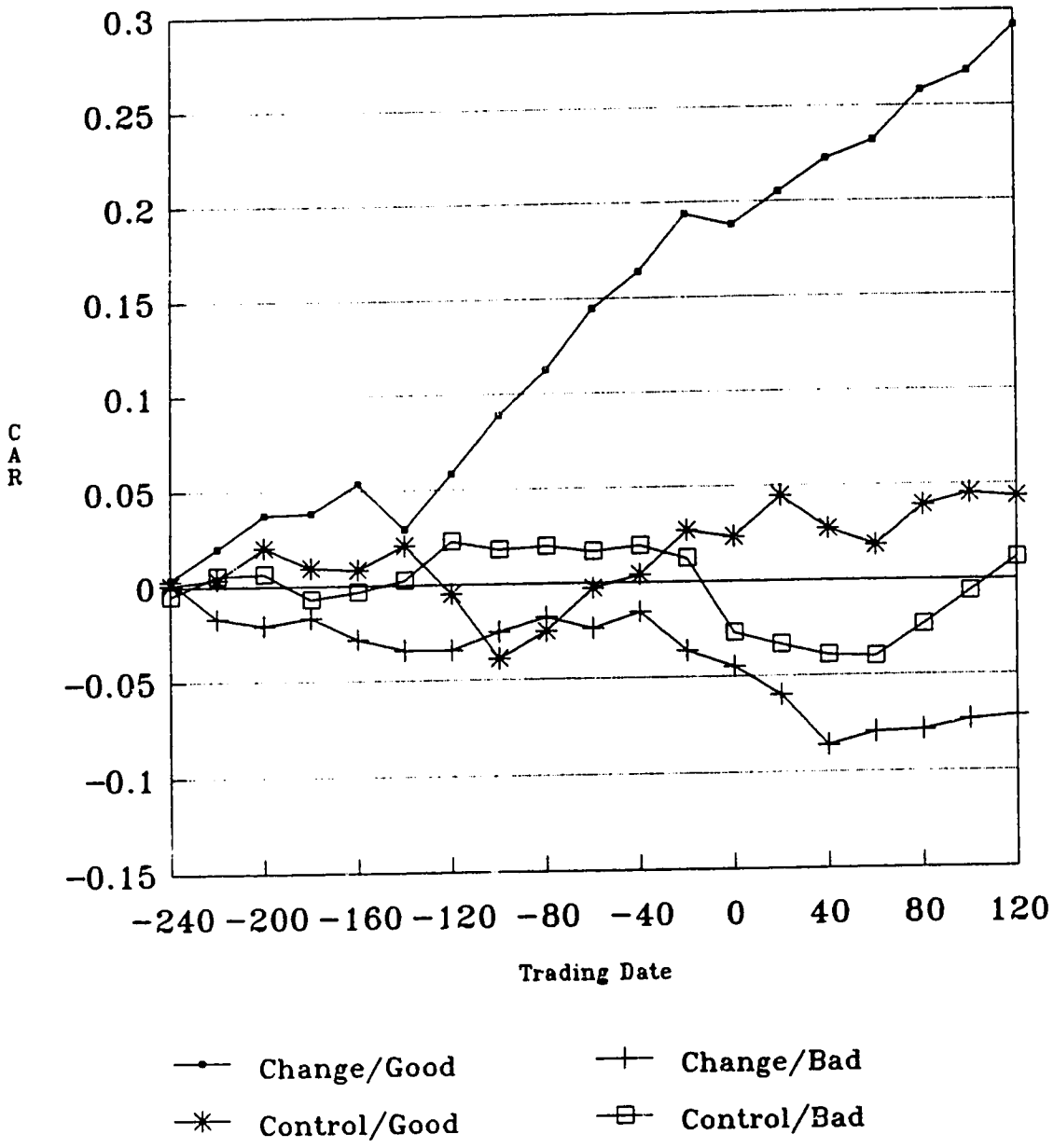
+News is considered good if operating income in fiscal year of turnover is higher than operating income in previous year. Trading dates shown are relative to announcement of earnings for fiscal year of turnover in the Wall Street Journal.

Figure 4-7. CAR Broken Down by Turnover (Normal Turnover vs. Control) and News (Operating Income in Fiscal Year of Turnover vs. Previous Year)+



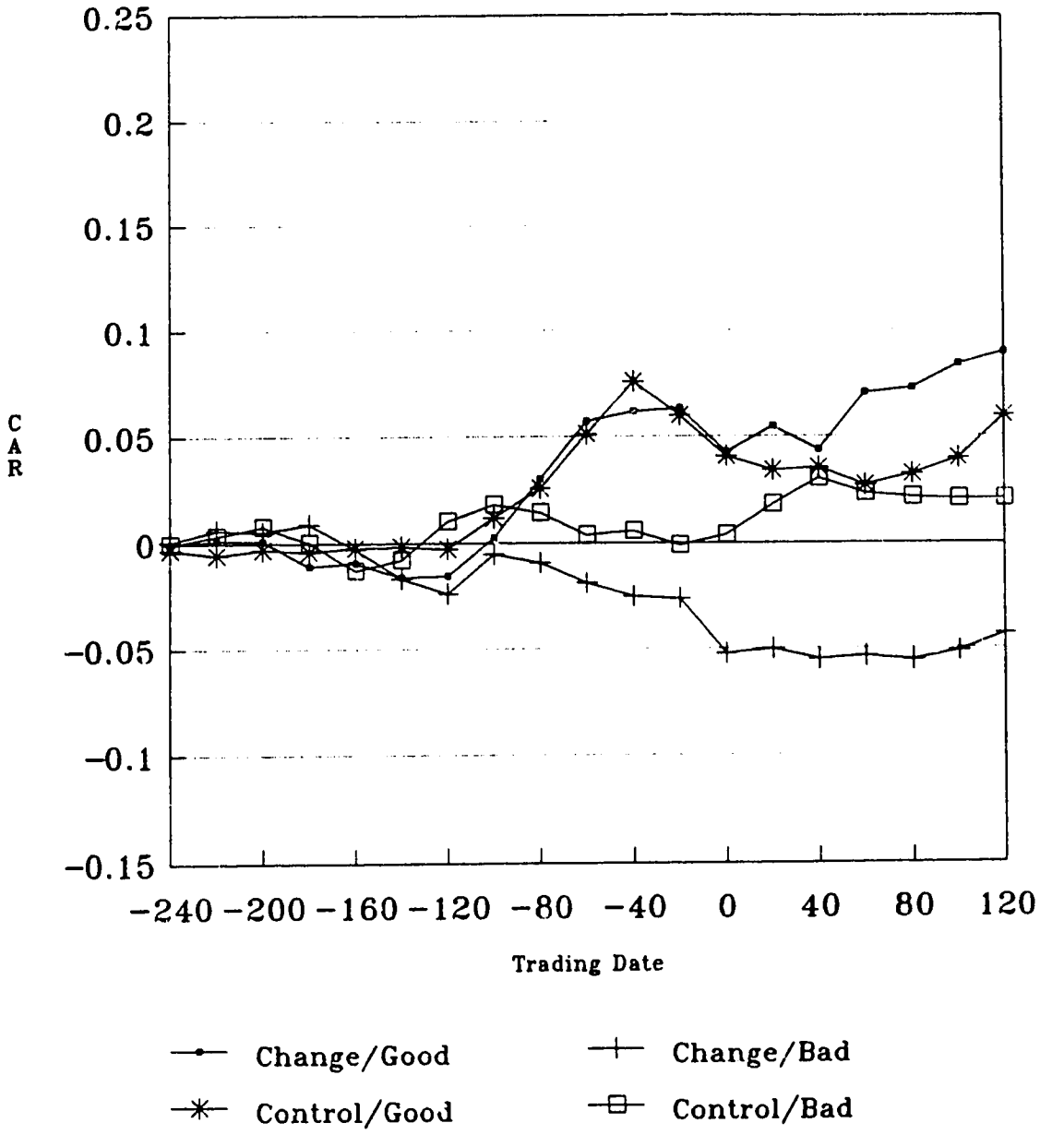
+News is considered good if operating income in fiscal year of turnover is higher than operating income in previous year. Trading dates shown are relative to announcement of earnings for fiscal year of turnover in the Wall Street Journal.

Figure 4-8. CAR Broken Down by Turnover (Long Tenure Turnover vs. Control) and News (Earnings per Share in Fiscal Year of Turnover vs. Value Line Forecast)+



+News is considered good if earnings per share in fiscal year of turnover is greater than or equal to Value Line forecast earnings per share. Trading dates shown are relative to announcement of earnings for fiscal year of turnover in the Wall Street Journal.

Figure 4-9. CAR Broken Down by Turnover (Normal Tenure Turnover vs. Control) and News (Earnings per Share in Fiscal Year of Turnover vs. Value Line Forecast)+



+News is considered good if earnings per share in fiscal year of turnover is greater than or equal to Value Line forecast earnings per share. Trading dates shown are relative to announcement of earnings for fiscal year of turnover in the Wall Street Journal.

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CHAPTER 5. CONCLUSION

This chapter ties together the important results found in this dissertation and discusses them in terms of the extant literature in accounting and organization theory. The chapter is organized as follows: First, the theoretical underpinning and important results of the study are summarized; second, the implications of these findings for the accounting and organization theory literatures are discussed; and finally, some directions for future research are offered.

SUMMARY

The "big bath" is probably the most obvious form of top management manipulation of accounting, and incidents of financial baths often receive prominent attention in the financial press. It has also attracted the attention of researchers (Copeland and Moore, 1972; Elliott and Moore, 1988) who have studied the incidence of financial baths and generally found that they often occur shortly after a top executive turnover. The research reported here takes a different approach. Rather than identifying baths and then trying to detect management turnover, I identify turnovers and then test for the occurrence of financial baths.

The central contribution of this research is the application of organization theory notions of leadership and turnover to the issue of discretionary accounting decisions. The story told here is that poor corporate performance prompts the board of directors to dismiss the incumbent chief executive officer (CEO) and hire a replacement to improve performance. The new CEO, uncommitted in any way to the organization's history, identifies problems within the organization and available opportunities. While making or planning to make substantive changes in

the operation of the firm, the new CEO attempts to put together a coherent story that will describe the condition that the firm is in and where it must go. The financial statements provide one way to communicate this vision to interested observers.

Not all turnovers can be expected to follow the pattern outlined above. In many instances, turnover is a routine event in which the CEO of a successful firm simply retires and is replaced by a junior executive promoted from within the firm. In this case, organizational change is unnecessary and possibly even dangerous, and the challenge facing the new CEO is to convince observers that the turnover event is really a non-event.

The work performed here distinguished between routine (change-avoiding) and non-routine (change-enhancing) CEO turnover, and examined accounting decisions and market conditions surrounding both types of turnover. This chapter briefly reviews the results for each of the types of turnover studied in the first four chapters of this thesis, and points out the important findings, limitations and directions for future research.

This study distinguished between routine turnover and non-routine turnover in two ways. The first was the age/origin dichotomy, in which a turnover was deemed to be non-routine if the outgoing CEO was less than 64 years of age (a dismissal) and/or the replacement CEO was hired from outside the organization (an injection of fresh blood). Either case arguably reflects the opinion of the board of directors that some sort of change is required in the organization.

Consistent with many of the findings in the organizational and

economic literatures, non-routine turnover was generally preceded by poor stock market performance relative to matched non-turnover firms. As predicted, non-routine turnover was generally followed by what seemed to be income decreasing accounting decisions on the part of the new CEO, decisions that seemed to be associated with positive abnormal stock returns in the period leading up to and following the first announcement of annual earnings subsequent to the turnover. Routin turnover, on the other hand, was not preceded by poor performance relative to that of matched non-turnover firms; and did not appear to be associated with income decreasing decisions on the part of the new CEO or unusual stock returns behavior subsequent to the turnover.

Taken together, the results reported here offer strong support for the model advanced in Chapter 1. There are some important limitations, however, and unexpected findings that bear some discussion and point out directions for future research in this area.

First of all, as discussed in Chapter 2, there is at least some evidence that the age/origin scheme yields at best a fuzzy distinction between routine and non-routine turnover. Fully one-third of the non-routine turnover firm financial statements released after the turnover made no mention of the change in management or any change in corporate strategy. This probably reflects to some extent the corporate tact that Vancil (1987) found among top executives in large firms, but it probably also reflects at least some misclassified firms. Remedies for this problem are not obvious. Researchers using press reports to classify turnovers have suffered similar problems (Weisbach, 1988). On the other hand, an inefficient classification system probably introduces a

conservative rather than a liberal bias into the tests used here.

An important result that I did not obtain was a significant market reaction to the announcement of the non-routine turnovers in the Wall Street Journal. As discussed in chapter 3, there are a number of possible reasons for this, including: (1) given the results of Chapter 2, it is likely that the market anticipated the turnover to some degree; (2) the market did not have enough information at the time of the announcement to assess whether the turnover was beneficial; or (3) the market model is misspecified and a matched pairs analysis of turnover and non-turnover firm total stock returns is unable to detect accurately firm-specific stock returns. Regarding the second possibility, it might be possible to identify alternative events that might have yielded information to the market regarding the new CEO's agenda, including: (1) the announcement of the write-downs and special charges in the popular press; (2) the announcement of any specific restructuring/repositioning plans (e. g., Brickley and Van Drunen, 1990), if these events are different from the announcement of the accounting decisions; or (3) the release of the annual financial reports following the turnover.

One interesting result that bears discussion is the Chapter 2 finding that routine turnover firms experience a high return on assets (relative to matched non-turnover firms) in the fiscal year prior to turnover. Further, chapter 3 results showed that routine turnover firms tend to reduce research and development spending in the year of CEO turnover. These results together are consistent with recent work by Dechow and Sloan (1991) who find that CEOs about to retire appear to manage discretionary expenses to increase short-term firm earnings.

The second dichotomy recognized that, under some circumstances at least, an ineffective CEO might be able to resist what might be considered normal internal pressures to leave the CEO position (e. g., through holding a significant block of company shares, or a sympathetic board of directors). In this case, an underperforming firm might be expected to drift further and further out of synchronization with its environment until the incumbent voluntarily retires or dies. To examine this problem, turnovers were divided into two groups based on the tenure of the outgoing CEO: normal tenure turnover firms were those in which the outgoing CEO was occupied the CEO position for less than fifteen years (the bottom four quintiles of the distribution of tenures); while long tenure turnover firms were defined as those in which the outgoing CEO had held that position for fifteen or more years. Here, the normal tenure turnovers were considered "routine" while the long tenure turnovers were considered "non-routine," and expected to be accompanied by substantive organizational change and unusual accounting decisions.

The first finding was that the classification of firms based on tenure was entirely independent of the age/origin classification. Throughout the analyses, the normal tenure firms behaved like a hybrid of the age/origin routine and non-routine firms. This leads to the conclusion that the age/origin classification scheme is a better proxy for the concept of routine vs. non-routine.

The results for the long tenure firms are still interesting, however. Although characterized by lower stock returns over the period leading up to the turnover, the income-to-sales ratio for these firms seems to increase after turnover, after controlling for contextual

variables like size, and prior accounting and stock market performance. These results suggest one or more non-exclusive explanations. First, it is possible that change in these relatively smaller firms (Chapter 2 results) is easier and works its way through to accounting performance measures more quickly. Secondly, it is also possible that long tenure is evidence of successful management and the efficient operation of the managerial labour market. Carroll (1984), for example, finds that founder-CEOs are often vital to the success of their firms; and organizational death is much more likely following a turnover. Although long tenure turnover does not seem to proxy in any obvious way for non-routine turnover, long turnover firms still behave in a manner different from other turnover firms and seem to provide an promising avenue for future research.

IMPLICATIONS FOR ORGANIZATION THEORY AND ACCOUNTING RESEARCH

The next section of this chapter discusses in broader terms the implications of this research for the extant literature in accounting and organization theory. The first issue is that of CEO turnover and organizational change. Next, the issue of the relationship between organizational change and accounting decisions is examined, and implications for this research are drawn.

CEO Turnover and Organizational Change. The organization theory literature reviewed in Chapter 1 is split on the effect of executive succession on an organization. Many writers (e. g., Pfeffer, 1977) argue that leaders are constrained by selection processes and environmental factors and are therefore unable to make a substantial difference in the organization. Others (e. g., Vancil, 1987) contend that substantive

organizational change is impossible without CEO turnover, and that CEOs have remarkable impact on the organization's history.

It is important to note that these two viewpoints need not be contradictory. In the model of organizational change put forward by Pfeffer and Salancik (1978), change is brought about by executive succession. The type of succession is determined, however, by environmental forces. Critical factors in the environment determine what parts of the organization will become powerful, which in turn triggers executive succession and determines the identity of the incoming executive. The new CEO's agenda reflects that of the most powerful group within the organization. Although this model of change depends upon the executive, it does so in a very deterministic way.

Does the research presented here shed any light on this voluntarism vs. determinism argument? My empirical strategy was to rely on stock market reactions to gauge whether or not CEO turnover was associated with imminent and unexpected organizational change. If organizational change is effected entirely deterministically via CEO turnover in response to organizational crisis as outlined by Pfeffer and Salancik above, the market should be able to predict a CEO turnover and the agenda of the new CEO some time before the turnover event.

This sort of thinking is consistent with the market returns results reported in chapter 3, where I was unable to detect any significant abnormal returns to turnover firms around the date of the announcement of CEO turnover relative to matched non-turnover firms. However, positive abnormal returns were detected for non-routine turnover firms around the time of the first annual earnings announcement following the turnover.

This suggests that the market perceives some increase in the market value of the non-routine CEO turnover firm but not until some time after the turnover. This finding is more consistent with the voluntarist view of Vancil, where the market is aware that the new CEO could mean change in the organization but is not immediately sure whether or not this change will be successful.

Note that the lag between the turnover announcement and positive market returns is not by itself evidence of some kind of market inefficiency. What is more likely is that the sample selection method employed in this research tended to discard firms whose CEO turnovers were ultimately unsuccessful (i. e., the firm was taken over, went bankrupt or significantly downsized following the turnover and therefore disappeared from the Forbes 500 lists.

Organizational Change and Accounting. A second issue relates to the relationship between accounting information and organizational change. Assuming that non-routine turnover does lead to organizational change, the changes in accounting ratios detected in chapter 3 must be related to substantive organizational change in one of three ways: (1) the accounting information reflect ex post substantive change in the organization; (2) the accounting information is a precursor to substantive change; or (3) the accounting information is unrelated to any substantive organizational change. The next section of this chapter addresses each of these three alternatives.

With its focus on historical cost and past transactions, it seems quite attractive to argue that accounting information reflects all of the activities of the firm, and therefore any substantive changes, ex post.

Arguably, then, the changes in financial ratios detected in chapter 3 reflect changes that have already happened in the firm either under the new CEO or the predecessor. This suggests one of two possible explanations: (1) that substantive organizational change can be accomplished very quickly or (2) that substantive organizational change is begun by the outgoing CEO, but too late or insufficient to prevent dismissal.

The results of the examination of the financial statements of non-routine turnover firms reported in chapter 3 tend to discount this view. In particular, most of the special items reported were not transaction-based - provisions for future reorganization costs, provisions for losses on future disposals of divisions or assets, apparent re-evaluations of doubtful accounts receivable and other asset writedowns.[23] These were generally accompanied by letters to the shareholders describing the need for change in the organization and at least a vague outline of what that change would entail.

Indeed, the financial statement results just described are consistent with the view of accounting information as a precursor to organizational change. This was the view outlined in chapter 1, where it was argued that income decreasing accounting changes on the part of management could serve (1) to catch the attention of organizational

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[23]Note that the accrual of provisions for future losses or costs is not contrary to generally accepted accounting principles (GAAP). In an effort to be conservative, firms are generally required under GAAP to accrue substantial losses as soon as it becomes clear that they will be incurred. Often, this point occurs before the transaction that actually gives rise to the loss. Note as well, however, that there is considerable room for discretion on the part of the manager regarding the amount and timing of this loss.

participants and alert them to the existence of a crisis (Pettigrew, 1986); and (2) offer an explanation for the current crisis and suggest directions for the future (Salancik and Meindl, 1984). From this point of view, asset writedowns could be interpreted as acknowledgements of past managerial mistakes or, at least, changing circumstances which have caused (new) management to rethink the firm's position. Provisions for future losses and reorganization costs are early indications of the intentions of management over the next two or three years or more.

There is strong reason to believe, however, that at least some of the accounting results detected in chapter 3 are unrelated to any mandate on the part of the new CEO. The most obvious is the decrease in research and development expense detected in the fiscal year of routine turnover. As Dechow and Sloan (1991) have found, CEOs approaching retirement have an incentive to reduce discretionary spending to enhance short-term earnings. The reduction in research and development found in the routine turnover case might simply reflect the efforts of the outgoing CEO to manage earnings before retirement.

A similar argument might explain the opposite result found in the case of non-routine turnover. The increases in allowance for doubtful accounts and research and development expense noted in the year of non-routine turnover might reflect decisions made by the outgoing CEO, and not any proposed substantive changes in the organization attributable to the new CEO.

This discussion leads into the issue of the constraints facing the new CEO in making accounting decisions. Throughout this dissertation, I have argued that the incoming CEO will make accounting accrual and policy

decisions to reflect the CEO's change mandate. There has been no explicit discussion, however, of the limits to this decision-making power. The most obvious is generally accepted accounting principles (GAAP). As almost all of the firms in this sample had publicly traded stocks, the GAAP constraint is a significant one. While GAAP is comprised of a number of restrictions, probably the restriction most relevant to the turnover question is that the firm's accounting policies must be at least reasonably consistent over time.

A second constraint that has been discussed earlier in this chapter is that of the accounting effects of past managerial decisions, whether accounting or non-accounting. Aside from the consistency issue raised above, many of the past CEO's decisions (arguably most of them, in fact) will continue to impact upon the financial statements of the firm for some considerable time after that CEO has left. The most obvious example from this work is that of the reduction in research and development expense in routine turnover firms, a phenomenon that has been attributed in other research to the outgoing CEO (Dechown and Sloan, 1991).

Future Directions. The last section of this chapter attempts to point out directions for future research, given the limitations and issues raised in this chapter and throughout the dissertation. The first relates to the incentives facing both outgoing and incoming CEOs. Research reviewed in chapter 1 suggested that accounting earnings is a statistically significant although not necessarily substantive predictor of CEO compensation. Given the interesting findings presented here regarding routine CEO turnover in particular, it might be fruitful to consider explicitly CEO incentives around the time of turnover. Is the

compensation of a CEO approaching retirement more closely tied to short-term earnings performance than is that of other CEOs, as Dechown and Sloan (1991) and my own results suggest? This idea of differing incentives facing CEOs at different stages of their careers has only just begun to impact upon the accounting literature, and could have important implications for the study of earnings management in general, as well as around CEO turnover.

A number of other contextual variables could be considered which were not included in this analysis. Weisbach (1988) found that the number of outsiders on the Board of Directors was an important intervening variable in the relationship between CEO turnover and abnormal stock returns. Additionally, the routine vs. non-routine distinction could be sharpened by examining the ultimate fate of outgoing CEO - whether the individual retired, was promoted to Chairman of the Board, or took a job with another company could help determine whether this was a routine or non-routine turnover.

Finally, the results of this research suggest a word of warning to researchers in the accounting field. The relationship between earnings and stock market returns is not as simple as the classic Ball and Brown (1968) finding. The challenge facing accounting researchers is to determine whether decreased income reflects diminished firm prospects or some sort of imminent and substantive organizational change that will enhance the firm's future cash flows. The results reported here indicate that the presence or absence of top executive turnover is one cue that the researcher can look to to help settle this question.

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