
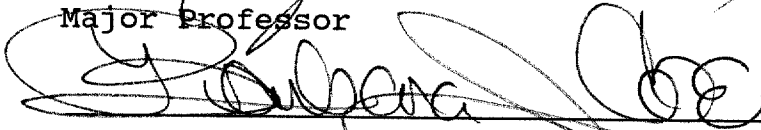


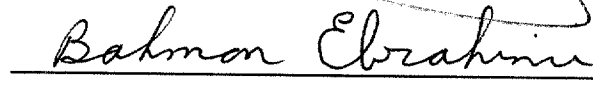
MERGER TYPE AND PERFORMANCE: A LONGITUDINAL STUDY OF
THE FOOD AND KINDRED PRODUCTS INDUSTRY

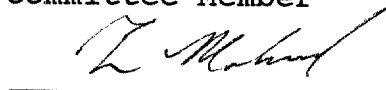
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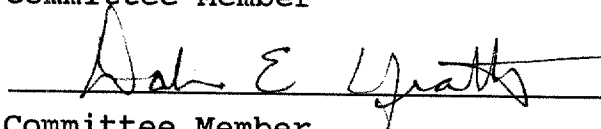
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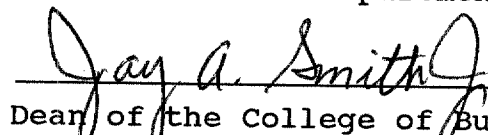

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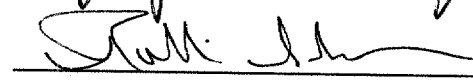

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MERGER TYPE AND PERFORMANCE: A LONGITUDINAL STUDY OF
THE FOOD AND KINDRED PRODUCTS INDUSTRY

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

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Denton, Texas

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MSJ

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The purpose of this study was to measure merger performance on a longitudinal basis using a micro perspective. Specifically, this study looked at the performance of a sample of mergers drawn from the food and kindred products industry, Standard Industrial Classification code 20, for a period of five years before and five years after the merger using two performance measures. The performance measures, namely market returns to stockholders and return on investment, have been used extensively in the literature to study the performance of mergers and acquisitions, albeit on macro samples.

Archival data for a sample of eighty firms for the period from 1968 to 1984 was collected to test three hypotheses. The hypotheses were used to study merger performance in general, merger performance across merger types, and merger performance across two different time periods.

The study offered significant statistical support for the hypothesis that mergers benefit the acquiring firm and

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its stockholders, as well as for the hypothesis that merger performance in the latter time period of study (1977 to 1984) was better than in the former (1968 to 1977).

However, no significant difference in performance was found across merger types. The study discussed the managerial implications of these findings and offered directions for future research in the area of merger performance.

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CHAPTER I

INTRODUCTION

One measure of how well a firm is doing is the rate at which it grows over the years. Well managed firms are not expected to remain stagnant in terms of sales, profits, assets, and number of employees. Members of management are often rewarded when they are able to report healthy growth rates for their firms.

It is generally accepted by management theorists that the two ways that a firm can grow are by internal growth and through mergers and acquisitions (Salter and Weinhold 1979). Joint ventures are another, albeit a less popular, means of growth. Growth by internal means occurs when firms introduce new products in existing markets or use new technology to streamline and increase their production capacity. However, the cost of developing new products is not only tremendously expensive but also very risky (consider Coca Cola's foray into New Coke), and the cost factor severely restricts the adoption of new technology by firms.

Acquiring a company (acquisition) or merging with another (merger) to form a larger entity is another means of growth. While mergers and acquisitions (a term that is now used interchangeably to denote change of ownership) have existed since

the turn of the century, the 1980s saw a wave of billion dollar ownership changes that affected millions of people, either directly or indirectly. The year 1988 saw a bewildering total of 3,487 corporate mergers and acquisitions (M&As) valued at over \$226 billion (Adams and Brock 1989). This trend does not seem to be slowing down, and the media continues to be full of the multi-billion dollar mergers, such as the Time-Warner merger. In addition to the large number and total value, the size of individual mergers has also skyrocketed. While the value of R. J. Reynolds' 1985 merger with Nabisco totalled \$4.9 billion, the largest merger of 1988, between Philip Morris and Kraft General Foods, was valued at \$13.4 billion (Adams and Brock 1989). Table 1 shows the trend in merger activity from 1980 to 1988.

Although problems in the junk bond market are expected to slow merger activity in the 1990s, experts predict a greater tendency toward strategic mergers rather than haphazard acquisitions. A case in point is the recent merger of two pharmaceutical giants, Smith Kline and Beckman and Beecham Products (Dobrzynski 1990).

Apart from providing a means for growth, mergers and acquisitions result from other motivations. Mergers are justified on the grounds that they move assets into the hands of managers who can employ them efficiently. In fact, this is the rationale for most take-over bids.

Table 1.--Trends in Merger Activity 1980-1988

Year	No. of M&As	Percent	Value (\$ billions)	Change
1980	1565	5.87	33.0	-
1981	2326	8.72	67.3	+103.9%
1982	2296	8.61	60.4	-10.3
1983	2387	8.95	52.8	-12.6
1984	3158	11.84	126.0	+138.6
1985	3428	12.85	145.4	+15.4
1986	4323	16.21	204.4	+40.6
1987	3701	13.88	167.5	-18.1
1988	3487	13.07	226.6	+35.3

Source: Walter Adams and James W. Brock, Dangerous Pursuits: Mergers and Acquisitions in the Age of Wall Street (New York:Pantheon Books, 1989), 12.

Merger-induced restructuring is considered absolutely necessary if American industry is to achieve production efficiency, technological leadership, and competitiveness in world markets. Such restructuring is considered by many to be a panacea for keeping the economy both normal and healthy (Adams and Brock 1989).

History reveals results that do not support most justifications for mergers. The United States Steel Corporation was created in 1901 by consolidating eleven major steel companies (Adams and Brock 1989). The first president of the company

assured the United States populace that the consolidation was motivated by the need to increase the efficiency of steel production and that the consolidation would benefit a myriad of stakeholders including investors and customers. As a direct result of major consolidation moves, United States Steel became a colossus of inefficiency by the 1980s, unable to compete with efficiently run foreign firms and reduced to seeking the protection of the federal government.

Gulf and Western, International Telephone and Telegraph (ITT), General Mills, and Beatrice are all well known examples of companies which were once enamored with the merger game but later totally disillusioned by the results. Gulf and Western sold 60 businesses (Adams and Brock 1989), ITT sold approximately 100 (Weston, Chung, and Hoag 1990) and General Mills sold 26 (Adams and Brock 1989), after it became apparent to management that their acquisitions were not working out.

In spite of definite evidence to the contrary, the magnitude of merger activity continues to increase, both in the United States and abroad. The anticipated unification of European markets in 1992 has ushered in a spate of mergers and acquisitions as companies attempt to establish a beachhead in what promises to be a large and lucrative market (Spellman 1988). Japan, which had previously evidenced only a minor interest in the mergers and acquisitions game, reportedly acquired \$5.5

billion worth of United States companies in 1988 (The Economist 1988).

Statement of the Problem

Researchers from a myriad of disciplines have attempted macro studies on merger performance and related issues. Even using a wide range of performance measures (e.g., stock returns, return on investment, risk, market share), the essence of their results is that mergers benefit the stockholders of acquired firms, but do not result in any significant benefit to the acquiring firm or its stockholders (Halpern 1983; Jensen and Ruback 1983).

However, researchers from the discipline of strategic management have recently found evidence that contradicts the earlier findings of researchers who were predominantly from the finance discipline. The strategic management researchers (Lubatkin 1987; Pettway and Yamada 1986), using the same methodology as the finance researchers, but with different time frames and slightly different assumptions, have concluded that mergers yield significant benefits to stockholders of both firms.

Thus, a question currently exists as to whether mergers benefit only one (the acquired) or both firms involved. The clarion call from researchers in the area of mergers and acquisitions research (Datta, Rajagopalan, and Rasheed 1990) is

for more micro studies (focusing on individual industries) rather than macro approaches (pooling firms from different industries into one single sample) that look at merger outcomes from a longitudinal perspective (Napier 1989). This is seen as a method of resolving the current controversy that exists regarding merger performance.

Toward this end, the current study examined merger performance, using multiple measures, in the food and kindred products industry covered by the SIC Code Number 20.

Purpose of the Study

The purpose of this study was to measure merger performance on a longitudinal basis using a micro perspective. Specifically, this study looked at the performance of a sample of mergers drawn from the food and kindred products industry, Standard Industrial Classification code 20 (Standard Industrial Classification Manual 1985), for a period of five years before and five years after the mergers using two performance measures. The performance measures, namely market returns to stockholders and return on investment, have been used extensively in the literature (Kusewitt 1985; Langetieg 1978; Lubatkin 1987; Mandelker 1974; Singh and Montgomery 1987) to study the performance of mergers and acquisitions, albeit on macro samples.

Since previous research provides conclusive support for increased returns following a merger to stockholders of acquired firms (Halpern, 1983; Jensen and Ruback 1983; Lubatkin 1987), this study used market measures to determine returns to acquiring firms' stockholders only. Also, since the effect of a merger can best be felt only in the long run (Napier 1989), performance was measured for a period of five years after the merger and compared to performance five years prior to the merger. Such a longitudinal scope ensured that the anticipated synergies (Chang 1988; Chatterjee 1986) have had a chance to be effective.

Significance of the Study

While a number of studies have been done on mergers and acquisitions in the past, the scope and thrust of this study are significant on two counts. The first is that, given the fact that the pace and magnitude of mergers and acquisitions are increasing geometrically, managers are presently confronted with conflicting evidence regarding benefits to the acquiring firm. Without knowing the factors that impinge on the performance of these billion-dollar decisions, managers are not able to rationally decide on the mode of growth and the options open to them. Research that looks at mergers and acquisitions performance within an industry-specific context would reiterate

the importance of situational factors that should provide important input into a decision to merge.

Lubatkin and Shrieves (1986) urge strategic management researchers to use event studies to measure economic performance rather than the traditional accounting-based indices such as return on investment (ROI) and price/earnings (P/E) ratio.

The second significance of this study is that it uses the event study approach to measure merger performance on a longitudinal basis within the context of a specific industry. Thus, it factors in the strident calls of several researchers to use sound and consistent methodology in the study of merger performance in order to extend the base of knowledge in this particular area.

Limitations of the Study

Any study that uses as its sample firms drawn from a single industry suffers from obvious generalizability problems. Since the current sample included firms drawn entirely from the food and kindred products industry (SIC code 20), the applicability of the findings of this study across other industries is limited. This limitation stems from unique structural and competitive characteristics that are industry specific, thereby precluding, to a large extent, the applicability of findings across other industry groups.

The second limitation of this study was that it used only two measures of performance from a wide array of choices possible. By using only stock market and accounting measures of return, other performance aspects such as the effect of mergers and acquisitions on the risk of the merged firm, the market shares and subsequent sale value of acquired firms were not addressed. Since a merger may have been undertaken for a variety of reasons, by limiting the measurement of performance just to returns, other aspects are not factored in.

Research Methodology

Definition of Variables

The variables used in the study and their definitions are as follow:

(A) Dependent variable -- Merger performance. The two surrogates for this variable were stock-market returns and return on investment. Stock market returns were calculated using the following formula (Kusewitt 1985):

$$R = \frac{(P_t + D_t)}{(P_{t-1})} - 1 \quad \text{where,}$$

R = return on acquirer's stock for the year

P_t = arithmetic mean of high and low market price of share in calender year t

D_t = dividend per share in year t

P_{t-1} = share price in previous calendar year

Return on assets (ROA) was calculated as follows:

$$\text{ROA} = \frac{\text{After-tax earnings}}{\text{Year-end book value of assets}}$$

(B) Independent variables -- Type of merger and the time period of the merger. The surrogates for merger types were the following: horizontal, vertical, product concentric, market extension and pure conglomerate. The classification is based on the scheme suggested by the Federal Trade Commission (FTC 1980) and has been used by several researchers (Lubatkin 1987). A horizontal merger is one where the companies involved produce one or more of the same, or closely related products in the same geographical market (FTC 1980). A vertical merger is one where the two companies involved had a potential buyer-seller relationship prior to the merger (FTC 1980). A product concentric (or product extension) merger is one where the acquiring and acquired companies are functionally related in production and/or distribution but sell products that do not compete directly with one another (FTC 1980). A merger is considered to be market extension (or market concentric) in type when the acquiring and acquired companies manufacture the same products, but sell them in different geographical markets (FTC

1980). The pure conglomerate type of merger involves the consolidation of two essentially unrelated firms (FTC 1980). The two surrogates for the independent variable "time period" were 1968 to 1978 and 1979 to 1984.

The variables and surrogates used in this study are summarized in Table 2.

Table 2.--Variables Used in the Study
and their Surrogates

VARIABLES	SURROGATES
Dependent	
Merger performance	1. Stock-market returns 2. Return on Investment
Independent	
1. Merger type	1. Horizontal 2. Vertical 3. Product-concentric 4. Market-extension 5. Pure conglomerate
2. Time period	1. 1968-1976 2. 1977-1984

Hypotheses

Based on a review of the literature, three hypotheses were developed. The hypotheses are as follows:

Hypothesis 1: In the food and kindred products industry, mergers do not result in any change in performance by acquiring firms following the merger

Hypothesis 2: In the food and kindred products industry, there is no change in merger performance between the two time periods (1968 to 1976 and 1977 to 1984)

Hypothesis 3: In the food and kindred products industry, there is no difference in performance among merger types.

Data Collection and Analysis

This study used archival data to test the hypotheses. Specifically, this study used Moody's Industrial Manual and Value Line Investment Survey to obtain data on stock market prices, dividends, net incomes and total assets. A sample of firms involved in mergers and acquisitions in the food and kindred products industry (SIC code 20) for the period 1968 to 1984 were identified using two sources. The sources were the FTC's Report on Mergers and Acquisitions (1980) and "Merger Rosters" published periodically by Mergers and Acquisitions. These mergers were classified into horizontal, vertical, market concentric, product

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CHAPTER II

REVIEW OF LITERATURE

Introduction

The significant level of activity in the mergers and acquisitions field has spurred the interest of researchers from a myriad of disciplines. Researchers from the fields of finance (Amihud, Dodd, and Weinstein 1986; Davidson, Garrison, and Henderson 1987), banking (Browne and Rosengren 1988; Neely and Rochester 1987), marketing (Hopkins 1987), economics (Beckett 1986; Borg, Borg, and Leeth 1989), and strategic management (Chatterjee 1986; Clarke 1987) have all contributed to the large and growing body of literature on mergers and acquisitions.

Today, the literature on this topic not only represents a great variety of perspectives and interdisciplinary paradigms, but also covers a wide gamut of research questions and ideas. However, in spite of the breadth of current research, no comprehensive review of literature along the lines of Ramanujam and Varadarajan's (1989) work on diversification research exists on mergers and acquisitions. In addition to Bruton and Alexander's (1989)

review of the literature on acquisition planning, and Marks' (1982) and Napier's (1989) survey of existing research on human resources issues of mergers and acquisitions, a comprehensive review of literature covering the various research streams in mergers and acquisitions would enhance the theoretical base from which future researchers could draw.

The first part of this chapter contains a review of the definitions of mergers and acquisitions terms that can be found in the literature. The second part of the chapter provides a detailed review of the literature in each of the streams discussed earlier. Finally, the chapter provides a critique of existing research in mergers and acquisitions and suggests directions that future research should take.

Definition of Terms

While the topic of mergers and acquisitions has been the object of several studies, there is a surprising dearth of definitions of the terms "mergers" and "acquisitions." In addition, the definitions found in management handbooks often do not agree on the two terms. For example, Van Duyn (1986,47) defines a merger as "the absorption of one or more corporations by another existing corporation, which retains its identity and takes over all the rights, principles,

franchises, and properties of the absorbed companies;" and an acquisition as "the joining of one company into another." Duyn's concept of an acquisition as a combination is also shared by Shelton (1988,279) who defines an acquisition as "a combination of the assets of target and bidder firms." However, Hayden (1986,106) uses the term "combination" to define a merger. An acquisition, according to her, is the "purchase of one company or part thereof by another company." For purposes of this research, the terms merger and acquisition are used interchangeably to denote change in ownership.

Most researchers (Bumpass 1987; Lubatkin 1983, 1987; Bumpass 1987; Sturgess and Wheale 1984), however, have used the classification scheme proposed by the Federal Trade Commission (1980). According to the Federal Trade Commission (1980,107), a merger is "horizontal when the companies involved produce one or more of the same, or closely related, products in the same geographical market." An example of a horizontal merger would be a North American oil company merging with another North American oil company. According to the Federal Trade Commission (1980,107), a merger is vertical when "the two companies involved had a potential buyer-seller relationship prior to the merger." Thus, a soft drink manufacturer merging with an aluminum can manufacturer would constitute a vertical merger. The

Federal Trade Commission classifies conglomerate mergers into three sub categories: product extension, market extension, and other. A merger is considered to be "product extension in type when the acquiring and acquired companies are functionally related in production and/or distribution but sell products that do not compete directly with one another " (FTC, 1980,108). An example of a product extension merger would be a pharmaceutical company acquiring a surgical instruments manufacturer. A merger is "considered to be market extension in type when the acquiring and acquired companies manufacture the same products, but sell them in different geographic markets" (FTC 1980, 108). A Coca-Cola bottling plant in New Jersey merging with a California-based Coca-Cola bottler would be an example of a market extension merger. Finally, the "other" type of conglomerate merger "involves the consolidation of two essentially unrelated firms" (FTC 1980, 108). An example of this type of merger would be a cosmetics company acquiring an automobile parts manufacturer.

Mergers were predominantly conglomerate from 1950 through the late 1970s (Caves 1989; Lee and Cooperman, 1989). This was true because conglomerate mergers create market power by increasing a firm's contact in several markets and achieve symmetry among a markets' firms (Scott

1989). A striking example of a firm that embodied the conglomeration spree of this period was International Telephone and Telegraph (ITT). In 1960 ITT was primarily a one-product company -- manufacturing telecommunications equipment and operating international telephone systems (Adams and Brock 1989). The company embarked on a diversification program and acquired 74 domestic and 66 foreign acquisitions totalling \$4 billion between 1961 and 1969 (Adams and Brock 1989). By the 1980s it became apparent that this strategy was not working out and the company divested 100 of these by 1986 (Adams and Brock 1989). Today, most companies position themselves as "focused" conglomerates which diversify selectively, rather than randomly as in the past (Adams and Brock 1989).

Theoretical Framework

Research on mergers and acquisitions has been fragmented, focusing on isolated areas of the process such as planning (Paine and Power 1984), performance measurement (Lubatkin 1987), and the management of the human element (Walsh 1988), and also holistic, looking at the management of mergers and acquisitions as a whole (Souder and Chakrabarti 1984). Researchers have used one-shot (Howard 1982) and logitudinal case studies (Buono, Bowditch and

Lewis 1985), as well as archival (Montgomery and Wilson 1986) and opinion (Davidson 1981, 1987) data. Finally, there has been a myriad of both empirical and conceptual writings done in this area.

An electronic database search on the topic of mergers and acquisitions produced a bewildering total of 7,286 articles during the period from 1985 to 1989. Before reviewing the multitude of research studies done in this area, a framework is necessary. Such a framework is not only helpful in classifying and studying existing work, but also provides direction for future research by pointing out the hiatuses.

Ramanujam and Varadarajan (1989, 525-526) provide a convenient scheme for classifying existing research on diversification. Their classification scheme identifies several broad research themes -- each stream, then, is represented by a box. Thus, for example, two of their streams (and hence, boxes) in the area of diversification are the choice of direction of diversification and the choice of mode of diversification. Within this classification scheme, the authors distinguish research into unlinked and linked categories. Unlinked studies are those that focus explicitly on the themes represented in the boxes. Thus, for example, an unlinked study on a firm's choice of mode of diversification looks purely at whether

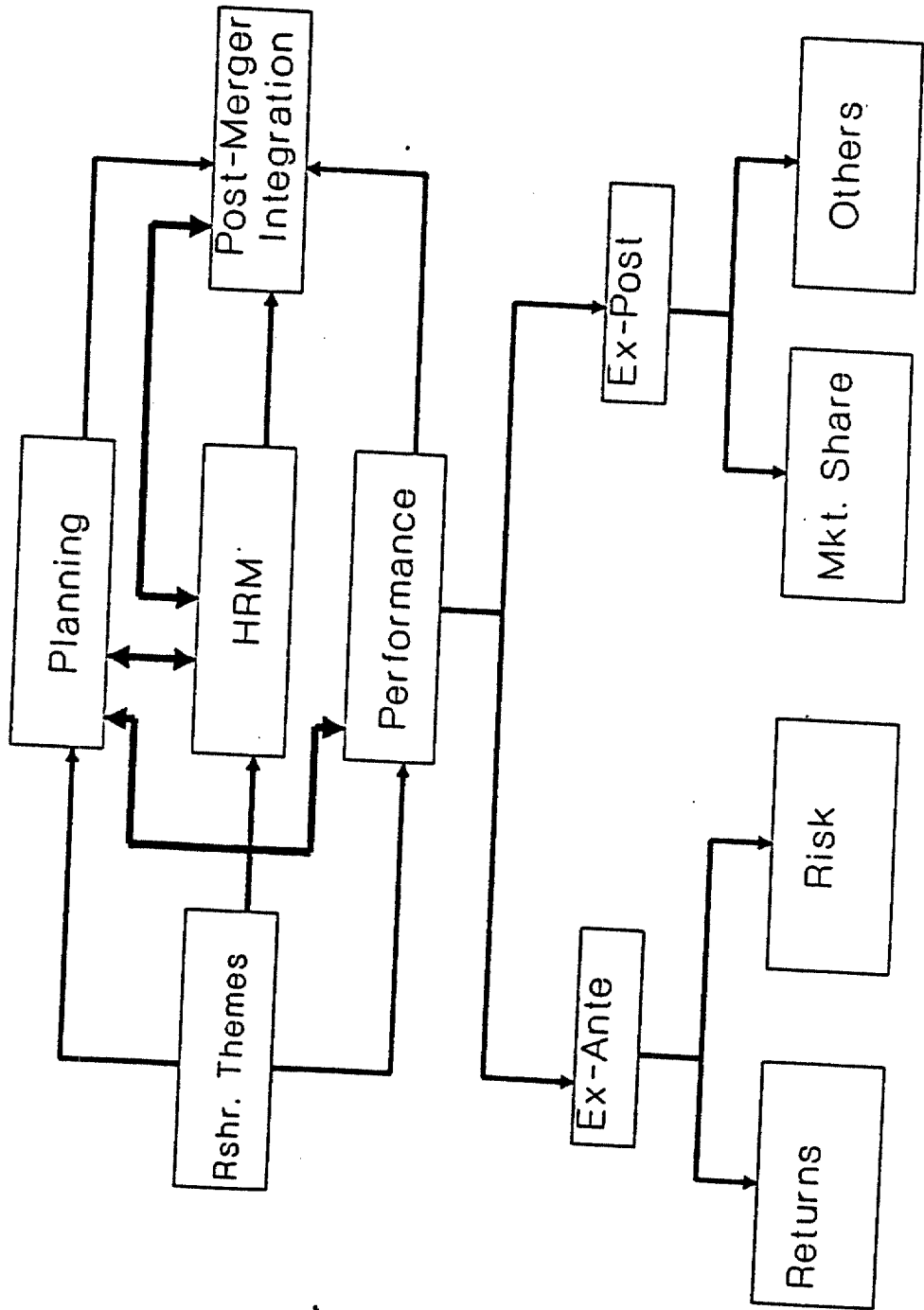
the firm diversifies through internal development or by acquisition (Ramanujam and Varadarajan 1989,526). A linked study, on the other hand, examines the relationship between two or more variables in a contingency framework. A linked study on the choice of mode of diversification, for example, examines it in relationship to the management of diversity. Within each category, the division also indicates whether the study was empirical or conceptual.

Ramanujam and Varadarajan's (1989) classification scheme was adopted to categorize research on mergers and acquisitions in this study. The framework consists of several boxes that are joined together by arrows to show the interrelationships. The adopted framework is provided in Figure 1 and is used to review the literature on mergers and acquisitions.

As shown in Figure 1, the four broad streams of mergers and acquisitions research are planning for mergers and acquisitions, measuring the performance of mergers and acquisitions, managing the human resources during the merger process, and post-merger integration.

Research on planning for for mergers and acquisitions focuses on issues such as comparison of internal-growth versus acquisition-based growth (Salter and Weinhold 1979), examining the potential synergies involved (Chatterjee 1986) and identifying the key steps that a firm has to follow in

Figure 1
Research Themes in Mergers and Acquisitions
A Schematic Representation



order to achieve success in the mergers and acquisitions process (Jemison and Sitkin 1986).

In evaluating the performance of mergers and acquisitions, finance literature has focused mainly on using market-based measures of return and risk to examine the process from investors' point of view rather than the managerial view (Ramanujam and Varadarajan 1989). While much of the initial merger literature from the strategic management researchers' perspective used accounting based rates of return measures, there has been a recent marked tendency for strategy scholars (Lubatkin 1987; Singh and Montgomery 1987) to adopt market-based performance measures.

Research on the human resources aspect of mergers and acquisitions has focused on stress (Schweiger and Ivancevich 1985), employee turnover (Walsh 1989), and related issues following the merger announcement. This research stream is highlighted by a plethora of conceptual rather than empirical studies, usually from a practitioner's viewpoint.

Research on post-merger integration has looked mainly at the acculturation process (Nahavandi and Malekzadeh 1988). There is a strong link between this stream of research and research on managing human resources during mergers. This is understandable as most mergers fail to realize the expected synergies because of a failure to mesh the two different cultures following the merger agreement.

In order to facilitate post-merger integration, the process should start with managing human resources at the time of the merger announcement (Swaim 1985).

Planning for Mergers and Acquisitions

The concept of strategic fit was the focus of several studies that dealt with the planning area of mergers and acquisitions research (Pekar 1985; Scott and Berry 1985; Shelton 1988). Haspeslagh (1989) notes that since the basic purpose of a merger or an acquisition is to capture or create value for the firm engaging in such activity, it is important that the act fits the strategy of the organization. Clarke (1987) differentiates between hard concepts that measure strategic fit by means of financial results and soft concepts such as the meshing of the two cultures that make or break a merger.

Peter Drucker (1981,28) prescribed five rules for making a successful acquisition. These rules, all relating to the concept of strategic fit, include acquiring a company with a "common core of unity; projecting the acquiring firm's potential contributions of skill to the acquired firm; respecting the products, the markets, and the customers of the acquired company; being able to replace the acquired company's top managers effectively within a year;

and, finally, providing an incentive to managers of both companies by promoting them." However, Paine and Power (1984) tested Drucker's theoretical precepts by reviewing the literature and concluded that his rules were not supported by current evidence or arguments.

In simple terms, synergy occurs when the total is greater than the sum of the parts -- or when two plus two equals five. The pursuit of synergy has been widely believed to be a major motivation for mergers in finance literature (Brigham 1982; Chang 1988; Van Horne 1983). From a strategic management viewpoint, Chatterjee (1986) identified three types of possible synergies and concluded that while all three synergies-- price related, financial, and operational-- are important in acquisitions, collusive or price related synergy is paramount. Thus, the two firms must have a strategic fit in terms of their pricing policies in order for the merger to add the maximum value. While Chatterjee's (1986) empirical study, also supported by Rappaport (1987), found operating synergies to be far less important than collusive or financial synergies, Davidson, Garrison, and Henderson (1987) found evidence to suggest that synergy was unrelated to the size of the acquired firm. They concluded that operating, rather than financial synergy caused shifts in the value-adding potential of mergers.

Jemison and Sitkin (1986a 1986b) prescribe the use of a process perspective which underscores the importance of the acquisition process itself as an integral part of acquisition success. This need for focusing on the way the acquisition process shapes is further emphasized by Haspeslagh and Jemison (1987) and Brockhaus (1986). The process perspective is a way of integrating the fragmented perspectives that various managers and specialists bring to the mergers and acquisitions decision. By using a systematic process to integrate their viewpoints, a more rational decision on the merger and acquisition can be made by top management. Jemison and Sitkin (1986a) argue that the process perspective is an important addition to the merger decision process, which has often been overlooked by previous researchers.

Bruton and Alexander (1989) suggest a three-stage planning model that an organization could use when contemplating a merger. The first stage in the model is building strategic readiness, or gearing up for the merger. This stage includes gathering support from top management for the acquisition program, deciding on the firm's strategic objectives and preparing to make a move. During this stage, Scott and Berry (1985) advocate the setting up of a strategic planning unit to coordinate and analyze the

large body of information that accompanies the merger and acquisition process.

The second stage in the mergers and acquisitions planning model is the identification and evaluation of candidates for acquisition. Silhan and Thomas (1986) suggest the use of simulation techniques during the assessment stage. A wide variety of models (Alberts and Varaiya 1989; Dutz 1989; Neuburger 1986; Perry and Porter 1985; Young 1989) have been proposed for analyzing acquisition candidates. Birch (1988), however, cautions against acquiring a foreign company without consulting advisors in that country.

The negotiation process is the final stage of Bruton and Alexander's (1989) planning model. In this step, the type of consideration paid for the merger or acquisition is important (Kusewitt 1985). In order to accomplish the goals of both firms, Howard (1982) advises negotiators to focus on objective, rather than emotional factors in putting together the acquisition package.

Several studies have examined the link between the planning stage of the merger and acquisition process and the subsequent performance of the combined firm. Kusewitt (1985) used both market-based and accounting measures of return to empirically test seven common factors of acquisition strategy necessary for the long-run financial

performance of acquiring firms. Using archival data, he concluded that the relative size, acquisition rate, industry commonality (the concept of synergy), timing, type of consideration paid for the merger, and the profitability of the acquired firm all play a part in the long-term financial health of the merged firm. However, the price paid for the acquisition does not affect the subsequent performance of the merged firms. These are important implications for merger and acquisition planning.

The concept of market power, or the ability of a merged firm by reason of its larger size to dictate and obtain higher prices, has been examined both by economists (Bumpass 1987) and by strategic management researchers (Chatterjee 1986). Using an empirical study, Galbraith and Stiles (1984) established the nexus between merger strategy and market power, while Chatterjee (1986) found support for price related (emanating from market power) synergies being important determinants of merger performance.

Audretsch (1989) approached merger planning from an industry life cycle perspective. His argument, supported by empirical evidence, is that firms with products in the mature and declining phases of their life cycles should plan for conglomerate mergers in order to rejuvenate both its profits and growth prospects.

Other linked studies in the area of merger and acquisition planning are those linking planning and post-merger integration (Achtmeyer and Daniell 1988), and planning and managing the human element during the merger process (Swaim 1985). Advanced planning that sets up a transition team, and key profit levers are recommendations suggested by Achtmeyer and Daniell (1988) for ensuring smooth post-merger integration. Involving the personnel professional at the planning stage of the merger and acquisition ensures, according to Swaim (1985), a smooth transition.

Measuring the Performance of Mergers and Acquisitions

The 1980s saw more than 26,000 mergers which were valued at over \$1000 billion (Adams and Brock 1989). This is in marked contrast to the merger activity of the 1950s, the 1960s, and the 1970s, where the numbers were relatively more modest (Michael and Shaked 1985). The recent increase in activity in the merger sector has resulted in a significant body of literature. Much of this literature is devoted to measuring merger performance.

Researchers from the fields of finance and strategic management have used a variety of measures to examine merger performance. These measures can be classified under the

following headings: returns -- both accounting and market-based, risk, market share, and others.

Returns

Past researchers used accounting-based measures such as return on investment (ROI) and price-earnings ratios (P/E) to measure merger performance (Mason and Goudzwaard 1976; Melicher and Nielson 1970; Weston and Mansinghka 1971). Halpern (1983) criticizes research studies that used purely accounting-based performance measures to study the effects of mergers. His criticisms, also shared by others (Lubatkin and Shrieves 1986; Montgomery and Wilson 1986), include the following: First, accounting data are historical and reflect past performance (ex-post) rather than expected future earnings (ex-ante). The second shortcoming is that it is difficult to get comparable control groups using accounting-based measures. Third, most publicly available accounting data (e.g., from annual reports) are highly aggregated, making it difficult to isolate the effects of individual and relatively small events such as mergers and acquisitions which sometimes account for less than 5 percent of a firm's total assets. His final criticism is that accounting-based measures capture only one dimension of performance. Halpern (1983) supports the body of work that examines merger

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the managerial expertise or access to finances to exploit its unique resources. The other explanation is that the acquired firm may have been operating at suboptimal levels of efficiency and the merger may be seen as a way of increasing the level of performance. None of these explanations, however, appear to have been empirically tested.

It is argued that, attracted by the potential synergy possible in a merger, acquiring firms often overpay. Thus, synergy is created at a high cost which often cancels the gains derived from synergy. Thus, since there are often no real gains from a merger for stockholders of the acquiring firm, the returns to stockholders are either less than or equal to those from other investments. Again, these precepts have not been tested empirically. While the results of merger performance are in, the explanations are, at best, conjectures that need to be examined by future researchers.

Most of the early studies (Elgers and Clark 1980; Singh and Montgomery 1984) examined merger performance by classifying mergers into two broad categories: related and unrelated. This two-way classification is too broad to be of practical value and is also inconsistent with schemes suggested in the strategic management literature (Lubatkin 1987).

Lubatkin (1983) offered a scheme based on the Federal Trade Commission's categorization that sought to overcome the limitations caused by the broad classifications used in earlier studies. He classified mergers as product concentric, horizontal and market concentric, conglomerate, and vertical. His classification scheme touched off a series of studies that examined merger performance in relation to the type of merger.

Lubatkin (1987) found evidence to suggest gains accruing to stockholders of both the acquired and the acquiring companies, but could not find any significant differences in returns among merger types. Pettway and Yamada (1986) found similar evidence in their study of mergers in Japan. This conclusion is also supported by the empirical research of Burgman (1984), Chatterjee (1986), Shelton (1985), and Singh and Montgomery (1987). Thus, while the finance and strategic management disciplines agree on returns to the stockholders of acquired firms, they are divided as to the returns to acquiring firms' stockholders.

Risk

Langetieg, Haugen, and Wichern (1980) examined the relationship between risk and mergers by using traditional finance literature based measures such as Beta, total

variance, and residual variance. They concluded that, partly because of increased leverage, mergers result in increased risk for the consolidated firm.

However, subsequent studies from the strategic management perspective that used different constructs of risk (Lubatkin and O'Neill 1987; Lubatkin and Rogers 1989) concluded that one of the reasons firms merge is to reduce risk. Lubatkin and O'Neill (1987) classified risk as unsystematic or business-specific risk, systematic or market risk, and total risk that is the combination of both unsystematic and systematic risks. Using a model developed earlier by Lubatkin and Shrieves (1986) to operationalize the different types of risk, they concluded that all types of mergers result in a significant increase in unsystematic risk, while related merges result in a corresponding reduction in both systematic and total risks for the consolidated firm. They argue that risk reduction may be a valid rationale for megers.

Thus, like the evidence on measures using returns, the literature on the nexus between mergers and risk is also conflicting.

Market Share

In 1982 and 1984, the Department of Justice announced new merger guidelines underscoring the government's concern regarding mergers resulting in "undue concentration" in a particular industry because one or more firms show significant gains in market share (Weston, Chung, and Hoag 1990). However, empirical evidence does not support the Justice Department's contention.

Using an experimental and a control sample made up of conglomerate and horizontal acquisitions between 1950 and 1972, Mueller (1985) examined the impact of mergers and acquisitions on market shares. He found that both types of mergers resulted in substantial losses in market shares to the acquired firms in contrast to the control group.

Hopkins (1987) classified acquisitions into conglomerate (unrelated), technology-related, and marketing-related. Using a sample of sixty-four firms that were active acquirers during the period from 1964 to 1979, he found evidence to support Mueller's (1985) contention that acquisitions resulted in a loss of market share to the acquired firms. One exception was the case of marketing-related acquisitions where market shares increased following the acquisition.

In spite of evidence to the contrary, the Justice Department's new guidelines adopt the Herfindahl Index (Weston, Chung, and Hoag 1990) to determine, prior to sanctioning the merger, if the merger results in "undue concentration" in the industry in question.

Other Measures

Noting that the size-effect problem could distort the findings of merger studies using the event-study method, Montgomery and Wilson (1986) used the resale value of acquisitions to measure their performance ex-post. Using a sample of 434 large acquisitions that occurred between 1967 and 1969, they found that unrelated acquisitions were resold at a moderately higher rate than related acquisitions. The difference, however, was not statistically significant.

It is possible that economies of scale exist in an industry and that, because prior to the merger the firms were operating at sub-optimal levels of efficiency, a merger may achieve it, leading to operating synergy. Earlier studies (Arrow 1975; Klien, Crawford, and Alchian, 1978; Williamson 1975) argued that communications and various forms of bargaining costs can be reduced by vertical mergers leading to better operating performance. Neely and Rochester (1987) examined operating synergies in the savings

and loan industry using experimental and control groups. They found support for the operating synergy effect because the merged firms showed significant increases in profitability and return on net worth. It is not clear however, if these findings apply to other industries as well.

While it can be argued that a firm can diversify as well through internal growth as through acquisitions, the tremendous investment (and the associated risk) required for making technological changes is one reason for the explosion of merger and acquisition activity in the 1980s. This is even more evident in the international arena. The Swiss purchase of United States drug companies and Boeing's acquisition of the Canada based de Havilland Aircraft Company have been attributed to the need of the acquirers for new technology (Weston, Chung, and Hoag 1990).

Chakrabarti and Souder (1987) surveyed managers in thirty-four firms to examine their perceptions of the efficacy of mergers to gain new technologies for the acquiring firms. While the managers in the survey agreed that mergers helped the acquiring company gain access to new technology, they were of the opinion that the merged firm had to follow a proactive and aggressive research and development policy in the post-acquisition period to exploit the technology.

Human Resource Management in
Mergers and Acquisitions

Marks (1982) provides a very comprehensive review of literature on the human element of mergers. His review reveals that, while the importance of the impact of organizational and human dynamics on the financial results of mergers cannot be precisely determined, neither can it be denied. Since then, several studies (Gaddis 1987; Gridley 1986; Hunt 1987; Ivancevich, Schweiger, and Power 1988; Schweiger, and Weber 1989) have examined the human resource implications of mergers and acquisitions. Napier (1989) provides an excellent update of human resources issues involved in a merger.

According to Swaim (1985), it is the personnel professional who has to play a big part in managing human resources during a merger. Therefore, the early involvement of the personnel specialist is recommended in order to maintain the economic and non-economic (O'Hara 1989) values of a merger (Geber 1987; Robino and DeMeuse 1985; Sturges 1989).

Mergers are trying times for employees of both the acquired and the acquiring firms (Davy, Kinicki, Kilroy, and Scheck 1988; Quartararo 1988). Based on their survey of 166 employees from six acquired firms, Schweiger, Ivancevich, and Power (1987) concluded that the main employee concern

following a merger announcement was a loss of identity. Using a psychological questionnaire, "The Emotional Reactions Inventory", on seventy subjects, Hunsaker and Coombs (1988) identified the following stages of employees' feelings following a merger announcement : denial, fear, anger, sadness, acceptance, relief, liking, and enjoyment. The positive reactions occurred once the issues involved became clear to employees.

In order to reduce the emotional trauma that follows a merger announcement, it is suggested that managers communicate clearly the impact of the merger to the employees (Hunsaker and Coombs 1988; Kanter and Seggerman 1986; Menard 1987; Sinetar 1981; Tiersten 1989). Imberman (1985) suggests that managers have the foresight to cushion the blow to employees in order to lessen the trauma.

The ethical aspects of dealing with employees following a merger announcement make up another stream of research that has surfaced recently. Serpa (1988) argues that current approaches to determine which individuals will be terminated when there are duplications are highly questionable from an ethical standpoint. He calls for a meaningful and rational performance evaluation system in place of currently-used approaches such as seniority and "golden handshakes." Werhane (1988) argues that it is the ethical responsibility of shareholders to inform employees

of their impending termination early so that they can pursue other job options.

Several studies linking the human resources aspect of mergers with post-merger integration are covered in detail in the next section; however, two deserve immediate attention while on the topic of managing the human element following a merger.

Walsh (1988) empirically examined the difference in turnover rates between top managers and lower level managers of an acquired firm. He found that top management turnover rates following a merger and acquisition were significantly higher than normal top management attrition rates. His study also revealed that the type of merger and acquisition did not account for the variance in turnover rates and that senior executives were the first to leave, as compared to lower level managers. This reinforces one of Drucker's (1981) rules for successful acquisition, that of replacing top executives of the acquired firm as soon as possible. Siehl, Smith, and Omura (1990) offer some practical pointers for executives whose organizations are taken over.

Schweiger and Ivancevich (1985) suggest that there is no single recipe for effectively managing merger stress. However, unless a systematic attempt is made to deal with the human side of a merger, the merger experience is likely to be "traumatic, dysfunctional and costly." Schweiger and

Ivancevich (1985) offer a model to help overcome merger stress.

Post-Merger Integration

A number of studies in this research stream examine the persons and cultural issues involved in post-merger integration (Krupar and Krupar 1988; Walter 1985). Studies linking two research streams are examined later.

Knowles (1988) notes that more than seven of every ten mergers fail within the first ten years. Such a large failure rate confirms the importance of post-merger integration. Jones (1987) stresses the significance of the leadership role that a chief Executive officer should take to ensure the smooth integration of two firms. However, since the tasks involved in post-merger integration are many, Bruckman and Peters (1987) suggest the use of post-merger teams. Williams and Feldman (1986) recommend the use of task forces, while Rigby (1988) proposes using his model. Shrivastava (1986) offers a framework for integrating two firms following a merger that uses procedural, physical and managerial/sociocultural elements. This broad framework reiterates that post-merger integration goes beyond meshing two cultures. Souder and Chakrabarti (1984) caution the top management of acquiring companies to be patient, to combine

the two technologies effectively (Shrallow 1985), and to understand each others' businesses in order to realize the fruits of the merger.

When firms merge, the companies often bring to the merger, diametrically opposite cultures. Even when the cultures are not diametrically opposite, the problem of the two cultures not meshing together is always present. This concept of the need for acculturation has preoccupied researchers interested in studying the integration of merged firms and signifies research that links the human resources aspect of the merger process with post-merger integration (DeNoble, Gustafson, and Hergert 1988; Doherty, 1988; Hall and Norburn 1987; Kazemek 1989; Lefkoe 1987; Pappanastos, Hillman, and Cole 1987; Sheehy 1988; Siehl, Ledford, Silverman, and Fay 1988)

Buono, Bowditch, and Lewis (1985) conducted a longitudinal study of the acculturation process in a merger of two banks. Their study, which covered a three-year period, concluded that different corporate cultures exist even within the same industry. Therefore, even when the merger and acquisition process involves firms in the same industry, the cultural clash should not be ignored, rather it should be proactively managed.

While firms in the same industry could have different cultures, Nahavandi and Malekzadeh (1988) suggest that

congruent firms have essentially similar cultures. Therefore, the degree of congruence between the acquiring and acquired organization's preferred modes of acculturation affects the level of acculturative stress. This stress, in turn, either facilitates or hinders the implementation of the merger.

Stybel (1986) warns firms involved in, or contemplating, mergers that it takes five to seven years for employees of both firms to feel truly assimilated into the new entity. Such a long gestation period makes post-merger integration that much more vital to the success of a merger.

Critique of the Research on Mergers and Acquisitions

A significant number of previous empirical studies on mergers and acquisitions have relied on archival data (Chatterjee 1986; Galbraith and Stiles 1984; Kusewitt 1985; Lubatkin 1987; Montgomery and Wilson 1986), while a few used opinions (Souder and Chakrabarti 1984; Walsh 1988) or indepth case studies (Buono, Bowditch, and Lewis 1985; Howard 1982). Thus, the element of experimental control is conspicuously absent in many studies. Consequently, several propositions that involve a cause and effect relationship (e.g., Does poor cultural meshing cause poor results in the merged firm? Is the stress factor a direct function of the

clash of corporate cultures or are other factors involved?) have not been definitively established.

As mentioned earlier, the plethora of research on managing the human element in mergers is conceptual rather than empirical. Written from the practitioner's viewpoint, these studies are predominantly normative, and use anecdotal data (Sinetar 1981) that is often unrelated to theory. Few studies have looked at the management of human resources from a longitudinal perspective with a view to identifying relevant factors important at each stage of the merger process.

An excess of normative studies is again the bane of research that has examined the issues associated with post-merger integration. Mostly anecdotal data have been used (Brockhaus 1975), while a few have used very general case studies (Napier 1989) that are of little research value. Even the prescriptions offered have been very general. Previous research has not tried to identify and establish a relationship between the type of merger and the specific implementation steps necessary to effect the merger. It is possible that horizontal and vertical mergers require a series of specific steps necessary to complete the merger that are entirely different from those required for a conglomerate merger of two entirely unrelated firms.

Perhaps the brunt of the criticism on merger research has focused on merger performance. Napier (1989) notes that the measures used can be broadly divided into financial and reaction measures. Few empirical studies have used multiple perspectives to measure performance (Napier 1989). But, perhaps the greatest shortcoming of the research on merger performance is the preponderance of conflicting evidence.

While research from the field of finance (Halpern 1983) has found support for mergers providing value for the stockholders of acquired firms and little or no value to stockholders of acquiring firms, research from the discipline of strategic management, using similar methodology, has found empirical support for gains to stockholders of both firms. In an effort to reconcile these conflicting results, Lubatkin and Shrieves (1986) offer several explanations.

One reason for the apparently conflicting results is the use of daily-stock data by finance researchers as opposed to monthly stock data used by strategic management researchers. Consequently, the time frames used have been different and could have lead to different results.

Second, finance researchers have insisted on using "clean" data, whereby they discarded from their samples, firms that had engaged in multiple mergers and acquisitions during the period under study. Strategic management

researchers, arguing that insisting on clean data results in a non-representative sample, have used samples that included firms involved in more than one merger and acquisition during the period under study.

Finally, finance researchers have assumed that mergers are homogeneous occurrences and, thus have not subdivided mergers to identify different types as strategic management researchers have. It is possible that the subdivision could have produced different results.

While the explanations offered by Lubatkin and Shrieves (1986) are plausible, they are perhaps incomplete. It is possible that there is a strong nexus between merger performance and industry type. Mergers may yield value to stockholders of both firms within particular industry types which may be masked when firms from several industries are mixed in a sample. While merger performance studies from the strategic management perspective assume that mergers are heterogeneous occurrences and so must be classified into different types prior to examination, their use of heterogeneous samples may have failed to catch the relationship between merger performance and industry specificity (Napier 1989).

Napier (1989) calls for longitudinal measurement of merger performance. Since the effect of a merger is usually

felt only after the lapse of a few years, measurement must be made for an extended period to fully capture its effect.

Tables 3 through 7 provide a review of the methodology used and salient findings of an illustrative list of studies dealing with the four major themes in merger research.

Table 3.--Illustrative Studies in Planning

Author(s)	Methodology	Findings
Paine and Power (1984)	Conceptual	The five rules prescribed by Drucker for making successful acquisitions are not conclusively supported by current evidence or argument.
Chatterjee (1986)	Empirical-- archival data. Sample size 157 merged firms.	Of the three synergies that affect performance, collusive (price related) is best, followed by financial (cost of capital related) and finally, operational (cost of production related).
Chang (1988)	Conceptual	Developed a model to measure anticipated synergies in a merger. Uses Tobin's Q and three variables: acquisition premium, market value, and target firm's replacement cost.
Davidson, Garrison, and Henderson (1987)	Empirical	Synergy unrelated to size of firm. Operating, rather than financial synergy causes shifts in the merger's value adding potential.
Jemison and Sitkin (1986a)	Conceptual	Prescribes the use of a process perspective which recognizes the acquisition process itself as a potentially important determinant of outcome.
Haspeslagh and Jemison (1987)	Conceptual	Reinforces the process perspective as an essential element of acquisition success.

Table 3.--Continued

Author(s)	Methodology	Findings
Bruton and Alexander (1989)	Conceptual	A three-stage merger planning model is developed. The first stage is building strategic readiness, next is identifying acquisition candidates, and the third stage is integrating the acquired business into the acquiring firm.
Davidson (1981)	Conceptual	Mergers do not necessarily enhance profits, boost productivity and efficiency or result in social good. Managers must seriously question whether a proposed merger is a sound strategic decision before acting on it.
Davidson (1987)	Conceptual	Megamergers do not often benefit shareholders, managers or the public. One does not need to have acquisitions followed by divestiture or dismemberment, followed by more acquisitions. Unless corporate managers learn from a decade of experience, one can expect a continuing parade of profitless mergers.

Table 4.--Illustrative Studies on Merger Performance

Author(s)	Methodology	Findings
A. Returns		
Halpern (1983)	Conceptual-- review of literature.	While empirical evidence points out that mergers bring significant returns to stockholders of acquired firms, not enough evidence exists to suggest the same for acquiring firms' stockholders.
Lubatkin (1987)	Empirical-- archival data. Sample size 439 acquiring firms and 340 acquired firms.	Mergers do lead to permanent gains in stockholder value for both acquiring and acquired firms, but empirical evidence does not support the popular prescription that "all things being equal, some product and market relatedness is better than none."
Lubatkin (1983)	Conceptual-- review of literature.	Reviews the literature to determine if mergers provide real benefits to acquiring firms. Concludes that empirical studies point out that all significant benefits go to the acquired firm. However, the literature of industrial organizations and strategic management suggests that the acquiring firms gets tremendous benefits. These claims have not been supported by empirical studies.
Pettway and Yamada (1986)	Empirical-- 51 acquiring and 16 acquired firms from 1977-1984 in Japan.	Acquiring firm's stockholders' wealth also increases in a merger but the increase is not statistically significant.

Table 4--Continued

Author(s)	Methodology	Findings
Singh and Montgomery (1987)	Empirical-- 105 firms from the period 1975- 1980.	Acquired firms in related acquisitions performed better than acquired firms in unrelated acquisitions.
B. Risk		
Langetieg, Haugen, and Wichern (1980)	Empirical-- 149 firms from the period 1929- 1969.	Mergers increase the risk for the merged firm. Part of the risk is due to increased leverage, other parts not explained by study results.
Lubatkin and O'Neill (1987)	Empirical-- 297 firms from the period 1954- 1973.	Lowered risk is a valid rationale for mergers. All mergers increased the unsystematic risk for the merged firm, while related acquisitions lowered the systematic and total risks.
C. Market Share		
Mueller (1985)	Empirical-- archival data with sample of 1000 firms from the period 1950- 1972.	Mergers result in loss of market share to the acquired firm.
Hopkins (1987)	Empirical-- archival data with sample of 64 firms from <u>Fortune</u> 1000 for 1965.	Market share decreased for the acquired firm after the merger except in the case of marketing-related mergers where it went up.

Table 4.--Continued

Author(s)	Methodology	Findings
D. Others		
Montgomery and Wilson (1986)	Empirical-- archival data with sample of 434 firms that were acquired during 1967-1969.	Not enough evidence to suggest that unrelated acquisitions are bad. Used resale value to measure performance.
Neely and Rochester (1987)	Empirical-- archival data from 37 savings and loans firms that merged in 1976 matched with 37 savings and loans firms that did not.	Merged savings and loans firms showed significant increases in profitability and return on net worth. Mergers allow these firms to grow faster, become more aggressive and meet increased competition.
Chakrabarti and Souder (1987)	Empirical-- interviews with executives of 31 firms.	Aggressive research and development policy needed in post-acquisition period to exploit new technology gained.

Table 5.--Illustrative Studies in Human
Resources Issues

Author(s)	Methodology	Findings
Marks (1982)	Conceptual-- review of literature.	A review of the literature revealed that, while the importance of organizational and human dynamics in influencing the financial results of mergers cannot be precisely determined, neither can it be denied.
Napier (1989)	Conceptual-- review of literature.	Develops a framework for future research on mergers. Stresses the need for understanding and differentiating various types of mergers.
Hunsaker and Coombs (1988)	Empirical-- surveyed 70 executives using the Emotional Reactions Inventory.	Employee feelings are initially negative followed by more positive feelings. Need to share information and involve as many people as possible.
Serpa (1988)	Conceptual	Current approaches to dealing with employees following a merger are ethically questionable.
Werhane (1988)	Conceptual	Two important issues that have ethical overtones need to be considered. They are: the rights of employees affected and the responsibilities of stockholders toward these employees.
Imberman (1985)	Conceptual	Mergers are traumatic both for the companies involved and to their employees.

Table 6.--Illustrative Studies on
Post-Merger Integration

Author(s)	Methodology	Findings
Shrivastava (1986)	Conceptual	Success of mergers lies in how well the merged firms are integrated after the merger. Provides a framework for this using procedural, physical, and managerial/sociocultural elements.
Souder and Chakrabarti (1984)	Empirical-- opinion survey of executives in 8 firms.	To increase the likelihood of post-acquisition success, managers should have a patient partnership mentality and look at the immediate benefits that the acquiring firm can provide to the acquired firm.
Bruckman and Peters (1987)	Conceptual	Suggest a model to study and manage physiological, psychological, and corporate and societal impacts caused by mergers.
Williams and Feldman (1986)	Conceptual	Suggest nine steps to reduce post-merger trauma including using pre-merger scenarios and post-merger task forces.
Rigby (1988)	Conceptual	Successful integration requires vision and good leadership.

Table 7.--Illustrative Linked Studies

Author(s)	Methodology	Findings
Kusewitt (1985)	Empirical-- archival data from 138 firms.	Identified key factors in acquisitions that are related to performance.
Galbraith and Stiles (1984)	Empirical-- archival data from 1976 firms.	Relative market power is one determinant of market behavior. Found a significant relationship between type of merger and relative power.
Swaim (1985)	Conceptual	It is important for the personnel professional who is involved in an acquisition to analyze the motivation behind it. If the reasons are tactical or financial needs, the personnel manager should then start planning to address the inevitable losses that will ensue.
Krupar and Krupar (1988)	Conceptual	Need to consider and manage the people-fit issues after the merger.
Stybel (1986)	Conceptual	Mergers complicate workers' past assumptions regarding careers and promotions. Companies must allow the tension underlying mergers to work itself out naturally.
Schweiger and Ivancevich (1985)	Conceptual	There is no single recipe for efficiently managing merger stress. However, unless a systematic attempt is made to deal with the human side of a merger, the merger experience is likely to be traumatic and costly.

CHAPTER III

Research Methodology

Design

The study method used for this research was statistical analysis of historical data obtained from published sources. While prior studies (Lubatkin 1987; Singh and Montgomery 1987) have used samples of firms drawn from a variety of industries, the analysis group for the current study was composed entirely of firms in the food and kindred products industry (SIC code 20).

This study considered all publicly reported mergers and acquisitions (for which data were available) of the analysis group firms for the period from 1968 through 1984. This relatively long period was broken up into two periods: 1968 to 1976 and 1977 to 1984. The purpose for creating these two groups on the basis of time was to assess the impact of structural differences within the industry on the performance of mergers and acquisitions.

Sample

The United States Federal Trade Commission (FTC) large merger series contained in its Statistical Report on Mergers and Acquisitions (1980) was used to identify mergers and acquisitions in the food and kindred products industry for the period from 1968 to 1979. Mergers and acquisitions after 1979 were obtained from the Roster of Mergers and Acquisitions" that appears periodically in Mergers and Acquisitions.

There are many gaps in the publicly-reported mergers and acquisitions activity data. Therefore, some firms were eliminated from the population of firms that were engaged in merger and acquisition activity during the period from 1968 through 1984. Although this reduced the sample size, the number of mergers and acquisitions that occurred during this period remained large enough for statistical analysis.

Some of the firms in the sample participated in more than one merger during the period under study. While some researchers argue for the use of "clean data" (Langetieg, Haugen and Wichern 1980), that is, discarding firms that have engaged in multiple mergers, Lubatkin and Shrieves (1986) contend that, for the purposes of strategic management research, using "clean data" may result in biased estimates of the impact of mergers. Therefore, firms that

had engaged in multiple mergers were discarded from the sample for this study.

The sample, drawn from the two sources, was classified into vertical, horizontal, product concentric, market concentric, and pure conglomerate types, based on the guidelines suggested by the Federal Trade Commission. This classification system has been used by other researchers (Lubatkin 1987) to study merger performance.

Variables and Measures

This study measured the performance of different types of mergers on a longitudinal basis over two periods of time using multiple measures. Toward this, the variables that were used in the study were the following:

Dependent Variable -- The dependent variable examined in this research study was performance. For the variable performance, two measures were used: accounting return on assets and market return. Both measures have been used previously by researchers (Kusewitt 1985; Lubatkin 1987) to study merger performance.

The accounting return on assets (ROA) measure was calculated based on after-tax earnings (including extraordinary items) on year-end book value of total assets. The net income for five years before the merger and

acquisition was summed and taken as a percentage of the total assets for the corresponding period. This calculation was also done for five years after the merger.

While the use of accounting-based performance measures have been criticized in the literature (Halpern 1983; Lubatkin and Shrieves 1986; Montgomery and Wilson 1986), their use in this study is justified on the ground that they measure an important aspect of performance namely, the earnings stream that is at the disposal of the acquiring firm as a percentage of the assets employed to earn the return. As an ex-post facto measure, return on assets complements an ex-ante measure such as market return to give a complete picture of performance.

One of the difficulties with using accounting measures is the occasional practice of some firms to restate prior years' accounting figures as a result of some procedural change (Kusewitt 1985). In order to obtain consistency in data, for this study only the originally stated figures were used in such cases.

While there are several methods to measure market performance (Weston, Chung and Hoag 1990), this study used the relationship suggested by Kusewitt (1985) in his work on factors associated with acquisitions performance. The justification for using this formula was that it is simple to understand, easy to use and is based on sound theoretical

grounds. Moreover, it has been used to measure merger and acquisition performance in the past.

The individual year's market return was computed for each acquiring firm using the following relationship:

$$R = \frac{(P_t + D_t)}{P_{t-1}} - 1$$

where,

R = return on acquirer's stock for the year,

P_t = arithmetic mean of high and low market price per share of stock in a calendar year t,

P_{t-1} = same for the previous year,

D_t = Dividend per share in year t.

The market return performance of a firm for a period of five years before and five years after a merger was obtained by taking the geometric mean of the individual years' returns.

Independent Variables -- (1) Type of Merger. Based on the categorization scheme suggested by the FTC (1980), the sample of firms for the period from 1968 to 1984 was grouped into the five merger types mentioned previously. This independent variable assessed the impact of merger type on performance.

(2) Time Period. The sample of firms was divided into two groups based on the time period. The first group consisted of all mergers and acquisitions occurring between

1968 and 1976, while the second group covered the period from 1977 to 1984. This variable measured the impact of structural changes within the industry during the particular time period on the performance of the acquiring firms.

Hypotheses

This study examined the following research questions:

1. Do mergers improve the performance of acquiring firms?
2. Is there a difference in the performance of acquiring firms between the two periods under study?
3. Is there a difference in the performance of the different types of mergers?

While these questions have been examined in the past, the focus of prior studies (Langeteig 1978; Lubatkin 1987; Mandelker 1974) has been on samples drawn from a mix of industries. Since the objective of this study was to examine merger performance on a micro level (one industry) the same questions were studied, with a narrower focus. The research questions led to the following hypotheses:

Hypothesis 1: In the food and kindred products industry, mergers do not result in any change in performance by acquiring firms following the merger

Hypothesis 2: In the food and kindred products industry, there is no change in merger performance between the two time periods (1968-1976 and 1977-1984)

Hypothesis 3: In the food and kindred products industry, there is no difference in performance among merger types.

Data Collection and Analysis

Data on the analysis group's financial and market performance was obtained from Moody's Industrial Manual and Value Line. A Lotus 1-2-3 spreadsheet was used to calculate the average accounting and market-based returns for the period under study, after the formulas were entered into the program.

Statistical procedures of the SPSS -X computer package were used for analyzing the data. Preliminary statistical analysis included basic descriptive statistics like mean and standard deviation of performance of the analysis group.

To assess the statistical significance of the comparison of the analysis group's performance before and after the merger, the paired t-test was used. Because studying the performance of firms both before and after the merger is similar to a pre-test/post-test procedure, the use of the paired t-test is justified.

In order to examine the performance across merger types and across time periods, a regression model was first developed using dummy variables to represent the independent variables. Next, a t test was performed to test for statistical significance. The t test determines the effect of each performance measure in isolation.

CHAPTER IV

Data Analysis

Sample Selection

In selecting the sample firms used in this study, two sources were used. For the period from 1968 to 1978, target firms were identified using the large merger series (acquisitions of at least \$10 million) in the Federal Trade Commission's Statistical Report on Mergers and Acquisitions, 1980. This report classifies mergers during a particular period on the basis of the SIC code. The report also discloses the type of merger in each case. Since such reports were not available for years subsequent to 1978, the list of target firms for the period 1979 to 1984 were obtained from "Merger Rosters," published in every issue of Mergers and Acquisitions. In all cases, only those firms in the food and kindred products industry (SIC code 20) that were involved in complete acquisitions (as opposed to partial acquisitions or acquisition of one or more units of the target firm) were used in the study. Limiting the sample to large mergers enabled the study to focus only on

mergers that were likely to have had a noticeable impact on market valuation.

This process resulted in a list of all mergers and acquisitions from 1968 to 1984 involving firms in SIC code 20. Using Moody's Industrial Manual and Value Line Investment Survey, data on each acquiring company's net income, year-end book value of assets, high and low stock prices and dividends per share were obtained. Since both Moody's Industrial Manual and Value Line Investment Survey report data only on selected publicly held companies, several firms had to be eliminated from the list. Incomplete data also resulted in the elimination of another set of firms. Finally, 80 of a possible 138 firms for which data were complete were assembled for the study. Since meeting the data requirements was the criterion employed in choosing firms, the sample was not a random sample in the probabilistic sense and any resulting biases could not be avoided. Firms that were involved in more than one merger during the period under study were not discarded from the sample, in keeping with the recommendations of Lubatkin and Shrieves (1986). For example, one of the firms included was Beatrice Foods, which was engaged in multiple mergers during the study period. While the complete list is provided in Appendix A, Table 1 lists a sample of firms used in the study.

Table 8.--Illustrative List of Firms Used in the Study

Firm	SIC Code
Coca-Cola Company	2086
Universal Foods	2022
Pillsbury Company	2041
Beatrice Foods	2026
Consolidated Foods	2011
Coca-Cola Bottling, New York ..	2086
Nabisco	2052
United Foods	2037
Central Soya	2092
General Mills	2041
Quaker Oats	2043
Borden	2026

Data Collection

For each acquiring firm in the sample, data were collected for a ten-year period (five years before and five years after the merger) on net income, year-end book value of assets, high and low stock prices, and annual dividends per share. Table 9 illustrates the data points for Nabisco which was involved in a merger in 1971.

The first measure of performance, return on assets (ROA) was calculated for each year using the following formula (Kusewitt 1985):

$$\text{ROA} = \frac{\text{Net income after taxes}}{\text{Year-end book value of assets}}$$

It is the occasional practice of some firms to restate prior year's accounting figures as a result of some procedural change. To obtain consistency in data whenever such cases were encountered, this study used only the originally-stated figures. This is in accordance with the procedure followed in earlier research (Kusewitt 1985). The return on assets for each year was averaged for the five years prior to the merger and the five years after the merger. This exercise yielded average return on assets figures for the pre-merger and post-merger periods.

Table 9.--Data Points for Nabisco, Merger Year 1971

Year	Net Income (\$ Mill)	Assets (\$ Mill)	Market Price (\$)		Dividends. (\$)
			High	Low	
1970	41.4	504	27.5	18.9	1.10
1969	31.0	474	27.5	23.5	1.10
1968	42.0	472	26.8	21.5	1.05
1967	42.0	418	25.8	21.1	1.00
1966	41.0	374	27.4	19.7	0.94
1965	*	*	33.0	25.1	0.89
1971	*	*	28.9	24.1	1.10
1972	54.4	733	32.1	26.5	1.11
1973	44.0	889	30.5	17.6	1.15
1974	45.5	1047	21.5	10.8	1.15
1975	59.0	1014	21.3	11.2	1.15
1976	77.0	1217	25.4	17.8	1.20

* An additional year's data needs to be collected to calculate market return.

Source: Moody's Industrial Manual, 1967-1978 and Value Line Investment Survey, 1967-1978.

The market return performance measure was calculated by initially computing individual year market returns for the ten-year period using the following relationship:

$$R = \frac{(P_t + D_t)}{P_{t-1}} - 1$$

where,

R = return on acquirer's stock for the year,

P_t = arithmetic mean of high and low market price per share of stock in calendar year t,

P_{t-1} = same for the previous year, and

D_t = dividend per share in year t (Kusewitt 1985).

Using a spreadsheet created on Lotus 1-2-3, the individual years' market returns for each of the eighty firms were calculated. The market return performance of a firm for a period of five years before and five years after the merger was obtained by taking the geometric mean of the individual years' returns. The geometric mean was used because it is a more conservative average than the arithmetic mean and is better suited to account for outliers (Clark and Schkade 1974). This exercise yielded average market return figures for the pre-merger and post-merger periods.

Data Analysis

The descriptive statistics for the analysis group are shown in Table 10.

Table 10.--Descriptive Statistics of Analysis Group

	Before	After
ROA		
Mean	6.66	7.92
Standard Deviation	2.92	3.58
Market Return		
Mean	9.54	30.44
Standard Deviation	25.82	24.47

As indicated by the means and standard deviations, the range of performance in the analysis group is remarkably large, particularly when one considers that this is over a ten-year period. Some acquiring firms did extremely well with their acquisition program while others did very poorly. This is indicated very clearly by the jump in the average market return from 9.54 before merger to 30.44 after merger.

This performance variability is consistent with other research findings (Kusewitt 1985).

The first hypothesis tested in this study was:

In the food and kindred products industry, mergers do not result in any change in performance by acquiring firms following the merger.

The paired t-test was used to test this hypothesis. The paired t-test is a statistical procedure for analyzing the difference between the means of two groups when the sample data are obtained from populations that are related that is, the results of the first group are not independent of the second group. This dependent characteristic of the two groups occurs either because the items or individuals are paired or matched according to some characteristic or because, as in this study, repeated measurements are obtained from the same set of items or individuals. In this case, the variable of interest becomes the difference between the values of the observations rather than the values of the observations themselves (Berenson and Levine 1990).

Using the paired t-test, the difference in means was found to be significant ($t = 3.89$, $p < 0.001$ for ROA; $t = 5.47$, $p < 0.001$ for market return), strongly supporting the alternate hypothesis that mergers result in improved performance by acquiring firms following a merger.

The second and third hypotheses tested in the study were:

Hypothesis 2: In the food and kindred products industry, there is no difference in merger performance between the two time periods (1968-1976 and 1977-1984); and
Hypothesis 3: In the food and kindred products industry, there is no difference in performance among merger types.

The descriptive statistics for the analysis group broken down by time periods are given in Table 11.

While the mean and standard deviations do not show a large variation across periods for ROA, the change in mean market return following merger for period was significantly large. Also, the range of performance across firms on market return was greater than on return on assets, as illustrated by the larger standard deviations.

The descriptive statistics broken down by the type of merger are shown in Table 12. Merger type 2 (i.e., vertical mergers) reported the highest return on assets before merger, while merger type 4 (market extension) showed the highest return on assets after merger. While vertical mergers showed the highest market return before merger, the mean market return after merger was the highest for horizontal mergers. The standard deviations for market return were much higher than those for return on assets.

Table 11.--Descriptive Statistics of Analysis Group by Periods

	Period 1 (1968-1976)		Period 2 (1977-1984)	
	Before	After	Before	After
ROA				
Mean	6.84	7.73	6.42	8.17
Standard Deviation.	2.84	3.17	2.11	2.81
Market Return				
Mean	12.99	16.72	6.07	41.40
Standard Deviation	11.48	9.41	34.45	25.98
n	35		45	

In order to test the second and third hypotheses, a multiple regression model was built with dummy variables representing the two time periods and the five merger types. The regression model selected had the performance measure (return on assets or market return) as the dependent variable and five independent variables.

Table 12.--Descriptive Statistics of Analysis Group by Merger Types

Type	1*	2	3	4	5
Mean ROA Before	5.49	7.31	6.80	6.78	6.72
SD Before	1.32	4.01	3.31	2.63	2.55
Mean ROA After	6.91	7.65	7.34	12.33	8.06
SD After	2.16	2.62	3.02	6.02	4.01
Mean Mkt. Ret Before	7.20	20.23	12.57	6.80	4.68
SD Before	40.18	33.35	18.75	11.79	29.45
Mean Mkt.Ret. After	39.87	34.83	32.19	27.25	23.34
SD After	48.91	26.79	17.61	11.97	14.82
n	12	10	27	6	25

*1 = horizontal, 2 = vertical, 3 = product extension, 4 = market extension, and 5 = pure conglomerate

The independent variables were dummies introduced to represent qualitative constructs such as periods and types of merger. In the regression model, independent variables X_1 and X_2 represent, by means of 1 and 0, the two periods under study (i.e., the period before the merger and the period after the merger); variables X_3 and X_4 represent the two time periods (1968-1976 and 1977-1984), while variable

X_5 represents the five merger types. In both cases (i.e., return on assets and market return) the model had an F value (5.88 for return on assets and 16.69 for market return) that was significant at the $\alpha_{0.05}$ level, justifying its selection. The significance of the independent variable was determined on the basis of the parameters of each X. The regression model is shown below:

$$Y = 0 + X_1 + {}_2X_2 + {}_3 X_3 + {}_4 X_4 + {}_5 X_5 + e,$$

where,

Y = dependent variable (ROA or market return),

X_1 = 1 if the performance measure is for the period before the merger, 0 after the merger,

X_2 = 1 if the performance measure is for the period after the merger, 0 before the merger,

X_3 = 1 if the performance measure is for a firm in time period 1 (1968-1976), 0 if period 2,

X_4 = 1 if the performance measure is for a firm in time period 2 (1977-1984), 0 if period 1,

X_5 = type of merger, where 1 = horizontal, 2 = vertical, 3 = product extension, 4 = market extension, and 5 = pure conglomerate, and

e = error term.

For both measures (return on assets and market return) the second hypothesis yielded t scores (t = -2.43, p < 0.05 for return on assets; t = -4.09, p < 0.001 for market

return) that supported the contention that the difference in performance between the two periods was statistically significant. However, for the third hypothesis, neither performance measure yielded results to indicate that the difference among merger types was statistically significant. This was consistent with prior research findings by Lubatkin (1987). Appendix B provides SPSS-X printouts for the three hypotheses tested. Table 13 summarizes the findings of the study.

Table 13.--Summary of Study Results

Measure	Hypothesis	t Value	p Value	Decision
ROA	1	3.89*	<0.001	Significant
	2	-2.43*	<0.05	Significant
	3	1.41	>0.10	Not Significant
Mkt.Ret.	1	5.47*	<0.001	Significant
	2	-4.09*	<0.001	Significant
	3	0.53	>0.50	Not Significant

*statistically significant at α 0.05

Thus, in accordance with the results of prior studies (Lubatkin 1987; Pettway and Yamada 1986), the current study found evidence to conclude that, while mergers do result in benefits to the acquiring firm and its stockholders, there is no evidence to indicate that one merger type is better than the other. In addition, the current study also found evidence to conclude that firms involved in mergers and acquisitions in more recent years (1977-1984) performed better than the firms that were involved in mergers and acquisitions in the past (1968-1976).

Possible reasons that could be attributed to the study's results are discussed in the next chapter. Chapter V also contains an analysis of the implications of the findings, both to the corporation and to the managers who have to make strategic choices.

CHAPTER V

Summary and Conclusions

Researchers from the discipline of finance report that there is no empirical evidence to support the view that mergers yield benefits to the acquiring firm. Using the event study approach, their research reveals that, while mergers benefit the stockholders of acquired firms, the benefits to the acquiring firm or to its stockholders are not significantly greater than if the mergers had not taken place at all. However, more recent research from the field of strategic management offers empirical evidence to refute the contentions of the researchers from the discipline of finance. Strategic management researchers, using the same event study approach, albeit with some slightly different assumptions, conclude that mergers do benefit the stockholders of both firms.

Several explanations have been offered to reconcile this difference. One is the need to control for industry effects that may "contaminate" the results. This study attempted to reconcile the difference in the empirical findings of these two streams of literature by focusing on a

sample of firms drawn from one industry--the food and kindred products industry represented by SIC code 20, using multiple measures of performance.

The results lead to the following conclusions:

1. Using a ten-year span (five years before and five years after the merger), within the food and kindred products industry, mergers do result in a significant improvement of the lot of acquiring firms and their stockholders.

2. While mergers result in improved performance for the acquiring firm, there is no evidence to support the contention that one type of merger is better than the other.

3. Mergers and acquisitions that took place during the period from 1977 to 1984 resulted in better performance for the acquiring firm than those that occurred during the period from 1968 to 1976.

Discussion

This study attempted to replicate Lubatkin's (1987) study within an industry-specific domain. Another objective of this study was to examine merger performance in two distinct time periods to see if there were any significant differences.

Hypothesis 1: Merger Performance in General

This study offered significant statistical support for the hypothesis that mergers benefit the acquiring firm and its stockholders. This evidence, while being consistent with Lubatkin's (1987) findings, contradicts earlier results from the finance discipline reported by Jensen and Ruback (1983) and Halpern (1983). This could be attributed to several possible reasons. First, researchers from the finance discipline used short time frames to measure merger performance--the most common time period used was 180 days before and after the merger (Michel and Shaked 1985). Presumably, this short time period was used to reduce bias associated with extraneous events. Because market models have been shown to factor in the effects of time (Gonedes 1973), it is argued by strategic management researchers (Lubatkin and Shrieves 1986) that a five-year time period captures the strategic impact of a merger better than a shorter time frame. Thus, Lubatkin's (1987) study, using a five-year time frame both before and after the merger, reported results that contradicted earlier findings of researchers from the finance discipline.

Second, researchers from the discipline of finance used "clean" data, which discarded firms from their samples that had engaged in multiple mergers during the period under study. The rationale for this was that only by using clean

data could the effects of a single event be studied. However, it is argued by strategic management researchers (Lubatkin and Shrieves, 1986) that by insisting on clean data the sample becomes non-representative--consisting only of firms that are relatively inactive in the acquisition market.

Third, none of the earlier researchers studying merger performance controlled for industry effects. In other words, their samples included firms from a myriad of industries with no countervailing checks-and-balances to account for this diversity that may have contaminated the results. Lubatkin (1987) argues that measuring performance based on market models adjusts for industry variation. This, of course, assumes a perfectly efficient market. But, other researchers (Black 1986; Dess, Ireland and Hitt 1990) report that inefficiencies in the market create "noise," rendering it less than perfect. Limiting the sample to firms from only one industry is one of the ways of controlling for industry effect.

The two performance measures used in the present study were return on assets and market return. In effect, the first measure is concerned with the performance of the firm in total, while market return signifies the benefits to the stockholders.

The average return on assets for the focus group increased from 6.66 percent to 7.92 percent after the merger--an increase of 18.9 percent compounded for the five-year period. A look at the standard deviation (2.92 before and 3.58 after the merger) indicates that the range of performance in the analysis group is remarkably large. Some acquiring firms did extremely well with their acquisition programs, while others did very poorly. For example, Smithfield Foods doubled its return on assets after a merger, while General Host Corporation more than tripled its return on assets in the five years following a merger. On the other hand, American Maize Products, Conagra and International Multifoods actually saw a drop in their return on assets following mergers. One possible cause of this fluctuation in performance within the analysis group is the fact that for a merger to be successful, both pre-merger planning and post-merger integration are important. International Multifoods is a case in point. In the 1970s, the company's strategy was diversification away from flour milling by acquiring consumer foods companies. The strategy did not succeed because the company failed to anticipate the oncoming recession and was timid in its implementation of strategy (Business Week 1984).

The average market return for the focus group increased from 9.54 percent to 30.44 percent after the merger--an

increase of more than 219 percent over the five-year period. Again, the large standard deviations (25.82 before and 24.47 after the merger) reflect the variance in performance among the target group. Market return is an ex-ante measure while return on assets is an ex-post facto measure. In other words, while return on assets measures the performance of the firm after the event, the market return is an anticipatory measure. Stockholders push the market price up or down depending upon their perception of the effects of a merger on a firm. Therefore, the market return reflects the net change in the wealth of stockholders during the period under study after factoring in the anticipated benefits that propelled the firm to merge or acquire in the first place as well as the price paid to the acquired firm.

While the market return for firms such as Coca Cola and Quaker Oats increased more than 200 percent during the study period, stockholders either did not perceive Beatrice's mergers to be strategically viable or felt that the price paid was too steep. This is reflected by the market return for Beatrice, which actually decreased in the period following its merger.

In some cases, a comparison of the two measures for the same firm proved very interesting. In the early 1980s, Campbell Soup acquired several food companies including Snow King Frozen Foods and Mrs. Paul's Kitchens. While the

stockholders perceived this move as beneficial to them (as reflected by the market return which more than tripled during this period), in effect the return on assets actually decreased from 9.2 percent prior to these acquisitions to 8.2 percent after they were acquired. So, while these acquisitions did not help the company's bottom line, they were perceived as strategically sound by the company's stockholders. Similar situations confronted other companies such as Coca Cola, Wendy's International and American Maize Products. However, in a majority of cases, the two performance measures moved in the same direction and, therefore, were consistent.

Hypothesis 2: Merger Performance Across Time Periods

One of the objectives of this study was to examine merger performance across two time periods to see if one period performed better than the other. No previous study of this type was located. Such a study could indicate whether or not firms have learned to plan for and manage their acquisitions better in more recent years in order to gain the most out of this strategic decision.

Toward this, the sample was split into two distinct time periods--1968 to 1976 and 1977 to 1984. Contrary to

the hypothesis, there was a statistically significant difference in performance (for both measures) between the periods, with the latter period showing better performance after the merger than the former. One reason for this, as discussed earlier, is that firms have learned that mergers and acquisitions succeed only if much thought goes into the planning and post-merger integration stages. In the planning stage, careful deliberations must be used to identify the type of merger that is strategically most suitable for the acquiring firm, to identify the right type of acquisition candidate, and, also, the type of consideration paid for the acquisition (Kusewitt 1985). In post-merger integration, care must be taken to mesh the two cultures (Buono, Bowditch, and Lewis 1985).

However, the testing of this hypothesis raised more questions than it answered. With astronomical prices being paid for many acquisitions in more recent periods than in the past, one of the anticipated results was that stockholders bring the market price down as a result of panic. But, the difference in performance (for market return) between the two periods was significant with $p < 0.001$. A possible explanation for this is that high acquisition prices buoys stockholders' expectation even higher, thereby raising the market price in anticipation of

larger profits for the firm in the future, and consequently greater market returns.

Hypothesis 3: Merger Type and Performance

Table 14 gives the breakdown of merger types for the analysis group.

The most common type of merger exhibited by the analysis group was product extension (or product concentric) whereby the acquiring firm and the acquired firms are functionally related in production and/or distribution but sell products that do not compete directly with one another (FTC 1980). This was followed by the pure conglomerate or totally unrelated type of merger. Market extension mergers were the least popular of them all.

A breakup of merger types by periods reveals interesting results. Consistent with the conglomerization craze of the 1960s and 1970s, type 5, or the pure conglomerate type was the most popular (around 50 percent of all the mergers) during the 1968 to 1976 period. In contrast, during the period from 1977 to 1984, the percentage of firms involved in type 5 mergers decreased to 18 percent while the product extension type increased from around 25 percent to 40 percent .

Table 14.--Breakdown of Sample by Merger Type

Type	Number	Percentage
1-- Horizontal	12	15.0
2-- Vertical	10	12.5
3-- Product Extension	27	34.0
4-- Market Extension	6	7.5
5-- Pure Conglomerate	25	31.0
Total	80	100.0

Apparently the troubles of firms like ITT and Beatrice convinced managers that conglomerization was not the answer. Thus, during the latter period, more acquisitions were of the related type. This observation is consistent with the findings of Palepu's (1985) study of diversification strategy and profitability among firms in the food industry. Palepu's study demonstrated that firms with predominantly related diversification showed significantly better profit growth than firms that diversified into unrelated industries.

Like Lubatkin's (1987) findings, this study also did not provide empirical support for the contention that one type of merger was better than the other. In other words, there was no significant difference among merger types at the alpha 0.05 level. One possible explanation for this is that investors may evaluate mergers on characteristics other than market and product relatedness. Some of the characteristics identified by earlier researchers are the quality of human capital acquired (Jensen and Ruback 1983; Paine and Power 1984), the structural characteristics of the acquired markets (Galbraith and Stiles 1984), and the competitive position of the acquired business in each of their respective markets (Porter 1980). In addition, the lack of significant difference in return on assets among merger types underscores the importance of post-merger integration on the acquiring firm's bottomline. More than the type of merger, it is the management of the merger that affects the acquiring firm's performance.

Future Research Directions

More can be learned about merger performance by further research. There are several areas that future researchers can explore.

In the past, merger performance has been measured by examining its effects on returns, risk, market share, and resale value. Not only should newer measures such as the effect of mergers on gaining access to new technology and on operating synergy, be examined in more detail than at present, but also softer measures such as its effect on the human resources and competitive position should be introduced to get a better insight on the merger process. Operationalizing these softer constructs will be difficult, but only by factoring in all possible effects of a merger, can its true performance be measured.

Dess, Ireland, and Hitt (1990) provide an excellent discussion of the need for, and methods to control for, industry effects that could otherwise contaminate the findings. They identify three methods that could be used toward this end. Single industry studies provide good control for industry effects but suffer from generalizability problems. The second method suggested is to measure all critical dimensions so that those that are being studied can be isolated. Finally, stratified samples by industry provide a good control against contaminating effects. Future researchers studying the effect of mergers on the performance of acquiring firms should choose the method ideally suited for their studies. Only by

controlling for industry effect can spurious interpretations be avoided.

Merger specialists play an important role in the acquisition process for a number of companies. In some cases, the merger specialist is called in at the time the acquisition is planned, while in others the specialist is asked to oversee the integration of the two firms after the merger. The impact of these merger specialists on merger performance has not been studied. A fruitful research direction would be to study the link between such expertise and performance.

While Walsh (1988) studied the rate of employee turnover after mergers, a possible future research study should examine the nexus between the stability of top management (in terms of turnover) and merger performance. In other words, such a study should empirically test the question as to whether the stability of the acquired firm's management is linked to performance after the merger.

Appendix A
List of Companies Used in the Study

List of Companies Used in the Study

Beatrice Foods
Coca Cola
Pillsbury
Consolidated Foods
Coca Cola Bottling Company of New York
Universal Foods
Conagra
Flowers Industries
Borden
Land O'Lakes
MEI Corporation
Pennbrook Foods Corporation
Foremost-McKesson
Goodmark
Acton Corporation
Alleghany Beverage Corporation
Beefsteak Charlie's
Conna Corporation
Crowley Foods
U. S. Sugar Corporation
Coca Cola Bottling (Southwest)
Sonoma Wineyards
Early California Industries
Snyder's Bakery
Ingredient Technology Corporation
Farley Candy Company
International Multifoods
Campbell Soup
Quaker Oats
Smithfield Foods
United Foods
Dean Foods
General Host
McCormick
Tyson Foods
Iroquois Brands
General Mills
Wendy's International
H. J. Heinz
American Maize Products ,
DiGiorgio
Fleming Companies
Gerber Products

List of Companies Used in the Study.--Continued

Supervalu Stores
Wetterau
Lucky Stores
National Tea
Superfood Services
Amfac
Ashy Corporation
Oscar Meyer Company
Sealaska Corporation
ARA Services
Amalgamated Sugar
Bickford Corporation
S. M. Flickinger Company
Ireland's Restaurants
Kay Corporation
Keystone Foods
Moxie Industries
Pacific Gamble Robinson Company
Pneumo Corporation
CPC International
Hershey Foods
Ralston Purina
Chock Full of Nuts
Archer Daniells
Carnation
Central Soya
Kelloggs
Kraft
Nabisco
Norton Simon
Royal Crown Cola
Pepsico
American Agronomics Corporation
Campbell Taggart
EGD
Johnson Southern
Lance

Appendix B
SPSS-X Printouts

01-Jun-90 MARKET-TYPE
 12:18:10 UNIVERSITY OF NORTH TEXAS NAS/8083 MWS/SP

*** MULTIPLE REGRESSION ***

Listwise Deletion of Missing Data

Equation Number 1 Dependent Variable.. ROA RETURN ON ASSETS
 Beginning Block Number 1. Method: Stepwise

Variable(s) Entered on Step Number 1.. XI BEFORE

Multiple R	.18946	Analysis of Variance			
R Square	.03500	Regression	154	Sum of Squares	Mean Square
Adjusted R Square	.02979	Residual		82.87558	82.87558
Standard Error	3.26924	F	5.89288	1688.69187	10.68792
				Signif F	.0164

----- Variables in the Equation -----				----- Variables not in the Equation -----							
Variable	B	SE B	Beta	T	Sig T	Variable	Beta In Partial	Min Toler	T	Sig T	
X1 (Constant)	-1.253750	.519912	-.189464	-2.425	.0164	X2	.168887	.000000	.000	1.0000	
	7.915000	.385512		21.055	.0000	X3	-.001557	.001518	.020	.9842	
						X4	-.001557	.001518	.020	.9842	
						X5	.109883	.111800	1.000000	1.411	.1603

End Block Number 1 PIN = .050 Limits reached.

01-Jun-90 MARKET-TYPE MAS/8083 MVS/SP
 12:12:45 UNIVERSITY OF NORTH TEXAS

*** MULTIPLE REGRESSION ***

Listwise Deletion of Missing Data

Equation Number 1 Dependent Variable.. MR MARKET RETURN
 Beginning Block Number 1. Method: Stepwise

Variable(s) Entered on Step Number 1.. X1 BEFORE

Multiple R	.30909	Analysis of Variance	DF	Sum of Squares	Mean Square
R Square	.09553	Regression	1	6371.83806	6371.83806
Adjusted R Square	.08081	Residual	158	80224.78187	507.75184
Standard Error	19.53878	F =	18.68884	Signif F =	.0001

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T.
X1	-12.821250	3.088508	-.308087	-4.085	.0001
(Constant)	18.541250	2.184612		7.572	.0000

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
X2	-.188887	.000000	.000000	.000	1.0000
X3	-.120151	-.120337	1.000000	-1.598	.1125
X4	-.120151	-.120337	1.000000	1.598	.1125
X5	.040164	.042232	1.000000	.530	.5971

End Block Number 1 PIN = .050 Limits reached.

28-May-80 ROA
 13:51:43 UNIVERSITY OF NORTH TEXAS MAS/8083 MVS/SP

T - T E S T

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	(DIFFERENCE) MEAN	STANDARD DEVIATION	STANDARD ERROR	CORR. PROB.	2-TAIL PROB.	T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.
G1	80	7.9150	3.583	0.401								
G2	BEFORE	8.6612	2.821	0.327	1.2538	2.880	0.322	0.025	0.000	3.88	78	0.000

28-May-90 SPSS-X RELEASE 3.0 FOR IBM OS/MVS
 13:21:39 UNIVERSITY OF NORTH TEXAS MAS/8083

MVS/SP

T - T E S T

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	(DIFFERENCE) MEAN	STANDARD DEVIATION	STANDARD ERROR	X CORR.	2-TAIL PROB.	T VALUE	DEGREES OF FREEDOM
Q1	AFTER	30.4375	24.474	2.736							
Q2	BEFORE	9.5387	25.817	2.888	20.8987	34.158	3.819	0.078	0.480	5.47	79

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