PERFORMANCE DIFFERENCES BETWEEN RELATED AND UNRELATED ACQUISITIONS OF TURNAROUND CANDIDATES

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PREFACE

This research has examined the impact of relatedness on one specific method to turn a declining firm around, merger and acquisition. The conjunctive model used to identify the turnaround candidates required that multiple qualitative and quantitative measures be met in order to include a firm in the sample. This has resulted in an extremely clean sample of turnaround candidates.

The results of the research have demonstrated that relatedness strongly influences the success of the merger or acquisition of a turnaround candidate. The only other variable found to impact the success of a merger or acquisition of such a declining firm was prior merger experience, and that association was weak. The combination of these variables indicates that the acquired firm should possess an appropriate base of knowledge for the merger or acquisition to succeed.

A number of individuals were instrumental in helping me to complete my program and this dissertation. These individuals provided me with the understanding, intuition, support and encouragement which enabled the completion of this research. I would like to express my sincere appreciation to them.

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CHAPTER I

INTRODUCTION AND PROBLEM STATEMENT

Strategic management literature has begun only recently to investigate why some firms are able to revive their performance after a period of decline and others are not. Schendel, Patton, and Riggs (1975) were among the first to systematically investigate turnaround candidates in the strategic management literature. The lack of academic investigation in this area is surprising since most businesses do face periods of declining performance (Hofer, 1980) and must determine the best method of reviving their performance. This research will investigate one way of restoring satisfactory organizational performance, acquisitions.[1]

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[1]In this research the term "acquisition" will include merger. Although there are differences between acquisitions and mergers, they are inconsequential for this study, and the use of a single term simplifies the writing style and eliminates grammatically awkward constructions.

Definition

The term "turnaround" has been used most widely to describe the revival of a declining firm. However, the treatment of the term has not been consistent. "Turnaround" has been used to describe: a set of difficult situations facing a firm (Crost, 1984); a firm that is in decline requiring a special set of activities or strategies to revive its performance (Hofer, 1980; Pant, 1986); and a firm after it has revived its performance (Bibeault, 1982; Schendel & Patton, 1976; Schendel, Patton & Riggs, 1975, 1976). For the purpose of this research, a turnaround firm is one that is in a decline and is a candidate for a special set of activities to revive its performance. Reversal of its decline is termed a "successful turnaround firm."

Importance of Turnarounds

Since most businesses experience a decline in performance some time during their history (Hofer, 1980), understanding turnaround candidates and how some firms can successfully revive performance is important. As would be expected, business practitioners have demonstrated a significant interest in the concept of turnaround and the process of creating successful turnarounds (Easton, 1976; Eisenberg, 1972; Goodman, 1982; Kibel, 1982; Whitney, 1987). A related area of research that

also demonstrates this concern for firms in decline is the investigation of companies that have collapsed (Argenti, 1976; Ross & Kami, 1983). These works examine the fall of firms and prescribe ways that such crisis situations could have been avoided.

Despite the interest of practitioners, the number of academic studies of turnaround candidates has remained limited (Ramanujam, 1984). These limited investigations can be categorized broadly. First, a number of them have examined the characteristics of the successful turnaround candidates as compared to the unsuccessful candidates (Bibeault, 1982; Hambrick & Schecter, 1983; Hofer, 1980; O'Neill, 1982; Schendel & Patton, 1976; Schendel et al., 1975, 1976). Second, the contextual characteristics of successful and unsuccessful turnarounds attempts have been compared (Pant, 1986; Ramanujam, 1984). The term contextual characteristics refers to the internal characteristics of the firm, such as firm size, market share, capital intensity, and diversification level, and to external factors, such as industry growth rate, industry research and development spending levels, and concentration of ownership in the industry.

Several issues arise from the prior research. There is evidence from the accounting literature that firms in severe decline may seek a merger with other firms to avoid bankruptcy (Altman, 1971; Stiglitz, 1972). Also,

the practitioner literature has prescribed acquisition by a stronger firm as one potential solution to the firm's problems (Kibel, 1982). To date, the empirical work on turnaround has not focused on the impact of acquisitions on the turnaround candidate. This absence from consideration is particularly startling because it has become so prominent. The level of acquisitions continues to rise, with some calling the increased activity "merger fever" (Washington Post, 1988).

Another issue that becomes clear from a review of the research on turnaround candidates is the lack of consistency in operational definitions. Quantitative and qualitative measures have been used to define operationally a firm experiencing a decline and recovery. Additionally, multiple quantitative measures have been used: net income (Bibeault, 1982; Schendel & Patton, 1976; Schendel et al., 1975, 1976), return on investment (Hambrick & Schecter, 1983; Ramanujam, 1984), and return on assets (Pant, 1986). Even those studies which used the same measures for definitional purposes have used them in different ways.

Problem Statement

As part of a broad exploration of unrelated diversification, Dundas and Richardson (1982) introduced the idea that "relatedness" might be a determining factor in

the successful acquisition of turnaround candidates. Relatedness is the degree of fit or possible synergy between the products, processes, and markets of businesses within a single corporation.

To date the evidence on whether related or unrelated diversification efforts result in better performance is inconclusive. Some studies (Bettis, 1981; Rumelt 1974, 1982) found related diversification resulted in better performance. Others have found only weak support for the effectiveness of related diversification (Palepu, 1985; Varadarajan & Ramanujam, 1987). However, some researchers argue that industry characteristics are either as important or more important than the type of merger in deciding performance results (Bettis & Hall, 1982; Christensen & Montgomery, 1981).

Dundas and Richardson (1982) argued that unrelated acquisitions that require turnaround management should be avoided because such situations require skills and knowledge that are highly industry specific and often unavailable among the financial specialists and management generalists that direct conglomerate corporations. In a turnaround situation, they argued, a related acquisition would result in better performance.

This study will test the hypothesis of whether related or unrelated acquisitions produce the more successful turnarounds. The research will also attempt

to improve the identification of turnaround candidates methodologically. Previous research has relied on single measures of whether a firm is in decline or recovery. In this examination the measures of what constitutes a turnaround candidate will be combined in a method not previously used. The use of multiple measures will increase the validity of the study.

The relevant literature will be reviewed in Chapter II. The research design for the study will then be discussed in Chapter III. The results of the study will be reported in Chapter IV, and the implications of those results will be discussed in Chapter V.

CHAPTER II

LITERATURE REVIEW

This chapter will define the concept of central concern to the research, turnaround firms. It then will examine related concepts, the understanding of which are required for this research. Previous investigations of turnarounds by both practitioners and academics will be reviewed. Also, included in this chapter will be an examination of the measures used by the various investigators and a discussion of their findings.

Definitions

The term "turnaround" has been used in several different contexts. First, the term has been used to describe a firm facing a serious set of difficulties that have the potential result of organizational death. This most general definition is summarized as follows:

> Definition 1
> When we talk about turnaround situations among dependent businesses, we are describing profitable, seasoned companies that get into difficulties--difficulties serious enough to lead to bankruptcy if not corrected (Crost, 1984: 29).

A second approach in defining the term turnaround has been to identify a set of activities or strategies required to recover from a period of sustained decline. This approach has been described as:

> Definition 2
> ...a different variation of a problem that most organizations face at some time in their existence: a major decline in performance. The response to such situations is almost always a major effort to "turn the company around" (Hofer, 1980: 20).

The specific actions suggested have been of two broad types: efforts to increase operating efficiency, or strategic efforts to improve the effectiveness of the firm (Robbins, Pearce & Robinson, 1987).

Finally, other researchers have used the term to describe a firm once it has recovered from a period of decline.

> Definition 3
> By a corporate turnaround I mean a substantial and sustained positive change in the performance of a business. In most cases a turnaround follows years of declining profitability (Bibeault, 1982: 81).

The above definitions indicate a lack of consistency in the use of the concept of turnarounds. This lack of consistency has been a principal weakness in the previous research (Robbins et al., 1987). Therefore, a clear definition of the concept needs to be specified. These various definitions of the term are at least consistent

in that the authors view a turnaround as involving a sustained period of declining performance. Also, the majority of authors (unlike Crost, 1984) do not specify that this period of decline will eventually lead to bankruptcy if the situation is not corrected (Hambrick, 1985; Schendel & Patton, 1976; Schendel et al., 1975, 1976). The major disagreement among the various definitions is in the breadth of the concept. The first definition is the broadest since it would include all firms that have declined, without regard to recovery efforts. The second definition only includes firms that have declined and are candidates for the special activities to reverse the decline. The last definition uses the term only if the special activities have been successfully implemented, reversing the firm's decline.

"Turnaround firms" will be used here in the sense that it applies to all firms that are candidates for using a special set of activities to correct a decline in performance. This definition is broader than Bibeault's (1982), since it does not limit turnarounds to only those firms that have successfully implemented the needed activities. Therefore, the phrase "turnaround firm" will be used to specify candidates for special activities; "turned around firms," or "successful turnarounds," are those firms that instituted those activities and have reversed their decline.

Related Concepts

The concept of turnarounds should be differentiated from several related concepts. The concepts of declining industries, firms in crisis (Hamermesh, 1977), and bankruptcy are closely related to and share some similar characteristics with the concept of turnaround firms. A clear differentiation between each of these concepts and that of turnaround candidates will help to increase the precision of the analysis in this research. It is also important to examine two concepts which have implications for the proposed research, diversification and synergy.

Declining Industries

The first of the related concepts is an industry in decline. Entire segments of the economy may experience a period of decline (Harrigan, 1980), as in the steel industry or more recently the insurance industry. A firm in a declining industry may experience a deterioration in its financial position because its potential market for goods is shrinking. Whetton (1980) termed this situation "decline-as-cutback." Companies in declining industries may or may not be turnaround firms. A firm in a deteriorating industry may experience declining financial performance while it is outperforming its competitors. Such a firm is not classified as a turnaround candidate since it is performing well given its environment.

Therefore, the decline of a turnaround firm should be evaluated in the context of the industry in which that firm operates (Pant, 1986). If this is not done, the researcher may be analyzing a problem with an entire industry rather than a problem with an individual company.

One difficulty in performing such industry specific analysis is that many corporations, including those that are turnaround candidates, are involved in more than one industry. One business segment of the corporation may be doing well while another is doing very poorly. It is this inability to control precisely for industry factors that has led investigators virtually to ignore the potential impact of declining industries in research on turnaround candidates (Bibeault, 1982; Hofer, 1980; O'Neill, 1982; Schendel & Patton, 1976; Schendel et al., 1975, 1976). Yet industry decline and turnaround candidates are distinct concepts, and the research reported here will take greater pains to distinguish turnaround candidates from firms displaying average performance within a declining industry than have any of the past empirical work on turnaround.

Firms in Crisis

Another closely related concept is that of firms in crisis. An organizational crisis has three dimensions:

1) a threat to high priority values of the organization; 2) a restricted amount of time for response, and 3) a situation that is unexpected or unanticipated by the organization (Hermann, 1963). The crisis itself may emerge because of something the firm has done wrong or from a threat in the environment (Starbuck, Greve & Hedberg, 1978). A firm in a crisis situation may or may not be a turnaround firm; the crisis itself does not indicate whether or not the firm is a turnaround candidate. The emphasis in the crisis situation is the need for an immediate response to a threat the firm faces. Turnaround candidates may or may not have the need for such an immediate response.

There are two situations, however, where the turnaround candidate could face a crisis situation. Turnaround candidates experience a decline over a period of time. This decline may go undetected or unacknowledged. Over time, the cumulative effect of the decline may create a crisis in which the firm's survival is threatened (Hamermesh, 1977). Urgency in the management's actions is required to prevent a rapidly deteriorating spiral of performance (Hambrick, 1985).

Similarly, a threat from the environment such as a change in an industry's dominant technology may create a crisis forcing a firm to recognize that it is a turnaround candidate. Without such a crisis situation

arising, a firm's steadily declining performance may be tolerated (Schendel & Patton, 1976).

Therefore, a turnaround candidate may experience a crisis situation as the cumulative result of its decline or as some other event in the environment. However, without such external events or serious deterioration performance, the turnaround candidate may tolerate its depressed level of performance.

Multiple methods should be used to ensure that the sample of firms studied is truly one of turnaround candidates, not firms in crisis. A combination of qualitative and quantitative measures that examines the firms' performance over a period of time should be used to distinguish firms in crisis from turnaround candidates. These measures will allow the researcher to ensure that the firms' problems have been developing for a period of time rather than being a situation that has arisen recently.

Bankruptcy

A related concept that has implications for the proposed research is that of bankruptcy. The third definition of the concept of turnaround examined at the beginning of this chapter argued that turnarounds were firms that had successfully reversed their decline. The bankruptcy literature can be conceptualized as the

opposite of this definition, firms that have not been successful in their turnaround efforts. This literature examines those firms that have been unsuccessful, at least initially, in reversing their decline. Bankrupt firms still have options available to them in their effort to survive; however, those options are more limited than those for turnaround firms.

One of the foci of the finance and accounting literature on bankruptcy has been the use of financial ratio models to predict its occurrence (Altman, 1968; Altman, Haldeman, & Narayan, 1977; Beaver, 1966). These models have been discounted for use in the investigation of turnaround candidates because of their lack of predictive power (Schendel et al., 1975).

Some authors argue that a firm with a high potential for bankruptcy can return itself to financial health (Altman & LaFleur, 1981). According to Altman (1971), the alternatives available to a potentially bankrupt firm include:

1. Change the product line or management personnel;
2. Sell unprofitable equipment, plants, or even entire divisions;
3. Solicit a takeover by a healthy company;
4. Reorganize under bankruptcy court protection;
5. Liquidate.

A brief review of this list demonstrates a high degree of similarity to the responses that are available to turn-around candidates. Alternative 3 is the point of this investigation, the acquisition of a declining firm. Alternatives 1 and 2 above are similar to strategic turn-around options available to a declining firm (Hofer, 1980). Alternative 4 has been used as a means of turn-around; that is, reorganization under the protection of bankruptcy statutes allows a firm time and means to recover from an untenable situation. Thus, the bankruptcy literature may be seen as a subdivision of the turn-around literature. The former places greater emphasis on financial analysis to predict bankruptcy. The latter concerns itself with a broad range of options for firms in decline.

Diversification and Synergy

Finally, two related topic areas that are of concern to this research are those of diversification and synergy. The term diversification is a broader concept than acquisitions. A firm may diversify by several means including acquisition, internal development of new product areas and joint ventures. The interest in the present study is on diversification through acquisition.

It is argued that the relatedness, or the potential for the sharing of resources or knowledge, between the

purchased and purchasing firms in diversification has an important impact on the success of any acquisition (Bettis, 1981; Porter, 1985; Rumelt, 1974, 1982; Salter & Weinhold, 1978). The greater the degree of relatedness, the greater the potential synergies between the two firms.

The question of whether related acquisitions perform better than unrelated is not without controversy, however. The strategic management literature, beginning with Rumelt (1974), had some authors who argued strongly for the benefits of related diversification (Porter, 1985; Rumelt, 1982). However, only weak statistical support for better performance by related diversifiers has been found by other authors (Palepu, 1985; Varadarajan & Ramanujam, 1987). Furthermore, Christensen and Montgomery (1981) and Bettis and Hall (1982) found that industry characteristics were more, or at least as, important as the type of diversification in influencing performance.

The financial economics literature has indicated that unrelated diversified firms perform better than concentrically diversified firms (Michel & Shaked, 1984) or at least as well (Weston, Smith & Shrieves, 1972). One reason unrelated diversification may succeed is that the purchased firm's assets are undervalued by the market and only a minimum of effort is required to revitalize

them (Allen, Oliver & Schwallie, 1981; Salter & Weinhold, 1979).

The pursuit of synergy, however, is one of the principal motivations for an acquisition (Ansoff, 1965). In terms of the current research this means that the turnaround firm's products, distribution channels, assets, and management can be combined with those of the purchasing firm to make both entities stronger than they were alone. However, the research concerning whether synergy actually occurs in related acquisitions has been mixed. Some researchers have found that there is no evidence of any synergy between related merging firms (Haugen & Langtieg, 1975). Others have found evidence of synergy but have not been able to specify whether it was of the type typically found only in related acquisitions (Choi & Philippatos, 1980). Therefore, evidence of operational synergies being produced by related acquisitions is limited.

In summary, the common wisdom is that related acquisitions result in better performance. However, the acquisition literature is unclear whether related or unrelated acquisitions result in superior or similar performance. The evidence concerning the benefits of synergy, is not very strong. This lack of definitive insight suggests that other issues need to be accounted for. Differentiation between successful firms and

turnaround candidates would seem to be important when examining the impact of relatedness on the success of acquisitions.

Previous Investigations of Turnaround Candidates

The previous investigations of turnaround candidates can be categorized by the background of the individual researcher or author: practitioner or academician. Practitioners have written prescriptive material based on their personal experience as consultants specializing in turnaround activities (Baterson, 1981; Kibel, 1982), on managing firms which have been turned around (Eisenberg, 1972; Pearson, 1977), and on their actions as the banker for turnaround candidates (Crost, 1984).

Academic investigations of turnaround candidates are based on more systematic empirical evidence gleaned from the subject matter. The researcher gathered information on turnaround candidates as an observer rather than a participant.

This difference in the background of the investigator has resulted in differences in the way turnaround candidates are identified and in the analysis of what produced successful turnarounds. Both of these issues are of interest here, and distinctions in the ways that turnaround candidates are identified are considered first.

Measures Used by Practitioners

In identifying a turnaround candidate there are two central points of concern, the firm's decline and its potential recovery. Practitioners have avoided specific definitions of these concepts. They often believe that a firm's state of decline and state of recovery are self-evident (Kibel, 1982; Stewart, 1984; Whitney, 1987). The manager should be able to make that evaluation, and specific measures of their occurrence are not needed.

Some practitioners have used a qualitative appraisal of a firm's financial characteristics. The factors considered in such evaluations included shrinking net worth, overdependence on bank financing, excessive accounts receivable, and overstated inventory (Crost, 1984). But these evaluations are still global and impressionistic, not specific and quantitative.

Measures Used by Academics

The academic literature has used both qualitative and quantitative measures. Each of these types of measures will be reviewed in turn.

Qualitative Measures

Academic researchers have used several different types of definitions of decline and recovery (see Table I) including qualitative approaches similar to those used

by the practitioners (Hofer, 1980; O'Neill, 1982, 1986). Researchers employing such an approach observe the general pattern of many characteristics in the firm and develop impressions of its decline and recovery.

TABLE I

MEASURES OF DECLINE AND RECOVERY IN TURNAROUND FIRMS

Article	Measure	
Qualitative Measures		
Hofer (1980)	Impression of firm's overall financial condition, market position, technological stance, production capabilities and strategic health	
O'Neill (1982, 1986)	Judgment of performance pattern of firm based on published stories about profits and market share	
Firsirotu (1985)	17 in-depth interviews with managers and archival evidence	
Quantitative Measures	Decline	Recovery
Schendel, Patton and Riggs (1975, 1976)	4 year decrease in net income normalized by GNP growth	4 year increase in net income normalized by GNP growth

TABLE I (Continued)

Schendel and Patton (1976)	flexible measure of decline and recovery which evaluated the goodness of fit of firm's pattern of decline and recovery relative to expected pattern of performance by a turnaround firm	
O'Neill (1981)	3 years decline in net income normalized by banking industry average (sample limited to banks)	3 years growth in net income normalized by banking industry average
Bibeault (1982)	3 years decline in net income	not clearly defined, but appeared to be based on researcher's qualitative impression of firm
Hambrick and Schecter (1983)	2 years of pre-tax ROI below 10%	firms whose ROI rose to 20% or more in the following 2 years
Ramanujam (1984)	4 years decreasing after-tax ROI, at least one year of ROI had to be below 5%	during all 4 years following decline, the after-tax ROI rose above 5%
Pant (1986)	ROA was in bottom 25% of industry for 2 years	ROA rose to top 25% of industry for 2 years; lag of 4 years between decline and recovery

Hofer's (1980) and O'Neill's (1982, 1986) qualitative measures are similar and provide useful examples. Aspects of a firm's financial condition such as cash flow, break even points, and net income are considered. Also, less well defined aspects such as market share, market position, competitive position, technological strengths, and production capabilities are combined to form qualitative impressions of the firms' decline and recovery.

The potential sources of such qualitative information are numerous. Articles in Fortune magazine were used by O'Neill (1982, 1986) to analyze the companies in his sample. Firsirotu (1984) examined cultural changes in the turnaround of the small parcel division of the state-owned-railroad, Canadian National Express. He used archival evidence and seventeen in-depth interviews with managers of the firm to evaluate the firm's culture and its changes.

The qualitative measures allow greater insight into the firm and its nuances (Harrigan, 1983). This insight comes from the greater detail which provides greater understanding of the firm's complexities. The researcher can obtain multiple viewpoints on the firm in a qualitative analysis. These multiple viewpoints help to increase the validity of the analysis if they agree with one another. However, qualitative measures are hindered

by questions of replicability among researchers and of generalizability to other firms.

Quantitative Measures

Academic researchers have also relied on quantitative measures to evaluate decline and recovery in turnaround candidates. The declining firm is one whose financial condition is below what is expected and/or exhibits an unfavorable trend. Three different pieces of financial information have been used in the quantitative appraisals of decline. These are net income, return on investment (ROI), and return on assets (ROA). All of these measures focus on the firm's profitability, but that focus may be in absolute terms (net income) or as a relative measure where returns are compared to invested capital (ROI) or to total assets (ROA). However, trade-offs are involved in any measure chosen for use. These three specific measures will be considered below.

Net Income. Schendel, Patton and Riggs (1975) were among the first to systematically study turnaround firms. They used net income to evaluate decline and recovery by firms. They did not specifically define net income; issues such as whether or not extraordinary items were included were not discussed. However, typically net income is defined as the net sales revenue of the firm minus its operating, financial, and tax expenses.

Schendel, Patton and Riggs (1975) normalized net income figures with gross national product (GNP) growth. Firms whose growth in net income was less than growth in GNP were defined as "in decline," and firms whose net income growth was greater than GNP growth were in an "upturn phase." This allowed the economic condition in which the firms operated to be partially controlled.

Declining firms were defined by Schendel, Patton and Riggs (1975) as those with four years of uninterrupted decline in net income normalized by GNP growth. Firms were defined as successful turnaround companies if they had four years of uninterrupted increase in normalized net income following that decline. A two year lag between the downturn and the recovery was allowed.

Before selecting net income as the measure for their sample, Schendel, Patton and Riggs (1975) compared the nature of the samples generated by three financial measures, net income, earnings per share (EPS), and return on assets (ROA). Again, they did not define exactly the definitions they used for the measures of EPS and ROA. However, typically EPS is defined as a firm's net income divided by the number of shares of stock outstanding. Return on assets may be defined as operating income before taxes and extraordinary items divided by the firm's total assets (Pant, 1986). They believed that the

pattern of net income provided a more accurate picture of a turnaround firm.

They were critical of ROA, arguing that the sample it produced included firms that, by the author's qualitative evaluation were not turnaround candidates (although they did not specify their qualitative criteria). The example they provided was Xerox. For them, it was difficult to argue that Xerox was a turnaround candidate during the 1950's and 1960's despite a slight drop in ROA. They were also critical of earnings per share as a measure of decline. The sample it generated was significantly smaller than that provided by net income. Thus, net income was evaluated as the most appropriate measure providing the largest and most accurate sample.

Three other studies have used net income to identify turnaround candidates (Bibeault, 1982; O'Neill, 1981; Schendel & Patton, 1976). However, the time span of the net income decline used by these studies to identify a turnaround candidate was different from Schendel, Patton and Riggs (1975). Bibeault (1982) surveyed executives who, based on a qualitative analysis, he felt successfully turned a firm around after it had suffered three years decline in net income. O'Neill (1981) identified banking turnaround candidates as those with three years decline net income, successful turnarounds were banks which then experienced three years growth in net income.

Schendel and Patton (1976) used a flexible measure of decline and recovery. Their measure was based on the general pattern of a firm's net income performance over a long period, rather than a specific decline over a given number of years. They selected 130 firms from the 1952-1971 Compustat tapes which appeared visually to have a pattern of decline and recovery in their normalized net income. They plotted each of the firms' income as a percent of the base year. Then, they ran two simple linear regressions of income on time, one on the downturn phase, and one on the upturn phase. The R^2 values were then used to determine the goodness-of-fit to the perceived pattern of how a decline and recovery by a successful turnaround firm should appear. Their resulting sample consisted of 36 pairs of turnaround and matching non-turnaround firms.

The use of net income as a measure of decline and recovery is not without criticism. Using net income does not involve an absolute zero. The absence of an absolute zero, or some point that places various firms in comparable terms, makes contrasts between firms difficult. For example, net income has no means to control for the fact that a firm may buy income growth by using stock for acquisitions (Schendel et al., 1975). Since net income makes no adjustment for the additional capital employed, the income of the firm may be increasing, but only due to

the new acquisition. More generally, net income does not control for firm size. Large firms and small firms have no common grounds for comparisons. Therefore, as a measure of performance it does not make varied firms directly comparable.

ROI. Since return on investment (ROI), is a ratio it allows easy comparisons among firms. ROI is typically defined as income before extraordinary items divided by invested capital (Ramanujam, 1984). Invested capital is usually defined as long term debt plus preferred stock plus common equity and minority interest in unconsolidated subsidiaries. This allows the relative effectiveness of a firm's invested capital to be compared to others no matter the size of the firms, although it may still be important to control for systematic size differences when using ROI.

At least two studies have used ROI in their evaluations of turnaround firms (Hambrick & Schecter, 1983; Ramanujam, 1984), although they have defined decline and recovery differently. The nature of the database determined how ROI was used. The PIMS database used by Hambrick and Schecter (1983) is assembled in four-year segments of data. Since they wished to examine successful turnarounds, this limited their investigation to firms which had a decline in ROI for only two years and then recovered the following two years. To help ensure

their sample did not contain firms experiencing temporary and innocuous downturns, they established severe criteria for a firm's pattern of ROI performance. They defined declining firms as those with a pre-tax ROI below ten percent for two consecutive years. A firm was deemed as successfully turned around if its ROI for the next two years was at least 20 percent. The use of the ten percent level of pre-tax ROI was chosen because it was well below the cost of capital to firms in the mid-to-late 1970's. The 20 percent level was chosen for successful turnarounds since it was a significant increase over the ten percent used in the decline period.

Other databases contain financial information about a firm over longer periods of time. For example, the Compustat database contains up to 20 years of financial information about a firm. This allowed Ramanujam (1984) to examine firms that had experienced four years of decline in after-tax ROI, with at least one of those four years having an ROI below five percent. Successful turnaround firms were those whose subsequent performance rose above five percent for the following four years. The unsuccessful turnaround firms were those whose performance remained below five percent ROI.

Return on investment as a measure of decline can be criticized, as any ratio measure potentially can (Schendel et al., 1975), as identifying firms that are

not true turnaround candidates. For example, does a slight drop in ROI over several years make a firm a turnaround candidate? Arguably, a very large firm with slight declines may not be a turnaround candidate. This potential problem was recognized by Ramanujam (1984). He sought to ensure that only turnaround candidates were in his sample by limiting his sample to firms that had experienced at least one year of below-five-percent ROI in addition to his other criteria. The five percent ROI was below the cost of capital for firms at that time. This allowed Ramanujam (1984) to show that not only was ROI declining for his sample of firms, but that ROI was low relative to other firms.

ROA. Return on assets, in a manner similar to ROI, does aid in the comparison of firm performance among dissimilar firms.

Pant (1986) defined turnaround candidates as firms whose ROA's were in the bottom quartile of their industry for two consecutive years. Successful turnaround firms were those companies that then improved their performance to the top 25 percent of their industry for two years; a lag of four years was used between the decline and recovery period.

In summary, there has been little consistency in the quantitative measures used to evaluate decline and recovery in turnaround candidates. Even among the studies

that used similar measures, the way in which these measures were operationalized has varied. Each of the financial measures has both advantages and disadvantages to its use. The next section will discuss the trade-offs inherent in the use of these quantitative measures.

Discussion of Quantitative Measures. A principal concern in turnaround research is having a sample of sufficient size (Hofer, 1980). The fact that a successful turnaround does not happen every day limits the available sample. For example, Schendel and Patton (1976) started with a potential sample pool of 1800 firms and ended with a sample of 66 firms. An important problem is that different measures for decline and recovery produce different sample sizes, and thus, the choice of a measure is driven by the sample size it produces (Schendel et al., 1975). Yet, it is not clear which measure provides the largest sample. Schendel, Patton and Riggs (1975) selected net income as their measure of decline and recovery primarily because it provided an adequate sample size. However, Ramanujam (1984) found that using ROI provided a larger sample than did net income.

A second concern in turnaround research is to include only firms in the sample which are actually turnaround candidates. There are two dimensions to this problem. The first is the time frame to be investigated.

A sufficient period of time must be included to ensure that a significant problem exists for the firm, not just a minor mistake (Schendel et al., 1975) or random noise (Ramanujam, 1984).

Periods of decline ranging from two to four years have been used. However, a trade-off exists between allowing sufficient time to ensure a problem exists and the previous research concern, sample size. The longer the time frame, the more limited the sample will be. For example, Ramanujam (1984) found 1,143 firms that had three years declining ROI, but only 701 of those firms had a four year decline. In recognition of this problem, Schendel and Patton (1976) did not specifically set a time frame on the desired pattern of performance. Therefore, while allowing sufficient time to ensure that only true turnaround candidates are allowed in the sample, the researcher must be aware of the effect of the time dimension on sample size.

A second dimension to the problem of including only true turnaround firms in the sample is the measure to be used. As previously cited there are benefits and criticisms of each measure. One way to overcome these difficulties is the use of multiple measures. Multiple measures used in the research would increase the validity (Hambrick, 1980) and might simultaneously increase the sample size by permitting a shorter time period of

decline to be used. Limited efforts have been made in the past turnaround research to use multiple measures in identifying a sample. For example, Schendel, Patton and Riggs (1975) examined the overlap between net income measure and return on assets. They found only 31 of the 65 firms (47 percent) identified using the ROA measure of decline over four years were also included in a sample that used the net income measure. Ramanujam (1984) found a greater overlap between the net income and the ROI measures of decline. Examining three years of ROI decline, he identified 1,143 firms; of those, 823 (72 percent) also experienced three years of declining net income.

None of the researchers used multiple types of information in identifying their sample, as suggested by Harrigan (1983). Schendel and Patton (1976), O'Neill (1981) and Bibeault (1982) used such multiple data sources to analyze recovery by turnaround candidates, but did not do so to identify the firms which had experienced a decline. It is argued that multiple data sources, including published secondary materials, should be used in conjunction with the statistical analysis to further increase the validity of the measure of decline. The quantitative measures will provide financial evidence that a firm is in decline. The published information will provide the opinion of experienced observers and will allow greater insight into the complexities of the

firm. Qualitative information will also provide indications of whether the firm was performing worse than its industry competitors. The two types of data combined will provide a clearer understanding of the firm than either could provide alone.

In summary, each of the quantitative measures has benefits and problems with its use. The validity of the sample can be increased through the use of multiple financial measures. Additionally, qualitative measures of decline should be sought to validate the financial measures. Such combined methods move closer to the ideal for strategic management research (Harrigan, 1983) and permit a fusion of academic and practitioner oriented study.

Characteristics of a Turnaround Firm

Having identified their samples, investigators focus on two questions. First, what are the responses that have produced the successful and the unsuccessful turnarounds? Included in the analysis of successful turnarounds has been a conceptualization of the stages involved in the process. Second, what are the internal and external contextual factors associated with successful turnarounds? The findings on these two issues will now be examined. As will be seen, the findings are in

such conflict that they may be interpreted to support either Dundas and Richardson's (1982) hypothesis that related acquisitions of turnaround candidates result in better performance than unrelated acquisitions or the opposing hypothesis that relatedness is not a significant factor in turnaround efforts.

Responses That Produce Successful Turnarounds

Once successful and unsuccessful turnarounds have been identified, researchers have focused on the behaviors which produce successful turnarounds. The differentiation between practitioner and academic researchers is again useful for this analysis.

The practitioner literature has focused on current operating factors that managers can change to improve the performance of the firm. The authors have similar views on the actions which should be taken: cost cutting, divestiture of unprofitable businesses, tighter financial controls, elimination of nonproductive employees, restructuring to ensure accountability, and leadership changes. Only two authors, Kibel (1982) and Stewart (1984), briefly address the need for longer term issues such as strategic planning.

The academic literature also has recognized that there are similar operating solutions that increase

efficiency in implementing a chosen strategy. However, this literature emphasizes strategic solutions that focus on changes to make a firm more competitive within its industry.

This dichotomy of corporate responses to decline, operating and strategic, was developed by Schendel, Patton and Riggs (1975). They found that declines caused by operating problems (e.g., production bottlenecks, excess capacity) were frequently solved by operating solutions (e.g., cost cutting, plant modernization). They found that strategic problems (e.g., intense competition, obsolete products) were principally solved by strategic solutions (e.g., redefining the business, new products).

Hofer (1980) supported Schendel, Patton and Riggs' (1975) concept that the choice of an operating or strategic turnaround efforts should depend on the cause of the firm's decline -- poor strategy or poor operations. In fact, he became more specific on the nature of operating turnarounds. He argued there were four different types of operating turnarounds: revenue generating, cost cutting, asset reducing and some combination of these three.

Hambrick and Schecter (1983) supported this analysis of a successful turnaround dichotomy in their discussion of "gestalts." Their empirical work revealed that successful turnarounds used three gestalts, or series of moves: asset cost surgery, where excess capacity and

costs are cut; selective product/market pruning, where firms refocus on their most profitable sectors; and piecemeal moves which combine the other two gestalts. These are similar to operations (cost cutting), strategy (product/market pruning), or some combination of the two (piecemeal moves).

Analyzing the responses that produce successful turnarounds in an operating-strategic dichotomy has implications for this research. The operating responses stress increasing the efficiency of the candidates' current operations. The practitioners who have performed operating turnarounds emphasized that speed was essential to their successful completion (Kibel, 1982). The requirement for speed implies that potential managers of turnaround candidates needing operating turnarounds should be experts on the business and industry before they take on the task, as the following shows:

> The usual route that companies follow when a turnaround has not gotten them back on the right track is a sellout to a stronger company in the same industry. Usually companies in the same industry have the expertise and the market requirements to give the shareholders of the troubled company a higher price than other companies could offer (Bibeault, 1982: 133).

Logically, this would preclude acquisition of a turnaround candidate by an unrelated firm. There would not be time enough for such a firm to analyze the industry of the candidate and to mount an investigation of the

candidate's shortcomings. The implication is that successful operating turnarounds that employ an acquisition of the declining firm should be of the related type.

This is consistent with Dundas and Richardson's (1982) hypothesis that a related acquisition works best for turnaround candidates. They argued that unrelated acquirers do not possess the skills to turn a declining firm around successfully.

However, in acquisitions of turnaround candidates that require strategic changes, relatedness may not matter. Lack of a close relationship among the acquiring corporations' businesses may even be an advantage. Strategic turnarounds often involve strengthening a firm's position in areas such as technology or finance (Hofer, 1980), and the sources of new technologies and new financial structures may come from transferable knowledge in unfamiliar industries. Thus, an unrelated acquirer may improve performance in turnaround candidates which have strategic problems.

Therefore, the type of acquisition best suited to the turnaround candidate may be contingent on the type of turnaround effort that is needed. However, two findings in previous studies suggest that successful related acquisitions of turnaround candidates will be more frequent than successful unrelated ones, no matter what type of turnaround response is needed. First, combina-

tions of operating and strategic responses are most frequently found in successful turnaround firms (Hambrick & Schecter, 1983; Schendel et al., 1976). Thus, familiarity with a business may always be needed in order to act with the necessary speed to make the operating part of the turnaround work. Second, it is not always possible to distinguish between the two types of efforts (Hofer, 1980), suggesting the disappointing implication that the operating-strategic dichotomy may be conceptually interesting but practically useless. Nevertheless, an empirical finding that relatedness does not matter in the acquisition of turnaround candidates, or that unrelated acquisitions performed better, might benefit from a post hoc analysis of the type of turnaround effort used in the successful business combinations.

Stages of a Turnaround

Table II compares Bibeault's (1982) and Hambrick's (1985) stages of corporate turnaround. Hambrick argued that evaluation and analysis should be carried out throughout the turnaround process and could not be relegated to any specific stage; while Bibeault identified evaluation as a separate stage. However, there is a significant amount of agreement on the other stages. The organization must stop the immediate threats to its

survival. The cash outflows such as accounts payable and travel expenditures must be controlled immediately (Hambrick, 1985). More serious cost cutting measures such as closing a money losing portion of the corporation may also have to occur (Bibeault, 1982). Once the immediate threat to the organization has has been halted the next stage is to rebuild the organization. Finally, the firm is able to expand in the last stage of the turnaround.

TABLE II

STAGES OF A TURNAROUND

Hambrick (1985)	Bibeault (1982)	Focus
	1. management change	
	2. evaluation	
1. crisis	3. emergency	The focus in both models is on eliminating the immediate threats to the organization's survival.
2. stabilization	4. stabilization	The focus in both models is on the rebuilding of the organization.
3. rebuilding	5. return to normal growth	The focus in both models is on entrepreneurial activity inside the organization as the firm begins to grow once again.

It is reasonable to expect that a declining firm seeks to be acquired only after its other turnaround efforts have failed (Bibeault, 1982). One reason may be that the management of a declining firm often is replaced in the turnaround effort (Hofer, 1980). Therefore, managers of turnaround candidates only reluctantly will seek an acquisition. Thus, a turnaround candidate which is acquired most likely is in a very serious state of decline; i.e., a firm trapped in the emergency or crisis stage of the turnaround.

Firms that are in such serious decline should follow an operating turnaround effort because an immediate effect on performance is needed (Hofer, 1980). Strategic turnaround efforts take too much time to implement and to be successful. Therefore, operating turnaround efforts offer the greatest likelihood of providing the response such a firm needs to survive.

Since turnaround firms involved in acquisitions are most likely to be in a very serious state of decline, theoretically only an acquiring firm that implements an operating turnaround effort will be successful in restoring the firm's health. Recalling that operating turnarounds work best in related acquisitions, additional support was found for Dundas and Richardson's (1982) hypothesis that a related acquisition of a turnaround candidate will result in better performance.

Contextual Factors

The contextual characteristics associated with successful turnarounds are the second major area of investigation among researchers. The term "contextual characteristics" refers here to structural characteristics, both internal and external, that are difficult to alter but that are associated with successful turnarounds. External structural characteristics include such factors as the industry's environmental volatility, concentration, capital intensity, growth rate, and research and development spending levels. Internal structural characteristics include a firm's size, market share, capital intensity, diversification level, financial leverage, growth rate, and whether managers own a significant portion of the firm.

Previous research has found that contextual factors have a limited impact on a firm's successful turnaround (Pant, 1986; Ramanujam, 1984). Pant and Ramanujam examined a number of contextual factors and have been the principal researchers examining the impact of contextual factors on turnarounds. Size was the only factor that both studies found to have a significant impact on successful turnarounds; large firms were more likely to be turned around than small firms. Additionally, Ramanujam (1984) found some support for successful turnarounds being associated with less severe periods of

decline. Favorable industry conditions, such as industry growth rate, also appeared to have aided in producing successful turnaround firms. However, this last finding is counter to Pant's (1986) conclusions. Schendel, Patton and Riggs' (1976) work also investigated this issue and found no significant impact from industry growth.

Ramanujam (1984) discussed at length industry volatility measured as the coefficient of variation in industry shipments. But he used only a portion of his total sample in analyzing its importance since he could not obtain the needed information on all firms. Using this partial sample, this variable was not found to be significant in explaining pre-decline performance and post-decline outcome. The remainder of the factors he examined (number of acquisitions during the decline phase, industry concentration, capital intensity, industry research and development intensity, industry advertising intensity, and external financial resource dependency) also produced either inconclusive or insignificant results.

Pant (1986) found successful turnaround firms had higher degrees of external control; such control coming from individuals who owned more than four percent of the firm's stock and were not in the management of the firm. However, unlike Ramanujam (1984) she found successful turnarounds were in industries that had higher levels of

R&D spending and had a lower degree of interaction between operating profit and the ratio of advertising to sales than did unsuccessful turnaround firms. Pant (1986) did not find the industry growth rate, market share, financial leverage, capital intensity, or industry concentration, to be significant factors in producing successful turnarounds. She also found that the degree of diversification was not significantly different between successful and unsuccessful turnaround firms.

There are two implications for the proposed research. First, the research will need to control for firm size in order to assess accurately the impact of the related versus unrelated acquisitions. This is the only contextual factor found by both Ramanujam (1984) and Pant (1986) to impact successful turnarounds. The effect of almost all other contextual factors was either sample specific or both researchers found them to be insignificant in producing a turnaround. Two factors, severity of decline and nature of control, were shown by one researcher (but not investigated by the other researcher) to have at least some impact on successful turnarounds. Second, the type of acquisition, related or unrelated, may not impact the success of the turnaround effort (Pant, 1986).

This finding on diversification is in contrast to the implications of the previous discussion concerning

the types of turnaround efforts (strategic or operating) and the stages of the turnaround process. One implication may be that turnaround managers depend less on their industry specific skills than on a set of generic skills required in a turnaround. For example, it may be more important to the turnaround manager that he/she have the ability to motivate subordinates, find and cut wasted resources, and promote a clear (but broad) vision of the firm's future than it is to have specific industry-related skills.

Summary

Past empirical results and logical extensions of the thinking of various scholars suggest conflicting ideas on whether related or unrelated acquisitions of turnaround candidates should perform better. Pant's (1986) findings suggest that unrelated or related acquisitions of turnaround candidates may result in equal performance. However, a different result is suggested by the logic that only firms in severe decline are involved in acquisitions, that severe decline requires an immediate operating turnaround for survival, that related acquisitions are likely to produce superior operating turnarounds, and that operating turnarounds are the most frequently encountered type. The proposed research provides a direct test of these conflicting hypotheses.

Motives for Acquisition of Turnaround Candidates

The last area to be examined is why a stronger firm would want to purchase a turnaround candidate. Kibel (1982) noted that a troubled firm usually must meet certain needs of a purchasing firm including at least some of the following:

a. Specialized management capability;

b. Excellent brand name identification;

c. A tax loss carry forward that can be utilized;

d. An existing product line that fits well with that buyer's customer base;

e. A distribution network that increases the buyer's customer base;

f. Excellent profit potential if an increased cash flow were available;

g. A special premium which is being offered to the buyer;

h. Valuable patents or trademarks that have not been fully developed.

These factors emphasize connections in products, customers, and distribution channels between the purchased and the purchasing firm. These interconnections make synergy possible. However, the previous discussion on synergy illustrated that the actual findings on the existence of synergy were discouraging.

There are two other rationales for such purchases of turnaround candidates. The first comes from the turnaround literature. Heany (1985) argued that a firm in decline not only has operating and strategic options, but also has the exit option. He argued that other owners or managers might be able to turn around a given business when the current owners could not. Managers often examine only a narrow range of options for a firm in decline. Someone outside the industry may have fresh approaches to solving the firm's problems. Therefore, an acquiring firm may seek the acquisition of a turnaround candidate when it feels it has a fresh approach to the firm's problems.

Finally, the industrial economics literature provides some rationale for acquisition of a turnaround candidate. Mueller (1969) argued that managers have a preference for growth maximization. The manager is more concerned with the perception of himself or herself as an important and powerful head of a large organization than he/she is with the return on investment. Therefore, a manager may seek related or unrelated acquisitions principally for the growth it provides in the firm's size, not for potential returns. It is reasonable to expect managers to seek such growth since firm performance has been shown to influence executive compensation only weakly (Kerr & Bettis, 1987). Relatedness, and the

degree of success in the turnaround effort may be subordinate concerns.

The reasons cited for the acquisition of a turnaround candidate provide rationales for either a related or an unrelated acquisition. The first rationale (synergy) promotes related acquisitions. The next two (fresh insight and growth maximization) could be used to justify unrelated acquisitions. The proposed research will allow greater insight into which of these rationales is appropriate.

Summary

The merger and acquisition literature has not been able to answer definitely whether related or unrelated acquisitions result in better performance. Similarly, the review of the turnaround and related literature has presented evidence that supports two arguments. One argument is that related acquisitions of turnaround firms have resulted in better performance than unrelated acquisitions. The other argues that related or unrelated acquisitions could result in equivalent performance.

This leads to a hypothesis that begs an empirical test:

> Hypothesis: Related acquisition of turnaround firms results in better performance than unrelated acquisition of turnaround firms.

The research design proposed in Chapter III will investigate this hypothesis. Innovative multiple measures combining financial and qualitative sources will be used to identify the turnaround candidates.

CHAPTER III

RESEARCH DESIGN

This study will investigate the effects of relatedness on the results of acquisitions of turnaround candidates. This chapter will specify the research design. The design will use multiple measures and data sources to ensure validity. For example, both quantitative and qualitative measures will be used to identify turnaround candidates. The quantitative measures will utilize two financial measures in the evaluation of the turnaround candidates.

The chapter will first specify how the acquired firms will be identified and selected. Next, the quantitative measures which will be used to identify turnaround candidates among the acquired firms will be discussed. Third, the qualitative measures utilized to support the quantitative evaluation of these firms as turnaround candidates will be examined. Fourth, the measure of relative industry performance shown by potential turnaround candidates will be delineated. The methods used to identify whether acquisition of the turnaround candidates were related or unrelated will be discussed next.

Sixth, the measure of acquisition performance will be examined. Next, the technique to be used to test the hypothesis, a multiple regression technique, will be discussed.

Identification of Acquired Firms

The first step in the proposed research is to identify firms which have undergone an acquisition. The information to make this determination will come from the Standard and Poor's Compustat computer tapes--the research file. Firms that have been dropped from Compustat's data collection process over the past 20 years and the reason for their elimination are identified in the research file.

Firms that have been dropped from Compustat files due to acquisition during 1979-1987 will be identified. The time frame of 1979-1987 will ensure no acquisition over nine years old or less than two years old will be examined. This will allow two factors to be considered in developing the sample. First, the time span is sufficient to allow a sample large enough to perform the required statistical tests. Second, the time span is current so that an investigation of the impact of the acquisition on the turnaround candidate can be evaluated reasonably using a panel of experts.

Quantitative Identification of Turnaround Candidates

Once the acquired firms are identified the second step in the research will be to identify the turnaround candidates within that group. Turnaround candidates are firms that require a special set of activities to reverse the firm's decline. Sample selection shall be based on a conjunctive model. This type of selection is very common in the psychology and consumer behavior literatures but yet to be applied in the strategic management literature. This technique examines various attributes of a person or a firm and includes that entity in a sample only if the item is above the cutoff level on all attributes (Grether & Wilde, 1984). Quantitative and qualitative criteria will be used to identify the turnaround candidates in this study. The quantitative measures will be applied to the acquired sample initially. The presentation of quantitative measures will occur in two parts. The source of information for the quantitative measures will be examined, and then, the two measures to be used in the quantitative evaluation, return on investment and net income, will be examined.

Source of Information

The quantitative measures use a downward trend in a firm's financial performance to signify a firm in de-

cline. Since the quantitative measures rely exclusively on financial information, the Compustat tapes provide an appropriate source of data.

The Compustat files of interest in this study are the over-the-counter and the industrial files. The over-the-counter Compustat file includes approximately 800 companies whose stock is publicly traded over-the-counter. There are three industrial files (primary, secondary and tertiary industrial files) all of which are of interest to the proposed research. These three industrial files combined contain approximately 2,400 companies whose stock are publicly traded on the New York and American stock exchanges. An examination of the 1988 research file reveals there are 817 firms which were dropped due to a merger or an acquisition from the industrial files and the over-the-counter file during the years 1979-1987. Unfortunately, the 1988 Compustat computer tapes do not contain historical data on firms dropped from the data collection process. Therefore to obtain financial information on these 817 firms, data from the original Compustat tapes issued from 1979-1987 will be obtained.

Specifying the Measures Used

As discussed in Chapter II, there have been three financial measures used to identify turnaround candi-

dates. None of these measures has established its validity as the most appropriate measure to use to identify turnaround firms. However, if two of the measures agreed in their evaluation of a firm as a turnaround candidate convergent validity could be established. Therefore, the two most widely used measures, return on investment (ROI) and net income, will be used. The fact that they have received the greatest use in past research led to their selection.

The first measure, ROI, will be defined in a manner similar to Ramanujam's (1984) definition:

$$ROI = [(I + IE + MI)/ IC]$$

I = income before extraordinary items
IE = interest expense
MI = income from minority interest in consolidated subsidiaries
IC = invested capital: long term debt + preferred stock + common equity + minority interest in consolidated subsidiaries

The second measure to be used in this research is the measure of income. The most common measure used in past research has been net income normalized by GNP growth (Schendel & Patton, 1976; Schendel et al., 1975, 1976). This means that the net income of some turnaround candidates in the sample used by Schendel and Patton (1975) and Schendel, Patton and Riggs (1975, 1976) could have been increasing; yet, because they grew at a rate less than GNP, they were deemed to be in decline.

In this study income after taxes but before extraordinary items will be used. Extraordinary items may temporarily hide the underlying poor financial performance of a firm. For example, the sale of assets may allow a one time increase in income; however, such a sale may not resolve the firm's reasons for its poor performance. Thus, extraordinary items will be excluded from consideration. These income figures will then be normalized by GNP growth. Information on GNP growth was obtained from the 1988 Economic Report of the President.

$$I = OI - IE - IT - SI$$

I = Income before Extraordinary Items
OI = Operating Income
IE = Interest Expense
IT = Income Taxes
SI = Special Items

$$NI = \frac{I2 - I1}{I1} - GNPG$$

NI = Normalized Income
I2 = Income before extraordinary items year 2
I1 = Income before extraordinary items year 1
GNPG = percent GNP growth from year 1 to year 2

It would be logical to expect a very high correlation between ROI and NI. However, Ramanujam (1984) found only a 72 percent overlap between firms with three years of declining ROI and three years of declining income. This lack of consistency further supports the need for multiple measures that are in agreement to identify

turnaround candidates. Therefore, both measures will be used in this investigation.

As noted in Chapter II, the length of time examined is critical. The longer the time frame, the more certain it is that the firm is in decline. However, the longer the time frame the smaller the sample. Previous research has used defined periods for evaluations of decline ranging from two years (Hambrick & Schecter, 1983) to four years (Ramanujam, 1984; Schendel et al., 1975, 1976). A four year time frame helps to increase the validity of the selection of a firm as a turnaround candidate. However, the use of multiple measures increases the validity of the selection, making the longer time period an excessive constraint without substantially increasing the validity. Therefore, three years of decline in the two financial measures will be used to identify turnaround candidates.

An additional requirement will be that there is a one year lag between the three years of decline and the acquisition date. Two issues motivate this requirement. First, financial information is not available for all firms the year prior to the acquisition. The financial data from Compustat is gathered based on fiscal year. The financial data for the latest fiscal year may not always be available on Compustat if the release of the Compustat tape occurs before the financial information

for the last fiscal year is obtained. Typically, this missing year of data is then reported on the next Compustat tape. However, once an acquisition is completed, the firm will no longer release financial information and it is then dropped from data collection by Compustat. The result is that in a few cases no financial information for the year prior to the acquisition can be obtained.

A second reason for allowing the one year lag relates to those companies that do have financial information the year prior to the acquisition. This concern relates particularly to those firms that may have an upward swing in their financial performance that year after a three year period of decline. The upswing in performance may reflect that even the announcement of a pending acquisition, while not completed, may have a positive impact on the firm's performance. For example, suppliers of turnaround candidates' inputs and financial resources may have tightened credit requirements as the firm's performance deteriorated. They fear that under normal credit terms if the firm should file for bankruptcy they may not receive payment for the items supplied. However, the proposed acquisition by a stronger firm prompts the supplier to return to normal credit terms because the stronger partner is expected to pay the supplier after the acquisition. In summary, in evaluating

quantitatively which firms are turnaround candidates, the last year before the acquisition may actually reveal more about the acquisition effort than it does about the turnaround effort. The means that will be used to avoid this potentially confounding factor will be to maintain a one year lag between the decline period and the acquisition.

Qualitative Measures

The discussion in Chapter II highlighted the need for both quantitative and qualitative measures to identify turnaround candidates. The two types of measures taken together increase the validity of the designation of a firm as a turnaround candidate. The addition of the richer qualitative measures helps to ensure that when the financial data being analyzed indicated a decline, this indication was consistent with the way outsiders viewed the firm. Another benefit is that it provides both an academic and a practitioner view of the firm.

O'Neill (1982, 1986) in his analysis of turnaround candidates used published articles from the business press that discussed the firms under consideration. He discussed such information as being appropriate for several reasons. First, the business writer is a trained professional who records the activities of the firm. Second, the nature of the audience is a professional one that demands accuracy in evaluations of firms. Finally,

such writers have greater access to channels of information than do academicians. Published sources of information appear to be particularly appropriate in this study.

The analysis of such published material will be conducted in a manner similar to that of Montgomery, Thomas and Kamath (1984). The relevant articles on each of the firms will be obtained from the citations provided by the Predicasts F&S Index. The index will be examined for three years prior to the acquisition, the year of the acquisition and for one year after the acquisition. These articles then will be reviewed for their content. Specifically, discussions concerning performance problems, reasons for such problems, and the firm's relative industry performance will be analyzed. Specific quotations and discussions concerning these factors for each firm will be extracted from the articles. Then these summaries will be presented to a panel of three academic experts for their consensus evaluation of whether the firms will be considered turnaround candidates.

Analytical stories will not be available on all firms. Therefore, the qualitative analysis will be used to confirm the quantitative measures previously used. When conflicts between the quantitative and qualitative measures appear within the data on a firm, the firm will be eliminated from the sample. However, if no published

information can be located to provide insight into the firm, the firm will not be eliminated from the sample.

Industry Comparisons

Once firms have quantitatively and qualitatively been identified as turnaround candidates it will also be necessary to ensure these firms' industries are not in decline. Firms that are part of industries in decline may not be turnaround candidates, especially those firms that are performing better than the industry as a whole.

The analysis of industry performance will occur in two steps. First, qualitative evaluations of the firms will consider the relative performance of the firm. Specifically, the published material used to confirm a firm's decline will also be used by the panel of experts to evaluate that firm's performance relative to other comparable firms. This material will be a qualitative evaluation of the firm's overall competitive position, including such issues as relative profit, market share, growth and recent stock price. (See Appendices D and E.) It is still possible for a firm to be a turnaround candidate in a declining industry. However, for this to occur there must be a clear indication that the firm's performance is worse than that of its major competitors. If the qualitative information indicates that a firm is

doing well relative to its competitors it will not be included in the sample.

There will not be qualitative comparisons for all firms. A number of smaller firms in the study's sample may not have sufficient information written about them for an analysis of their competitive position. Additionally, the convergent validity of the study will be increased if a quantitative measure can confirm the qualitative analysis of the performance of various industries. Therefore a second step will examine the financial trends of the principal industry in which a firm is involved. If it is in decline that firm will be evaluated quantitatively as in an industry in decline.

However, such an examination may not be useful for all firms. Many of the firms in the sample are involved in more than one standard industry classification (SIC) code. It is difficult to isolate an industry's impact on widely diversified firms. Therefore, the firms that are active in only one or two SIC codes--most likely the smaller firms--will have a quantitative industry analysis performed. The principal four-digit SIC code for these firms in the sample will be obtained from Standard and Poor's Register of Corporations, Directors and Executives and other publicly available sources. Then the average return on investment for the principal industry of firms active in only one or two SIC codes will be examined.

Industries in which the ratio trends downward during the same three years used to identify the turnaround candidate will be considered industries in decline. If the financial ratios are trending upward or have mixed results, the industry will not be considered in decline. Firms in declining industries, with no evidence that such firms are performing worse than the industry as a whole, will not be included in the sample. When there is evidence that a firm has relatively poor performance in a declining industry, the firm will be included in the sample.

The source of this comparative information will be the Robert Morris Associates Annual Statement Studies (professional commercial lenders association). There are many potential sources of information for such comparisons. The Robert Morris Associates ratios were chosen due to the critical role a turnaround candidate's banker plays in its turnaround efforts (Pant, 1986). These ratios are used by lenders to evaluate the relative performance of a turnaround candidate. Additionally, most of the turnaround candidates to be investigated in this research are smaller in size than Fortune 500 corporations. The firms used to arrive at Robert Morris Associates composite figures, similarly, are relatively small. Therefore, it is appropriate that such an information source be used to evaluate the relative performance of an entire industry over time.

Relatedness of Acquisitions

Once the turnaround candidates that have undergone acquisition have been identified, the next stage of the research will be to evaluate whether the acquisitions of such firms were related or unrelated. The date of the acquisition can be identified from either the journal Mergers & Acquisitions or from the business press. These sources can also be used to identify the acquiring firm. Only those firms which made purchases of the entire firm will be considered. Additionally, only those firms where the purchasing firm did not control the acquired firm through ownership of a significant block of stock prior to the full acquisition will be included in the sample. The controlling firm may have been responsible for the decline experienced by the turnaround candidate. This would make the determination of the impact of the related or unrelated acquisition difficult.

The initial evaluation of relatedness will be based on four-digit SIC codes. These codes will be obtained for one year prior to the acquisition from Standard and Poor's Register, Dun and Bradstreet's Million Dollar Directory, Dun and Bradstreet's Principal International Businesses, and Ward's Business Directory of Major U.S. Private Companies. Any overlap between any of the SIC codes of the acquired or acquiring firms will be evaluated initially as a related acquisition.

A second measure of relatedness will also be used. It is a categorical measure and involves the judgment of researchers. Here, a panel of academic experts will categorize acquisitions as related or unrelated based on information such as the firm's revenue sources, its products, its markets and its production processes. This information will be drawn from published articles, and from telephone conversations with the firms and trade associations. Rumelt's (1974) guideline that 70 percent of firm's revenues must come from one distinct business area for the acquisition to be considered related will be used. If the consensus of the experts' classification does not agree with the initial evaluation using SIC codes, the experts' classifications will be used due to the greater information which they can incorporate into their analysis in addition to the SIC codes.

Performance

The dependent variable in the proposed research will be the performance experienced by the acquiring firm from its acquisition of the turnaround candidate. Financial information will not be available on turnaround candidates once they are acquired since the acquired firm's resources may be dispersed among the assets of the acquiring firm. Therefore, a qualitative measure of the resulting performance experienced by the acquiring firm as a result of the

acquisition will be used. This qualitative measure will be based on the evaluation of a panel of academic experts.

The panel will consist of three academics experienced in evaluating firm performance. They will be different from those that classified the acquisitions as related and unrelated, and they will be ignorant of those classifications. The experts will be asked to evaluate on a seven-point Likert scale the success of each acquisition. (See the questionnaire in Appendix A.) Their evaluation will be based on published accounts of the results of the acquisitions collected and provided to each panel member from journals, and published stock broker analyses. The method is similar to O'Neill's (1982, 1986) method for determining organizational performance, except that multiple opinions and multiple data sources are used to ensure validity and reliability. The performance value used for each acquisition will be the mean of the three academics' ratings.

Hypothesis Testing

The primary statistical technique used to analyze the data will be a multiple linear regression. The principal focus of the investigation is the performance impact of relatedness on acquisition of a turnaround candidate. However, there are other factors that may confound this analysis. These factors include size of

the acquiring and acquired firms, the severity of the turnaround candidate's decline, and the acquiring firm's experience in acquisitions.

Ramanujam (1984) and Pant (1986) both indicate size to be an important factor in the success of a turnaround candidate. Their belief is consistent with the emphasis placed on size in the merger and acquisition literature; a critical mass, or minimum size ratio, must be present between the acquired and acquiring firm for the acquisition to be successful (Salter & Weinhold, 1978). On the other hand, an acquisition that is too large may be difficult to digest (Kusewitt, 1986). Therefore, it will be important to control for the ratio of acquired firm to acquiring-firm revenues.

A second factor that may confound the analysis of the impact of relatedness on the acquisition of turnaround candidates is the degree of decline the turnaround candidate is experiencing (Ramanujam, 1984). Ramanujam (1984) found that the more severe the decline in net income or ROI, the less likely was a successful turnaround of a firm. Therefore, to control for this potentially confounding variable, the percent decline in the income measure used in identifying the turnaround candidate will be included as a covariate.

There is evidence from the acquisition literature that the experience of the acquiring firm performing such

activities impacts the success of future acquisitions (Lubatkin, 1983). This experience may allow expertise to develop in the acquisition process. The acquisition experience of the acquiring firm four years prior to acquisition of the turnaround candidate will, therefore, be summarized by a count of the number of acquisitions during that period. This information will be obtained from the journal Mergers & Acquisitions. The covariate will be treated as a continuous variable.

No other contextual variable concerning the acquired firm will be considered. The prior research found either no support or mixed results for the importance of any other variable. The only other potential variable that has been found to be significant and not contradicted by other research was extent of internal control (Pant, 1986). However, this variable is not important where the sample of firms under investigation are all acquired turnaround candidates. The turnaround will be performed under the acquiring firm's direction no matter what the prior ownership configuration of the firm was.

In summary, a multiple linear regression technique with an indicator independent variable and three continuous covariates will be used. From the literature there is no indication that the proposed relationship would be nonlinear or that interactions among the variables should

be expected. The formula representing the variables to be used in this technique can be summarized as:

$$Y_i = B_0 + B_1X_{1i} + B_2X_{2i} + B_3X_{3i} + B_4X_{4i} + \varepsilon_i$$

Y_i = performance of the business combination as measured on a 7-point Likert-type scale

X_{1i} = relatedness of acquisition, 1 = related, 0 = unrelated

X_{2i} = ratio of acquired to acquiring firm revenues

X_{3i} = percent decline in net income of turnaround candidate for three years prior to acquisition

X_{4i} = number of acquisitions by acquiring firm during four years prior to acquisition of turnaround candidate

i = acquisition 1 to N

ε_i = random error term

Reliability and Validity

This study has made a significant effort to establish reliability and validity in its measures. Reliability is defined as the absence of measurement error (Venkatraman & Grant, 1986). The reliability of this study is aided by the use of a standardized financial database, Compustat, to identify turnaround candidates. This database is gathered through a systematic means over a number of years and the reliability of the data gathered has not come into significant question. In summary, the reliability of the data and measures used should be significant.

Efforts have also been made in the design to increase the validity of the study. There are several different types of validity which have been addressed in this design. Content validity is whether the measures used actually measure the domain they were intended to (Venkatraman & Grant, 1986). In this study content validity is assured through the use of a qualitative measure in addition to the quantitative measures to identify turnaround candidates. The qualitative measures are based on business writers' impressions of the firm's overall performance. These impressions help to ensure that the measures used to classify a firm as a turnaround candidate are doing so accurately. Similarly, the efforts to ensure that the potential turnaround candidates are not part of a declining industry help to establish content validity. This effort to ensure the firm is not part of a declining industry eliminates a similar domain which may confound the analysis.

The use of multiple measures also helps to establish convergent validity. The agreement between two quantitative measures and a qualitative measure in their classification of the firm as a turnaround candidate helps to establish that the measures are accurately identifying a true turnaround candidate. Additionally, the financial measures used to identify the turnaround candidates have been built on the measures used in the prior research.

For example, Ramanujam's (1984) measure of ROI was duplicated in this study as one measure of a firm's decline. The convergent validity of the study is also aided by the use of two methods to identify the relatedness of the acquisition. Finally, the use of a panel of experts to confirm the qualitative evaluations made from the printed stories about the turnaround candidates helps to establish convergent validity. In summary, the proposed study helps to establish more clearly the content and convergent validity of the measures used than has been the case in previous studies of turnaround.

CHAPTER IV

RESULTS

This chapter will discuss the results obtained from the research outlined in Chapter III. These results will be discussed in two parts. First, the sample of turn-around candidates derived from the multi-method selection process will be considered. Second, the findings from the testing of the hypothesis will be examined.

Sample Identification

The research performed used multiple methods to identify the sample of turnaround candidates so that the results of related versus unrelated acquisitions could be understood. Table III and Appendix B provide a summary of how the final sample was derived.

Firms Identified Through Compustat Financial Information

The first step in developing the sample of turn-around candidates was the identification of acquired firms that had experienced a decline in their financial measures. The 1988 Compustat research files identified

817 firms from the over-the-counter and the industrial files that had experienced an acquisition during the period 1979-1987. To obtain financial information on these firms, copies of the original Compustat files were examined. The last four years of financial data for each firm was obtained from the latest year the firm appeared on the Compustat tapes. From this information, 139 firms that had three years of decline in ROI prior to the year of their acquisition, the year immediately before the acquisition not being considered, were identified. (Appendix C lists three situations where the date of acquisition was uncertain and one unusual purchase.)

Ninety-three of the firms also experienced a three year decline in net income, 66 percent of the ROI sample. This percentage of overlap between ROI and net income is similar to Ramanujam's (1984) findings when he examined potential measures for his study; he found a 72 percent overlap between firms that had three years of decline in ROI and those that had a three year decline in net income.

Two of the firms with declining ROI and net income were banking institutions. Examining the Compustat tapes over several years it was found that these institutions experienced substantial restatement of their financial reports each year. The two banks were eliminated from the sample since it was unclear from the restated

financials whether or not the firms were truly turnaround candidates.

Required information on the acquisition, such as the identity of the acquiring firm, was not available in all cases. Nine firms missing this minimal information were dropped from the sample.

Control of Acquired Firm

The remaining sample of 82 firms was reviewed to ensure that the acquiring firms did not own enough shares of the acquired firm to constitute control prior to the acquisition. A firm that controlled a turnaround candidate prior to its acquisition could have been responsible for the decline of that firm. Seven firms were eliminated from the sample because the acquiring firm had significant control at least four years prior to the acquisition of the turnaround candidate.

Two turnaround candidates were under significant control by their acquiring firms prior to their acquisition but were still included in the sample. William E. Wright was acquired by Newell in 1987; Newell acquired a significant share of stock two years prior. Graniteville was acquired by Southeastern Public Service in 1984; Southeastern acquired a majority of stock in 1983.

Both firms were included in the sample for several reasons. First, little control seems to have been

asserted by either firm prior to the completed acquisition. Newell became involved in a number of lawsuits over the acquisition of William E. Wright. These lawsuits by stockholders appear to have frustrated a large measure of Newell's control until 1987 when they were able to acquire all of the firm. Graniteville appeared to be operating fairly independently until 1984, the year of the acquisition; in late 1983 Graniteville was still analyzed as a separate entity (Value Line, 1983b). The pending acquisition was discussed, but there was no implication of a shift in control. Also, a major trade publication, Textile World, did not discuss a shift in control until September 19, 1984, the time of the acquisition.

Another factor arguing in favor of including these firms in the sample was the time frame used in the sample. Three years of decline with a one year time lag before the acquisition was used in analyzing financial data to identify turnaround candidates. Neither Graniteville nor Newell's financial data would have been impacted by the purchase of their stock. William E. Wright's year end was June 30. Newell did not raise its stake significantly in Wright until September 1985. The Graniteville activity occurred the year before the acquisition. Again, this year of data was not used to identify turnaround candidates. Finally, published

material on both firms supports the contention that the firms were turnaround candidates prior to the purchase of the stock interest by the acquiring firms.

These results illustrate the benefits of combining qualitative and quantitative analysis to identify the turnaround candidates. The rich information provided by the qualitative data ensures the sample only includes firms where the impact of the acquisition is clearly discernible. The elimination of the seven firms where qualitative information indicated that control had passed prior to the actual acquisition helps to establish a clear pattern for analysis: the firm's decline, its acquisition, and then the resulting performance. Therefore, the addition of qualitative data helps to delineate more clearly the impact of related versus unrelated acquisitions.

Nature of Acquisition Activity

The presence of qualitative data about the acquired firms also allows the nature of the business combination to be examined. A firm experiencing a leveraged buyout (LBO), purchase by private investors, or a purchase by an employee stock option plan is classified by Compustat as dropped due to an acquisition. All such firms are not appropriate for inclusion in the sample of this study.

The acquisition by private investors does not allow the investigation of the impact of relatedness. The background of these individuals is typically not available for analysis. Also, individuals do not bring to the combination resources similar to that of a firm. Therefore, no acquisitions by private investors were included in the sample.

LBO's are technically a type of financing mechanism where high yield bonds are used to help finance the purchase of a firm; however, the term is also commonly used to describe a situation where a firm is purchased and taken into private hands, usually that of the managers. Again, this is inappropriate for inclusion in the sample. Therefore, the nature of the purchase and the parties involved were investigated where the acquisition involved an LBO. One case in particular, though, merits discussion.

Riordan, Freeman and Spogli (RFS) purchased Bayless Markets in 1984. RFS later became known for LBO's of grocery stores where the existing management remained in control. However, Bayless was included in the sample because RFS bought 85 percent of the firm's stock and appeared to assert control over the firm.

A final unusual type of acquisition was a purchase by an employee stock ownership plan (ESOP). Under such plans the employees, through a third party, gain control

of the stock of the firm. However, again, since this does not affect the combination of two firms, such acquisitions do not allow the impact of relatedness to be investigated.

A total of 14 firms were either purchased by private investors, taken private through LBO's involving the management of the firm, or purchased through an ESOP. These firms were eliminated from the sample leaving 61 potential turnaround candidates for further consideration.

Industry Comparisons

As discussed in Chapters II and III, the validity of the study will be increased by ensuring that the decline in performance of the firms was not due simply to a decline in the firm's industry. To do this, both quantitative and qualitative comparisons were made again.

Quantitative Evaluations

As discussed in Chapter III, quantitative industry comparisons were not performed on all firms. Rather, only those firms active in two or fewer SIC codes were examined for a decline in industry performance. The industry performance measure was the percent of profit before taxes divided by tangible net worth during the years each firm's ROI and net income were in decline.

Quantitative industry data were obtained for 26 firms. Nineteen firms were in industries that either were growing or experiencing no change at a time when the turnaround candidate was experiencing a decline. Seven firms were in declining industries. Specific industry comparison information was examined on these firms. (See Appendices D and E.) Much of this information was of a qualitative nature.

Qualitative Evaluations

A review by the panel of experts of the printed material concerning all 61 firms in the sample at this point was performed to qualitatively evaluate the firm's competitive position in its industry. Particular attention was paid to the seven firms whose industries quantitatively appeared to be in decline. Qualitative data showed four of these seven firms were performing worse than the industry over all. As discussed previously, firms which performed worse than their industry, even if the industry was in decline, were considered a turnaround candidate. Such firms included in the sample were Howard Johnson, Graniteville, Lloyd's, and Weingarten. (See Appendix D.)

There were three firms whose industries were quantifiably shown to be in decline which were eliminated from the sample. These firms showed no evidence that

their performance was any worse, and was sometimes even better, than their industry as a whole.

Two other firms experiencing a decline in performance were eliminated from the sample when it was determined that their industries were experiencing declining performance. Masonite Corporation's declining performance was attributed to the housing slump of the early 1980's (Business Week, 1984). Likewise, the decline in the oil industry contributed to Superior Oil's decline in performance (New York Times, 1983). (See Appendix E.)

Historical Accounts of Turnaround Candidates

As discussed in Chapter III, qualitative measures have been used to identify turnaround candidates. The use of multiple measures helps to increase the validity of the identification of firms as turnaround candidates.

A total of 98 published stories were found on 43 of the 51 firms in the final sample. The consensus of the expert panel was that these stories were supportive of the analysis of the firms as turnaround candidates. These stories made specific comments concerning the firm prior to its acquisition which indicated its status as a turnaround candidate. These comments included statements about the firms' below average performance, level of financial losses, planned liquidation or bankruptcy filing, and the firms' poor competitive position relative

to comparable firms. The eight firms without stories written about them depend strictly on financial indicators of decline for their identification as a turnaround candidate.

Stories written about five firms indicated that they were not turnaround candidates prior to their acquisition despite declining ROI and net income. The names of these firms and a few illustrative comments can be found in Appendix F.

Summary

In summary, 51 firms were identified as turnaround candidates through this multiple criteria, conjunctive selection process. (The firms included in the sample along with the firms that acquired them are shown in Appendix G.)

Table III summarizes the sample selection process used in this research. Mazen, Graf, Kellogg and Hemmasi (1987) argued that multiple selection methods help to overcome the adverse impact of the small sample size on statistical power by improving the ability to detect significant variance. The stringent methods used to select the sample in this research make the ability to detect variance much stronger.

TABLE III

SAMPLE IDENTIFICATION

Number of Acquisitions	
817	- acquired firms 1979 - 1987
(678)	- non-declining ROI
(46)	- non-declining income
(2)	- banks
(9)	- insufficient information
(7)	- prior control of candidate by acquiring firm
(14)	- private purchase, ESOP's, LBO's
(3)	- quantitative indicators of industry in decline
(2)	- qualitative indicators of industry in decline
(5)	- historical accounts did not support that firm was a turnaround candidate
51	- final sample of turnaround candidates

Hypothesis Testing

The proposed hypothesis was tested using a multiple linear regression. The characteristics of the variables used in the regression and the results of the regression will be discussed in this section of the chapter.

Variable Definitions

The final sample of 51 firms was examined to determine whether related acquisitions resulted in better performance than unrelated acquisitions. The definitions for the variables used in the analysis were discussed in Chapter III. Several points concerning implementation of the measures will be discussed below.

Relatedness

The categorical measure of relatedness resulted in the sample being classified as 29 related acquisitions and 22 unrelated acquisitions. The categorical method and the use of qualitative data from multiple sources provided a rich measure for this study. Firms which were under transition could be classified accurately as to the relatedness of their acquisition. For example, Esquire Corporation received approximately 40 percent of its revenue from publishing in 1980. In 1981, Esquire acquired the publishing firm Allyn and Bacon. Thus, by Rumelt's 70 percent revenue criterion this would be an

unrelated acquisition. However, by 1982 Esquire earned nearly 100 percent of its revenue from publishing. The method and rich data used here allowed this transition to be considered in evaluating the acquisition as related.

The fact the methodology requires that 70 percent of a firm's revenues come from a discrete business area still makes the measure a conservative one. There were several acquisitions, such as Borden's acquisition of Guy's Foods or Hawley's acquisition of ADT, that involved firms with substantial experience in the industry of the acquired firm. However, with less than 70 percent of firm revenues coming from related discrete business areas, the acquisitions could not be classified as related. If these acquisitions had been evaluated as related, the statistical strength of the positive relationship between relatedness and the performance would have been higher (to be discussed later).

Performance

The panel of experts evaluating performance were faculty members from three different universities in the disciplines of strategic management, strategic marketing, and finance. The panel was unfamiliar and uninvolved with the project in any other way. They used an average of 3.8 stories per acquisition for their analysis of performance. The stories ranged in time from the announcement of the

acquisition to eight years after the combination. The median time was one year after the combination. The mean of all the performance evaluations was positive, 4.5. The correlation of the responses of the panel of experts is shown in Table IV. The average correlation between pairs of raters was used to demonstrate inter-rater reliability (Borman, 1978), and the average of 0.87 was deemed satisfactory.

TABLE IV

CORRELATION AMONG EXPERTS' ACQUISITION PERFORMANCE RATINGS

rater	rater 1	rater 2
2	0.81760	
3	0.89562	0.89604

Greater information was available on some firms simply because the acquisitions were older. To ensure that this time difference did not impact the results a split half test was performed. The average performance

results for acquisitions occurring 1979-1982 were compared to the results of acquisitions occurring during 1984-1987. The sixteen early acquisitions had a average performance of 4.16 on the seven-point Likert scale. The 32 later acquisitions had an average of 4.74. The averages of the two halves do not show the time differences to have a significant impact on results.

Covariates

The decline variable measured the decline of the firm's net income over the three years used to identify it as a turnaround candidate. The mean of the decline variable was 144.34 percent. Fifty of the 51 firms experienced a decline in income. The one firm that did not experience a decline in income grew at a lower rate than the Gross National Product. The range of the decline experienced was -2918.15 to a positive 16.91.

The mean of the size variable (acquired firm's sales divided by acquiring firm's sales) was 0.88. The range of the size ratios was 0.01 to 11.82. The information used to calculate the size ratios came from sources such as Mergers & Acquisitions, the Wall Street Journal and other business publications. An effort was made to use the same source of information for both the acquired and acquiring firms' revenues. The information on sales varied from two years before to the year of the acquisition.

Finally, the mean number of acquisitions by the acquiring firms for the four years prior to the year of acquisition under investigation was 1.4. The range of acquisition experience was zero to eight during that time period. (The values for each firm for each value are summarized in Appendix H.)

Multiple Linear Regression

A general linear model was used to test the hypothesis. The results from the regression are seen in Table V.

TABLE V

REGRESSION RESULTS

	F Value	PR>F
Relatedness:	23.92	0.0001
Merger Experience:	3.96	0.0527
Percent Decline In Performance:	0.28	0.997
Size Ratio of Firms:	1.25	0.2698
R-Square:		0.387983

The model explains about 40 percent of the variance in performance. Only relatedness and acquisition experience

were significant at the $\alpha = 0.05$ level. The acquisition experience variable is only weakly significant, or arguably not significant at all. However, the use of the 0.05 level of significance is an arbitrary criterion (Sauley & Bedeian, 1989). The exploratory nature of this research justifies the recognition of acquisition experience as a potentially important variable in explaining the success in the acquisition of turnaround candidates. The power of the analysis is an estimated .80. The hypothesis is strongly supported.

There are eight assumptions that must be met to justify this use of a linear regression. These are:

A. All variables must be measured at least at the interval level and without error.

B. For each set of values for the k independent variables ($X_{1j}, X_{2j},\ldots,X_{kj}$), $E(\varepsilon_j)=0$ (i.e., the mean value of the error term is 0).

C. For each set of values for the k independent variables, VAR $(\varepsilon_j)=\sigma^2$ (i.e., the variance of the error term is constant).

D. For any two sets of values for the k independent variables, $COV(\varepsilon_j, \varepsilon_h)=0$ (i.e., the error terms are uncorrelated; thus there is no autocorrelation).

E. For each X_j, $COV(X_j,\varepsilon)=0$ (i.e., each independent variable is exogenously determined).

F. There is no perfect collinearity--no independent variable is perfectly linearly related to one or more of the other independent variables in the model.

G. For each set of values for the k independent variables, ε_j is normally distributed.

H. The relationships under investigation are linear.
(Berry & Feldman, 1985)

To ensure these criteria were met several tests were performed.

First, the assumption is that all variables are measured without error (criterion A). However, visual observations of plots of the variables indicated two outlying values in the regression, the Riordan, Freeman and Spogli size variable and the Dairy Mart decline variable. Regressions were run without each firm and without both firms. Their absences made no significant difference in the regression results. Both firms are included in the sample for the results described here.

Second, plots of residuals were run on predicted values. These plots indicated a pattern consistent with constant error variance (criterion C) and no autocorrelation (criterion D).

The distributions of the samples were also investigated (criterion G). The sample was found not to be normally distributed using the Kolomogorov D statistic. This violation of the regression assumptions is not without concern. However, the regression technique is robust to the violations of normality (Bohrnstedt &

Carter, 1971). Also, with a small sample of 51 it is difficult to obtain a normal appearing sample with the conservative Kolomogorov D. Therefore, the lack of a normal appearing sample in this situation is not critical.

Fourth, multi-collinearity among the variables was examined (criterion F). The Pearson correlation coefficients can be reviewed in Table VI. The highest absolute value was .24 which was judged to indicate an absence of significant multi-collinearity.

TABLE VI

CORRELATION OF VARIABLES

	Performance	Decline	Size
Decline	-0.13045		
Size	-0.19436	0.02582	
Experience	0.15299	0.11727	-0.23582

Finally, the plots of the dependent variable on the independent variables used in the regression were also investigated. No pattern was seen in the plots which would suggest that a nonlinear form of analysis would be useful (criterion H). Interactions were also explored without significant results.

Summary

Dundas and Richardson's hypothesis is strongly supported. The multiple methods used to identify the research sample increased the significance of the regression relationships. The result demonstrates that a large element of the explanation for the success of an acquisition of a turnaround candidate comes from the relatedness of the corporations' businesses. The implications of these findings for researchers and managers and for future research needs will be examined in Chapter V.

CHAPTER V

OVERVIEW, RECOMMENDATIONS, AND CONCLUSIONS

The research presented here has examined the impact of business relatedness on the acquisition of turnaround candidates. The results of this research have implications for both academic researchers and business practitioners. These results, their implications, and the potential for future research will be discussed in this chapter.

Overview of Study

Declines in performance are experienced by most firms at some time in their history (Hofer, 1980). This study has examined one method of reversing a firm's decline--acquisition. This analysis has focused on whether related acquisitions result in better performance than unrelated acquisitions.

Specifically, this research has filled three voids in the current literature. First, it has allowed a greater understanding of how to revive a firm's performance when it experiences a decline. Prior research has

neglected to investigate any specific turnaround methods in the detail performed here.

Second, the research has allowed a greater understanding of the impact of relatedness on acquisitions. Previously, the impact of relatedness on acquisitions has been primarily a matter of speculation. This study helps to expand the understanding of relatedness by closely examining one situation, the acquisition of a turnaround candidate.

Finally, the research has combined methodologies from prior research in a manner never used before. Prior research has relied on one or two measures of decline to identify turnaround candidates. This study has used multiple qualitative and multiple quantitative measures of decline to identify the sample. The sample selection was based on the conjunctive model of selection. The result was a conservatively identified sample of clearly defined turnaround firms. By using such a sample, the validity of this research was increased.

The principal finding of this research was that relatedness had a significant impact on the success of the acquisition of a turnaround candidate. This finding was consistent with the rationale discussed in Chapter II. This rationale argued that the speed of implementation required for a successful turnaround would require the acquiring firm to possess industry knowledge prior to

its acquisition of the turnaround candidate. Thus, related acquisitions should result in better performance than unrelated acquisitions. The research also showed that the experience of the acquiring firm in implementing acquisitions was an important factor in the success of the acquisition of a turnaround candidate. Two other variables, firm size and severity of decline, were found not to be significant factors in explaining a successful turnaround.

These findings are consistent with much of the existing literature. As discussed previously, while there are a variety of findings on the impact of relatedness on acquisitions, the common wisdom developed from the literature is that relatedness is a significant factor in the resulting success of business combinations (Bettis, 1981; Rumelt, 1974, 1982). Acquisition experience also was argued to be a significant factor in the eventual success of an acquisition (Lubatkin, 1983).

The two contextual variables, size and severity of decline, were not found to be significant. This is inconsistent with what Ramanujam (1984) and Pant (1986) found concerning size and with what Ramanujam (1984) found concerning degree of deline. However, Ramanujam's finding on the importance of decline countered the findings of Schendel and Patton (1976), and Pant (1986). No other turnaround research has examined the importance of firm

size in turnaround. The implications of these findings to practitioners and academics will be reviewed next.

Implications for Academic Researchers

This research holds several implications for academic researchers. As reviewed earlier, the prior research has been inconclusive in the determination of whether related acquisitions resulted in better performance than unrelated acquisitions. However, a higher degree of significance for the relatedness variable was found in this research than in much of the prior research. These findings indicate a new approach to analyzing the impact of relatedness. Dundas and Richardson (1982) argued that an unrelated acquisition could be just as successful if certain situations were avoided. Therefore, rather than seeking a global answer on the impact of relatedness, researchers should pay greater attention to potential situations where related or unrelated acquisitions are most appropriate.

The second implication for researchers is that greater efforts need to be made in combining practitioner oriented qualitative analysis and quantitative academically oriented methodologies. The pool of quantitatively identified acquired turnaround candidates was decreased by nearly one-half when the qualitative information on these firms was considered. The nature of the relation-

ship between the acquired and acquiring firms, the competitive position of the acquired firm relative to comparable firms, and the specific firm analysis helped to ensure that only true turnaround candidates were included in the sample. No prior research had combined such multiple measures to identify turnaround candidates. Future research should make efforts to combine both fine and coarse grained methodologies (Harrigan, 1983) of practitioners and academics to gain a richer and more insightful perspective on turnaround firms.

The identification of two nonsignificant contextual variables, size and performance, has implications for academic researchers also. Prior research examining the relationship between successful turnarounds and contextual variables found either limited or conflicting results on the importance of such variables. This research found that the two contextual variables examined were nonsignificant. This indicated that academic researchers should redirect their investigative efforts from the relationship between contextual variables and turnaround to the examination of other factors; other potential areas of examination include how the turnaround is implemented and the specific strategies used in successful turnarounds.

A limitation of the research should be recognized by academic researchers. A number of firms (9) were dropped

from the sample due to a lack of information on the acquiring firm. While not all, many of these acquiring firms were either privately or closely held entities. Although there were some private firms in the final sample of the acquiring firms the preponderance of the firms were publicly traded. This lack of privately held firms in the sample leaves unanswered the question whether the results found apply equally well to public and private companies.

One other potential limitation of this study is the lack of control of industry differences. The firms in this study came from a wide variety of industries rather than one single industry. It was expected that any potential industry differences would average out and would not be a significant factor in this research. If a sufficient sample could be derived from a single industry in the future, an examination of the acquisition of turnaround candidates in this single industry would be interesting.

Implications for Practitioners

These findings have several implications for practicing managers. However, these implications should be confirmed through other studies prior to their implementation by managers. First, before acquiring a turnaround candidate and attempting to revive that firm's perfor-

mance, practitioners need to ensure that they possess an understanding of the industry. Practitioners may be tempted to argue that, while they do not have the specific industry knowledge, they do possess generalizable turn-around skills, turnaround skills that can be applied with equal success to a variety of industries. However, quantitative as well as qualitative analysis of the firms in this sample does not appear to support this argument.

For example, Sherwin-Williams purchased Gray Drug/Drug Fair in 1981. The expectation was that the skills of the individuals who had successfully turned around Sherwin-Williams would be transferable to turn around Drug Fair. However, the retail drug industry is substantially different from the paint manufacturing and retailing industry. These differences include: channels of supply (Sherwin-Williams produced many of the products they sold, while drug stores rely on numerous suppliers), inventory control and shrinkages, marketing, and nature of competition. The lack of specific industry knowledge was never overcome and helped to contribute to a lackluster acquisition for Sherwin-Williams (Kidder Peabody Company Comment, 1986). Therefore, practitioners must ensure that they understand the industry and possess the skills to compete in that industry before attempting to acquire a turnaround candidate.

A second implication is that practitioners need to review their acquisition experience. It has been argued that prior merger experience helps a current acquisition by building on previously acquired expertise. This expertise helps the proposed acquisition to be implemented more quickly and smoothly by allowing many of the potential pitfalls to be avoided. The successful turnaround of a declining firm is difficult enough without the necessity of simultaneously learning the intricacies of successful acquisition. Learning how to implement an acquisition may delay the actions required to quickly reverse the turnaround firm's performance.

In summary, practitioners should focus their analysis on their ability to understand a turnaround candidate and its industry. Also, the acquiring firm's ability to implement the combination once the acquisition has occurred should be assessed. Other factors such as firm size and the seriousness of the acquired firm's decline are relatively unimportant in the success of the acquisition.

Future Research

The research conducted here has implications for future investigations. There are a variety of studies that need to be performed to extend the understanding of successful turnaround in firms. The needed future

research includes: a re-examination of the nonsignificant contextual variables using different measures; an examination of how differences in turnaround implementation impact performance; alternative strategies for reviving turnaround firms, and several topics raised by the nature of the research findings.

First, further efforts are needed to examine the variables found in this research to be nonsignificant. These two variables had been shown by the prior research to be potentially the most important contextual concerns in the acquisition of a turnaround candidate. To ensure they are not significant factors, other potential measures of these variables should be constructed. These investigations will also provide an opportunity to question whether such contextual variables are important only under certain conditions.

Size in this research was measured by its most common measure, total revenues of a firm. There are other potential measures of size. One measure of size that could be appropriate in examining turnaround firms would be the number of a firm's employees, the size of the firm being the average number of employees over time. This measure of size, while normally highly correlated with revenues, could provide additional insight since it might reflect decline more accurately for labor intensive turnaround firms.

The second nonsignificant variable was the degree of decline in the turnaround candidate. Decline was measured similarly to Ramanujam (1984) as the decline experienced in a firm's net income. Another potential measure of the seriousness of the decline has been suggested by the bankruptcy literature. A number of financial ratio models have been developed to predict the occurrence of bankruptcy (Altman, 1968; Altman et al., 1977; Beaver, 1966). Schendel, Patton and Riggs (1975) argued that such models lacked predictive power. However, further investigations of these models and their ability to identify turnaround candidates may be appropriate. The investigations using these bankruptcy ratios could provide an alternative measure of decline.

Another area of investigation for researchers is the nature of the implementation effort. Experience with past acquisitions was found to impact the success of the turnaround. Other implementation issues that may impact the success of the turnaround include top management's leadership, the declining firm's culture, its structure and technology.

Firm leadership is the first implementation issue that should be examined more closely. Specifically, future research needs to investigate the impact of top management teams on the turnaround of firms. Several authors have argued that top management should be changed

to aid in the turnaround of a firm (Bibeault, 1982; Hofer, 1980; O'Neill, 1986). Future research needs to be performed on the demographic changes among top managers that occur once turnaround candidates are acquired. The research can then begin to examine more specifically the impact of various leadership styles on turnarounds.

Second, the culture of the turnaround candidate needs to be examined. Culture has been defined in many ways (Smircich, 1983). However, one way it can be defined is as a shared schema that helps organizations to interpret information (Kiesler & Sproull, 1982). Therefore, the culture of a firm will impact the information processing that occurs as the turnaround effort is implemented. Information processing affects how the problems of the firm and the needed solutions are identified and interpreted. Different cultures may result in different levels of success in the the turnaround effort.

Third is the impact of the corporate structure on turnaround efforts. Organizational structure affects an organization in many different ways (Galbraith & Kazanjian, 1986). One way structure could affect a turnaround is in potential organizational consolidations that may be required to make the firm more efficient. Consolidation may work differently in various types of organizations.

Finally, the technology of the organization and its impact on the implementation efforts of the turnaround firm need to be examined. Since Woodward (1958), technology has been recognized as an important variable in determining the characteristics of an organization. Future research needs to examine whether certain types of technology used by turnaround candidates lend themselves to successful turnaround more easily than other types. For example, does a firm performing principally what Perrow would call craft technology (low analyzability required and low variety) turn around easier than a firm with an engineering technology (high degree of analyzability required of workers who face a high degree of variety)?

In summary, the implementation related concerns of top management teams, culture, structure and technology should be examined to gain a better understanding of their impact on the success of the turnaround efforts.

Another primary area for future research is the alternative methods of successfully turning around a firm. For example, it has been argued that firms in decline can acquire other firms to help minimize their own problems (Risher, 1972). The acquisition of other firms may provide new products and markets to a firm experiencing a decline in performance. The potential for avoiding bankruptcy through acquisitions has already been

recognized by the bankruptcy literature (Pastena & Ruland, 1986). The use of such an acquisition in turnaround efforts also needs to be investigated.

Leveraged buyout financing is a second means that can be used to turn a firm around. A number of firms have been eliminated from this research since they involved leveraged buyouts (LBO's). While LBO's were not appropriate for the investigation of the impact of relatedness, the impact of LBO's on turnaround candidates needs to be investigated. Acquisitions by declining firms and LBO's are two alternative turnaround methods that should receive a detailed investigation.

Several areas of future research are suggested by the sample and the findings of this research. First among these is the investigation of the acquisition of turnaround candidates by foreign firms. One reason cited by foreign firms such as Foseco Minsep for their acquisition of American turnaround candidates is to gain access to the American markets (Wall Street Journal, 1984a). While the number of foreign acquisitions in this sample is too small to analyze, there is some evidence that foreign acquisitions have not been successful. For example, the acquisitions by Foseco Minsep and Cavenham of American firms resulted in failure. Further research needs to be conducted to examine the impact of foreign

acquisitions not only on turnaround candidates but also on firms whose performance is healthy.

A final area of needed investigation is the impact on success of the elapsed time between the acquisition and the actions taken to correct the performance problems. A common feature of the two variables found to be significant in this research (relatedness and prior experience in making an acquisition) is that they both allow the acquiring firm to act quickly on the turnaround candidate's problems. Unrelated firms and firms not familiar with implementing an acquisition lose time as they become familiar with the industry or with how to implement needed actions within the acquisition process. Practitioners have recognized that the speed with which a turnaround effort can be implemented is important in its eventual success (Kibel, 1982). Future research needs to examine the impact of the speed with which actions are taken to turn around a firm.

The two significant variables also suggest an alternative means for future research to conceptualize successful turnaround. The two variables, relatedness and acquisition experience, can be viewed as a part of a knowledge base required to make an acquisition of a turnaround candidate. Future research should examine other potential areas of a firm's knowledge that could impact the success of the turnaround. These knowledge

areas could include specific technology issues, and an understanding of international cultural differences.

Conclusions

Related acquisition of a turnaround candidate results in significantly better performance for the acquiring firm than does unrelated acquisition. Therefore for the practitioner, alluring and apparently underpriced assets may not produce the result desired if the acquiring firm is unfamiliar with the industry. The ability to understand the needed actions and to implement them quickly are central to the success of the turnaround acquisition.

The findings of this research were based on a conservatively constructed sample. The sample's use of multiple measures to identify the turnaround candidates have produced one of the cleanest samples of true turnaround firms employed in this arena. Future research should strive to continue to combine such coarse and fine grained measures in identifying turnaround firms.

The need for future research is significant. By continuing research in this area it is hoped that both the academic and practitioner communities can achieve a better understanding of how to restore health to firms in decline. This knowledge will enable business entities to continue in operation and will result in a greater stability for the country's economic environment.

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APPENDICES

APPENDIX A

QUESTIONNAIRE FOR RATING

ACQUISITION PERFORMANCE

INTRODUCTION

Attached is information concerning the results of 53 mergers and acquisitions. Please rate the success of the merger or acquisition as you view it from the complete set of comments presented.

The term "success" is used here to mean that the acquiring firm experienced either financial or strategic benefits from the acquisition.

It is recognized that the process of achieving success involves trade-offs and unpleasant consequences for some stakeholders, such as when employees are laid off to improve organizational efficiency. Your judgment about the acquisition for the acquiring firm should include your judgment about whether these trade-offs contributed to financial and strategic benefits to the firm.

Some of the material presented on specific mergers and acquisitions is several pages long. It is very important that you read all of the stories since the analysis may vary from writer to writer and over time.

I will retrieve your evaluations from you on Monday, May 8, 1989.

Thank you for your help.

Circle the number that best describes the outcome for the acquiring firm.

1 = very unsuccessful - the acquiring firm experienced no significant financial or strategic benefits from the acquisition
2 = unsuccessful
3 = moderately unsuccessful
4 = neutral - cannot determine if the acquiring firm experienced financial or strategic benefits from the acquisition
5 = moderately successful
6 = successful
7 = very successful - the acquiring firm experienced either significant financial or strategic benefits from the acquisition

1. A&P acquired Shopwell in 1986

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

2. Adobe Oil & Gas merged with Madison Resources to become Adobe Resources in 1985

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

3. Alaska Interstate acquired C&K Petroleum in 1980

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

4. Amax acquired Rosario Resources in 1980

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

5. American Healthcare Management acquired Huntington Health Services in 1983

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

Circle the number that best describes the outcome for the acquiring firm.

1 = very unsuccessful - the acquiring firm experienced no significant financial or strategic benefits from the acquisition
2 = unsuccessful
3 = moderately unsuccessful
4 = neutral - cannot determine if the acquiring firm experienced financial or strategic benefits from the acquisition
5 = moderately successful
6 = successful
7 = very successful - the acquiring firm experienced either significant financial or strategic benefits from the acquisition.

6. Anschutz acquired Rio Grande Industries in 1984

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

7. Bacardi acquired Lloyd's Electronics in 1983

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

8. Bond Corporate Holdings acquired Heileman Brewing in 1987

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

9. Borden acquired Guy's Foods in 1979

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

10. Buckhorn acquired New Idria in 1984

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

Circle the number that best describes the outcome for the acquiring firm.

1 = very unsuccessful - the acquiring firm experienced no significant financial or strategic benefits from the acquisition
2 = unsuccessful
3 = moderately unsuccessful
4 = neutral - cannot determine if the acquiring firm experienced financial or strategic benefits from the acquisition
5 = moderately successful
6 = successful
7 = very successful - the acquiring firm experienced either significant financial or strategic benefits from the acquisition.

11. Calmar acquired Realex in 1985

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

12. Cavenham USA acquired Weingarten in 1980

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

13. Champion International acquired St. Regis in 1984

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

14. Chesebrough Ponds acquired Stauffer Chemical in 1985

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

15. Cooper Industries acquired McGraw Edison in 1985

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

Circle the number that best describes the outcome for the acquiring firm.

1 = very unsuccessful - the acquiring firm experienced no significant financial or strategic benefits from the acquisition
2 = unsuccessful
3 = moderately unsuccessful
4 = neutral - cannot determine if the acquiring firm experienced financial or strategic benefits from the acquisition
5 = moderately successful
6 = successful
7 = very successful - the acquiring firm experienced either significant financial or strategic benefits from the acquisition.

16. Dairy Mart acquired Conna Corporation in 1986

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

17. Dome Placer was formed by the merger of Campbell Red Lake Mines, Dome Mines and Placer Development in 1987

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

18. Eastmet acquired UIP Corporation in 1979

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

19. Esquire acquired Allyn & Bacon in 1981

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

20. Field Acquisition (part of Schenley Industries) acquired Sonoma Vineyards in 1985

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

Circle the number that best describes the outcome for the acquiring firm.

1 = very unsuccessful - the acquiring firm experienced no significant financial or strategic benefits from the acquisition
2 = unsuccessful
3 = moderately unsuccessful
4 = neutral - cannot determine if the acquiring firm experienced financial or strategic benefits from the acquisition
5 = moderately successful
6 = successful
7 = very successful - the acquiring firm experienced either significant financial or strategic benefits from the acquisition.

21. Foseco Minsep acquired Gibson-Homans in 1984

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

22. Fred Meyer acquired Grand Central in 1984

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

23. Gulton Industries acquired Altec in 1985

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

24. Harcourt Brace Jovanovich acquired Florida Cypress Gardens in 1985

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

25. Hawley acquired ADT in 1987

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

Circle the number that best describes the outcome for the acquiring firm.

1 = very unsuccessful - the acquiring firm experienced no significant financial or strategic benefits from the acquisition
2 = unsuccessful
3 = moderately unsuccessful
4 = neutral - cannot determine if the acquiring firm experienced financial or strategic benefits from the acquisition
5 = moderately successful
6 = successful
7 = very successful - the acquiring firm experienced either significant financial or strategic benefits from the acquisition.

26. Hecla Mining acquired Ranchers Exploration in 1984

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

27. Hinderliter acquired Southwest Factories in 1982

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

28. Imperial Group acquired Howard Johnson in 1980

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

29. Insilco acquired Dual-Lite in 1987

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

30. Louisiana Land acquired Inexco in 1986

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

Circle the number that best describes the outcome for the acquiring firm.

1 = very unsuccessful - the acquiring firm experienced no significant financial or strategic benefits from the acquisition
2 = unsuccessful
3 = moderately unsuccessful
4 = neutral - cannot determine if the acquiring firm experienced financial or strategic benefits from the acquisition
5 = moderately successful
6 = successful
7 = very successful - the acquiring firm experienced either significant financial or strategic benefits from the acquisition.

31. Manor Care acquired Cenco in 1981

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

32. Marine Construction and Design acquired Campbell Industries in 1979

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

33. Masco acquired Brass-Craft in 1982

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

34. Maynard Oil acquired Echo Oil in 1979

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

35. McDonnell-Douglas acquired Tymshare in 1984

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

Circle the number that best describes the outcome for the acquiring firm.

1 = very unsuccessful - the acquiring firm experienced no significant financial or strategic benefits from the acquisition
2 = unsuccessful
3 = moderately unsuccessful
4 = neutral - cannot determine if the acquiring firm experienced financial or strategic benefits from the acquisition
5 = moderately successful
6 = successful
7 = very successful - the acquiring firm experienced either significant financial or strategic benefits from the acquisition.

36. Miller Cascade acquired Pacific Gamble Robinson in 1987

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

37. National Education Corp. acquired Intext in 1979

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

38. Newell acquired Wright (William E.) in 1986

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

39. R.B. Pamplin acquired Riegel Textile in 1985

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

40. Peoples Express acquired Frontier Airlines in 1985

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

Circle the number that best describes the outcome for the acquiring firm.

1 = very unsuccessful - the acquiring firm experienced no significant financial or strategic benefits from the acquisition
2 = unsuccessful
3 = moderately unsuccessful
4 = neutral - cannot determine if the acquiring firm experienced financial or strategic benefits from the acquisition
5 = moderately successful
6 = successful
7 = very successful - the acquiring firm experienced either significant financial or strategic benefits from the acquisition.

41. Petrie Stores acquires Miller-Wohl in 1984

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

42. Riordan, Freeman & Spogli acquired Bayless Markets in 1984

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

43. Schottenstein acquired M.H. Fishman in 1979

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

44. Seaboard Coast Line merged with Chessie System in 1980 to become CSX

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

45. Sherwin-Williams acquired Gray/Drug Fair in 1981

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

Circle the number that best describes the outcome for the acquiring firm.

1 = very unsuccessful - the acquiring firm experienced no significant financial or strategic benefits from the acquisition
2 = unsuccessful
3 = moderately unsuccessful
4 = neutral - cannot determine if the acquiring firm experienced financial or strategic benefits from the acquisition
5 = moderately successful
6 = successful
7 = very successful - the acquiring firm experienced either significant financial or strategic benefits from the acquisition.

46. Synder General acquired McQuay in 1984

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

47. Solvay & Cie acquired Purepac Laboratories in 1979

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

48. Southeastern Public Service acquired Graniteville in 1984

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

49. Standard Oil of Indiana (Amoco Corp.) acquired Cyprus Mines in 1979

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

50. Sun Chemical (Sequa) acquired Intercontinental Dynamics in 1986

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

Circle the number that best describes the outcome for the acquiring firm.

1 = very unsuccessful - the acquiring firm experienced no significant financial or strategic benefits from the acquisition
2 = unsuccessful
3 = moderately unsuccessful
4 = neutral - cannot determine if the acquiring firm experienced financial or strategic benefits from the acquisition
5 = moderately successful
6 = successful
7 = very successful - the acquiring firm experienced either significant financial or strategic benefits from the acquisition.

51. Sundstrand acquired Sullair in 1984

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

52. Technology for Communications International acquired BR Communications in 1987

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

53. Unimar acquired Enstar in 1984

1.....2.....3.....4.....5.....6.....7
very unsuccessful — neutral — very successful

APPENDIX B

FIRMS REMOVED FROM

POTENTIAL SAMPLE

No Information On Merger Partner (9)

- Barth Spencer
- Dixico
- Federal Resources
- Kratos
- Land Resources
- MWA
- Pratt-Read
- SPW
- Vernitron

Banks (2)

- Crocker Bank
- Ban Cal Tri-State Corporations

Controlled by Acquiring Firm (7)

- Standard Oil Company was acquired by British Petroleum. BP controlled Standard Oil by 1970.
- Docutel Olivetti was acquired in 1984 by Olivetti Corp. By 1981 Olivetti owned 17% of firm. Historically Docutel Olivetti appears to be tightly controlled by Olivetti.
- IMC Magnetics was acquired in 1984 by Nihom Miniature Bearings, which had gained control by 1975.
- Altamil was acquired in 1984 by Great Lakes Corp. Pritzker family controlled both firms; by 1980 they controlled Altamil.
- Fanny Farmer was acquired in 1980 by Amoskeag. In 1977 Amoskeag already controlled 41% of firm's stock.
- Brinks was acquired in 1979 by Pittson. In 1962 Pittson acquired control of Brinks.

- Equitable Life Mortgage and Realty was established in 1970. It was acquired by Equitable Life Assurance Society in 1982. Equitable Life Assurance Society appears to assert considerable control throughout the acquired firm's life.

LBO's, ESOP's, Private Acquisitions (14)

- Almay Stores
- Beeline Inc.
- Blue Bell
- Brooks Fashions
- CCI Corporation
- Cone Mills
- Fey Industries
- Hamilton Brothers Exploration
- Kaiser Cement
- McLean Trucking
- MPO Videotronics
- Niagra Frontier
- Peerless Chain
- Tri-Caro

Industry in Decline but firm performing well by qualitative measure (2)

- Masonite
- Superior Oil

Industry in decline by quantitative measure (3)

- California Portland Cement
- Cascade Steel
- Patton Oil

Stories did not support firm as a turnaround candidate (5)

- Buffalo Forge
- Eltra Corporation
- Getty Oil
- Monfort of Colorado
- Woods Petroleum

APPENDIX C

VARIANCES IN ACQUISITION DATES

There were three instances where the popular press and Mergers & Acquisitions were in conflict on the date of merger. These were:

1. Brass Craft - Mergers & Acquisitions (1983) cites a 3/19/83 merger date. However, the Merrill Lynch analysis of Masco already discusses Brass Craft as if it had been acquired by 12/30/82. This analysis is one of the major sources of information on this acquisition; the research presented here used a 1982 acquisition date.

2. Heileman Brewing - Mergers & Acquisitions (1988) discusses 3/19/88 as when the firm was taken private by Bond Corporate Holdings. However, by October, 1987 Bond already owned 91% of Heileman's stock.

   Business Week, 11/7/88 discussed the Heileman acquisition in terms of it occurring in 1987 (Oneal, 1988). Therefore, 1987 was used as the acquisition date.

3. Gibson-Homans - Mergers & Acquisitions (1985) cites a 1/2/85 merger date, but the Wall Street Journal notes that by 12/31/84 the merger was already approved by both parties. The study used the 1984 date.

One unusual acquisition was also included in the sample.

4. Drug Fair was acquired by Gray Drug in May, 1981. Sherwin-Williams purchased both Drug Fair and Gray Drug by September, 1981. Due to the short time held by Gray Drug, the study included Drug Fair in the sample considering Sherwin Williams as its purchaser.

APPENDIX D

INDUSTRY DECLINING - FIRM PERFORMANCE POOR

Howard Johnson was acquired in 1980. The firm had some very severe criticisms written about its performance. The comments on the firm included:

> New York Times, (1980)
> Value Line, the investment survey, in a report it published only 10 days ago, said it had trimmed its 1980 estimate of Howard Johnson earnings to $1.35 a share, or 13 percent less than in 1979.
>
> Journal of Commerce, (1980)
> The deterioration in Howard Johnson's trading prospects also has caused Imperial Group to rethink its strategy, analysts say.

Graniteville was acquired in 1984. One of its principal industries was in decline while the other was not. However, Wheat First Securities analyzed Graniteville to be in the lower half of comparable textile firms when analyzing their net margin (1982) or earnings per share 1981-1983 (Pickler, 1982).

Weingarten was acquired in 1980. It also has specific industry comparisons of its low industry performance.

> Supermarket News shows net profit as a percent of sales for the supermarket industry to be 0.87 in both 1977 and 1978 (Moore, 1979). Weingarten had a net profit as a percent of sales in 1977 of 0.4 and experienced a loss in 1978.

Lloyd's was acquired in 1983. The firm itself is described in written stories as a "marginal" firm (Behar, 1986) and it was experiencing a high level of losses at the time of its acquisition.

APPENDIX E

INDUSTRY DECLINING - FIRM

PERFORMANCE GOOD

Masonite Corporation was acquired in 1984.

> Wall (1984)
> Although Masonite had a $6.1 million loss in fiscal 1982, it has become increasingly attractive as an acquisition target. Recovering with the housing industry.
>
> Business Week (1984)
> Masonite is back on its feet after a disastrous two-year housing slump that socked the company with a $6 million loss in the year ended Aug. 31, 1982.

Superior Oil was acquired in 1984.

> Beginning in 1982 the oil industry went into a decline. However, even during the period of decline Superior was described in terms such as the following:
>
> New York Times (1983)
> After William M. Keck died in 1964, the leadership of a small company he founded - Superior Oil - fell to his son, Howard B. Keck, who built it into a premier independent explorer and producer.

APPENDIX F

HISTORICAL ACCOUNTS INDICATING

NON-TURNAROUND CANDIDATES

Monfort of Colorado Inc. was acquired in 1987. By 1986 it appears to be turned around already.

> Ivey (1986)
> While many in the beef industry are suffering, the price of Monfort stock has soared from $17 per share to $48 in a year.
>
> Six years ago, Monfort of Colorado Co. was almost out of business. But Monfort fought back with a series of cost cutting measures and shrewd marketing that brought the company back to life. Now he's trying to do it again.

Getty Oil was acquired in 1984.

> Value Line (1983a)
> The company is rated tops for financial strength, and the shares ought to perform as well as most others in next 12 months.
>
> Rating of company financial strength A++.

Woods Petroleum was acquired in 1985.

> Wall Street Transcript (1984)
> analysis by Rauscher, Pierce, Refnes Inc.
>
> Woods appears to be in excellent financial condition, superb compared to most exploration and production companies.

Eltra Corporation was acquired in 1979.

> Business Week (1978)
> Eltra's financial fortunes have advanced steadily.
>
> Moreover, the sales-to-employee ratio has nearly doubled over the five year period.
>
> Anreder (1978)
> Brightening the outlook is a rising tide of incoming orders, now running some 5%-10% above year ago levels.
>
> Value Line (1978)
> Rating of company financial strength A+.

Buffalo Forge was acquired in 1981.

> In an effort to be conservative Buffalo Forge was eliminated from the sample. This firm had extensive stories written on acquisition attempts of the firm and its eventual acquisition by Ampco-Pittsburgh. However, none of these stories described Buffalo Forge in terms which would indicate it is a turnaround candidate. Rather, terms indicated that Buffalo Forge had average performance. For example:
>
> Wall Street Journal (1981)
> The bidding match for Buffalo Forge, usually a quiet performer on the market, has pushed up its stock price.

APPENDIX G

FINAL SAMPLE

1. A&P acquired Shopwell in 1986.
2. Adobe Oil & Gas merged with Madison Resources to become Adobe Resources in 1985.
3. Alaska Interstate acquired C&K Petroleum in 1980.
4. American Healthcare Management acquired Huntington Health Services in 1983.
5. Anschutz acquired Rio Grande Industries in 1984.
6. Bacardi acquired Lloyd's Electronics in 1983.
7. Bond Corporate Holdings acquired Heileman Brewing in 1987.
8. Borden acquired Guy's Foods in 1979.
9. Buckhorn acquired New Idria in 1984.
10. Calmar acquired Realex in 1985.
11. Cavenham USA acquired Weingarten in 1980.
12. Champion International acquired St. Regis in 1984.
13. Chesebrough Ponds acquired Stauffer Chemical in 1985.
14. Cooper Industries acquired McGraw Edison in 1985.
15. Dairy Mart acquired Conna Corporation in 1986.
16. Dome Placer was formed by the merger of Campbell Red Lake Mines, Dome Mines and Placer Development in 1987.
17. Eastmet acquired UIP Corporation in 1979.

18. Esquire acquired Allyn & Bacon in 1981.

19. Field Acquisition (part of Schenley Industries) acquired Sonoma Vineyards in 1985.

20. Foseco Minsep acquired Gibson-Homans in 1984.

21. Fred Meyer acquired Grand Central in 1984.

22. Harcourt Brace Jovanovich acquired Florida Cypress Gardens in 1985.

23. Hawley acquired ADT in 1987.

24. Hecla Mining acquired Ranchers Exploration in 1984.

25. Hinderliter acquired Southwest Factories in 1982.

26. Imperial Group acquired Howard Johnson in 1980.

27. Insilco acquired Dual-Lite in 1987.

28. Louisiana Land acquired Inexco in 1986.

29. Manor Care acquired Cenco in 1981.

30. Marine Construction and Design acquired Campbell Industries in 1979.

31. Masco acquired Brass-Craft in 1982.

32. Maynard Oil acquired Echo Oil in 1979.

33. McDonnell-Douglas acquired Tymshare in 1984.

34. Miller Cascade acquired Pacific Gamble Robinson in 1987.

35. National Education Corp. acquired Intext in 1979.

36. Newell acquired Wright (William E.) in 1986.

37. R.B. Pamplin acquired Riegel Textile in 1985.

38. Peoples Express acquired Frontier Airlines in 1985.

39. Petrie Stores acquired Miller-Wohl in 1984.

40. Riordan, Freeman & Spogli acquired Bayless Markets in 1984.

41. Schottenstein acquired M.H. Fishman in 1979.

42. Seaboard Coast Line merged with Chessie System in 1980 to become CSX.

43. Sherwin-Williams acquired Gray/Drug Fair in 1981.

44. Snyder General acquired McQuay in 1984.

45. Solvay & Cie acquired Purepac Laboratories in 1979.

46. Southeastern Public Service acquired Graniteville in 1984.

47. Standard Oil of Indiana (Amoco Corp.) acquired Cyprus Mines in 1979.

48. Sun Chemical (Sequa) acquired Intercontinental Dynamics in 1986.

49. Sundstrand acquired Sullair in 1984.

50. Technology for Communications International acquired BR Communications in 1987.

51. Unimar acquired Enstar in 1984.

APPENDIX H

REGRESSION VARIABLES AND VALUES

NAME	PERFORMANCE	EXPERIENCE	DECLINE	SIZE	RELATED*
A&P	6.67	2	- 86.6	0.07	1
ADOBE	5.67	0	- 2.6	3.39	1
ALASKA INTER	5.67	3	- 54.1	0.07	1
AM HEALTH	5.33	0	- 47.0	0.65	1
ANSCHUTZ	1.33	0	- 28.7	0.35	0
BACARDI	1.33	1	- 125.6	0.30	0
BOND CORP	1.67	1	- 24.0	0.90	0
BORDEN	5.67	2	- 42.2	0.01	0
BUCKHORN	4.00	0	- 1.9	1.78	0
CALMAR	6.00	1	- 51.6	0.40	1
CAVENHAM	1.67	2	- 179.1	0.10	0
CHAMPION	4.67	0	- 73.5	0.64	1
CHESEBROUGH	1.00	4	- 108.2	0.81	0
COOPER	5.67	3	- 62.1	0.85	1
DAIRY MART	6.33	0	-2918.1	0.73	1
DOME PLACER	5.33	1	- 38.9	0.20	1
EASTMET	2.33	0	- 24.4	0.26	0
ESQUIRE	6.67	4	- 70.8	0.29	1
FIELD ACQUIS	6.33	0	- 385.0	0.09	1
FOSECO MINSEP	1.67	0	- 0.8	0.09	0
FRED MEYER	5.67	0	- 273.4	0.20	1
HARCOURT	6.00	2	- 25.3	0.02	0
HAWLEY	6.33	2	- 219.0	0.94	0
HECLA	5.67	1	- 36.0	0.60	1
HINDERLITER	6.33	0	- 74.0	0.55	1
IMPERIAL	1.33	1	16.9	0.08	0
INSILCO	6.33	3	- 8.0	0.05	0
LOUISIANA	5.00	1	- 202.2	0.15	1
MANOR CARE	5.67	1	- 7.1	0.40	1
MARINE CON	3.33	0	- 342.2	1.82	1
MASCO	6.00	8	- 24.8	0.08	0
MAYNARD	4.67	0	- 24.7	0.20	1
MACDONNELL	3.00	6	- 53.0	0.04	0
MILLER-CASCADE	5.33	0	- 69.7	4.60	1
NATL ED	5.33	1	- 19.5	1.19	1
NEWELL	5.67	2	- 53.3	0.18	0

PAMPLIN	5.00	1	- 52.4	3.73	1
PEOPLE'S	1.00	0	- 281.4	1.15	1
PETRIE	6.33	5	- 14.8	0.38	1
RIORDAN	1.00	0	- 41.9	11.82	0
SCHOTTENSTEIN	4.67	0	- 86.8	0.43	1
SEABOARD	6.67	1	- 30.9	1.17	1
SHERWIN-WILLIAMS	1.33	0	- 36.9	0.21	0
SNYDER	5.67	1	- 137.6	0.85	1
SOLVAY	4.67	1	- 23.4	0.01	0
SOUTHEASTERN	4.00	0	- 227.5	1.43	0
STD OIL	1.00	2	- 83.8	0.02	0
SUN CHEM	5.67	3	- 225.6	0.02	0
SUNDSTRAND	4.67	6	- 257.2	0.13	1
TECH COMM	6.67	0	- 74.6	0.25	1
UNIMAR	5.00	0	- 45.4	0.03	1

*(1= RELATED; 2=UNRELATED)

Variable	Mean	Standard Deviation	Minimum	Maximum
Performance	4.51	1.92	1.0	6.67
Size	-144.34	407.26	-2918.15	16.91
Decline	0.88	1.83	0.01	11.82
Experience	1.41	1.84	0.00	8.0

VITA

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