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MERGERS, ACQUISITIONS, AND THE PRUNING OF MANAGERIAL DEADWOOD

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This research investigates the role that mergers and acquisitions may play in the disciplining of entrenched and inefficient managers. The relationship between a company's performance history and its subsequent top management turnover is assessed for a sample of target companies, their parents, and a control group of companies not involved in merger and acquisition activity. The results reveal that target company top management turnover is higher than 'normal' in the 2 years immediately following a merger or acquisition, but there is no relationship between previous target company performance and its subsequent top management turnover. Further analyses indicate that first-year target company turnover rates are associated with a history of relatively poor parent company performance, while second-year turnover rates are associated with a history of relatively good parent company performance.

INTRODUCTION

We are witnessing this century's fourth wave of mergers and acquisitions (Golbe and White, 1988). Indeed, more than 76,000 mergers and acquisitions have been announced since 1963 (Grimm and Co., 1989). Although it is not certain that mergers and acquisitions enhance the wealth of the acquiring or parent company's shareholders (Mangenheim and Mueller, 1988), it is certain that the acquired or target company's shareholders earn a sizeable above-market premium following a merger or acquisition announcement (Jensen and Ruback, 1983; Jarrell, Brickley, and Netter, 1988; Roll, 1987). What is the motivation behind this merger and acquisition activity? Why do acquiring companies pay such high premiums for their acquisitions?

Ravenscraft (1987) identified 15 possible acquisition motives that ranged from tax savings and monopoly power to empire-building and hubris. The replacement of inefficient management, however, topped his list. Varian (1988) concurred with this focus on the disciplining of ineffective

managers. In his introductory comments to a special issue of the *Journal of Economic Perspectives* on corporate takeovers, he argued:

> It is generally agreed that [takeovers] are a primary manifestation of the 'market for corporate control.' That is, takeovers serve as an incentive device for management to perform in the stockholders' interests. If the current managers fail to maximize value, a takeover offers a mechanism whereby shareholders can replace the current managers with managers who offer better performance (1988: 3)

Our intent here is to examine this market for corporate control and its possible role in disciplining entrenched and inefficient top managers.

Following Berle and Means (1932), the theory of the market for corporate control was suggested by Manne (1965) and then refined in a series of papers by Jensen and Meckling (1976), Fama (1980), and Fama and Jensen (1983). A contractual model of the firm is central to the theory. In this view the modern corporation is 'a legal

entity that serves as a nexus for a complex set of explicit and implicit contracts among disparate individuals' (Jensen and Smith, 1985: 95). In the profit-making firm, the most important contract is between the shareholders who risk their wealth in the firm and the managers whose goal is (or should be) to maximize the return on that invested wealth. Thus, managers are acting as agents for shareholders. For the financial economist this relationship is efficiency-creating because it allows for specialization—the shareholder specializes in risk-bearing, while the managers specialize in the management function (Fama and Jensen, 1983). Problems arise, however, when managers act in their own interest rather than in the interests of shareholders.

Jensen and Smith (1985) identified three sources for potential conflict—differing choices of: (1) effort; (2) risk exposure; and (3) time horizons. While additional managerial effort would increase the value of the firm, managers might want to substitute leisure or over-indulgence in company perquisites for that additional work effort (Jensen and Meckling, 1976). Second, although shareholders can diversify their risk by holding a portfolio of stocks, the human capital of top managers tends to be tied to the success of their company (Fama, 1980). It may be in the interest of those managers, therefore, to take fewer investment risks than would be optimal for shareholders, even if in doing so they lower the market value of their company (Coffee, 1988). Third, while the firm lives on, its managers do not; as such, they are most interested in firm performance for the time period over which they are employed. They are likely, therefore, to have shorter time horizons than shareholders, even if this leads to a present-value loss of wealth (Furubotn and Pejovich, 1973; Jensen and Meckling, 1979). The clear task for shareholders, therefore, is to minimize the losses from these agency costs or conflicts of interest (Eisenhardt, 1989).

If top managers engage in self-interested behavior, their company's performance should diverge from its maximum potential. This under-performance is reflected in the value of the company's stock (Lubatkin and Shrieves, 1986). In such circumstances other management teams are likely to offer themselves to the shareholders as alternatives to the incumbent management. The 'market for corporate control,' then, is the competition among these management teams for the votes of shareholders (Jarrell and Bradley, 1980: 380–381). As a consequence, Lowenstein (1983: 272) noted that the acquiring company's expected profit resides 'almost entirely in the expectation that [it] will be able to root out deadwood inefficiencies and put a target's assets to better use.'

The theory of the market for corporate control has gained great currency; corporate raiders even employ this logic as a justification for their activity. T. Boone Pickens (1986), for example, argued that his actions serve to hold America's top executives accountable for their sometimes lackluster performance. Carl Icahn ('Icahn on Icahn', 1988) echoed this same sentiment.

Given the widespread acceptance of the theory, it is surprising to discover that only incomplete empirical evidence speaks to its veracity. Indeed, Ravenscraft (1987) concluded that economists have embraced this theory by a process of elimination. Since no other theory has been able to explain the wealth effects associated with merger and acquisition activity, they found themselves supporting an untested theory. Manne (1965: 120) argued that a 'possible approach to proof in this area is to determine if actual changes in the management personnel ultimately follow the merger.' Walsh (1988) documented that the top management turnover following mergers and acquisitions is significantly higher than 'normal' (absent merger or acquisition activity). Without at least collecting measures of preacquisition company performance, however, we cannot determine if this turnover actually represents a pruning of managerial deadwood. While Walsh (1988) examined postacquisition turnover in the absence of preacquisition performance, others have examined preacquisition performance in the absence of postacquisition turnover. Employing stock market data, Asquith (1983), Hasbrouck (1985), and Bartley and Boardman (1986) found evidence that target companies sometimes suffer from performance problems. Both suboptimal preacquisition performance and higher than normal postacquisition top management turnover are consistent with the theory of the market for corporate control. We cannot begin to test the theory, however, until a relationship between performance and turnover is examined concurrently.

HYPOTHESES

If the theory of the market for corporate control is correct, a number of relationships should be manifest. An acquiring parent company should be able to prune its own managerial deadwood if a target's shareholders are to believe that it has the capacity to improve upon the management of their own company. If the target company's top managers are entrenched, their preacquisition turnover rate should be less than a normal rate for comparative companies. Moreover, the target company's preacquisition performance, the market reaction to the acquisition announcement, and the interaction between the target company's performance history and the market reaction to the announcement, all should be related to subsequent target company top management turnover.

A supportive test of the market for corporate control therefore would demonstrate that entrenched and inefficient top managers are dismissed when acquired by a company with an ability to prune its own lackluster managers. Moreover, an efficient market reaction to such a merger announcement should be positively associated with the subsequent dismissal of the entrenched and inefficient target company managers. Each of these relationships will be investigated here.

If the source of the target company's problems is its entrenched poor management, then we would expect that an acquiring firm should demonstrate an ability to discipline its own managers. If merger and acquisition activity serves as an external check of internal control processes gone awry, then we expect that bidding firms should demonstrate an efficient internal control process. Parent companies should be intolerant of poor performance in their own firms if they are to play a disciplining role in the market for corporate control. Thus, we predict:

> *H1: A parent company is likely to demonstrate performance-contingent top management turnover.*

Jensen and Smith (1985: 106) argued that takeovers can replace the 'incompetent, lazy, or dishonest managers' that remain in place because of a 'breakdown' in the company's own ability to discipline these people. In short, such managers

are seen as entrenched. If this is true, we would expect support for the following:

> *H2: A target company's preacquisition top management turnover rate is likely to be less than the normal rate for an equivalent company that has not been acquired.*

As Jarrell and Bradley (1980) noted, management inefficiency is reflected in a company's stock price. Indeed, Manne (1965: 113) argued that 'apart from the stock market, we have no objective standard of managerial efficiency.' Managers are thought to reveal their incompetence through a series of decisions that adversely affect their company's stock performance (Asquith, 1983; Bartley and Boardman, 1986; Hasbrouck 1985). The theory of the market for corporate control would argue that negative adjustments in the market's evaluation of the company's current and expected performance will accumulate until managerial incompetence is revealed, the company is acquired, and the incompetent managers are dismissed. Thus:

> *H3: A target company's postacquisition top management turnover rate is likely to vary inversely with its preacquisition stock performance history.*

The market's reaction to an acquisition announcement reflects an evaluation of the performance expected to result from this new organizational combination (Caves, 1987). Accordingly, the sign and magnitude of the target company's abnormal return on the day of the acquisition announcement (or in the days leading up to the announcement) reflects a market assessment of the efficacy of the combination. Following the theory of the market for corporate control, if the gain that is expected to come from the acquisition is grounded solely in the acquiring company's intention to rid the target company of its incompetent managers, then a favorable market evaluation is likely to be followed by the subsequent dismissal of these target company managers. Accordingly:

> *H4: A target company's postacquisition top management turnover rate is likely to vary positively with the magnitude of a favorable market evaluation of the acquisition.*

Finally, a significant interaction effect between the target company's preacquisition performance and the market evaluation of the combination on subsequent management turnover would present the strongest evidence in support of the market for corporate control. Such an interaction effect would reflect both the performance history of the target company and a market assessment of the future of this particular parent–target combination. If top managers turn over in great numbers from poorly performing target companies that receive a favorable market reaction to the prospects of the new organizational combination, then we can surely consider acquisitions to be a recognized means of pruning managerial deadwood. Therefore:

H5: A target company's postacquisition top management turnover rate is likely to vary positively with the interaction between a target company's poor preacquisition stock performance and a favorable market evaluation of the organizational combination.

Two aspects of this research are exploratory. First, it is unclear how long it takes for managerial incompetence to reveal itself in the stock market. Accordingly, company performance will be assessed for the 5 years preceding an acquisition. Second, since it is unclear when performance-contingent management turnover is likely to occur, management turnover will be assessed for 5 years after an acquisition. If the theory of the market for corporate control is supported, this research will be able to identify both the critical incompetence-revealing performance period, as well as when the turnover is most likely to occur. With this objective in mind, we will examine all of the relationships between the 5 years of preacquisition performance and the 5 years of postacquisition turnover.

Support for these hypotheses would be consistent with the disciplinary role that mergers and acquisitions are thought to play in the pruning of managerial deadwood. We should emphasize, however, that we are conducting a conservative test of the inefficient management hypothesis. First, we are not controlling for the alternative acquisition motives that Ravenscraft (1987) identified. Second, by examining a sample that includes both mergers and acquisitions, we are examining the broad takeover market. Jensen (1984 :119),

for example, defined the takeover market as the arena 'where alternative management teams compete for the right to manage a corporation's assets. This competition can take the form of mergers, tender offers, or proxy fights.' Our sample is broadly composed of mergers and tender offers. While future research no doubt will refine our efforts, this research represents the first attempt to test the logic of pruning deadwood thesis.

METHODS

Sample

The research sample was composed of a set of target companies, their parent companies, and a group of control companies not involved in merger and acquisition activity during the observation period. The sample of merged and acquired companies was drawn from the *Statistical Report on Mergers and Acquisitions*, 1979 (1981). This report was published each year by the Federal Trade Commission, ending with the publication of the 1979 data in 1981. The report lists all manufacturing and mining companies with assets of at least $10 million that were merged with or acquired by U.S. companies. Walsh (1989) surveyed 240 parent companies that had merged with or acquired a company between the years 1975 and 1979 to determine the employment status of the target company's top managers. This effort yielded data on target company top management turnover rates for 102 companies. These data are employed again here.

The Walsh (1989) data base on target company top management turnover was supplemented with a compilation of preacquisition target company turnover and parent company top management turnover rates. Matching parent company top management turnover rates are available for 77 of the 102 possible parents in the sample. The mean asset size of the parent companies in this sample was $1.38 billion, with a standard deviation of $1.99 billion.

A control group of 75 companies not involved in merger and acquisition activity during the same time period was drawn from the *Standard and Poor's Stock Guide*. Their top management turnover rates were assessed by archival sources (e.g., 10K or annual reports). The target and control companies were matched randomly by

asset size but not by industry. We chose not to control for industry because as Morck, Shleifer, and Vishny (1989) pointed out, entire industries are often the focus of control contests. We did not want to risk the possibility that our control sample could share many of the management inefficiencies that we expected to find in the target firms. The mean asset size of the target companies was $87.60 million with a standard deviation of $137.14 million, while the mean asset size of the control companies was $86.71 million with a standard deviation of $30.87 million. The mean asset size difference between these two samples was not statistically significant at the 0.05 level. In all, top management turnover rates are available for 102 target companies, 77 parent companies, and 75 control companies.

Measurement procedures

Target company top management turnover

The name and position of each member of the 240 target companies' top management teams at the time of the merger or acquisition was identified from the companies' 10K or annual reports. The mean number of executives that composed each company's top management team was 8.19, with a standard deviation of 3.49. They held such titles as 'Chairman of the Board,' 'President', 'Executive Vice President,' 'Senior Vice President,' 'Treasurer,' and the like.

After identifying each executive, a survey was prepared. A call to each parent company established a human resources professional to whom we could mail the survey. The survey listed each member of the target's top management team at the time of the acquisition. We asked the human resources professional in the parent company to examine its personnel records and report the subsequent career histories for each executive. The parent company representative was asked to identify whether or not each executive was still employed by the company. If the executive had left the company, the representative was asked to provide the date of departure. With the date of departure information provided by the survey responses, we were able to compute the cumulative percentage of the top management team that turned over at each of 5 years after the date of the merger or acquisition. The differences between the cumulative yearly

percentages yielded measures of annual turnover rates for each year of observation.

The preacquisition target company top management team turnover was assessed with archival data. The top managers were identified from each company's 10K or annual report 5 years prior to the merger or acquisition announcement date. Their employment status was followed for the 5 years from the point of initial observation to the time of the merger or acquisition announcement. The 10Ks and annual reports were available for 59 of the possible 102 target companies. All 59 companies were traded publicly for at least 2 years prior to their acquisition, while only 55, 53, and 43 were traded for 3, 4, and 5 years, respectively. The data are limited accordingly.

Parent and control company top management turnover

The names of each top manager in the parent and control companies were identified from each company's 10K or annual report. Their employment status was then tracked in these 10Ks or annual reports for 5 years from the point of initial observation. 10Ks and annual reports were available for only 77 of the possible 102 parent companies. This approach to the assessment of top management turnover follows the precedent established by Walsh (1988, 1989).

Company performance

We attempted to compile stock return information for each target and parent company for the time period beginning 63 months prior to the merger or acquisition announcement and ending 2 months prior to the announcement. The intent was to obtain a performance measure for each company that was unaffected by the typical rise in stock prices in the 2 months prior to a merger or acquisition announcement (Asquith, 1983; Bradley, 1980; Dodd, 1980; Lubatkin, 1987). The company performance indices for the control companies were assessed over an equivalent time period. The assessment of control company performance began with the initial observation month of the top management team's employment status.

The abnormal return for any observation month $t(t = -63, -62, \ldots, -3)$ was defined as the excess return on the company's common

stock over that of the return on an equal weighted market index for that month. All stock price information was collected from data compiled by the University of Chicago's Center for Research in Security Prices (CRSP). A company's monthly market-adjusted abnormal return was computed as:

$$AR_{t,i} = R_{t,i} - R_t^m$$

where: $R_{t,i}$ = the return for company i in month t;

R_t^m = the return for the market in month t as reflected in the equal weighted market index from the CRSP data base;

$AR_{t,i}$ = the abnormal return for company i in month t.

Cumulative abnormal returns were constructed to represent the company's performance throughout any period in the 5 years prior to the 2 months before a merger or acquisition announcement (or point of initial observation in the case of the control companies). Such cumulative abnormal returns for company i from any month j through the third month prior to an announcement or observation day were computed as follows:

$$CAR_{j,i} = \sum_{t=-j}^{-3} AR_{t,i}$$

It should be noted that there are many procedures available to assess a company's abnormal stock price return. In a review of these various approaches, Brown and Warner (1980) acknowledged that the approach employed here assesses performance as well as any of the more sophisticated approaches.

The control companies were selected so that all 75 of them were listed on the New York Stock Exchange throughout the 63-month period preceding the observation of company turnover. Hence, complete performance and turnover data are available for all 75 control companies. Not all of the target and parent companies were listed on the New York Stock Exchange, however. Five-year cumulative abnormal returns (assessed in the period 62 months through 3 months prior

to the announcement day) were available for 49 target companies and 34 parent companies. This sampling limitation is common in event studies employing stock return data (e.g. Holderness and Sheehan, 1985).

Market reaction

The market reaction to the merger or acquisition was assessed in two ways. First, we collected the target company's abnormal return for the day the acquisition was announced. It is well known, however, that daily excess returns begin to accumulate in the days or weeks before an acquisition announcement, since information about the upcoming acquisition leaks into the market (Asquith, 1983; Bradley, 1980; Dodd, 1980; Lubatkin, 1987). With this in mind, we collected the cumulative abnormal returns for the period beginning 60 days before the merger announcement (the point where we stopped compiling monthly performance data) and ending with the announcement day itself.

The announcement day ($t = 0$) was the day the merger or acquisition was revealed in the *Wall Street Journal*. The abnormal return for the announcement day was defined as the excess return on the target company's stock as compared to the return on the equal weighted market index for that day. The daily stock price information was also collected from the data compiled by CRSP. A daily abnormal return is defined as:

$$ar_{t,i} = r_{t,i} - r_t$$

where: $r_{t,i}$ = the daily return for target company i at time t.

r_t = the daily return for the market at time t as reflected in the equal weighted market index from the CRSP data base;

$ar_{t,i}$ = the daily abnormal return for target company i at time t.

The 61-day cumulative abnormal return for company i from 60 days prior to the acquisition announcement through the announcement day ($t = 0$) was computed as:

$$car_i = \sum_{t=-60}^{0} ar_{t,i}$$

As with the assessment of monthly abnormal returns, there are many models available to assess a company's daily abnormal returns. Brown and Warner (1985) reviewed these various approaches and found that this simple computation of excess returns assesses performance as well as the other more complex approaches.

EMPIRICAL RESULTS

Top management turnover following mergers and acquisitions

The percentage of cumulative turnover among the top management teams was computed at each of 5 years following the date of the acquisition for the acquired and acquiring companies, or the time of initial observation for the control companies. Figure 1 profiles these cumulative top management turnover rates in each of the three classes of companies.

Walsh's (1988) finding that turnover was higher in acquired, as opposed to non-acquired, companies was re-examined with this larger data base. As Table 1 shows, *t* tests indicate that the target company cumulative turnover rates were significantly higher than the control company turnover rates at each of the 5 years of observation

(at the 0.001 level of significance). The turnover rate in the target companies increases steadily from 26 percent in the first year after an acquisition to 61 percent (inclusive) in the fifth year. In contrast, the control companies' turnover rates ranged from 7 percent in the first year to 34 percent in the fifth year. Interestingly, however, the analysis suggests that the target companies' top management turnover rate differs from the 'normal' rate established by the control companies in only the first year (26.07 percent versus 7.11 percent) and the second year (12.53 percent versus 7.92 percent) after an acquisition. With this in mind we will focus particularly on understanding the performance antecedents of turnover in the first 2 years after a merger or acquisition.

It should be noted that the parent company cumulative turnover rate is not significantly different from the control company rate in any year but the fifth, when it is higher. Correspondingly, the annual increases in turnover do not differ in any year but the fourth and fifth years. The relationships between the target company and parent company turnover rates, however, follow exactly the same pattern as the revealed relationships between the target and control company rates. That is, all of the five cumulative rates are significantly different at the 0.001 level, while only the first and second year annual rates differ. In sum, the turnover rates
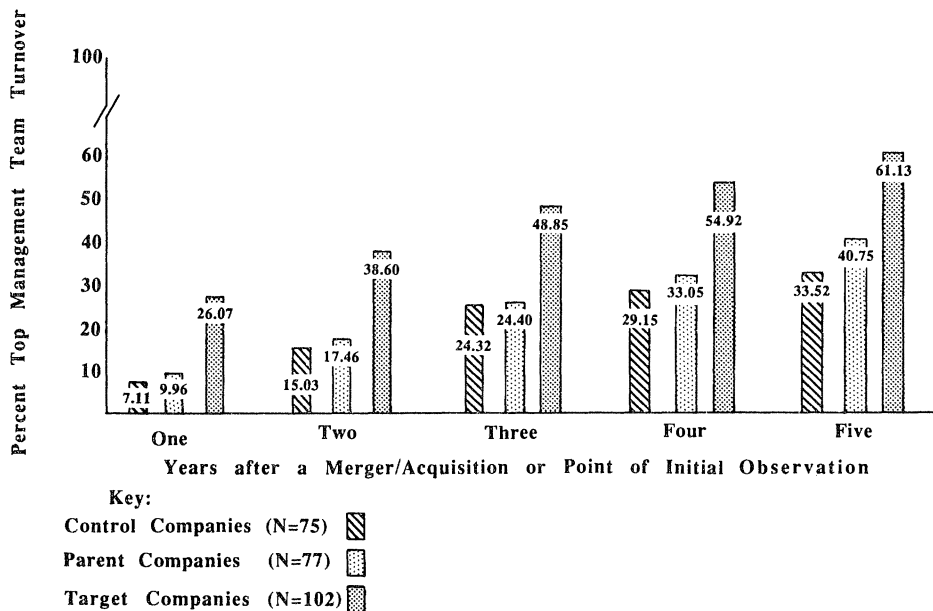

Figure 1. Cumulative top management turnover following mergers and acquisitions

Table 1. *T*-tests: Top management team turnover rates in the target and control companies

Variable	Number of companies	Mean	Standard deviation	*T*-value
Cumulative turnover rates				
One-year turnover rate				
Target companies	102	26.07	29.24	5.40***
Control companies	75	7.11	9.72	
Two-year turnover rate				
Target companies	102	38.60	29.09	6.56***
Control companies	75	15.03	12.90	
Three-year turnover rate				
Target companies	102	48.85	27.21	6.94***
Control companies	75	24.32	16.29	
Four-year turnover rate				
Target companies	102	54.92	27.45	6.99***
Control companies	75	29.15	19.02	
Five-year turnover rate				
Target companies	102	61.13	26.25	7.49***
Control companies	75	33.52	21.18	
Annual turnover rates				
Second-year turnover rate				
Target companies	102	12.53	16.98	2.16*
Control companies	75	7.92	8.38	
Third-year turnover rate				
Target companies	102	10.26	15.66	0.46
Control companies	75	9.29	10.37	
Fourth-year turnover rate				
Target companies	102	6.07	10.36	0.90
Control companies	75	4.83	6.80	
Fifth-year turnover rate				
Target companies	102	6.21	10.40	1.30
Control companies	75	4.37	7.49	

$^*p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

among the parent companies are much the same as those among the control companies.

Preacquisition target company top management turnover

The target company turnover rates in the 5 years prior to acquisition were compared with turnover in the control companies to test the hypothesis that a target company's top management is entrenched prior to acquisition. The results in Table 2 reveal no support for Hypothesis 2. In fact, the results indicate that the preacquisition turnover among target companies is sometimes *higher* than normal. The cumulative target company turnover in the first year of the 5-year

Table 2. *T*-tests: A contrast of the preacquisition target companies' top management team turnover rates and the control companies' top management team turnover rates

Cumulative turnover rates	Number of companies	Mean	Standard deviation	*T*-value
One-year turnover rate				
Target companies	59	12.02	14.08	2.30*
Control companies	75	7.11	9.72	
Two-year turnover rate				
Target companies	59	20.11	10.67	1.86†
Control companies	75	15.03	12.90	
Three-year turnover rate				
Target companies	55	27.06	20.94	0.04
Control companies	75	24.32	16.29	
Four-year turnover rate				
Target companies	53	34.11	24.30	1.29
Control companies	75	29.15	19.02	
Five-year turnover rate				
Target companies	43	40.93	24.12	1.74**
Control companies	75	33.52	21.18	

†$p < 0.10$;   *$p < 0.05$;   **$p < 0.01$.

observation period (12.02 percent versus 7.11 percent) and the fifth year (40.93 percent versus 33.52 percent) was significantly higher than the control company turnover rates at the 0.05 and 0.01 levels, respectively. In addition to the significant annual first-year turnover rate, the fifth-year annual turnover rate was significantly different between the two sets of companies (at the 0.05 level). Recall that this fifth-year annual rate is actually the turnover rate in the year immediately prior to the target company's acquisition. This higher than normal preacquisition turnover is not consistent with the hypothesis that a target company's top management team is entrenched prior to its acquisition.

Target, parent, and control company performance indices

Company performance was established by collecting the cumulative abnormal returns (*CARs*) for the target, parent, and control companies over a five-year period preceding the acquisition announcement or the point of initial observation

(from 62 months through the 3 months prior to the announcement). Short-term and longer-term performance can be assessed by varying the *CAR* observation period.

The results in Table 3 reveal that the target companies in the sample significantly outperformed the market in the 3-, 4-, and 5-year period prior to their acquisition. The *t* test comparing the mean three-year *CAR* to the market average of 0.00, for example, was statistically significant ($t(1,53) = 2.787$, $p < 0.001$). Their 1-year and 2-year *CARs*, however, do not differ significantly from the market index.

The parent companies in the sample outperformed the market over the 2 years ($t(1,33) = 3.920$, $p < 0.001$), 3 years ($t(1,32) = 5.362$, $p < 0.001$), four years ($t(1,32) = 4.878$, $p < 0.001$), and five years ($t(1,32) = 5.587$, $p < 0.001$) prior to their decision to acquire a company. Their performance in the year immediately preceding the decision to acquire, however, was not significantly different from the market average. Finally, as expected, the performance of the control companies over each of the 5 years prior to the observation

Table 3. Company performance indices: Cumulative abnormal returns for the target, parent, and control companies†

Variable	Number of companies	Mean	Standard deviation	T value
Target companies				
Five-year *CAR*	49	0.231	0.543	2.947***
Four-year *CAR*	52	0.210	0.511	2.935***
Three-year *CAR*	55	0.183	0.487	2.787***
Two-year *CAR*	56	0.107	0.481	1.665
One-year *CAR*	58	0.026	0.351	0.564
Parent companies				
Five-year *CAR*	34	0.461	0.474	5.587***
Four-year *CAR*	34	0.383	0.451	4.878***
Three-year *CAR*	34	0.343	0.373	5.362***
Two-year *CAR*	35	0.212	0.320	3.920***
One-year *CAR*	35	0.048	0.239	1.188
Control companies				
Five-year *CAR*	75	0.103	0.764	1.597
Four-year *CAR*	75	0.096	0.616	1.341
Three-year *CAR*	75	0.042	0.591	0.602
Two-year *CAR*	75	−0.006	0.469	−0.111
One-year *CAR*	75	0.024	0.345	0.616

*** $p < 0.001$.
†The 5-, 4-, 3-, 2-, and 1-year returns were assessed from 62, 50, 38, 26, and 14 months, respectively, through 3 months (inclusive), so as to exclude the typical abnormal returns found in the 2 months prior to the announcement of a merger or an acquisition.

of their top management turnover was not significantly different from the market average.

Market reaction

The announcement-day abnormal return was available for 59 target companies. The mean abnormal return was 0.006 with a standard deviation of 0.026. The abnormal returns ranged from a low of −0.06 to a high of 0.09. The mean cumulative daily abnormal return for the period 60 days prior to the announcement through the announcement day was 0.172, with a standard deviation of 0.217. These cumulative abnormal returns ranged from a low of −0.29 to a high of 0.78. Neither market reaction measure was correlated ($p < 0.10$) with any of the parents' or targets' historical measures of performance (the 1-year through 5-year *CARs*).

Company performance and top management turnover

Table 4 presents the correlations between company performance and top management turnover

for the control and parent companies, as well as for the target companies. The results reveal that an inverse relationship existed between control company performance (as assessed by a variety of *CARs*) and top management turnover at each of 5 years after a merger or acquisition within this sample of control companies. The relationships were statistically significant, however, only for the 2-year through 5-year performance measures. Thus, it appears that boards of directors of companies not involved in merger and acquisition activity discipline their top managers only after 2 or more years of unsatisfactory performance.

Our Hypothesis 1 proposed that parent companies who are active in the market for corporate control are better able to discipline managers than the average company. Figure 1 revealed that the extent of top management turnover in the parent companies was not appreciably different from that in the control companies. Table 4, however, revealed that parent companies may be more likely to discipline their top managers for poor performance than is the case for control companies. The magnitude of the inverse correlations between company performance (assessed

Table 4. A company's performance and its subsequent top management turnover: Pearson product-moment correlations

Company performance	Cumulative top management turnover in years after a merger/acquisition or point of initial observation				
	1 year	2 years	3 years	4 years	5 years
Five-year CAR					
Control companies (n = 75)	−0.32**	−0.32**	−0.40***	−0.29**	−0.28**
Parent companies (n = 29)	−0.39*	−0.31	−0.39*	−0.27	−0.08
Target companies (n = 40)	−0.07	−0.01	−0.07	−0.05	−0.15
Fourth-year CAR					
Control companies (n = 75)	−0.33**	−0.41***	−0.41***	−0.36***	−0.33**
Parent companies (n = 29)	−0.28	−0.28	−0.37*	−0.30	−0.14
Target companies (n = 42)	0.05	0.15	0.02	0.01	−0.03
Three-year CAR					
Control companies (n = 75)	−0.27**	−0.43***	−0.38***	−0.37***	−0.32**
Parent companies (n = 29)	−0.47**	−0.52**	−0.62***	−0.55***	−0.42*
Target companies (n = 43)	0.12	0.21	0.12	0.07	0.04
Two-year CAR					
Control companies (n = 75)	−0.24*	−0.35***	−0.29**	−0.30**	−0.30**
Parent companies (n = 30)	−0.32*	−0.44**	−0.49**	−0.53***	−0.59***
Target companies (n = 44)	0.02	0.16	0.10	0.17	0.16
One-year CAR					
Control companies (n = 75)	−0.13	−0.17	−0.18	−0.18	−0.17
Parent companies (n = 30)	−0.34*	−0.45**	−0.42*	−0.43**	−0.47**
Target companies (n = 46)	0.12	0.26*	0.20	0.28*	0.19

$*p < 0.05$; $**p < 0.01$; $***p < 0.001$.

over a 1–3-year time period) and top management turnover were stronger than those in the control sample in every case. Moreover, parent companies seemingly are more intolerant of poor performance. Unlike the control companies, the relationships between the 1-year CAR and turnover at each of the following 5 years was statistically significant. Thus, while managers of companies in the control sample are given several years to turn around poor performance, many

parent company top managers lose their jobs after a 1-year performance problem. These results support the logic of Hypothesis 1.

Finally, Table 4 reveals no support for Hypothesis 3. In striking contrast to the theory of the market for corporate control, there were few statistically significant relationships evident between a target company's preacquisition performance (assessed by five different CARs) and its subsequent top management turnover

(assessed at five different years). In fact, the signs of the relationship were not even in the predicted direction. Surprisingly, the only statistically significant relationships between pre-acquisition performance and subsequent turnover were the *positive* correlations between the 1-year *CAR* and the cumulative management turnover observed at 2 ($r = 0.26$, $p < 0.05$) and 4 ($r = 0.28$, $p < 0.05$) years after an acquisition.

Market reaction and target company top management turnover

Hypothesis 4 predicted that, if the gains to follow an acquisition are linked to the anticipation of the pruning of managerial deadwood, then the market reaction to the acquisition should vary positively with subsequent top management turnover. Table 5 shows the correlations between both the announcement-day return and the cumulative abnormal return for the 61 days leading to the announcement and subsequent target company top management turnover (both cumulative and annual rates). The negative correlations between both measures of the market reaction and all of the cumulative measures of top management turnover do not support the logic of Hypothesis 4. Only the marginally significant correlation between the announce-ment-day return and the annual turnover in the second year following the acquisition ($r = 0.22$, $p < 0.10$) offers any support.

Interaction effects

Hypothesis 5 suggested the strongest test of the theory of the market for corporate control. We predicted that a combination of a poor target company performance record and a favorable market reaction to the acquisition would yield the highest postacquisition turnover rates. A number of analyses were conducted to test this hypothesized interaction. Preacquisition perform-ance was assessed in two ways by splitting the sample of target companies on the market average for both the 1-year and 2-year *CARs* (0.00). Similarly, market reaction was assessed by splitting the sample of target companies on the announcement-day market average (0.00) and the cumulative 61-day market average (0.00). This approach splits the companies cleanly and meaningfully on a good/poor performance dimension. Since only the annual turnover rates in the first 2 years after an acquisition are significantly higher than normal (see Table 1), the analysis was restricted to an examination of only these two turnover rates.

In all, eight ANOVAs were conducted. Only one reached statistical significance. The first-year target company top management turnover was associated with the announcement-day return and the target company's past 2-year performance history ($F(3,42) = 5.273$, $p < 0.01$). The market response by company performance interaction term reached statistical significance ($F(1,42)$

Table 5. Market reaction and target company top management turnover: Pearson product-moment correlations

Market reaction	Target company top management turnover								
	Cumulative rates					Annual rates			
	1 year	2 years	3 years	4 years	5 years	Second year	Third year	Fourth year	Fifth year
61-day *CAR* ($n = 46$)	−0.28*	−0.34**	−0.29*	−0.22†	−0.23†	−0.05	0.13	0.17	0.02
Announcement-day return ($n = 47$)	−0.31*	−0.21†	−0.23†	−0.27*	−0.23†	0.22†	−0.00	−0.13	0.17

†$p < 0.10$; *$p < 0.05$; **$p < 0.01$.

= 10.648, $p = 0.002$). The interaction, however, was *not* in the predicted direction. As Figure 2 illustrates, the highest top management turnover rate was associated with those target companies that had a good performance record, and did not receive a favorable market response when the news of the acquisition was announced. With a recognition that this one significant and contradictory ANOVA may even represent experiment-wise error, these results do not support the logic of the fifth hypothesis at all.

Supplemental analyses

The theory of the market for corporate control tacitly argues that the top managers who depart after a merger or acquisition do so involuntarily, due to the 'discipline' thought to be inherent in such activity. It may be, however, that many top managers depart voluntarily. If so, they might be responding to the acquiring company's past performance record. Such managers might not want to be associated with their new, poor-performing parent company (Fama, 1980). Accordingly, the following exploratory hypothesis will be examined:

> *H6: A target company's postacquisition top management turnover rate is likely to vary inversely with the parent company's preacquisition stock performance history.*
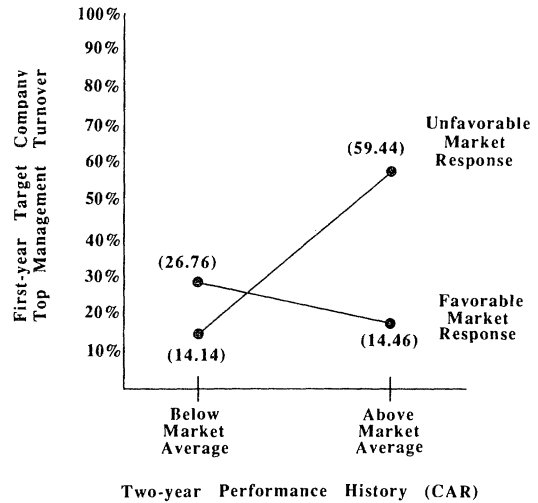

Figure 2. First-year target company top management turnover by the announcement-day market reaction and the company's 2-year performance history

The analysis presented in Table 6 provides some support for this exploratory hypothesis. The correlations between parent company's performance (assessed by five *CARs*) and top management turnover, especially in the first year after a merger or acquisition, were negative and statistically significant. Relatively poor parent company performance was associated with subsequent target company top management turnover. Moreover, this relationship became stronger as the duration of the poor performance increased

Table 6. A parent company's performance and its target company's cumulative top management turnover: Pearson product-moment correlations

Parent company performance	Cumulative acquired company top management turnover in years after a merger/acquisition				
	1 year	2 years	3 years	4 years	5 years
Five-year *CAR* ($n = 28$)	−0.39*	−0.43*	−0.49**	−0.46**	−0.51**
Four-year *CAR* ($n = 28$)	−0.34*	−0.40*	−0.44**	−0.41*	−0.43*
Three-year *CAR* ($n = 28$)	−0.50**	−0.38*	−0.47**	−0.36*	−0.33*
Two-year *CAR* ($n = 29$)	−0.45**	−0.19	−0.25	−0.11	−0.05
One-year *CAR* ($n = 29$)	−0.36*	−0.11	−0.32*	−0.23	−0.25

*$p < 0.05$; **$p < 0.01$.

from 1 to 3 years. The magnitude of the correlations between performance and first-year turnover increased from -0.36 to -0.45 to -0.50 as this record of relatively poor performance was established over a 1-year, 2-year, or 3-year prior time period.

The results of a correlational analysis of the relationship between parent company performance and annual rates of target company top management turnover are presented in Table 7. The first column of Table 7 is identical to the first column in Table 6, since the 1-year cumulative turnover rate is equal to the 1-year annual turnover rate. Interestingly, the target company second-year turnover rate (which, from Table 1, was significantly higher than the equivalent control company turnover rate) was associated with positive parent company performance assessed over a 1-year and 2-year time period. The 3-, 4-, and 5-year CARs were not related to the second-year turnover rate. The third-, fourth-, and fifth-year target company turnover rates (which, from Table 1, were not significantly different from the control company turnover rates) were not statistically associated with indices of parent company performance.

Finally, a series of exploratory ANOVAs was conducted to assess the interaction between the preacquisition performances of both the parent and target companies on target company top

management turnover. Employing market average splits of parent and target company performance (1-year and 2-year CARs), the first-year and second-year annual turnover rates were examined in the ANOVAs. It might be expected that top managers from poor-performing (well-performing) target companies, who were acquired by well-performing (poor performing) companies, would be especially likely to turn over. The interaction terms, however, were not statistically significant in any of the analyses. Similarly, a series of exploratory ANOVAS examined the interaction between parent company performance (again using both 1-year and 2-year CAR market average splits) and market reaction (using both 61-day and announcement-day CAR market average splits) on annual turnover in the first and second postacquisition years. Again, none of the interaction terms was significant.

DISCUSSION

Although the theory of the market for corporate control has received widespread currency, no complete examination of its implications has yet been reported. While there has been some evidence that the preacquisition performance of acquired firms tends to be suboptimal (Hasbrouck 1985; Bartley and Boardman, 1986), and there

Table 7. A parent company's performance and its target company's annual management turnover: Pearson product-moment correlations

Parent company performance	Annual target company top management turnover in years after a merger/acquisition				
	1 year	2 years	3 years	4 years	5 years
Five-year CAR ($n = 28$)	-0.39^*	0.02	-0.00	-0.03	-0.08
Four-year CAR ($n = 28$)	-0.34^*	-0.02	0.04	-0.02	-0.01
Three-year CAR ($n = 28$)	-0.50^{**}	0.26	-0.05	0.16	0.16
Two-year CAR ($n = 29$)	-0.45^{**}	0.44^{**}	-0.03	0.28	0.24
One-year CAR ($n = 29$)	-0.36^*	0.42^{**}	-0.22	0.15	-0.04

$^*p < 0.05$; $^{**}p < 0.01$.

has been some evidence that top management turnover following mergers and acquisitions is higher than normal (Walsh, 1988), the present research represents the first attempt to link these issues directly. It is in this theoretical and empirical context that the lack of a relationship between a target company's poor preacquisition performance and its subsequent top management turnover is so surprising. The results of the research therefore do not support the inefficient management hypothesis.

A relationship between poor stock price performance and subsequent top management turnover was found for both the control companies and the parent companies. This result supports the findings from three recent investigations (Coughlan and Schmidt, 1985; Warner, Watts, and Wruck, 1988; Weisbach, 1988). Moreover, this relationship is consistent with the results of a meta-analysis in the organizational behavior literature (McEvoy and Cascio, 1987). The fact that the relationship appears to be stronger among the parent companies than among the control companies suggests that such companies may be seen as credible suitors for shareholders' votes in the market for corporate control. They may claim, with some justification, that they are able to discipline inefficient managers.

The turnover among top managers in a target company in the 2 years after a merger or acquisition is much higher than normal. Almost 39 percent of a target company's top managers depart within 2 years, as compared to only 15 percent of their peers in the control companies. There is little evidence to suggest, however, that these top executives are either 'entrenched' or 'managerial deadwood.' The target company preacquisition turnover rates are either at or above the average for comparable companies. Moreover, the target company managers' past performance records bear little relationship to their postacquisition employment prospects. In fact, several of the analyses revealed that it was the managers from the target companies with the *best* performance histories that departed early. It is difficult to conceive of such managers as 'pruned deadwood'.

The target company's past performance history, the market reaction to the acquisition announcement, and the interaction between the target's performance history and the market reaction did not relate to postacquisition management

turnover in any of the ways predicted by the theory of the market for corporate control. Rather, the results summarized in Tables 4 and 5, and Figure 2, seem to indicate that the career fate of the target company's managers seems to be under their own control rather than their parent company's control. The weak but positive correlations between the target companies' 1-year *CAR* and cumulative turnover in the postacquisition years (Table 4), coupled with the negative relationship between this 1-year turnover rate and the market reaction (Table 5), suggest that talented managers may decide to leave on their own. The interaction effect between performance history and market reaction pictured in Figure 2 is consistent with this interpretation. Taken together, these results prompted the supplementary analyses that related parent company performance to target company management turnover.

The supplementary analyses finally began to unlock the puzzle about the origins of high target company turnover. Early on, Walsh (1988) documented the turnover phenomenon but he could not explain it by the relatedness of the merger or acquisition. The following year he examined the effects of the negotiation process on this turnover, again with little luck (1989). After failing to explain this turnover by the target company's preacquisition performance, the present research provided insights with its analysis of parent company performance.

Two different turnover patterns seem to follow mergers and acquisitions. If the parent company has performed poorly in comparison with the market for anywhere from 1 to 5 years prior to acquiring a company, its newly acquired managers are likely to turn over in the first year (and not in the second year) after the acquisition. This pattern of turnover suggests that the parent company might be suffering from what Levine (1979: 181) has labeled a 'free exiter' problem. That is, the talented managers who do not wish to be a part of this poorly performing company, and who have employment opportunities elsewhere, depart. The significant correlation between poor performance and low turnover in the second year suggests, ironically, that the poorly performing parent retains only the managerial deadwood who may not be able to find employment opportunities elsewhere.

A different pattern of results emerged for

those parent companies that had a relatively good performance record prior to the acquisition. Such companies experienced low turnover among the target company's management team in the year following the acquisition. High turnover was not in evidence until the second year. Thus, the praent companies appear to have little interest in immediately pruning their new company's management ranks. They may be waiting to form their own judgements about managers' talents before deciding to dismiss any of them, or they may be employing a developmental orientation wherein they hope to be able to give poor-performing managers the necessary skills and abilities to improve upon their past performance record. In either case there is little evidence of management turnover (either voluntary or involuntary) in the first postacquisition year. The second year turnover may represent a pruning of a sort, but since the turnover is unrelated to the managers' past performance, the basis for this pruning may be an assessment of the managers' fit with the future goals and objectives of the new copany, rather than a judgement of their past performance.

The inefficient management hypothesis seemingly has been accepted without any empirical test of its veraciousness. After examining the performance–turnover relationships in a set of large mergers and acquisitions, we found little evidence in support of the theory. These results, however, should not foreclose further research in this area. Rather, they should serve as a stimulus to better understand when external control contests act to redress inefficiencies in firms' internal corporate control efforts. The next logical step would be to examine the management discipline motive while controlling for the various types of corporate control contests (e.g. mergers, friendly or hostile tender offers, proxy fights, and leveraged buyouts). Indeed, Walsh and Seward (1990) recently defined the theoretical relationships between the breakdown of internal corporate control mechanisms and these various types of external corporate control contests. The challenge now is to conduct the empirical work that illuminates when and how managerial deadwood may be pruned from the corporate ranks.

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