Acquisitions and Shareholder Wealth Effects: The Case of the Hospitality Industry

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Dissertation Submitted to the Faculty of the

Virginia Polytechnic Institute and State University

In partial fulfillment of the Requirements for the degree of

Doctor of Philosophy

in

Human Nutrition and Foods

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1994
Blacksburg, Virginia.

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(ABSTRACT)

The phenomenon of acquisitions has attracted research interest in the finance literature partly because of its impact on the U.S economy during the decade of the eighties. Whereas an impressive body of knowledge has been accumulated on this subject thus far, the hospitality literature has no empirical studies that seek to explain the nature of this phenomenon in the hospitality industry. Of particular interest in this study was the impact of acquisitions on the shareholder wealth of target hotel and restaurant shareholders.

Therefore, there were three purposes in this study: 1) to determine whether stockholders of target hotel and restaurant companies involved in acquisitions earned significant additional wealth, 2) to determine whether there is a difference in the average size of additional wealth created in acquisitions involving hospitality companies versus those involving non-hospitality companies, and 3) to determine

whether there is a difference in the average size of additional shareholder wealth accruing to hotel versus restaurant shareholders.

The sample consisted of 39 restaurant and 18 hotel target companies acquired between 1980 and 1990. The datasource was the University of Chicago's Center for Research in Securities Prices (CRSP) database. The market model was used to predict stock returns for the target companies thirty days before and after the announcement of the acquisition. The difference between the predicted returns and actual returns for each trading day during this period constituted the abnormal return. The average abnormal returns for all the companies per trading day were cumulated and their significance determined.

The results showed that the size of the additional shareholder wealth created when the restaurant companies were acquired was 8.86%, hotels was 29.86%, while the combined sample was 15.47%. These results provided evidence that hotel and restaurant shareholders earn significant abnormal returns during an acquisition, and that there is a significant difference in the size of additional shareholder wealth accruing to hospitality companies versus non-hospitality ones. Furthermore, there was a difference in the average size of abnormal returns earned by hotel shareholders versus restaurant shareholders.

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to a number of people who provided valuable help in this odyssey and particularly made significant contributions towards completion of this dissertation.

First I wish to thank my co-chairs, Drs. Dana J. Johnson and Michael D. Olsen. Their guidance, advice and nudging which were always provided in a professional and understanding manner were invaluable to this process. I am especially grateful to Dr. Olsen for introducing me to the subject of finance, and Dr. Johnson for nurturing my interest in the subject along the way. Their encouragement, support and friendship were critical in sustaining my commitment to this adventure.

Second, I would like to thank Drs. Suzanne Murrmann, Eliza Tse and Michael Evans for allowing me to benefit from all of their years of experience in guiding research endeavors such as this. I am sincerely thankful to them for their comments, questions and suggestions for improving this dissertation. Above all, I am grateful to them for not abandoning my odyssey which seemed a never-ending one.

Third, I am indebted to Dr. Raman Kumar of the Department of Finance at Virginia Tech who was enormously helpful in

generating and interpreting the data from the CRSP database.

Finally, to my family, I am exceedingly appreciative of their support and understanding, and I hope this dissertation makes them proud.

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1.1 INTRODUCTION

Acquisition activity in the eighties appears to have made a mark on all segments of the United States economy. There were more than 31,000 transactions collectively valued at more than $1.3 trillion in the 1980s alone (Sikora, 1990). In the hospitality industry this phenomenon has become an important vehicle for growth since markets have become saturated. Reasons often cited for acquisition include financial synergy, economies of scale, market power and control, diversification, undervalued stocks, reducing bankruptcy risk, and achieving a better fit between corporate talents and resources (Jensen, 1983). As acquisition activity heated up in the seventies and eighties, issues were raised concerning the shareholder wealth effects of acquisitions, and the causes and consequences of acquisitions. The attempts to respond to these and many other issues regarding acquisitions have generated an impressive body of literature.

An acquisition can occur in two ways - through a merger or a tender offer. A merger is an agreement to combine two or more corporations to form one economic unit under procedures established by the state of incorporation of each corporation (Kuhn, 1990). This merger is achieved usually under friendly circumstances with management and shareholder approval. In a tender offer, however, management approval is not required.

This arrangement involves one entity, generally a corporation, seeking controlling interest in another, and it involves a direct appeal by the acquiring entity to the target corporation's shareholders to submit their shares in exchange for a specified amount of cash or stock. Where the entity seeking control is not a corporation but the incumbent management, this is referred to as a management buy-out (MBO). When the transaction by management is financed by a line of credit (which most MBOs are) then it is referred to as a leveraged buy-out. Both management and leveraged buy-outs, as examples of a tender offer, involve a direct offer to the current shareholders of the target corporation in an attempt to take the company private.

Viewing the market of acquisitions as a market in which management teams are competing for the control of one another's corporate assets, management acts as an agent on behalf of the relatively passive shareholders. The objective of management activity in acquisitions is thus to obtain control of the human and physical resources of the target firm and to utilize these to maximize the wealth of their firms. More substantively, Jensen and Ruback (1983) refer to corporate control as the right to determine the management of corporate resources including the right to fire, and set top management compensation as well as determine the overall direction of the target firm. In this role as an agent,

however, the management team may face a conflict of interest insofar as their current and future compensation and job security are linked to the survival and success of the firm.

Nevertheless, the consensus in the literature is that shareholders receive substantial gains when an acquisition occurs. Shareholders of target firms receive more of the gains while shareholders of bidding firms receive little or no gains. The problem, however, is that prior studies have tended to estimate the gains to target shareholders by observing mostly industrial corporations that have been acquired. These studies have been conducted in a cross-sectional fashion, and the results have been presented as explanations to the phenomenon of acquisition without regard to the specific industry environments to which the corporations belong. Consequently, there is no study that has focused on the impact of acquisition activity in the hospitality industry (in this case, hotels and restaurants).

1.2 Purpose of the Study

Notwithstanding the consensus in the literature about the additional wealth created by acquisitions for shareholders, there is evidence to suggest that there are variations in the size of the additional wealth created (Elgers and Clark, 1980; Gordon and Yagil, 1981; and Wansley et.al. 1983). The evidence shows that the size of the wealth created from

acquisitions depends on, among other things, the method of payment for the transaction, regulatory factors, whether the firm is a bidder or target, management's acceptance or rejection of the proposal, strategic business fit, and many more (Wansley et.al.1983; Travlos, 1987; Jarrell and Bradley, 1980; Asquith et.al. 1987; Carleton et.al. 1983; Shelton, 1988).

The purpose of the study is to determine the size of shareholder wealth accruing to shareholders of hospitality corporations (hotels and restaurants) that have been targets of an acquisition. Secondly, the study will investigate whether the size of the additional shareholder wealth differs from the average size of the additional wealth accruing to shareholders of non-hospitality stocks that have been involved in an acquisition.

These purposes are prompted by the observation that inspite of the quite extensive literature currently existing on the effects of acquisitions on shareholder wealth, only a few have focused on specific industries (eg. banks). Companies in the hospitality industry have not received such attention in any of the published studies. One of the reasons is because some researchers believe that inter-industry differences in returns are negligible (Rumelt, 1991). Another reason has been that the criteria for sample selection for most of the studies tend to be biased towards acquisitions

involving companies with large asset values (eg. $70 million and above, Dennis and McConnell, 1986). Although the hospitality industry has experienced a relatively large number of acquisitions during the eighties, the value of the individual transactions tend not to be large. This study will provide an insight into the shareholder wealth effects of acquisitions from the perspective of a selected industry, while exploring the impact of unique characteristics of this industry on the phenomenon.

Furthermore, real estate literature provides evidence through time series studies that returns to real estate investment are typically lower than returns to common stock. Part of the reason for this phenomenon is that real estate investment is generally less risky compared to other investment assets (Ibbotson and Siegel, 1984). The other reason provided by real estate researchers is that the valuation of real estate is fundamentally different from common stock valuation. Whereas common stock valuation depends on future dividends payable (growing at a predetermined rate) discounted at the investor's required rate of return, valuation of a real estate asset depends on the income from the property and the residual value of the asset both of which are difficult to determine a priori (Roulac, 1988).

Booth et.al.(1989) argue that commercial real estate investment is a hybrid of debt and equity even when the property is not encumbered by debt. They offer the following example: suppose the owner of an office building leased the property to a tenant who has agreed to make fixed lease payments. The owner of the building, in effect, has an investment that is a blend of two types of investments, one equity and the other debt. The debt asset (or investment) is the lease, while the equity asset is the residual value of the property after the lease expires.

The authors estimate that the total lease payments and the residual value of the property would constitute about seventy and thirty percent respectively of the total value of the property. Changes in the inflation rate, for instance, typically has the opposite effects on the value of each of the component assets. An increase in inflation tends to be accompanied by an increase in interest rates. The rise in interest rates reduces the value of the lease payments (they are discounted at a new higher rate), while a rise in inflation raises the residual value of the property. Thus the effect of inflation on two comparable real estate investments will vary due to the characteristics of each real estate property. Two comparable stocks will tend to be homogeneous with regard to their response to inflation (Ibbotson and

Siegel, 1984; Rosenberg, 1985; Nelson et.al.1988; Roulac, 1988).

The preceding discussion illustrates the complexity of real estate valuation and its difference from common stock valuation. Therefore, when methods of common stock valuation are applied to the valuation of real estate related corporations, the value thus obtained may not reflect the true value of the underlying assets.

The study will provide some evidence for accepting or rejecting the notion that, due to the differences in the characteristics and valuation of real estate and common stock, the size of the additional shareholder wealth often accruing to target shareholders of hospitality stocks will be relatively different from what shareholders of non-hospitality stocks generally earn.

Although the term hospitality is used broadly to describe many service-related segments of the economy, in this study it refers only to the hotel and restaurant segments. These two segments, inspite of their many similarities, do exhibit some distinct differences. On the basis of asset structure the two sub-segments are different, just as their operating environments and policies are different. In addition, the financial structures of restaurants and hotels tend to be quite different on the average. Whereas hotels tend to be overleveraged with relatively little current obligations

(besides the current portion of long-term mortgages), restaurants tend to show relatively higher current liabilities due to their use of trade credit.

Thus another purpose of the study is to determine the difference in the size of shareholder wealth accruing to restaurant shareholders versus hotel shareholders.

In summary, the purposes of this study are three-fold:

- to determine the size of shareholder wealth accruing to hospitality target shareholders in an acquisition,
- to investigate whether the size of the shareholder wealth to target hospitality shareholders is different from what accrues to non-hospitality shareholders,
- to investigate the differences in the size of shareholder wealth between restaurant and hotel shareholders.

1.3 Significance of the Study

The field of business strategy holds the opinion that competition acts to direct resources toward uses offering the highest returns. Yet, in many instances the process of resource allocation does not result in the highest return due to impediments to the resource flows. Business strategists believe these impediments arise from the unique endowments and actions of individual corporations or business-units, and not the common property of an aggregate of firms (Wheelen and Hunger, 1987).

However, in the area of acquisitions, there are reasons to believe that grouping similar companies and focusing on the effects of acquisitions on them in the aggregate can be useful. Schmalensee's (1985) work on the impact of industry effects on corporate rate of return concluded that industry effects were significant and substantial. Furthermore, in this case, there are collective characteristics of corporations in the real estate business in general, such as the lack of uniformity in the valuation techniques of real estate assets, which suggest that the shareholders of these corporations may not receive the highest returns possible in the event of an acquisition (Ambrose,1990). The results of this study will provide some indication as to whether, with regard to acquisitions, the stock market efficiently values real estate related businesses such as hotels and restaurants.

1.4 Theoretical Underpinning

Considering a merger or takeover as a capital investment decision, the ultimate goal must be to maximize shareholder wealth. There are immediate factors such as diversification, tax considerations, taking advantage of bargains, and elimination of inefficiencies all of which encourage companies in their decision to acquire another company. These factors and the goal of shareholder wealth maximization are not necessarily inconsistent because invariably they all affect

the wealth of shareholders. Trautwein (1989) has reviewed three general theories of the motives of merger: process theory, disturbance theory, and rational choice theories.

1.4.1 Process Theory

The process theory argues that a merger is simply an outcome of the organizational process. That is, a merger decision involves limited rationality. Instead it is the result of an organization's routine process of decision making which has proven successful in the past. In a review of prior studies on the process theory, Power (1983) commented that there was lack of formal planning, suppressed uncertainty, varying process participants and no agreed upon criteria within the firms that have engaged in mergers. In a sense, the merger decision may be based on a set of routines in the firm's repertoire for different problems and when a merger problem arises one such routine solution developed in the past may be utilized. Therefore, a merger decision process can be determined and also influenced by personalities, political and structural matters, even perceived cultural differences where a structured and formal decision process is lacking. Power (1983) concluded after a review of studies that the acquisition decision was not a comprehensively rational one, because there was evidence of suppressed uncertainty, lack of

planning, political influences and no agreed-upon acquisition criteria, characterizing many acquisitions.

The evidence on the process theory at the moment is ambiguous (Trautwein, 1990), and appears to depend more on the seeming lack of rationality by managers in merger decisions and less on direct evidence that managers actually follow a process.

1.4.2 Disturbance Theory

The second theory, disturbance theory, views merger as a macroeconomic outcome. Gort (1969), a proponent of this theory, postulated that merger waves, as an aggregate phenomenon, are triggered by economic disturbances which in turn change investors' expectations and increases the level of uncertainty about future economic outcomes. As a result of the differences in expectations about future levels and sources of income, acquiring and acquired firms have different perceptions of the present value of the target company's stock. This may be the result of differences in perceptions of the effectiveness of current management's stewardship in the future. Such discrepancies are more likely to occur during periods like bull markets or during rapid technological changes. The consequence of such a disturbance is exemplified by investors who are not currently owners of assets, now placing a higher value on these assets while current owners

place a lower value on their assets, hence the merger wave. Critics illustrate the shortcomings of this theory by citing the 1973/74 oil crisis which did not spur a merger wave. Furthermore, the theory does not adequately explain the motive for a merger in the absence of a merger wave (Trautwein, 1990).

1.4.3 Rational Choice Theories

The third group of theories considers a merger as a choice motivated by rationality. That is, the consequences of mergers are the motivating forces behind mergers. In this group of rational choice theories, two sub-groups emerge based on who the beneficiaries of a merger may be. One sub-group, empire-building theory, considers managers the beneficiaries of mergers; according to this theory, mergers are planned and executed by managers who seek to maximize their own interests at the expense of shareholders. Some of these interests may include the desire for power, managerial control, perquisites, lower level of work effort, prestige, status, excess staff, company cars, and prestigious investments as trophies (Williamson, 1964; Jensen and Meckling, 1976).

The other sub-group of rational-choice theories consists of theories which view the shareholder as the beneficiary of a merger. This sub-group of theories include: efficiency

theory, monopoly theory, raider theory, and valuation theory. The efficiency theory views synergies - financial, operational and managerial - as the reason mergers are planned and executed. Knowledge transfer resulting from the combination of two separate units; the target firm obtaining access to the superior planning and monitoring abilities of the acquiring firm; and the lower capital costs resulting from reduced risk due to the size of the merged firm, all contribute to efficiency in the market.

Monopoly theory views attaining market power as the object of acquisitions. Market power is achieved through increased market share, control over distribution channels and other collusive tactics designed to limit competition in product markets. Such actions are believed to benefit shareholders because the merged firm is able to produce less and raise prices, thus increasing profits. Evidence that acquisitions are undertaken to achieve monopoly power is very weak (Jensen, 1984). With regard to the raider theory, the beneficiaries of an acquisition in this context are shareholders of the acquiring firm, and their net gains are attained through wealth transfers from the target shareholders (Holderness and Sheehan, 1985). Included in the wealth transfers are all excessive compensation paid to the "raider" or acquirer after a successful acquisition. According to this theory such payments are what motivates "raiders" to seek

potential target firms. All evidence appear not to support this theory. Shareholders of target firms seem to gain in most cases involving raiders (Holderness and Sheehan, 1985), and the average abnormal returns to target shareholders have been found to range from eight percent in proxy contests to thirty percent in tender offers (Jensen, 1984).

Finally, the valuation theory views acquisitions as motivated by management's possession of private information not available to the market about the target firm's value. Thus gains accruing from acquiring an undervalued firm benefits shareholders of the acquiring firm. The problem with this theory is that it contradicts the market efficiency theory, and furthermore, although many acquirers justify their acquisitions on the basis of valuation, very limited evidence supporting this motive is available.

In summary, the process theory views an acquisition as an unplanned event that occurs as a result of the day-to-day transactions and activities in which an organization may be engaged. The disturbance theory considers an acquisition one of the possible consequences of a disequilibrium in macroeconomic forces outside the control of the organization. The disequilibrium creates uncertainty in the product and service markets of the organization, and one of the outcomes is the tendency for firms to engage in acquisitions. Both theories regard the factors leading to acquisition by

organizations as exogenous, therefore, there is a lack of deliberateness on the part of organizations to cause acquisitions to occur. The group of rational choice theories is the theoretical underpinning guiding this research, rather than the disturbance or process theories, because there is deliberateness on the part of the organization to cause an acquisition to occur. As a result the effects of an acquisition, such as increasing shareholder wealth, can be planned and anticipated, and more especially measured. This is the prevailing view in the field of corporate finance. An implication of the deliberateness of the decision to acquire another company is that it treats an acquisition as a capital investment decision and thus allows the use of models that predict the value of future returns arising from that investment.

1.5 Context of the Study

Acquisitions as capital investment transactions have been around for a while, however, they are most identified with the period of the eighties because of the impact they had on corporate decision making and governance. Black and Grundfest (1989) estimate conservatively that between 1981 and 1986 the shareholder wealth created from takeovers and restructurings totaled at least $162 billion. Over the same period, Jensen (1987) estimates less conservatively that the shareholder

TABLE 1

MERGER AND TAKEOVER ACTIVITY BY ALL INDUSTRIES: 1980-1989

RANKING BY TOTAL VALUE

Industry	Value of Deals ($Bill.)	# of Deals
Energy	153.23	1,219
Food & Tobacco	120.10	1,154
Media	89.20	2,031
Retailing	87.70	1,324
Healthcare	84.13	1,507
Banking	77.36	3,214
Nonbank Financial	49.37	1,278
Business, Professional, Social	47.67	2,996
Insurance	45.30	1,136
Transportation Equipment	44.81	615
Transportation	42.27	695
Chemicals	38.84	665
Paper and Packaging	36.97	397
Machinery	35.75	1,366
Primary Materials & Metals Min.	31.52	632
Consumer Products	28.18	578
Utilities	27.50	367
Hotels & Restaurants	25.93	415
Apparel, Footwear, & Textiles	24.58	660
Entertainment	24.23	441

Household Products & Furniture	23.69	390
Computer & Office Equipment	20.20	686
Wholesale	19.44	1,674
Security & Commodity	18.98	465
Building Materials	17.57	604
Construction	16.55	774
Measuring, Analyzing etc.	16.08	744
Fabricated Metals	15.79	688
Computer & Data Processing	15.29	1,169
Communications	12.77	365
Rubber & Plastics	11.49	451
Lumber & Wood Products	10.45	197
Repair & Maintenance	10.00	183
Nonclassifiable	2.87	281
Leather	2.41	40
Personal Services	0.43	59

Source: Mergers & Acquisitions, 24(5), 119, 1990.

wealth created was at least $244 billion. Naturally, the size of this phenomenon has generated significant research interest into why they occur, how deals are negotiated, what portions of the wealth created goes to whom, and above all, what consequences follow this phenomenon. Table 1 provides a summary of merger and takeover activity between 1980 and 1989 by all industries including hotels and restaurants. Of a total of thirty-six industries hotels and restaurants ranked 18th in terms of the total value of acquisition deals created during this period.

One of the consequences of acquisitions is its effect on market power. The message in reports published in 1969 and 1980 by the Bureau of Economics of the Federal Trade Commission was that conglomerate mergers reduced economic efficiency through the reduction of potential entry thereby hampering competition.

Another consequence of acquisitions is its impact on firm risk. Where an acquisition is motivated by the desire to diversify, the acquisition of a company that was unrelated (orthogonal) to the acquiring corporation tended to reduce the overall unsystematic risk of the surviving corporation. Also where the acquisition was a leveraged one, this method of payment heightened the vulnerability of the corporation to potential bankruptcy.

Acquisitions may tend to have socio-political consequences also. This refers to the impact of acquisitions on general income distribution, employment, worker satisfaction, political power, and the welfare of local communities (Rosett, 1990; Brown and Medoff, 1987).

Acquisitions in the hospitality industry, although not as prodigious as in the manufacturing and retail industries, grew in the seventies and peaked in the eighties (Crawford-Welch and Tse, 1990). This was the means of growing and maintaining market share in the face of heightened competition throughout the industry. Between 1980-1988 the value of reported takeover transactions in the industry was estimated at $19.9 billion for both U.S and non-U.S corporations (Crawford-Welch and Tse, 1990). Although acquisition activity is expected to decline in the nineties, a reflection and evaluation of the consequences of this activity on shareholder wealth will provide pertinent information for future planning by hospitality managers as well as hotel and restaurant stockholders.

1.6 Justification for Research

An overwhelming number of results in acquisition research have indicated that the consequence of an acquisition on shareholder wealth is positive. That is, overall, shareholders enjoy an increase in their wealth as a result of

the transaction. There is enough evidence, however, to suggest that the wealth effects of acquisitions are not homogeneous across all transactions, and the different wealth effects are the result of different factors that are unique to the transaction. The hospitality industry presents an example where the size of the wealth effects is associated with the unique nature of the hospitality investment.

The hospitality corporation has a going-concern component and a real estate component, and as a result traditional ways of valuing a hospitality stock on the stock market will be susceptible to the same biases inherent in the stock market's valuation of real estate corporations. For example, Lesser and Rubin (1993) show that in hotel investments, capitalization rates can be and are often applied to various net income levels. There is a lack of uniformity regarding the appropriate net income level to be used in hotel valuation, thus historical net income, forecasted first-year net income, and forecasted stabilized net income deflated to current dollars are all used at present.

This study will provide the first comprehensive and empirical look at the shareholder wealth effects of an acquisition in the hotel and restaurant segments of the hospitality industry. The study will also address the issue of whether industry differences exist in the average size of

additional wealth created for target shareholders in the event of an acquisition.

1.7 Research Questions

Given that real estate assets, specifically hospitality investments, are unique and different from other financial investments, the following questions are of empirical interest:

1) In an acquisition, do stockholders of hotel and restaurant stocks earn significant additional shareholder wealth beyond what is normal, and what is the average size of the additional wealth created?
2) Is there a difference between the size of additional wealth earned by hotel and restaurant target stockholders versus what is earned by stockholders of target non-hospitality firms?
3) Are there differences in the size of additional wealth created for hotel target stockholders on one hand and restaurant target stockholders on the other?

1.8 Outline of Dissertation

The following chapter, will focus on a review of the literature on acquisitions, and specifically on shareholder wealth effects of acquisitions. It will also include a review

of the literature on real estate pertaining to valuation. Chapter 3 will be devoted to the methodology to be used for this study, including a review of the most common method used in shareholder wealth analysis: event study analysis. Chapter 4 will cover the presentation and discussion of the results of this study. Finally, chapter 5 will highlight the conclusions of the study as well as any attendant limitations.

CHAPTER 2

LITERATURE REVIEW

2.1 REVIEW OF EMPIRICAL STUDIES

Merger and acquisition studies can be grouped under four broad categories: acquisition typology studies, predictive studies, explanatory studies, and impact studies. This section will describe the first three briefly, followed by a review of the relevant empirical research on the impact studies.

2.2 Acquisition Typology Studies

Value creation has been an underlying theme in many acquisition studies, and acquisition typology studies have tried to determine which types of acquisitions create the most value. The typologies in many of these studies has been based on the Federal Trade Commission's (FTC) five merger classifications scheme: horizontal and vertical mergers (also referred to as non-conglomerate mergers), market-extension and product-extension mergers (also referred to as conglomerate mergers), and unrelated mergers.

A group of studies in this area has investigated whether related diversification strategies outperform unrelated diversifiers using accounting measures (Rumelt, 1974; Salter and Weinhold, 1979). Another set of studies has focused on

market-based indicators using event study methodology to determine how merger types differ with regard to abnormal returns and risk posture (Elgers and Clark, 1980; Singh and Montgomery, 1987; Wansley, et.al., 1983; Lubatkin, 1987; Seth, 1990).

One of the motives for acquisition is value maximization and there is an underlying belief in acquisition typology studies that the value in acquisitions is created by taking strategic actions to make optimal use of a firm's productive resources in the presence of environmental constraints and opportunities (Seth,1990). There is no consensus in the literature at this point regarding which types of strategic acquisitions offer the most value. Nevertheless, the results of this group of acquisition studies confirms the assertion that the size of additional value created in an acquisition depends on several factors including acquisition typology.

2.3 Predictive Studies

Studies that can be grouped under this general umbrella have all sought to provide a profile of variables unique to target firms that serve as useful signals for firms with a high probability of being acquired by others. This type of analysis has commonly been used in predicting other economic events such as business failures. Such criteria will undoubtedly enable security analysts, for instance, to select

stocks of potential targets in anticipation of a public announcement.

Researchers have attempted to identify financial ratios that would predict the probability of an acquisition (Simkowitz and Monroe, 1971; Belkaoui, 1978; Dietrich and Sorensen, 1984). An important implication of the predictive studies is that if the predictive claims of their models are true then an investor could perform better than the stock market using the predictive models. That is, it would be possible to earn abnormal returns in the market using such prediction models.

Analysis of firms identified by such models as potential targets showed their excess returns to be statistically not significant (Palepu, 1986). Palepu concluded that even after the prediction models are modified to correct their methodological flaws, their ability to predict takeover targets through the analysis of excess returns shows prediction models to be no more significant than the stock market.

2.4 Explanatory Studies

The studies in this category seek to explain why certain firms are acquired and others are not. That is, the objective of such studies is to determine characteristics of target firms that explain why they are or are not acquired. One

approach through which these characteristics have been identified has been using financial ratios (Singh, 1971; Chiplin and Wright, 1987).

Another approach has considered corporate financial characteristics such as corporate liquidity, tax savings, internal and external financing, as factors which explain why acquisitions occur (Harris et.al., 1982; Hayes and Taussig, 1967; Boyle, 1970; Stevens,1973; Maupin and Label, 1987; Merjos, 1978)

2.5 Impact Studies

A close examination of the literature reveals that most of the studies on acquisitions have concentrated on the shareholder wealth effects. Other broad areas in which the impact of acquisitions have been monitored include, market power, firm risk, society, and employment. Some areas have received more attention than others and as a result patterns of observations have emerged to explain the relationship between these factors and acquisition, but in some cases the patterns remain inconclusive. The following section will focus solely on the shareholder wealth effects of acquisitions.

2.5.1 Shareholder Wealth Effects

In investment theory, decisions to accept or reject an investment in a firm's portfolio is motivated by additions to firm value. That is, if the expected cash flows from an investment will more than offset its related costs, then the investment is expected to enhance overall firm value, therefore the investment is acceptable. From the point of view of the acquiring firm an acquisition represents an investment decision. The cash flows are represented by the projected incremental revenues of the target firm as well as incremental revenues to the acquiring firm resulting from operational synergies, both discounted into present values. Transaction costs related to the acquisition as well as the price paid to the target shareholders constitute the cost of this investment decision. As long as investors expect the incremental value of this acquisition to be positive, this expectation will be reflected in the increased stock prices of the firms involved.

Two sets of theories have guided research into the effects of acquisitions on shareholder wealth (Halpern, 1983). The first is the positive impact theory which predicts that acquisitions will have positive impact on the equity values of both target and acquiring firms. This theory is supported by three notions - monopoly rent, synergy, and internal efficiency. Acquisition contests and negotiations result in

the creation of monopolistic conditions with the target or the acquiring firm or both becoming beneficiaries. The target firm becomes the single seller with one or more potential buyers in the market for corporate control. Therefore monopolistic rent is generated as a result of the market conditions. There is a lack of consensus regarding exactly what proportion of this monopolistic rent is earned by target and acquiring firms' shareholders.

The synergy notion describes a situation where the combined value of the firms involved is greater than the sum of their individual values (the 2+2=5 effect). Such synergies therefore occur through the combination of the firms' real assets. The synergies arise as a result of production and marketing efficiencies which are brought about by changes in technology or political factors as a result of the acquisition.

The internal efficiency notion suggests that corporate acquisitions are a means of disciplining inept management. The acquiring firm is assumed to be motivated by perceived managerial inefficiencies in the target firm. The announcement of an acquisition, therefore, releases positive information to the financial market and the market in turn reacts positively by increasing the value of both firms through price appreciation. This information hypothesis is further regarded by Bradley et.al. (1983) as having two

variants. The "sitting on a goldmine" hypothesis argues that the release of information causes the market to revalue the undervalued target shares. The "kick in the pants" hypothesis argues that the released information prompts target management to devise its own higher-value operating strategy to which the market reacts favorably.

The above theory is similar to Manne's (1965) improved-management hypothesis which maintains that corporate acquisitions are a response to the sub-optimal policies of the target firm. The target firm becomes an acquisition candidate as soon as investors recognize a pattern of incompetence and they in turn reflect that in their lowered expectations of the target's ability to generate future cash flows. Therefore management inefficiency is a precursor to acquisition, and following the acquisition shareholder wealth ultimately improves as a result of the new and better management policies.

Altogether these two hypotheses conceive of a positive relationship between acquisition and shareholder wealth. The proportions of such gains which go to the target and acquiring firms has been the subject of some research.

Besides the group of positive impact theories there is also the zero impact theory or otherwise called the non-value maximizing theory. This theory maintains that corporate acquisitions have no impact on the values of the firms

involved. That is, for successful acquisitions both target and acquiring firms earn normal returns. This theory stems from the observation that firms which exhibit prior good performance (measured by positive abnormal returns) are more likely to be engaged in acquisitions than firms which do not. Mandelker's (1974) empirical evidence showed that mergers follow periods of positive abnormal returns to the target firms and that the mergers themselves have no impact.

Under these circumstances the acquisition is believed to be motivated not by gains in shareholder wealth but by attempts to maximize growth in sales or assets, or the control of a large empire. Therefore acquisitions of this type have no economic gains to be divided by the firms, and any gains by the target shareholders will be offset by negotiation and transaction costs incurred by the acquiring firm (Halpern, 1983).

The positive impact and zero impact hypotheses represent the bases upon which the effects of acquisition on shareholder wealth have been investigated.

2.5.2 Empirical Studies into Shareholder Wealth Effects

A group of studies have researched the wealth effects of mergers and tender offers on the shareholders of both acquiring and target firms. Dodd and Ruback (1977) considered the effect of tender offers on shareholder returns. Using

monthly return data they obtained abnormal returns for both target and acquiring firms through Fama's (1969) market model. Size of the sample of tender offers was 386. Targets of successful tender offers experienced, on the average, 20.58% abnormal return while targets of unsuccessful offers averaged 18.96%. The acquiring firms, on the other hand, only averaged between 0.50% to 2.83% abnormal return.

Furthermore, during the pre-announcement period the cumulative average return was positive but not significant for both successful and unsuccessful targets. In the month prior to the announcement and including the month of the announcement the cumulative abnormal returns for successful targets were 24.60% while unsuccessful targets earned 22.22%. Based on their results the zero impact hypothesis, which implied no abnormal returns for the acquiring firm during the acquisition process, was rejected in favor of the positive impact hypothesis. That is, in the month of the tender offer both target and acquiring firms enjoy positive abnormal returns.

Dodd (1980) also used a market model and estimated the size and significance of abnormal returns for a sample of 151 merger proposals. This sample included both successful and unsuccessful merger proposals between 1970-1977. The study did not include acquisitions through tender offers or defensive mergers such as using a white knight. Results of

this study showed that in both completed and cancelled mergers, target shareholders on the average earned 33.6% However shareholders of acquiring firms in both cancelled and completed mergers experienced negative abnormal return.

Asquith et.al. (1983) considered a sample of 428 bids from 1979 Fortune 1000 companies. The authors hypothesized that shareholders of acquiring firms benefit from a merger. Using daily stock return data they generated daily abnormal returns for the firms in the sample. Their study concluded that mergers provide positive cumulative abnormal returns for shareholders of acquiring firms after controlling for firm size, outcome of the bid, and the time period in which the bid occurs.

In testing the explanatory power of the synergy hypothesis against the information hypothesis, Bradley et.al.(1983) hypothesized that where target shareholders do not receive a subsequent bid after an unsuccessful one, the price of the target shares should fall back gradually to pre-offer level. If this happens then the synergy hypothesis would have been confirmed. On the other hand if the target stock price remains at the same level even after an unsuccessful bid then such a situation would confirm the information hypothesis.

Eighty-six unsuccessful targets who were subsequently acquired experienced a cumulative abnormal return of 17.5%

twenty-four months after the initial bid. Twenty-six unsuccessful targets who were not subsequently taken over within the same period suffered a 27.5% decline in cumulative abnormal return. In general they concluded that successful tender offers have positive impact on the wealth of target shareholders. Furthermore a subsequent acquisition of an unsuccessful target's shares was necessary for positive revaluation of the target's shares by the market. This finding was consistent with the synergy hypothesis.

Kummer and Hoffmeister (1978) earlier investigated the comparative performance of target companies who resisted the acquisition versus those who did not. Using Black's stochastic process model they obtained average abnormal returns and cumulative abnormal returns for all the target firms in the sample (N = 88). Their results indicated that all target firms experienced low returns up to 3 months prior to the acquisition announcement. The cumulative abnormal return was lowest for the target firms where the acquisition was contested by management, and where such targets did not receive subsequent bids their performance continued to deteriorate after the takeover announcement. The authors concluded that firms that are acquisition candidates have experienced abnormally low returns prior to the acquisition announcement, therefore the acquisition provides some protection of target shareholder interests.

In another study examining 161 successful cash tender offers Bradley (1980) determined that acquiring firms paid a substantial premium, 49%, for the target shares purchased. Even target shareholders who did not tender their shares still realized a 36% capital gain. The acquiring shareholders, however, only realized a 4% capital gain from the price appreciation of their own stock. Bradley concluded that a successful cash tender offer is a value maximizing investment for both target and acquiring firms.

Dennis and McConnell (1986) extended their study beyond the common shareholders to cover preferred shareholders and bondholders. With a sample size of 132 mergers and using daily security returns data they obtained abnormal security gains for the following classes of securities - common stock, convertible preferred stock, convertible bonds, non-convertible preferred stock, and non-convertible bonds. Their results showed that target companies' common shareholders, convertible and non-convertible preferred shareholders and convertible bondholders all received statistically significant abnormal returns. The non-convertible bondholders neither gained nor lost. In addition acquiring common shareholders did gain significant abnormal returns. This study concluded that mergers create value for both target and acquiring firms.

Finally, Bradley (1988) attempted to resolve the question of how synergistic gains from corporate acquisitions are

divided between the target and acquiring firms. The sample consisted of 236 tender offers which occurred between 1963 and 1984. Daily stock returns were used in the market model to estimate the daily abnormal returns accruing to the target and acquiring firms. Results of the study showed an average $117 million gain due to synergy for each of the 236 tender offers. This gain represented 7.4% increase in the combined wealth of the shareholders of both target and acquiring firms. Of this gain target shareholders captured a relatively larger portion , and this proportion has continued to increase since the Williams Amendment of 1968. The remaining proportion of the gains that went to acquiring firms' shareholders was significant during the 1963 - 1968 era and has declined since. In fact the results further showed that between 1981 - 1984 shareholders of acquiring firms have experienced significant loss in their share of synergistic gains.

The substantive results of Bradley's (1988) study were that successful tender offers generate significant gains and lead to a more efficient allocation of corporate resources. The increase in synergistic gains over the years, however, has come at the expense of the acquiring firms' shareholders. In addition, the more the competition among bidding companies the greater the increase in the abnormal returns. Bradley concluded that there is no justification for regulation of the market for corporate control by Congress.

Table 2

Cumulative Excess Returns to Successful Bidders

for Tender Offers During 1960 to 1985, by Decade

Trading-day Interval	All	1960s	1970s	1980s
-10 to +5	1.14	4.40	1.22	-1.10
(t stat.)	(2.49)	(4.02)	(2.12)	(-1.54)
-10 to +20	2.04	4.95	2.21	-0.04
(t stat.)	(3.31)	(3.52)	(2.87)	(-0.04)
Number of Observations	405	106	140	159

Source: Jarrell and Poulsen (1987).

In a survey of studies about takeovers in the eighties Jensen (1984) concluded that target shareholders alone earn on the average 30% additional wealth. Between 1981-1986 the additional shareholder wealth was estimated to amount to $162 billion (Black and Grundfest, 1989). With regard to additional wealth earned by shareholders of acquiring companies the consensus of the evidence is they tend to receive at best modest increases in shareholder wealth or breakeven. The often cited evidence of this is provided by Jarrell and Poulsen (1987) who considered 663 successful tender offers covering 1962 to 1985. Table 2 shows a summary of the excess returns to NYSE and AMEX bidders over a period of three decades.

2.5.3 Differences in Wealth Effects Under Different Circumstances

Inspite of the general conclusion that there are significant wealth effects arising from acquisitions, there is evidence to suggest that under different circumstances the size of the additional wealth created may be different.

Travlos (1987) explored the role of the method of payment in determining the size of the additional shareholder wealth created on behalf of bidding firms at the announcement of takeover bids. Specifically the study analyzed the stock valuation effects associated with common stock exchanges

versus cash offers in takeover bids. The sample consisted of sixty common stock exchanges, one hundred cash offers, and seven combinations of common stock from 1972 through 1981. Using daily stock returns data the results of the study showed that, on average, stockholders of acquiring firms experience significant losses when their firm acquires another one through an exchange of common stock. On the other hand, stockholders of cash financing bidding firms earned "normal" rates of return at the announcement of an acquisition. Travlos concluded that stock financing bidding firms are evaluated differently by investors at the announcement of an acquisition.

Calvet and Lefoll (1987) similarly investigated the hypothesis that the stock market evaluated cash bids and non-cash bids differently during the announcement of an acquisition. They observed 119 Canadian acquisitions between 1971 and 1980. There was evidence that both bidding firms and target firms in general received significant abnormal returns during the announcement period of an acquisition. However, for bidding firms, there was significantly higher announcement effect for cash bidders compared to non-cash bidders. The authors concluded that the medium of exchange during a corporate acquisition provided a signal to the market whereby cash bidders' stock prices, on the average, were biased upward compared to other firms.

Huang and Walkling (1987) also found the method of payment to be a significant determinant of abnormal returns earned by target firm shareholders with the cash method of payment resulting in the largest returns. Shareholders receiving stock as payment for shares owned earned the smallest abnormal returns.

Dodd (1980) investigated the impact of management's acceptance or rejection of an acquisition proposal on the size of the shareholder wealth created. The sample included all completed mergers and merger proposals later cancelled between 1971 and 1977. Dodd found an early positive market reaction to the merger announcement for both bidder and target shareholders. Stockholders of target firms earned significantly larger abnormal returns than bidder shareholders upon the merger announcement, irrespective of the outcome of the proposal. Yet, for merger proposals that were completed, target shareholders earned 33.96 percent abnormal returns on the average while target shareholders of subsequently cancelled proposals earned only 3.68 percent on the average.

Jarrell and Bradley (1980) also reported that there are regulatory factors that intervene when determining the size of premiums to target shareholders during cash tender offers. They tested the hypothesis that the existence of federal and state antitakeover laws increased tender offer premiums. Their results showed that unregulated tender offers (those

before 1968) received a premium of 32.4 percent; post-Williams Act (1968) targets not subject to any state antitakeover regulation received 52.8 percent; while targets protected by state laws received a premium of 73.1 percent on the average.

Lewellen et.al. (1985) observed a link between the personal wealth circumstances of the senior executives of a bidding firm and the additional shareholder wealth accruing to bidder shareholders in completed mergers. That is, they found a persistently positive relationship between the abnormal stock returns to bidder shareholders in completed mergers and the percentage of outstanding company common stock held by senior management. Where officers and directors were in the top ten percent of the distribution of stock ownership (that is, owned more than twelve percent of the firm's outstanding common stock), shareholders earned 2.6 percent abnormal stock returns. Yet, where officers and directors were in the bottom ten percent, shareholders lost 3.5 percent stock return.

There is additional evidence from acquisition typology studies to show that the size of the shareholder wealth earned during an acquisition is also dependent on the type of acquisition.

Elgers and Clark (1980) studied 337 acquiring firms and 66 target firms between 1957-1975 using the event study approach. Their goal was to determine how merger types differed with regard to the size of the abnormal returns and

the risk posture. Similarly, Singh and Montgomery (1987) observed higher abnormal returns for target firms which were related to their bidder firms. In a sample of 105 large mergers between 1975 and 1979 they found that the standardized dollar gains for related acquisitions were greater than for unrelated ones.

Shelton (1988) also identified four types of strategic fit: unrelated, related supplementary, related complementary, and identical. His study investigated whether the strategic fit between businesses of the acquiring and target firms explain the variance in value created in mergers. With 118 mergers between 1962 and 1983, the study concluded that more value is created in acquisitions with related strategic fits than in unrelated ones, and where the companies were identical and fit strategically the variance in value created in mergers was not significantly different from zero.

Wansley et.al. (1983) concluded in their study that the combination of merger types and method of payment for acquisition had an influence on the size of shareholder abnormal returns. Pure conglomerate acquisitions that employed securities as the medium of merger exchange, appeared to reward the bidder shareholders with abnormal returns higher than returns to shareholders of pure conglomerates which employed cash transactions.

Walkling and Edmister (1985) examined the premium earned by target firm shareholders in 158 cash tender offers made between 1972 and 1977. The results of their study listed the following factors as determinants of the size of abnormal returns to target shareholders:

1. the tender offer premium decreases as the trend of the target firm's debt-to-assets ratio increases,
2. the tender offer premium decreases as the market-value-to-book ratio of the target firm increases,
3. the tender offer premium increases when there is an opposing suitor for the target firm,
4. the tender offer premium increases when the bidder seeks control of fifty percent or more of the target firm,
5. the tender offer premium decreases as the percentage of the target firm stock controlled by the bidder increases.

In a more comprehensive study, Kaufman (1988) tested a model of the factors affecting the premium paid to target firm shareholders rather than examining the size of abnormal returns. Using a sample of 748 firms the study concluded that premiums received by target firm shareholders:

1. were larger for firms selling at a discount from book value, except for target firms that had received an acquisition proposal during the previous two years in which

case the size of the premium increased with the target's market-to-book-value ratio,

2. were larger the greater the percentage of the acquisition price consisting of cash,

3. were larger for firms in which the bidding firm owned relatively little stock prior to making the acquisition proposal,

4. were smaller for firms that had received an acquisition proposal during the previous two years,

5. were smaller for firms having a tax-loss carryforward,

   a) the more highly correlated the target and the bidding firms' cash flows,

   b) the larger the target firm's debt-to-equity ratio, and

   c) the smaller the prior ownership interest held by the bidding firm,

6. were larger for firms having a higher return correlation with the market portfolio after the passage of majority legislation governing corporate acquisition.

Bradley, Desai and Kim (1983) also examined the determinants of the size of abnormal returns. They found that over a period from twenty days before through forty days after the first tender offer, target firm shareholders of firms receiving multiple-bidder offers earned abnormal returns that were significantly larger than shareholders receiving single-bidder offers. Their study also concluded that target

shareholders earned significantly greater abnormal returns after the passage of legislation governing corporate acquisitions.

In summary, it is clear from the literature that although all shareholders benefit (or at worst do not lose significantly) from acquisitions, the size of the premium depends on many factors. One area that has not received much attention is the size of the abnormal stock returns in specific industries, following acquisitions. The following section will focus on the real estate industry, exploring the evidence that historically real estate returns have been different from stock returns. This will be followed by a discussion of the unique difference between real estate valuation and valuation of other financial assets. A case will be made for why differences exist in hotel valuation and stock valuation.

2.6 The Real Estate Market and the Market for Stocks

Some researchers have argued that the real estate asset is different and specialized compared to all other assets. Its uniqueness stems from characteristics such as being location specific, having poor information availability, requiring large information collection and transaction costs, and existing in a discontinuous market (Miles et.al. 1988).

Ambrose (1990) hypothesized that real estate will be an important factor in the corporate takeover market since it is a unique and specialized asset. Its uniqueness arises from the fact that it is location specific, information availability is poor compared to the market for stocks, it exists in a discontinuous market, and requires large information collection and transaction costs. To test this hypothesis, the study examined the relationship between real estate assets and corporate takeover probability, with the expectation that no relationship would exist. The sample of 443 firms, each of which had been involved in an acquisition between 1981 and 1986, consisted of 170 targets and 273 non-targets. Each had a significantly high proportion of their assets invested in physical assets. Results showed that real estate was a significant factor in predicting the probability of a firm being an acquisition target.

Ibbotson and Siegel (1984) contended that real estate is the prototype of an asset for which non-risk factors play an important role in pricing. For example, leveraged real estate was clearly considered a tax shelter for high tax investors until changes in the tax law occurred in 1986. The rewards of accelerated depreciation and the conversion of ordinary losses to long-term capital gains enhanced the attractiveness of real estate assets.

Today, inspite of the Tax Reform Act of 1986 many investors, under qualifying conditions, still purchase real estate assets more for their tax consequences and other attributes than to obtain compensation for real estate's risk attributes. Other non-risk factors uniquely important to real estate asset pricing include, search, transaction, and marketability, all of which contribute additional costs which invariably are factored into the asset value.

Similar observations have been made by Hite, Owers and Rogers (1984) in their examination of the effect on wealth gains of corporate real estate spin-offs. They concluded that spin-offs of corporate real estate subsidiaries are motivated by the specialized nature of real estate operations that are distinct from the parent company's other non-real estate activities. Specialized real estate operations call for distinct managerial skills and financial arrangements.

2.7 Real Estate Returns versus Common Stock Returns

Comparisons of real estate returns and common stock returns have shown, in some cases, that common stock consistently outperforms real estate (see Table 2). Ibbotson and Fall (1979) compared the nominal returns of real estate, stocks, bonds, and treasury bills between the period 1947-1978. Their results showed that real estate average returns was 8.1 percent (standard deviation 3.5), common stocks

TABLE 3

STUDIES EXAMINING RETURNS TO REAL ESTATE AND OTHER ASSETS

Author(s)	Time Period	Type of Asset	Average Annual Rate of Return
Robichek, Cohn & Pringle (1972)	1951-69	Real estate	9.5%
		Common stock	11.9
		Bonds	1.3
		Treasury bills	3.0
Ibbotson & Fall (1979)	1947-78	Real estate	8.1%
		Common stock	10.3
		Bonds	2.9
		Treasury bills	3.5
Fogler (1984)	1915-78	Real estate	11.0%
		Common stock	13.0
		Bonds	8.0
		Treasury bills	6.0
Ibbotson & Siegel (1984)	1947-82	Real estate	8.3%
		Common stock	12.42
		Fixed income corp. securities	3.76
		U.S. Govt. securities	4.09
		Municipal bonds	2.24

averaged 10.3 percent (standard deviation 18.0), bonds averaged 2.9 percent (standard deviation 5.5), while treasury bills averaged 3.5 percent (standard deviation 2.1).

Fogler (1984) obtained similar results comparing real estate, common stocks, treasury bills, and bond returns. This study examined returns between 1915 and 1978 and found that on absolute return basis and also on a risk-adjusted basis, common stocks outperformed real estate.

Robichek et.al.(1972) earlier found real estate outperformed by common stock returns on a nominal basis using data over the period between 1951 and 1969. Ibbotson and Siegel (1984) also used data over the period 1947-1982 to compare returns to real estate, common stocks, fixed income, corporate securities, U.S Government securities, and municipal bonds. Similarly the returns data showed real estate outperformed by common stock. These findings are similar to results of other studies examining the performance of real estate limited partnership (RELP) units which found RELP returns to be inferior to common stock returns (Rogers and Owers, 1986; Kaplin and Schwarz, 1988).

In addition to the differences in returns between real estate and common stock, researchers have also found significant differences in the volatility of common stock and real estate (see Table 4). Firstenberg et.al.(1988) found

TABLE 4

REAL ESTATE AND OTHER ASSETS:

COMPARISON OF ANNUALIZED RETURNS VOLATILITY

Index	Total Return	Standard Deviation
Real Estate:		
FRC	13.87%	2.55
FRC (Cap. rate est.)	13.04	11.28
FRC (Appraisal adj.)	13.87	4.37
EAFPI	10.78	2.80
EREIT	22.26	19.71
Other Assets:		
S&P 500	9.71%	15.35
Small stocks	14.51	23.90
Corporate bonds	8.38	11.29
Government bonds	7.91	11.50
T-bills	7.51	0.82
Inflation	6.64	1.19
Risk Premium:		
EAFPI	3.27%	2.43
FRC	4.36	1.29
S&P 500	1.48	17.54
Small stocks	7.38	18.04

Source: Firstenberg, Paul, M., Stephen A. Ross and Randall C. Zisler (1988).

evidence to support the conclusion that the standard deviation of real estate returns show much lower risk for comparable returns when compared to stocks and bonds.

In a review of studies on real estate returns, Sirmans and Sirmans (1987) provide equivocal evidence on the volatility of real estate investment compared to investments in stocks and bonds. They conclude after analyzing the literature that some studies show stocks and bonds to be riskier than real estate, while others show the opposite.

Ibbotson and Siegel's 1984 study contained a regression of real estate returns on common stocks, long term corporate bonds and a market wealth portfolio. When regressed on all three asset return series, the beta-adjusted excess returns (the alphas) for real estate were very high and the betas were near zero. One of the significant implications of their findings was that there is no covariance between real estate returns and returns of stocks and bonds. Zerbst and Cambon (1984) concluded similarly after reviewing a number of empirical studies comparing real estate returns and risks to the performance of other classes of assets.

Research results, however, have shown high covariance between real estate returns and inflation, hence the desirability of real estate as an inflation hedge. Stocks and bonds, on the other hand, are negatively related to inflation. These findings tend to confirm the role of non-beta risks

(non-systematic risks) and non-risk characteristics as principal determinants of real estate valuation. Similarly, businesses and industries with relatively large quantities of real estate assets, such as hospitality, railroad, construction, building materials, insurance companies and others, will be expected to have little covariance with stocks and bonds.

One of the significant features of the stock market is its liquidity. For publicly traded companies, there is a ready market for the buying and selling of stocks. Consequently, it is relatively easy to establish the value of a company through its equilibrium per share price, and the associated transaction costs are also relatively low. This per share price reflects the value of the underlying assets of the company, and for many of the companies these assets are easily priced on the market.

Determining the real value of a real estate asset, on the other hand, is difficult. The appraised value (which represents the market value) of the real estate asset is almost always not the price which clears the market. Thus, unlike stocks and bonds whose true market prices are known prior to a trade, the true market price of a real estate asset remains unknown until after the sale is completed. Also, whereas the underlying assets of a General Motors (GM) stock is homogeneous, one real estate asset is essentially different

from another although their replacement costs may be the same. The price of the real estate asset depends on transaction costs, geographic factors (regional and local), economic factors (macro and micro) and tax considerations. As a result, valuing a company with a high real estate asset component presents unique challenges to the stock market (Ibbotson and Siegel, 1984).

These characteristics of the real estate asset has prompted some researchers to suggest that the stock market may be inefficient with regard to the valuation of real estate companies (Rosenberg et.al.1985; Roulac, 1988).

2.7 Asset Valuation Models

The general model for valuing assets depends on the estimated cash flow stream for the asset and the rate of return required by the owners of the asset. The estimated cash flows are discounted by the required rate of return and then summed to determine the value of the asset (Brigham and Gapenski, 1987):

$$V_0 = \frac{CF_1}{(1+k_1)^1} + \frac{CF_2}{(1+k_2)^2} + \frac{CF3_3}{(1+k_3)^3} + \ldots + \frac{CF_t}{(1+k_t)^t} + \ldots + \frac{CF_n}{(1+k_n)^n}$$

where:

V_0 = current, or present value of asset

CF_t = estimated cash flows for time t

k_t = required rate of return for each period's cash flow

n = number of periods for which cash flows are expected to be generated.

Similarly, the price (value) of a stock depends on the estimated cash flows (represented by the expected dividend stream) from the stock and the investor's required rate of return. The required rate of return is used to discount the dividend stream, and then summed to find the price of the stock,

$$P_0 = \frac{D_1}{(1+k_s)^1} + \frac{D_2}{(1+k_s)^2} + \frac{D_3}{(1+k_s)^3} + \ldots + \frac{D_\infty}{(1+k_s)^\infty}$$

where P_0 represents the current price of stock, D_∞ the dividend stream, and k_s is investors' required rate of return. A more simplified version of the stock valuation model which assumes a constant growth in dividends, is the Gordon's growth model,

$$P_0 = \frac{D_1}{k_s - g}$$

where g represents the growth rate of dividends.

The investor's required rate of return is estimated using the Capital Asset Pricing Model (CAPM) which ignores non-systematic risk:

$$k_s = k_{rf} + \beta (k_m - k_{rf})$$

where k_s is the investors' required rate of return; b represents the relative volatility of the stock to the market (or systematic risk); k_{rf} is the risk-free rate; and (k_m - k_{rf}) represents the market risk premium.

This approach to valuing assets may be inappropriate for real estate oriented stocks. In valuing MLPs (master limited partnerships), RELPs (real estate limited partnerships), and REITs (real estate investment trusts), for example, the common practice is to take its current cash flows and capitalize it at an appropriate required rate of return. Roulac (1988) provides several reasons why this approach may be overly simplistic and inappropriate for real estate valuation:

1. cash flows may be distorted for any one of the following reasons:

a) real estate cash flows may include proceeds from refinancing or mortgage debt service payments other than what is required to fully amortize the mortgage,

b) due to unique yet complex financing arrangements, the mortgage may call for a period of interest below regular rates, or require interest only, when fully amortizing payments would require substantially more,

c) partnership sponsors may make early cash distributions using borrowed money,

d) cash distributions may include proceeds from asset disposition.

All these factors introduce distortions into the cash flows and consequently the dividend stream. Also where proceeds from asset dispositions are included in the distributed dividends, the result reflects a return on capital as well as a return of capital.

2. Significant distortions may also be introduced from accounting accrual decisions and by decisions to defer expenditure. For example, deferral of property maintenance expenses may make cash flows appear to be higher than they really are.

3. Cash distributions to investors are sometimes financed, not from operating income, but from reserves. When this happens, the investor has simply received a return of invested capital.
4. Equity participation sometimes by lenders, developers, and real estate brokers can also complicate the estimation of the required rate of return.

Therefore, the estimated cash flow figures for these real estate enterprises and the resultant dividends may not be representative of what investors can expect in the future. As a result, simply capitalizing cash flows from these real estate investments to determine their market value will yield distorted business values, although this approach conforms to the general asset valuation model.

Also the application of the CAPM in determining the required rate of return presents problems when valuing real estate assets, since the CAPM is driven by systematic risk and ignores non-systematic risk. As Ibbotson and Siegel (1984) observed, while stocks are priced primarily on beta (or systematic risk), and bonds are priced primarily on interest rate and default risk, real estate pricing places more significance on non-systematic risk factors such as taxes, transaction costs, and marketability factors. The above discussion suggests inefficiencies in the method by which the stock market values (prices) stocks of real estate firms and other firms with significant proportions of real estate in

their asset portfolio. Such inefficiencies will have direct impact on market-related financial transactions such as spin-offs, sell-offs, and acquisitions, and in turn, on the shareholder wealth created and distributed from such transactions. Indeed Hite et.al.(1984), in their examination of corporate spin-offs of their real estate subsidiaries found that average abnormal returns to shareholders of divesting real estate firms were significantly smaller than the average abnormal returns achieved by shareholders of non-real estate firms in similar circumstances, as indicated from previous studies.

2.8 Acquisitions in the Hospitality Industry

The hospitality industry experienced its share of acquisition mania during the eighties. For instance, 1987 was dubbed "the year of the takeover" by industry observers considering that $50 billion worth of offers for companies were made in the first quarter alone. Examples of major transactions that occurred in the industry during this period were United Airlines Ltd.'s offer of $980 million for Hilton International, and W.R.Grace's $536.7 million leveraged buyout of its restaurant group. There were instances where relatively smaller companies acquired larger ones such as Pantera's (115 units) acquisition of Pizza Inn (672 units), or Little Steve's (30 units) acquisition of Swensen's (340 units)

in 1987 (Tse and Crawford-Welch, 1989). The study by Tse and Crawford-Welch also showed that between 1970-1988 there were 332 acquisitions in the industry and of this number 95% were takeovers while the rest were mergers. The most popular acquisition strategies in terms of numbers and dollar value were horizontal integration (34%) and conglomerate diversification (15.4%).

In another related study Crawford-Welch and Tse (1990) examined acquisition transactions involving both U.S and non-U.S companies between 1980-1988. A combined value of approximately $19.9 billion worth of transactions were completed during this period. This value underestimates the true total value of all transactions since it does not include other undisclosed private deals. Seventy-four percent (or 242) of the transactions occurred in the restaurant and foodservice sector while the remaining twenty-six percent (or 83) were in the lodging sector. In spite of the lower number of transactions occurring in the lodging sector, more than half of the total dollar value of transactions occurred in hotels (see Table 4).

Some of the notable transactions involving U.S and non-U.S companies included McDonald's Corporation's acquisition of McDonald's Golden Arches Restaurants Ltd. (UK), and WMS Industries Inc.'s acquisition of Divi Hotel NV (Netherlands).

TABLE 5

ACQUISITIONS IN THE HOSPITALITY INDUSTRY (1981-1988)

	Hotels		Restaurants/Bars	
Year	# of Deals	Value($mill.)	# of Deals	Value($mill.)
1981	10	561.6	24	118.9
1982	5	39.4	21	291.0
1983	4	5.6	31	601.8
1984	7	1,180.6	23	187.2
1985	11	993.2	31	2,353.9
1986	10	493.0	36	2,428.0
1987	21	2,369.0	40	2,272.9
1988	15	4,376.3	36	1,504.6
Total	83	10,118.7	242	9,758.3

Adapted from : Crawford-Welch and Tse (1990)

Other transactions were Grand Metropolitan's acquisition of Intercontinental Hotels, Dunfey Hotel Corporation's acquisition of Omni International, and Ladbroke Ltd.'s acquisition of Hilton International from Allegis Corporation in 1987 for $1.07 billion.

Some see the acquisition wave in the eighties as an inevitable consequence of the strategic choices companies in this industry made during this period. Olsen and Merna (1991) provide two reasons why there has been increased merger activity in the lodging industry. First, the high level of competition that existed in eighties required many lodging companies to acquire others in order to grow and maintain market share. Second, creative financing schemes that were spawned during this period (such as junk bond financing, limited partnerships and others) made the acquisition and syndication of individual hotels and hotel firms relatively easy.

While acquisitions in general are predicted to continue, the pace in the lodging industry in particular is expected to slow down due to industry dynamics. Since the cost of renovation continues to be prohibitive, and the travelling public expects bright new rooms, it will be difficult for hotel companies to acquire more properties if strong cash flows are unavailable to support their renovation. Also companies are limited by their internal pool of seasoned

managers to manage these acquired properties and this presents obstacles to further acquisition. The more compelling reason for the slowdown is related to the lack of available financing for real estate related transactions which is the result of the collapse of the real estate market in the beginning of the nineties. Nevertheless, the slowdown in the pace of acquisitions in the industry does not diminish the interest in this phenomenon that dominated the industry in the eighties.

2.9 Hospitality Enterprise Valuation: The Case of Hotels

The earlier discussion on real estate valuation concluded that the general stock valuation models commonly used in valuing all economic assets is not appropriate for real estate valuation (Firstenberg et.al., 1988; Zerbst and Cambon, 1984). This is due to the importance of nonsystematic risk factors in estimating real estate returns. Since these factors are generally ignored by the traditional asset valuation model, real estate values estimated by using these traditional models are likely not to reflect the true value of the underlying assets.

Also intangible assets play a very significant role in hotel valuation compared to other business valuations. The going-concern aspect of hotels are so management intensive that a poorly performing hotel property can significantly enhance its value simply by assembling a more competent and

experienced management team. Other intangibles such as franchise affiliation and liquor license are difficult to be valued a priori, and the methods for estimating them are not uniform throughout the hotel industry (Nelson et.al. 1988). Thus the ability of the stock market to correctly value the underlying real estate and business assets of a hotel corporation and reflect them in its stock price prior to a merger or takeover transaction is questionable.

In the past hotel developers typically leased hotel properties to hotel companies, or the companies owned the properties they operated. In the last decade, many hotel companies have ceased to be property owners; they have been content to provide affiliation to the chain, and the management of daily operations. Consequently, hotel management contracts have proliferated in the industry.

These contracts generally have a basic fee component (typically, three percent of gross revenue) and an incentive fee component (typically, ten percent of cash flow before fixed charges). Hennessey (1988) argued that there is no uniformity in how management incentive fees are incorporated into the financial statements of the hotel property. Some companies omit the incentive fee entirely thereby overestimating the cash flows, while others deduct incentive fees as additional fixed expense before estimating cash flows.

According to Hennessey, the choice of technique has a significant impact on the valuation of the hotel property.

The above discussion suggests that hospitality industry (hotels and restaurant) stocks, which share commonalities with the real estate industry stocks, are different from stocks, in general, in terms of how they are valued. As a result, the value of additional shareholder wealth created for shareholders of target hospitality companies in a takeover or merger will be significantly smaller compared to what is created for target shareholders of non-hospitality companies.

In summary, the studies into shareholder wealth effects show that significant gains result from acquisitions, however, the size of these gains vary under different circumstances. The evidence from the real estate literature suggests that the unique features of a real estate investment is one circumstance that can impact on the size of shareholder wealth created in acquisitions involving real-estate related companies. As a result, differences can be expected in the average size of additional wealth created in acquisitions involving hotel and restaurant companies compared to acquisitions in other industries.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 METHODOLOGICAL REVIEW

3.1.1 Research Questions

Due to the factors that determine real estate returns, one piece of real estate is not comparable to another although their replacement costs may be similar. Therefore, the hospitality industry is heterogeneous because of the nature of the underlying assets. Empirical work in the area of shareholder wealth effects of acquisitions generally assumes that stocks of corporations within the same industry are homogeneous. When these corporations are observed in the aggregate, then inter-industry differences are expected to approach zero with an increase in sample size. Schmalensee (1985), after reviewing 1975 Federal Trade Commission (FTC) Line of Business data, concluded that industry effects exist and are important, accounting for at least 75 percent of the variance of industry rates of return on assets.

Given that real estate assets are unique and different from other financial investments, the following questions are of empirical interest:

1) In an acquisition, do stockholders of restaurant and hotel stocks earn significant additional shareholder wealth beyond

what is normal, and what is the average size of the additional wealth created?

2) Is there a difference between the size of additional wealth earned by hotel and restaurant target shareholders versus what is earned by shareholders of target non-hospitality companies?

3) Are there differences in the size of additional wealth created for hotel target stockholders on one hand and restaurant target stockholders on the other?

3.1.2 The Market Model

The bulk of research about acquisitions has focused attention on the impact of acquisitions on shareholder wealth. In this regard the most frequently used methodology in the literature to capture the wealth effects of acquisitions has been residual analysis (also referred to as event study). This following section will review this method of investigating the shareholder wealth impact of acquisitions.

The foundation of studies into the behavior of stock returns has been the proposition that the distribution of stock returns follows a normal distribution. That is, given an interval, say a day, a week, or a month if the number of transactions involving a particular stock is large, then the price changes which occur during this interval simply reflect

many independent, identically distributed drawings. Therefore, using the central limit theorem (CLT), the distribution of a sum of independent, identically distributed intermediate price changes will generally approach a normal distribution as the number of items in the sum increases. This forms the basis of the financial models which have been used to investigate the effect of acquisitions on shareholder returns.

A theoretical explanation of the hypothesized behavior of a stock's return is made in the context of the portfolio or market return. The relationship between an individual stock's returns and the returns of a market portfolio is assumed to be bivariate normal. The expected return of the stock is given by :

$$E(R_{it}) = \alpha_i + \beta_i R_{mt}$$

where,

α_i = $E(R_{it}) - \beta_i E(R_{mt})$ or the intercept

β_i = $cov(R_{it}, R_{mt}) / var(R_{mt})$ or the relative risk

Given that the stock returns are normally distributed the deviation of a return from its expected value (the error term or residual) is also expected to be normally distributed with

mean zero and variance $\sigma^2(\epsilon_{it})$. The deviation is represented as :

$$\epsilon_{it}=R_{it}-(\alpha_i+\beta_i R_{mt})$$

where ϵ_{it} represents the error term or residual. Therefore assuming that the joint distribution of a stock return and the portfolio or market return is bivariate normal then the relationship between the two returns is :

$$R_{it}=\alpha_i+\beta_i R_{mt}+\epsilon_{it}$$

where the residual term is normally distributed with mean zero. This is the market model.

In this market model the market return is considered to reflect the effects of all the underlying factors that affect all stocks in the market. The residual term, on the other hand, captures the effects of factors specific to the individual stock, while the beta coefficient (β_i) defines the sensitivity of the individual stock to marketwide volatility.

To predict the market model the ordinary least squares (OLS) estimator is used to develop estimates for the market model parameters, α_i and β_i. The estimated OLS function is :

$$\hat{R}_{it}=\hat{a}_i+\hat{b}_i R_{mt}$$

where a_i and b_i are unbiased estimates of α_i and β_i respectively. In estimating the model a further assumption is made regarding the behavior of the parameters in time. This is the stationarity assumption which holds that the expected values of the individual stock returns and the market return as well as the OLS parameters are stationary over the period being investigated. Therefore, it is assumed that the estimators are in fact measuring the values of the true market model.

The difference between the stock return at any time t and the predicted stock return represents the residual. In an efficient capital market the prices of stocks are believed to reflect all available information on the stock and the market at any point in time. In other words the interaction of demand and supply which determines the equilibrium prices of stocks reflects a correct evaluation of all available information at any time by all investors. Therefore the residual term of the market model must have an expected value of zero.

The implications of the market model, and especially the residual term, has been the main focus of testing market

efficiency generally and characteristics of the market equilibrium specifically. Consequently the patterns of the residuals from a market model is monitored to see if a consistent pattern is discernible or whether the behavior of the residuals are purely random such as is predicted by the market model. Studies of the adjustment of stock prices to information contained in an earnings announcement, the announcement of an issue of stock by a firm, and the announcement of stock splits have all relied on the use of the market model.

3.1.3 The Capital Asset Pricing Model (CAPM)

As an alternative to the market model, abnormal returns or residuals have been estimated using the Sharpe-Lintner (1964 and 1965 respectively) or Black's (1972) models. The return generating process for both models follows the function :

$$R_{it}-R_{0t}=\alpha_i+\beta_i(R_{mt}-R_{0t})+\eta_{it}$$

where,

R_{0t} = risk-free rate, or the zero-beta return in month t

α_i = the average level of superior or inferior performance of a stock measured over the estimation period. Its expected value is zero

n_{it} = error term

β_i = beta coefficient obtained through the market model.

The abnormal returns are obtained as :

$$AR_{it} = (R_{it} - R_{ft}) - \beta_i (R_{mt} - R_{ft}) + \eta_{it}$$

The cumulative average residual is then tracked to show the movement of the stock returns as a result of a specific acquisition.

The market model and the CAPM are the principal methods that have been used in acquisition studies to investigate the impact of acquisition on shareholder wealth. The market model will be used in this study because it is essentially a statistical model with the same properties as the ordinary least squares (OLS) estimator. This facilitates the interpretation of the model's coefficients and provides for a more meaningful analysis of the residuals from the model. Although the CAPM model is similar to the market model in its statistical application, the risk-free rate of return is

difficult to obtain and there is a lack of consensus regarding the appropriate proxy to use (Brown and Warner, 1985).

3.1.4. Empirical Application of Financial Models

The use of the market model in studies of the effects of specific events was made popular by Fama, Fisher, Jensen and Roll (1969) in their study of the adjustment of stock prices to information about stock splits. This was the first study to use the market model as a basis for testing market efficiency, and their technique centered on the behavior of the estimated residual term.

Studies about the effects of acquisitions have benefited from this residual analysis technique by Fama et.al.(1969). In applying the technique, a merger event is identified and isolated, and in an ex post facto fashion the behavior of the residuals before and after the merger is tracked. The pattern of the residuals provide evidence regarding the impact of the merger on stock returns.

Dodd and Ruback (1977) used the market model to test the zero-impact and positive-impact theories. With a non-random sample of 386 tender offers listed on the University of Chicago's Center for Research in Security Prices (CRSP) database, they tracked monthly returns data around the date of the announcement of the first bid. Abnormal returns was defined as the average deviation of monthly returns on

securities from their normal relationship with the market, where the market model depicts the normal relationship. They rejected the zero impact theory because their results showed both bidding and target firms in a tender offer experiencing positive abnormal returns.

Dodd (1980) reviewed 151 merger proposals including both successful and unsuccessful mergers between 1970 and 1977. Using the market model and selecting the announcement date as the event date, he found that in both completed and cancelled merger proposals target shareholders on the average earned 13% abnormal return when the merger was first announced. Over the duration of the merger proposals the target shareholders continue to earn abnormal returns, 33.6% on the average, while bidding firms earned negative abnormal returns. Bradley (1980) similarly looked at 161 successful tender offers using the market model and determined that bidding firms typically paid a substantial premium (about 49% over current market value) for shares of the target firm.

Asquith et.al. (1983) used daily stock returns instead of monthly data to determine the abnormal returns accruing to bidding firms. With a sample of 428 bids of Fortune 1000 firms they used the market model to estimate the daily abnormal returns for each security. They concluded that after controlling for firm relative size, the outcome of the bid, and the time period in which the bid occurs, mergers provide

positive cumulative abnormal returns for shareholders of bidding firms.

Bradley (1983) focused on target firms to determine the impact of tender offers on the wealth of target shareholders. They used the market model to estimate the normal returns to each security and then determined the abnormal returns using monthly returns data. A sample of 371 target firms were used in this study and the market model was estimated using returns from -72 month to -13 month. This study found that tender offers have positive impact on the wealth of target shareholders. In 1988, Bradley et.al. again used the market model to investigate the division of synergistic gains between target and bidding firms in an acquisition. They concluded that both groups of shareholders gained from the acquisition.

Kumer and Hoffmeister selected Black's model instead of the market model to determine the behavior of abnormal returns to eighty-eight target firms between 1956 and 1974. The results of the study showed that all target firms, three months prior to a tender offer announcement, experienced abnormally low returns.

3.2 Methodological Issues

3.2.1 Event Date : Announcement versus Merger date

In determining the pattern of residuals researchers have chosen either the announcement date or the actual merger date

as the reference point. One advantage for using the merger date stems from the fact that all uncertainties about the success or failure of the merger is resolved by this date. Therefore the returns of the merging firms will reflect this and all other information. However, the question remains whether the abnormal returns observed prior to the merger date can be attributed to the merger event, the resolution of uncertainty about the success of the merger, or to prior consistent good performance of the merging firms. In other words, between the announcement date and the actual merger date there may be a lot of activities taking place which ultimately impact on the returns of the firms but not necessarily caused by the actual merger event.

On the other hand the choice of the first announcement date as the event date enables the investigation to capture any differences in the normal pattern of residuals immediately prior to and preceding the announcement. Since the issue of uncertainty resolution follows the announcement, deviations from the normal pattern of residuals during the period surrounding the announcement can be attributed to the merger event.

As a result of this event date issue, studies using the different approaches become difficult to compare. Contemporary studies in mergers now use the announcement date instead of the merger date since it provides a better link

between acquisitions and changes in shareholder wealth. This study adopted the announcement date as the event date.

3.2.2 Choice of Return Generating Process Model

The use of the CAPM in either the Sharpe-Lintner form or Black's in generating security returns, each assumes that the generating process is a true reflection of the distribution of securities in reality. Thus the CAPM coefficients are restrictive and cannot take on any other values except the values specified by the model. Tests of this model have failed to obtain the same coefficients specified by the model thus raising concern over the model's applicability. The market model, on the other hand, does not specify the size of the parameter values. The parameter values are obtained through the OLS process thus making this return generating process more robust. Nevertheless the question of which model is closer to the true security return generating process is unresolved. This study utilized the market model to estimate parameter values and to generate predicted returns for the sample of stocks.

3.2.3 Market index versus Real estate index

In the past decade real estate investments have been the subject of great attention by analysts and researchers. In

the process the appropriateness of market indexes such as the Standard & Poors (S&P) 500 and the New York Stock Exchange (NYSE) Composite as a barometer of the general real estate market has been questioned (Hassan, 1990; Zerbst and Cambon, 1984). Efforts have been made to develop real estate market indexes similar to the general stock market indexes like the S&P 500. The following are examples of indexes currently in use.

The Morguard Property Index is based on unleveraged, non-residential Canadian properties with returns data beginning in 1972. The Frank Russell Company (FRC) Property Index is based on income producing commercial properties in pension portfolios, including apartments, shopping centers, hotels, office towers and industrial parks.

Comingled and Real Estate Funds (CREFs) is the largest, most diversified source of data on real estate returns and continues to be the major vehicle for pension fund investment. The data for CREF returns are obtained from Real Estate Profiles, marketed by Evaluation Associates, Inc. (EAI). Hoag (1980) also developed an index of real estate value and return based on unleveraged industrial properties. The index employs a regression valuation model based on fundamental property and market characteristics to calculate changes in property values rather than appraisals.

The relevance of these real estate indexes is that they can be used in the CAPM or other asset pricing models to correctly value real estate assets and their returns. In this study, however, the Center for Research in Security Prices (CRSP) value-weighted indexes for the NYSE/AMEX and NASDAQ were used to ensure comparability of the abnormal returns from the sample of hospitality stocks and those of non-hospitality stocks.

3.3 RESEARCH PLAN

3.3.1 Research Problem

The traditional notion of viewing an acquisition as a capital investment decision has focused researchers' attention on value creation and maximization. Although the stock market is generally believed to be fair in assessing a company's value, there are instances when the market has undervalued a company's economic wealth. Undervaluation may be the result of information asymmetry, where management of the company may possess better information about the company's true value than the rest of the market. Also value distortions may be the result of a discrepancy in the market value of the company's assets versus their replacement cost, and this is referred to as Tobin's q-ratio.

The lodging business is viewed by operators as consisting of two components: the real estate and business operation components. In this sense the valuation of a hotel property or hotel company presents a unique challenge. Land value typically averages 10%-20% of the total property value, which is relatively high compared to other industrial companies. One reason for this is the importance of location in the development of a hotel, so land of prime commercial value is usually required to ensure high demand for the hotel's rooms. The building, furniture and fixtures may represent 55%-75% of the total value of the property. Thus, whereas for many industrial organizations the ratio of current assets to fixed assets may approximate 65% to 35%, the reverse is the case for lodging companies.

This unusual relationship between fixed and current assets presents inefficiencies in the market valuation of hotels and hotel firms. The requirement to depreciate long-term assets,

for example, leads to declining property values when in fact the properties are worth considerably more. Thus for hotel firms a lack of understanding by the stock market that these assets tend to appreciate rather than depreciate would lead to asset and stock undervaluation by the market. Palmon and Seidler (1978) provided several examples of real estate related companies who, in the belief that their companies were

undervalued (because of their low stock prices), liquidated assets to demonstrate the market's inefficiency. Monumental Corporation and Koger Properties were examples of such companies.

Besides assets, the other source of value is earnings: both current and prospective. Projection of future earnings in the hotel industry has been particularly difficult in the eighties due to heightened uncertainties in the industry. Although there has been a decline in occupancy rates during the eighties there were regional differences in this trend. Also some companies improved their performance through further market segmentation inspite of the declining industry performance. Thus for external investors who depend on independent appraisers in valuing a hotel company the difficulty in generating good estimates of future cash flows undermines the valuation process.

Another factor relevant to hotel company valuation is the cash flows used in the discounted cash flow analysis. The capital structure of hotel companies typically show high leverage due to the heavy investment required in fixed assets. Therefore, the loan-to-value ratio for a hotel property can range from 70% to 90% (although this ratio has been declining recently). As a result of the high leverage, during evaluation of a prospective investment, the focus is on income before debt service and this becomes the basis for determining

cash flows. Generally, net income is the basis of cash flow determination in most businesses, and using this measure in hotel valuation severely underestimates the true value of the hotel property due to the impact of interest expense (Rushmore, 1990).

The impact of goodwill during the sale or purchase of a going-concern requires unique attention for service industries in general and hospitality companies in particular. Goodwill is enhanced by such intangible assets as franchise rights, customer lists, service management contracts, recipes and formulas, and territorial rights, all of which are important aspects of a hospitality business on a going-concern basis. Unlike the hospitality industry, in other industries these intangibles (including patents, copyrights and trademarks) are separable from the business and they have a residual value even after the business has ceased to be in operation. In such industries the value of these intangibles can be easily ascertained and correctly reflected in the valuation of the company. Where the intangibles are an inseparable part of the business, and particularly in the hospitality industry where they may represent 20%-40% of the company's total assets, the perceived value of these intangibles to management and external investors can be very divergent. For example, the quality of management and its importance in the success of a going-concern is nowhere more crucial than in a hospitality

business. A good management team can enhance the future value of a hospitality company just as a mediocre management can undermine the quality of projected earnings of the company.

Furthermore, compared to stocks of basic commodity firms, health services, utilities, and other manufacturers of non-discretionary commodities, hospitality firms' stocks (especially lodging stocks), are highly susceptible to economic changes (Arbel and Carvell, 1988). Although real estate is considered a good hedge against inflation, the share prices of real estate-related companies tend to reflect the effect of higher interest rates in a distinctly negative manner. There is the belief that although discount rates are readily adjusted upwards in the discounted cash flow analysis during inflation, the market is rather conservative regarding adjustments in earnings during such times. This leads to an unfair valuation of hotel properties and hotel firms.

In the end, there are reasons to believe that hospitality companies' stocks would be undervalued by the market during an acquisition. As a result, the premium earned by hospitality stockholders, on the average, may be expected to be lower than stocks of companies in other industries where estimates of value can be relatively easily ascertained. That is, the average abnormal returns earned by hospitality stockholders will be significantly lower than the average indicated in the

acquisition literature, since most of these studies do not include hotel and restaurant companies in their samples.

3.3.2 Research Objectives

This research provided some understanding of the acquisition phenomenon in the hospitality industry since little or no evidence exists in the hospitality literature regarding impact of acquisition on shareholder returns. Secondly, the results of the research offered a fairly precise estimate of the size of abnormal gains to hospitality shareholders in the event of an acquisition. Finally, the results addressed the perception that hospitality stocks are usually undervalued because the market fails to correctly reflect the real estate and business components of a hospitality operation.

3.4 METHODOLOGY

The market model was used to generate the abnormal returns to hospitality stockholders in an acquisition. The idea in this process was to identify a normal return for a security based on general market conditions. By comparing actual stock returns around the acquisition announcement or occurrence of a major event to the normal or predicted return, one can detect abnormal or unexpected returns that are not explained by general market movements. To the extent that

these abnormal returns are associated with the announcement, one can estimate the magnitude of the market reaction to such announcements.

3.4.1 Estimating the Abnormal Return

In order to estimate abnormal returns to stocks of target hotel and restaurant companies, the following market model was used:

$$R_{it}=\alpha_i+\beta_i R_{mt}+\epsilon_{it}$$

where,

α_i, β_i = the intercept and slope respectively of the linear relationship between the return of stock i and the returns of the general market (represented by the CRSP value-weighted indexes);

R_{it} = stochastic return on stock i on day t;

R_{mt} = stochastic return on the value-weighted market index of the CRSP data tapes;

ϵ_{it} = the residual component of stock i's return.

Previous studies have reported that average residuals for target (acquired) companies are significantly different from zero approximately up to a month prior to the acquisition

announcement (Mandelker, 1974; Halpern, 1983). Consequently, α_i and β_i were estimated in this study using 200 trading days ending 51 days prior to each announcement. That is, 150 days of stock trading, during a period relatively far removed from the period when public hints of an impending acquisition may surface, was used to develop an OLS model of "normal" trading pattern for each stock. This represented the estimation window for this study. The estimation window describes an "uneventful" trading period preceding the event window which offers a picture of the normal trading pattern of a stock. A fundamental assumption of ordinary least squares regression is a zero expectation of the residual during the estimation period.

The purpose of the estimation process is to generate the coefficients required in the OLS model for predicting stock returns. The returns to an individual stock is determined by general stock market conditions as well as conditions and events specific to the company. Thus any residual left after eliminating the impact of market conditions on the returns to the stock is attributable to the event under study.

An event window describes a trading period immediately preceding and following the announcement date of a stock acquisition. This is the period when the effects of an impending acquisition on the stock price is felt. In this study the event window around which each stock's abnormal

returns were estimated was -30 days to +30 days (30 days prior to and 30 days after each announcement). This means the event period was synchronized for all stocks in the sample regardless of the actual calendar dates of the events (announcements). Thus for all stocks, day 0 represented the event day (announcement date), day -1 was the day preceding the event, day +1 was the day after the event, and so on.

Abnormal returns, ϵ_{it}, were calculated for company i on day t as the difference between the actual return on day t during the event period and the return predicted from the market model:

$$\epsilon_{it}=R_{it}-(\hat{\alpha}_i+\hat{\beta}_i R_{mt})$$

where t denotes the t-th day relative to a merger announcement for company i. The daily stock returns are assumed to be jointly normally distributed with the market returns. The abnormal returns are also assumed normally distributed with the following characteristics: $E(\epsilon_{it})=E(\epsilon_{it}.\epsilon_{it-1})=0$ and $E(\epsilon_{it}.\epsilon_{it})=\sigma_j^2$. That is, the abnormal returns are assumed to be normally distributed with mean zero, serially uncorrelated and homoskedastic.

For each event day the average residual (abnormal return) AR_t across a sample of predictions was calculated by:

$$AR_t = \frac{1}{n}\sum \epsilon_{it}$$

where n=number of companies. These daily average residuals were summed over the event window to obtain cumulative average residuals (CAR_ts) for each day in the event window. If there are no unusual price movements surrounding the announcement date, one would expect both the daily average residuals (AR_ts) and the daily cumulative average residuals (CAR_ts) to fluctuate randomly about zero. Significant deviations from zero, thus, isolates the market's response to the acquisition announcement.

3.4.2 Sample Selection

A preliminary search identified 199 hotel and restaurant acquisition targets between the period 1980-1990. This period was selected because of the significant acquisition activity that characterized this decade in all industries. Of this number, targets that were publicly traded prior to acquisition were sorted out to form the sample for this study. To make the final sample the companies must be listed on the CRSP

(Center for Research in Securities Prices) tapes. This database contains both daily and monthly stock returns data for companies listed on the stock exchanges. Companies that have other significant events occurring around the acquisition announcement period were dropped from the sample so as not to confound the effect of the acquisition. That is, for each company in the sample the thirty days before and after the announcement date were reviewed in the Funk and Scott Index and the Wall Street Journal Index to ensure that other significant corporate events had not occurred during this period. The significant corporate events selected were company announcements of dividend increases, major management reorganization (such as CEO resignation), and financial reorganization. Any company that had at least one of these events occurring during the event window was dropped from the final sample. One company was dropped due to management reorganization. A total of 57 companies were selected for this study.

The average abnormal returns for the final sample were compared to the average of 30% often cited in the acquisition literature (Jensen, 1984; Jarrell and Poulsen, 1987) as the size of average abnormal returns accruing to target stockholders of other industrial companies.

Also the hospitality sample was separated into restaurant and hotel stocks with the objective to capturing differences

that exist between the two segments of the industry. Although restaurant and hotel companies both generally have a high fixed asset component the relative impact of these fixed assets on the market value of a restaurant is not nearly as substantial as it is on a hotel. Therefore, one would expect the restaurant stock to be less undervalued relative to the hotel stock. In other words, the size of abnormal return gains to target restaurant stockholders will be expected to approximate the average size found elsewhere in other industries while the average for hotel stockholders will be significantly lower.

3.5 HYPOTHESES

1. **Null**: The size of the additional wealth earned by restaurant and hotel shareholders in the event of an acquisition will not be significantly different from zero at the .01 level.

That is, the size of the CAR over the event window for the combined sample of restaurant and hotel target companies will not be significantly different from zero, at the .01 level of significance.

Alternate: The size of the additional wealth earned by restaurant and hotel shareholders in the event of an acquisition will be significantly different from zero at the .01 level.

Following from the consensus in the literature, it is expected that the size of the additional wealth accruing to a combined sample of hotel and restaurant target companies will be significant.

2. **Null**: There will be no difference between the size of the additional wealth accruing to hotel and restaurant shareholders and the additional wealth earned by shareholders of target non-hospitality companies, at the .01 level of significance.

That is, the size of the CAR for hotel and restaurant target companies will not be different from the average CAR of 30% from non-hospitality target companies.

Alternate: There will be a difference between the size of the additional wealth accruing to hotel and restaurant shareholders and the additional wealth earned by shareholders of target non-hospitality companies, at the .01 level of significance.

The findings reported in the real estate literature that returns to real estate assets tend to be outperformed by common stock returns, coupled with the difficulties in real estate valuation, would suggest that differences will exist in the size of the hotel and restaurant CARs compared to the non-hospitality CARs.

The comparison here will be made between the results of this study and the average CARs reported in the studies by Jensen (1984) and Jarrell and Poulsen (1987).

3. **Null**: There will be no difference in the size of the average abnormal returns to restaurant stocks compared to the average abnormal returns to hotel stocks, at the .01 level of significance. That is, the sizes of the hotel and restaurant CARs will not be significantly different from each other.

Alternate: There will be a difference in the size of the average abnormal returns to restaurant stocks compared to the average abnormal returns to hotel stocks, at the .01 level of significance.

Following the previous discussions regarding the differences in operating policies, capital structure and asset structure that generally exist between hotel and restaurant companies, it is expected that the average sizes of CARs for the hotel and restaurant samples will differ.

The following section is a presentation of the results of this study and a discussion of the results within the context of the above hypotheses.

CHAPTER FOUR

4.1 RESULTS AND DISCUSSION

4.1 Results

A total of 57 corporations were identified by the CRSP database, and complete data was available for all of them for the period 1980-1990. The breakdown of the sample of corporations was as follows: 7 hotel corporations listed on the National Association of Securities Dealers Automated Quotation System (NASDAQ), 11 hotel corporations listed on the New York Stock Exchange and the American Stock Exchange (NYSE/AMEX), 22 restaurant corporations on NASDAQ, and 17 restaurant corporations on NYSE/AMEX. Table 6 provides a list of these corporations and by exchange.

4.2 Hotel and Restaurant Sample

Table 7 provides data on the total average residuals for the portfolio of 57 stocks for each day in the event window, that is, the period t-30 through t+30. That means, for each event day t the residuals for all stocks are aggregated and divided by the number of stocks in the portfolio, 57.

TABLE 6

LIST OF CORPORATIONS BY EXCHANGE

HOTELS: NASDAQ	
Greate Bay Casino	Servico
Days Inn Corp.	American Leisure
Atlas Hotels Inc.	Caesars New Jersey
Northview Corp.	
HOTELS: NY/AM	
Ramada	Resorts International
American Motor Inns	Treadway Companies
Holiday Corp.	Wrather Corp.
Hotel Properties	Howard Johnson
MGM Grand Hotels	Motel 6 LP
Quality Inns International	
RESTAURANTS: NASDAQ	
Pizza Transit Authority	Skippers Inc.
Pizza Ventures Inc.	Diversifoods
Bonanza International	Naugles Inc.
A&M Foodservices	Hungry Tiger Inc.
Chi-Chis Inc.	Restaurant Management
Crab House Inc.	Restaurant Systems
Cindys Inc.	Shoneys South
Usacafes	Associated Hosts

American Family Pizza	American Restaurant Corp.
Flakey Jakes Inc.	Furrs Cafeterias
Nathans Famous Inc.	Hamburger Hamlets
RESTAURANTS: NY/AM	
Host International	Ginos Inc.
Pizza Inn	Hardees Food System
Carrolls Corp.	Lifestyle Restaurant
Church's Fried Chicken	Ponderosa
Denny's Inc.	Restaurant Associates
El Torito Restaurant	Saga Corporation
Florida Capital Co.	Specialty Restaurant Co.
Foodmaker	TGI Fridays Inc.
Valles Steak House	

TABLE 7

HOTELS AND RESTAURANTS DAILY AVERAGE RESIDUALS

AND SIGNIFICANCE BY EVENT DAY

Event day	Average Residual	T-statistic
-30	0.71	1.52
-29	-0.15	-0.33
-28	-0.96	-2.07
-27	-0.19	-0.40
-26	0.76	1.63
-25	-0.28	-0.60
-24	1.29	2.76
-23	0.08	0.16
-22	0.77	1.65
-21	-0.28	-0.60
-20	0.08	0.17
-19	-0.07	-0.16
-18	-0.60	-1.27
-17	0.53	1.14
-16	-0.43	-0.92
-15	0.25	0.54
-14	0.16	0.34
-13	-0.28	-0.61
-12	0.39	0.84
-11	-0.90	-1.93

-10	-0.29	-0.61
-9	0.31	0.66
-8	0.26	0.56
-7	0.84	1.79
-6	0.52	1.12
-5	0.16	0.34
-4	-0.38	-0.82
-3	0.50	1.08
-2	1.38	2.97
-1	8.10	17.35
0	3.58	7.67
1	0.33	0.70
2	-0.15	-0.32
3	-0.49	-1.05
4	-0.09	-0.20
5	0.32	0.68
6	-0.11	-0.23
7	0.39	0.83
8	-0.68	-1.46
9	0.49	1.06
10	0.17	0.36
11	0.21	0.45
12	0.50	1.08
13	0.33	0.71

14	0.04	0.09
15	0.14	0.30
16	0.09	0.19
17	-0.09	-0.20
18	0.05	0.10
19	0.12	0.26
20	-0.06	-0.13
21	0.03	0.07
22	-0.74	-1.59
23	-0.06	-0.13
24	-0.56	-1.21
25	0.46	0.99
26	-0.15	-0.33
27	-0.36	-0.77
28	0.65	1.39
29	-0.51	-1.09
30	0.22	0.47

Table 7 shows that from the beginning of the event period until two days before the announcement date, that is day -2, the average daily residuals for the portfolio of all stocks was less than 1% each day, except for day -24 (the average residual for this day was 1.29%). The t-statistic at the 0.01 level of significance also shows the average daily residuals to be not significantly different from zero from day -30 to -3, except for day -24. The critical value for the t at the .01 level is 2.39 (two-tail). These results show that the actual stock returns for this portfolio of stocks were not different from what was to be expected during the pre-announcement days before day t-2. In the post-announcement period, t+1 through t+30, the daily abnormal returns earned by the portfolio of stocks did not exceed 0.65% each day.

These residuals are obtained by first, estimating the actual returns for each stock in the portfolio for each given day. For security i on a trading day t the return r is determined as the change in the total dollar value of an investment in that security per dollar of initial investment. The residual for that stock is estimated by subtracting the predicted value of the return from the actual return,

$$R_{it}=r_{it}-E(r_{it})$$

where,

$$E(r_{it}) = \alpha_i + \beta_i R_{mt}$$

For each event day the residuals for all the stocks in the portfolio are estimated and an average residual for the portfolio is calculated by,

$$AR_p = \frac{(R_{1t} + R_{2t} + R_{3t} + \ldots\ldots + R_{it})}{it}$$

Table 8 provides data on cumulative average residuals from day t-30 through day t+30. The cumulative average residuals for the entire portfolio is less than 2.8% from t-30 through t-3. Noticeable increase occurs on day t-2, an almost one and a half times increase in the cumulative average residual from the previous day although this increase remains not significant. There is an almost 300% increase in the cumulative average residual the day before the announcement (t-1). By the announcement day shareholders had earned 15.86% in excess returns with most of it occurring between day t-2 through day 0 (see Figure 1).

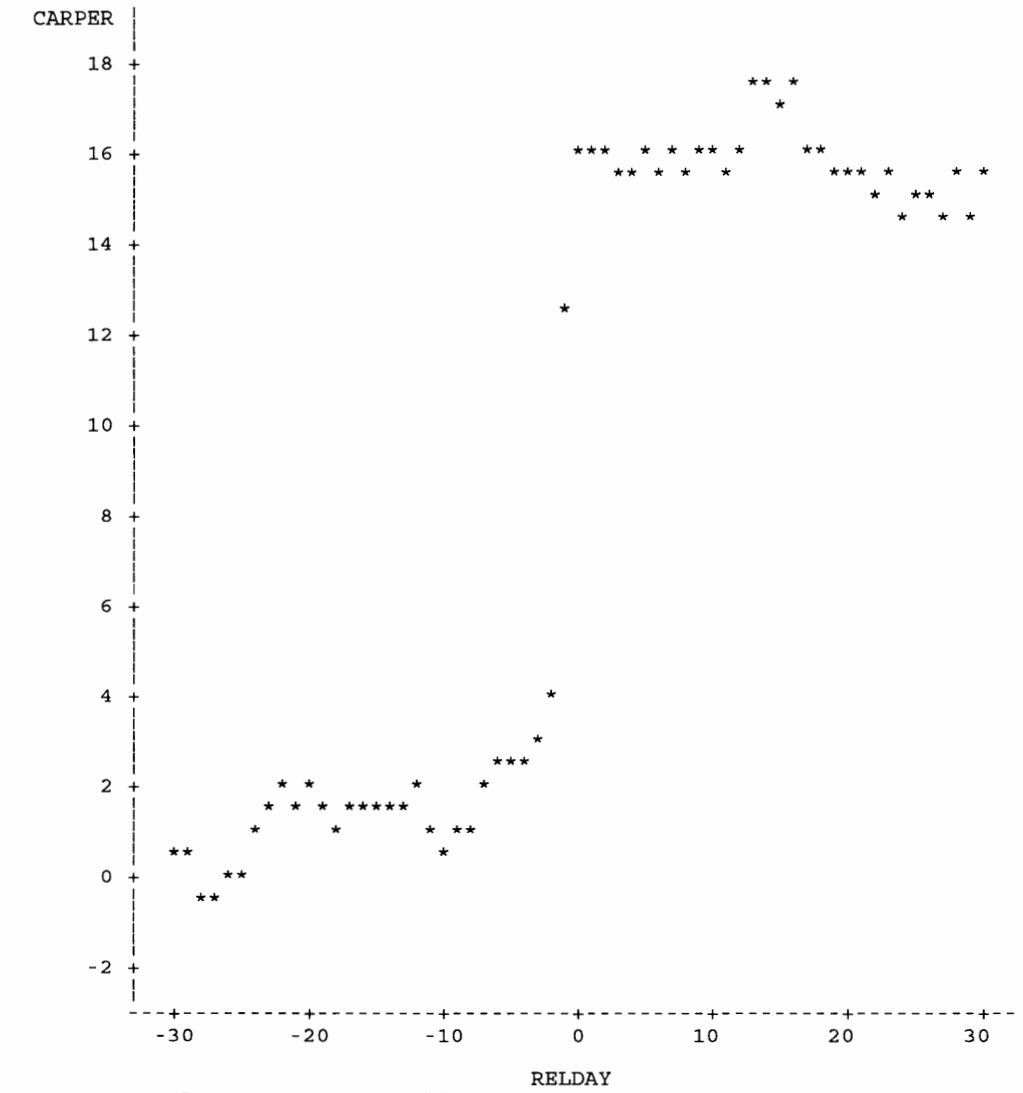
TABLE 8

HOTELS AND RESTAURANTS CUMULATIVE AVERAGE RESIDUALS AND SIGNIFICANCE BY EVENT DAY

Event day	Cumulative ave. residual	T-statistic
-30	0.71	1.08
-29	0.56	0.69
-28	-0.41	-0.44
-27	-0.59	-0.57
-26	0.16	0.14
-25	-0.11	-0.09
-24	1.17	0.89
-23	1.25	0.89
-22	2.02	1.37
-21	1.74	1.12
-20	1.82	1.12
-19	1.74	1.04
-18	1.15	0.66
-17	1.68	0.93
-16	1.25	0.67
-15	1.51	0.78
-14	1.66	0.84
-13	1.38	0.68
-12	1.77	0.85
-11	0.87	0.41

-10	0.58	0.27
-9	0.89	0.40
-8	1.15	0.50
-7	1.99	0.85
-6	2.51	1.06
-5	2.67	1.10
-4	2.29	0.93
-3	2.79	1.11
-2	4.18	1.63
-1	12.28	4.72
0	15.86	6.01
1	16.18	6.03
2	16.03	5.89
3	15.54	5.63
4	15.45	5.52
5	15.77	5.55
6	15.66	5.44
7	16.05	5.51
8	15.37	5.21
9	15.86	5.31
10	16.03	5.30
11	15.53	5.07
12	16.19	5.23
13	17.49	5.58

14	17.72	5.60
15	17.10	5.34
16	17.47	5.40
17	16.09	4.92
18	16.06	4.86
19	15.41	4.62
20	15.63	4.64
21	15.58	4.59
22	14.92	4.35
23	15.45	4.46
24	14.35	4.11
25	15.25	4.33
26	14.84	4.17
27	14.32	3.99
28	15.25	4.22
29	14.35	3.94
30	15.47	4.21



CARPER = Cumulative Average Residual
RELDAY = Event Day

FIGURE 1
Scatterplot of Residuals : All Companies

In the post-announcement period (t+1 through t+30) there are marginal fluctuations in the cumulative residuals until t+17 when the cumulative average residuals decline slightly. The cumulative average residual for the entire event period, t-30 to t+30, was 15.47%, with most of it occurring two days before the announcement of the acquisition. This CAR is significantly different from zero at the .01 level of significance (t_{obs} 4.21 > t_c 2.39). Therefore, hypothesis 1 is rejected.

With regard to the difference between the CAR for the hotel and restaurant (aggregate) sample versus the CAR from previous studies using non-hospitality companies, the difference between 30.00% and 15.47% was found to be statistically significant at the .01 level. Therefore, hypothesis 2 is also rejected.

Table 9 provides a summary of the cumulative daily average residuals by 10-day intervals. This is done only as a means of consolidating the data from the entire event window, and focusing attention on specific intervals in the event window where the abnormal returns are concentrated. The cumulative average residuals for the ten days preceding the event day is 11.41% which is significant at the .01 level. Although positive average residuals characterize these ten days only the average residuals from days -2 and -1 are significant. In the days following the announcement there is

TABLE 9

SUMMARY OF HOTEL AND RESTAURANT CUMULATIVE DAILY AVERAGE RESIDUALS BY TEN-DAY INTERVALS

Event days	Cumulative ave. residuals	T-statistic
-30 to -21	1.74%	1.12
-20 to -11	-0.87%	0.58
-10 to -1	11.41%	3.19
0 to +9	3.58%	2.43
+10 to +19	-0.45%	0.30
+20 to +30	0.06%	0.04

an equal number of days with negative and positive average residuals, and although the 10-day period between day 0 and day t+9 show a 3.58% cumulative average residual significant at the 0.01 level, the bulk of the residual was earned on day 0. The t-statistic for the ten-day cumulative average residual was estimated as follows:

$$t_{CAR} = \frac{n\text{-}dayCAR}{SD_{AR}\sqrt{n}}$$

where n-day CAR represents the cumulative average residual for the ten-day period, SD_{AR} is the standard error of the daily average residuals, and n represents the ten-day window. For example, the t-statistic for day t-20 to day t-11 was estimated thus:

$$t = \frac{0.87}{(\sqrt{10})\,0.4668} = 0.58$$

Table 10 shows data on the percentage of daily security returns in the portfolio of stocks which were less than their predicted market return on each event day, with accompanying z values. The expectation is that for each day the residuals of the companies will be evenly split, 50% of the companies will show positive residual and 50% will show negative

TABLE 10

PERCENTAGE OF DAILY RETURNS LESS THAN

THE MARKET PREDICTED RETURNS: HOTELS AND RESTAURANTS

Event Day	Percentage of Returns	Z Statistic
-30	54.00	0.57
-29	58.00	1.13
-28	72.00	3.11
-27	60.00	1.41
-26	44.90	-0.71
-25	55.10	0.71
-24	46.00	-0.57
-23	62.00	1.70
-22	56.00	0.85
-21	60.00	1.41
-20	56.00	0.85
-19	44.00	-0.85
-18	64.00	1.98
-17	50.00	0.00
-16	60.00	1.41
-15	54.00	0.57
-14	50.00	0.00
-13	58.00	1.13
-12	44.00	-0.85

-11	62.00	1.70
-10	46.00	-0.57
-9	48.00	-0.28
-8	44.00	-0.85
-7	44.00	-0.85
-6	48.00	-0.28
-5	48.98	-0.14
-4	63.27	1.86
-3	51.02	0.14
-2	48.94	-0.15
-1	28.89	-2.83
0	36.96	-2.38
1	46.67	-0.45
2	52.17	0.29
3	56.52	0.88
4	60.87	1.47
5	50.00	0.00
6	53.33	0.45
7	43.18	-0.90
8	63.64	1.81
9	52.17	0.29
10	45.65	-0.59
11	52.27	0.30
12	45.65	-0.59

13	47.83	-0.29
14	55.56	0.75
15	48.89	-0.15
16	51.11	0.15
17	66.67	2.24
18	53.33	0.45
19	44.44	-0.75
20	55.56	0.75
21	59.09	1.21
22	57.78	1.04
23	47.62	-0.31
24	66.67	2.16
25	56.10	0.78
26	58.54	1.09
27	65.85	2.03
28	31.71	-2.34
29	70.73	2.65
30	56.10	0.78

residuals. Although the percentages will vary from 50% they are not expected to be significantly different from 50%. When they are significantly different from zero that is an indication that the behavior of the market on that day is non-random. That is, the market in reaction to an event has decidedly priced a stock higher than its predicted value. Given this, it is expected that the percentage of daily returns that are less than the market predicted returns (that is negative residuals) will be significantly less than 50% as the event day draws closer. Event days t-1 and t0 show percentage of negative returns as 28.89% and 36.96% respectively. Their z values of -3.44 and -2.38 are both significant at the .01 level.

In thirty-eight of the sixty-one event days there were more negative residuals than there were positive residuals from the portfolio. This shows that 62.3% of the time the actual market returns fell short of their predicted returns. During the post-announcement period, event days t+1 to t+30, there were twenty-one days with more negative residuals than positive. During the pre-announcement period, event days t-30 to t-1, eighteen days showed more negative residuals than positive. Most of the days with positive residuals occurred ten days before the announcement, that is, eight of the ten days showed positive residuals.

TABLE 11

RESTAURANT DAILY AVERAGE RESIDUALS AND SIGNIFICANCE

BY EVENT DAY

Event day	AR	T statistic	CAR	T statistic
-30	0.87	1.30	0.87	0.92
-29	-0.15	-0.22	0.72	0.62
-28	-0.63	-0.94	0.09	0.06
-27	-0.38	-0.56	-0.29	-0.19
-26	0.66	0.99	0.37	0.23
-25	0.36	0.53	0.73	0.41
-24	0.56	0.84	1.29	0.68
-23	0.04	0.07	1.34	0.67
-22	1.37	2.05	2.71	1.28
-21	-0.64	-0.95	2.07	0.93
-20	0.27	0.40	2.34	1.01
-19	-0.52	-0.78	1.82	0.75
-18	-0.97	-1.45	0.84	0.34
-17	0.28	0.42	1.12	0.43
-16	-0.20	-0.30	0.92	0.34
-15	0.24	0.36	1.16	0.42
-14	0.12	0.18	1.29	0.45
-13	-0.36	-0.54	0.93	0.32
-12	0.59	0.88	1.51	0.51
-11	-1.02	-1.53	0.49	0.16

-10	-0.31	-0.46	0.18	0.06
-9	1.03	1.53	1.21	0.38
-8	0.22	0.33	1.43	0.43
-7	0.65	0.98	2.08	0.62
-6	0.33	0.50	2.41	0.71
-5	-0.06	-0.09	2.35	0.68
-4	-0.63	-0.94	1.72	0.49
-3	0.59	0.89	2.32	0.64
-2	0.24	0.36	2.56	0.70
-1	7.36	11.01	9.92	2.66
0	2.62	3.92	12.54	3.31
1	-2.01	-3.00	10.54	2.74
2	-0.21	-0.31	10.33	2.65
3	-0.56	-0.83	9.77	2.47
4	-0.19	-0.28	9.58	2.39
5	0.31	0.46	9.89	2.43
6	-0.59	-0.88	9.30	2.26
7	0.30	0.45	9.60	2.30
8	-0.86	-1.28	8.75	2.07
9	0.54	0.81	9.28	2.17
10	0.03	0.04	9.31	2.15
11	0.47	0.71	8.92	2.03
12	0.48	0.72	9.55	2.15
13	0.84	1.26	11.03	2.46

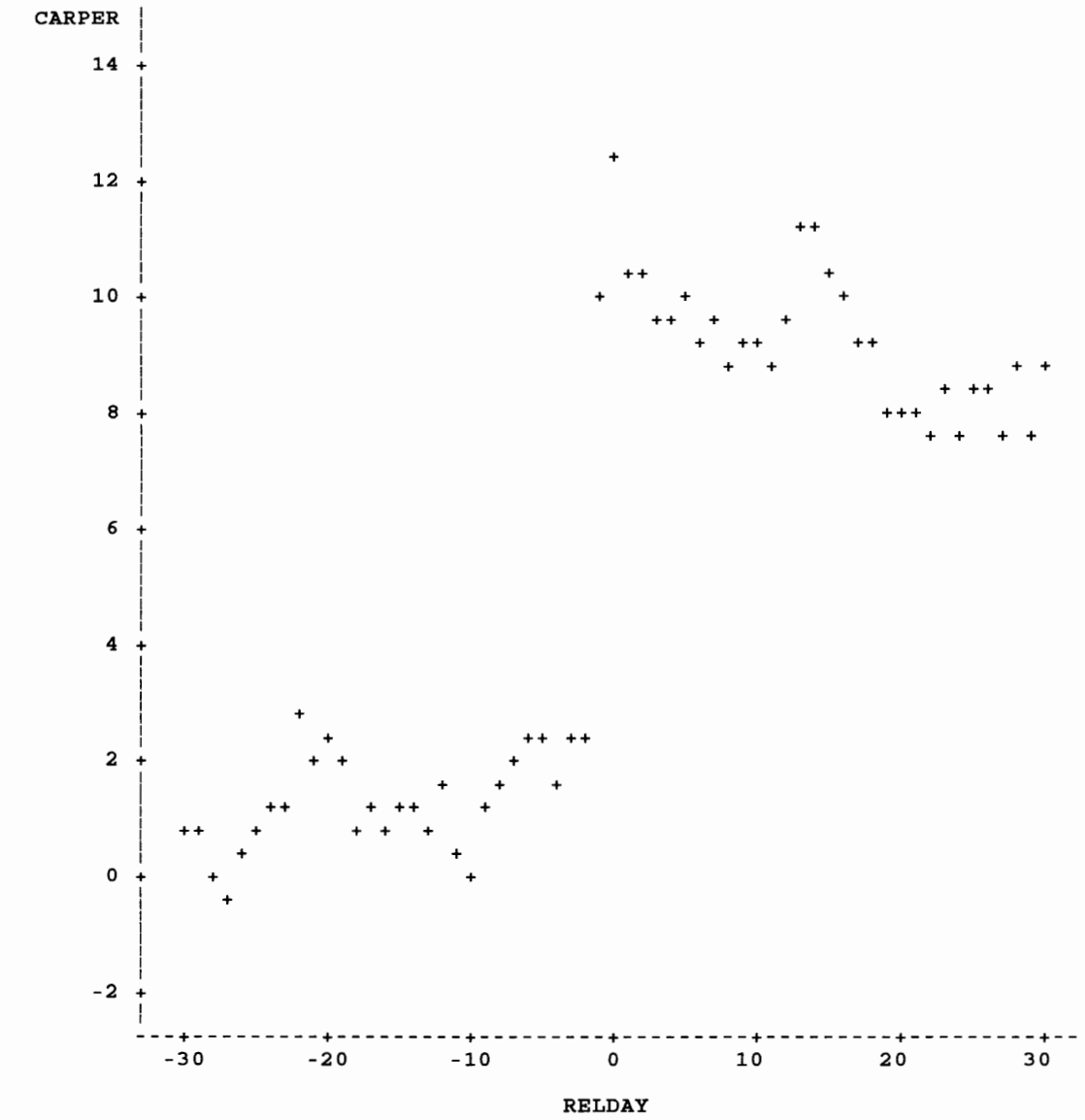
14	-0.23	-0.34	11.17	2.46
15	-0.09	-0.13	10.42	2.27
16	0.08	0.12	10.15	2.19
17	-0.32	-0.48	9.27	1.98
18	0.03	0.05	9.26	1.96
19	-0.03	-0.05	7.85	1.64
20	-0.32	-0.47	8.18	1.69
21	0.19	0.28	8.10	1.66
22	-0.94	-1.40	7.68	1.56
23	-0.15	-0.22	8.51	1.71
24	-0.66	0.98	7.57	1.51
25	0.67	1.01	8.44	1.67
26	0.07	0.10	8.27	1.62
27	-0.43	-0.64	7.72	1.50
28	0.89	1.34	8.97	1.73
29	-0.75	-1.12	7.64	1.46
30	0.20	0.30	8.86	1.68

AR - Average residual, CAR - Cumulative average residual

Table 11 shows the daily average residuals and significance by event day for the thirty-nine restaurant corporations in the restaurant portfolio.

4.3 Restaurants

From the beginning of the event period through day t-2 all the daily average residuals were less than 1% except days t-22, t-11 and t+19. Consequently, none of the average daily residuals were significantly different from zero. Significant abnormal returns, however, occurred on days t-1, t0 and t+1, and these returns were equal to 7.36%, 2.62% and -2.01% respectively. That is, the day after the announcement there was a significant loss in returns. None of the daily average residuals in the post-announcement period (beginning from day t+2) was equal to or exceeded 1%, indicating that the post-announcement residuals were not significantly different from zero. The cumulative average residuals from day t-30 through day t-2 is less than 2.6% and not significantly different from zero (see Figure 2). There is an almost 400% increase in the cumulative average residuals from day t-2 to day t-1. Day t-1 showed the highest average daily residual of 7.36% in the entire event period. By the announcement day, day t0, shareholders have earned 12.54% in excess returns with most of it occurring 2 days before the announcement. More than half of the 28 days of negative daily average residuals occurred in



CARPER = Cumulative Average Residual
RELDAY = Event Day

FIGURE 2

Scatterplot of Residuals : Restaurants

the post announcement period (17 of the 28 days) resulting in fluctuations in the cumulative average residuals. The cumulative average residual for the entire event period, t-30 to t+30, was 8.36%, which is significantly different from zero at the .05 level.

With regard to the percentage of daily returns that are less than the expected market returns, days t-1 and t0 showed 28.9% and 37.0% negative residuals respectively and they were significant at the .05 level.

The ten-day summary of daily average residuals for the restaurant stocks, Table 12, confirms that all the significant activity in stock price movement occurred in the twenty day window surrounding the event day, with most of it during days t-1 and t0.

TABLE 12

SUMMARY OF RESTAURANT CUMULATIVE DAILY AVERAGE RESIDUALS

BY TEN-DAY INTERVALS

Event days	Cumulative ave. residuals	T statistic
-30 to -21	2.07%	0.93
-20 to -11	-2.22%	-1.50
-10 to -1	8.41%	5.70
0 to +9	7.81%	5.30
+10 to +19	-1.00%	-0.68
+20 to +30	-0.40%	-0.27

TABLE 13

HOTEL DAILY AVERAGE RESIDUALS AND SIGNIFICANCE

BY EVENT DAY

Event day	AR	T statistic	CAR	T statistic
-30	0.41	0.63	0.41	0.45
-29	-0.16	-0.25	0.24	0.22
-28	-1.61	-2.51	-1.37	-1.06
-27	0.18	0.28	-1.18	-0.82
-26	0.94	1.46	-0.25	-0.16
-25	-1.48	-2.29	-1.72	-1.01
-24	2.70	4.19	0.98	0.54
-23	0.14	0.21	1.11	0.58
-22	-0.40	-0.62	0.71	0.35
-21	0.41	0.64	1.12	0.53
-20	-0.29	-0.45	0.84	0.38
-19	0.80	1.25	1.64	0.71
-18	0.14	0.21	1.77	0.74
-17	1.02	1.59	2.80	1.12
-16	-0.87	-1.35	1.93	0.75
-15	0.27	0.42	2.20	0.83
-14	0.23	0.36	2.43	0.89
-13	-0.13	-0.21	2.30	0.82
-12	0.01	0.01	2.31	0.80
-11	-0.67	-1.04	1.64	0.56

-10	-0.24	-0.38	1.39	0.46
-9	-1.09	-1.69	0.31	0.10
-8	0.35	0.54	0.66	0.21
-7	1.19	1.85	1.85	0.57
-6	0.90	1.40	2.74	0.84
-5	0.61	0.94	3.35	1.00
-4	0.13	0.20	3.48	1.02
-3	0.32	0.49	3.79	1.10
-2	3.82	5.94	7.61	2.16
-1	9.73	15.13	17.34	4.84
0	5.78	8.98	23.12	6.35
1	5.49	8.54	28.61	7.74
2	-0.03	-0.04	28.58	7.62
3	-0.36	-0.56	28.23	7.42
4	0.11	0.17	28.33	7.34
5	0.33	0.52	28.67	7.33
6	0.87	1.35	29.53	7.45
7	0.57	0.89	30.11	7.50
8	-0.30	-0.47	29.81	7.33
9	0.40	0.62	30.21	7.33
10	0.46	0.72	30.67	7.36
11	-0.30	-0.46	29.96	7.10
12	0.55	0.85	30.67	7.19
13	-0.72	-1.12	31.57	7.32

14	0.58	0.90	31.96	7.33
15	0.60	0.93	31.62	7.17
16	0.10	0.16	33.20	7.45
17	0.36	0.57	30.87	6.86
18	0.07	0.11	30.80	6.77
19	0.42	0.66	31.62	6.88
20	0.45	0.71	31.67	6.83
21	-0.30	-0.47	31.65	6.76
22	-0.35	-0.55	30.50	6.45
23	0.12	0.18	30.48	6.39
24	-0.38	-0.58	29.08	6.04
25	0.06	0.09	30.01	6.18
26	-0.58	-0.91	29.16	5.95
27	-0.23	-0.36	28.69	5.81
28	0.17	0.27	29.00	5.82
29	-0.05	-0.08	28.94	5.76
30	0.25	0.40	29.86	5.90

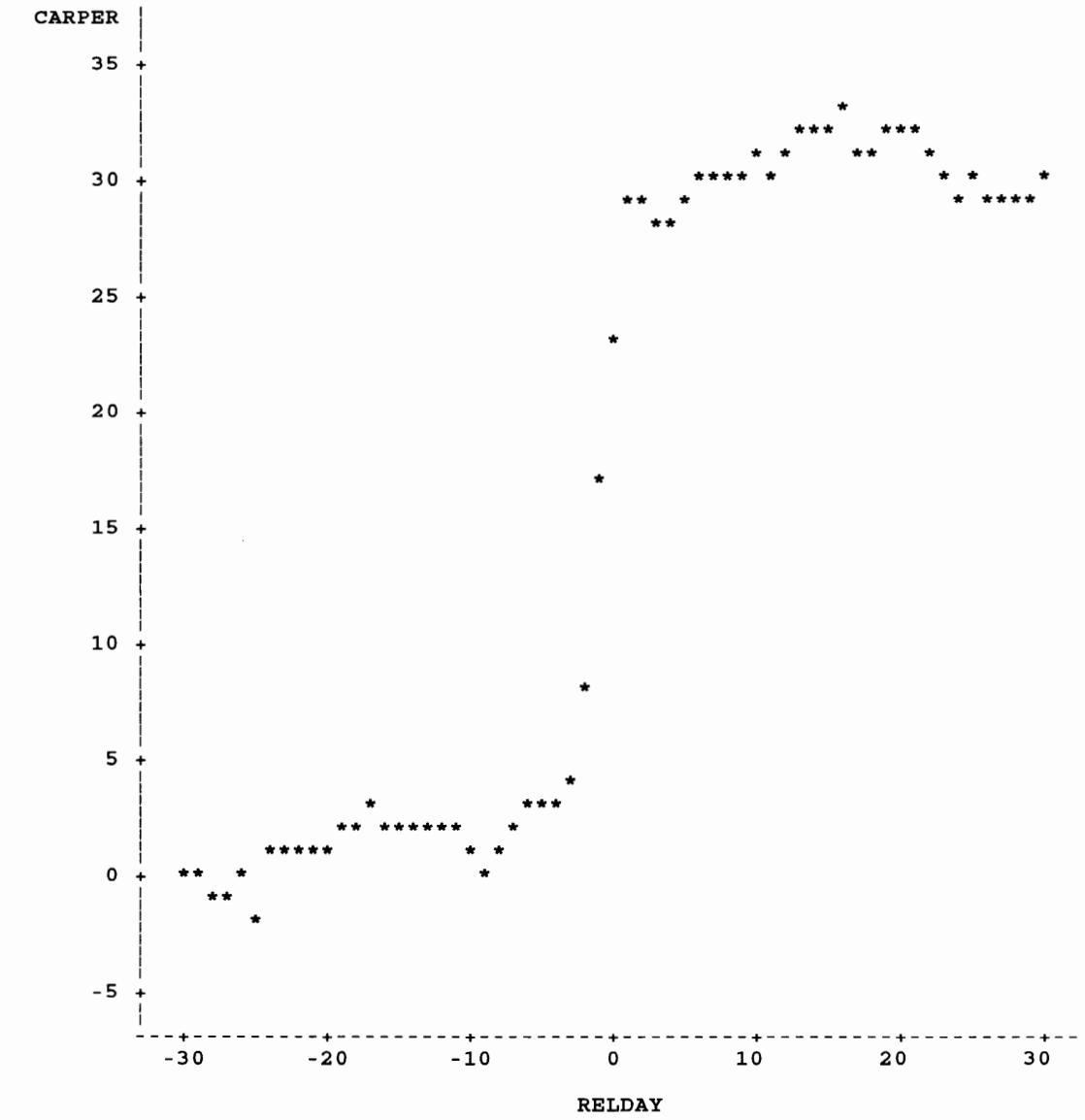
4.4 Hotels

The total cumulative average residual for hotels from day t-30 to day t+30 is 29.86% (Table 13). This hotel CAR of 29.86% is significantly different from the restaurant CAR of 8.86 at the .01 significance level (t_{obs} 16.01). Therefore, hypothesis 3, which stated that there will be no difference between the hotel and restaurant CARs, is rejected. During the pre-announcement period only two days, days t-28 and t-24, had significant residuals (.01 level), all other daily average residuals were not significantly different from zero.

Two days before the announcement there was more than a 200% increase in the cumulative average residuals (7.61% to 17.34%). There were significant increases in average residuals during the announcement day itself and the day after (see Figure 3). In the entire sixty day window only 21 days showed negative average daily residuals and these were evenly split between the pre- and post-announcement periods.

Abnormal Returns to Shareholders of Target Firms: Evidence from Previous Studies

Shareholders of target firms clearly benefit from acquisitions. Jarrell and Poulsen (1987) provided a breakdown of the estimated value of additional wealth (abnormal returns) created in 663 successful takeovers from 1962 to 1985 from non-hospitality industries (Table 14). They found that



CARPER = Cumulative Average Residual
RELDAY = Event day

FIGURE 3
Scatterplot of Residuals : Hotels

TABLE 14

COMPARISON OF CUMULATIVE ABNORMAL RETURNS: HOSPITALITY FIRMS VERSUS NON-HOSPITALITY FIRMS

Industries	Average CARs
Non-Hospitality (1980-1985)	30.00%[1]
All Hospitality (1980-1990)	15.47%
Hotels (1980-1990)	29.86%
Restaurants (1980-1990)	8.86%

[1] Source: Jarrell and Poulsen (1987).

abnormal returns averaged 19% in the 1960s, 35% in the 1970s, and 30% from 1980 to 1985. These results are consistent with findings by Jensen and Ruback (1983) in a review of 13 studies published between 1977 and 1983. Similar results were found in 93 leveraged buyouts that took place between 1980 and 1984, where Lehn and Poulsen (1987) found abnormal returns of 21% to target shareholders. Deangelo, Deangelo and Rice (1984) also found an average of 27% abnormal returns in leveraged buyouts occurring between 1973 and 1980.

A comparison of the results from this study to previous studies shows that as a whole the hospitality firms' shareholders in this sample of acquisition targets earned about half of the cumulative abnormal returns earned by other non-hospitality shareholders. When the hospitality group is separated into hotels and restaurants then it is clear that the shareholders of hotel companies fared just as well as shareholders of non-hospitality stocks. That is, there is no significant difference between the hotel group's cumulative average residual of 29.86% and 30.00% for non-hospitality companies. However, the restaurant sample shows an overall cumulative average residual for the entire event window that is significant at the .05 level but not at the .01 level. The restaurant shareholders earned about a third of the cumulative abnormal returns earned by the hotel shareholders.

CHAPTER 5

CONCLUSIONS

Questions regarding the impact of acquisition on the value of the participating companies have occupied the attention of researchers during the past two decades, especially during the eighties. In response to these questions, many empirical studies have been conducted using companies in the aggregate and focusing on the size of additional wealth created as a result of such transactions. This has left unanswered the question of whether there will be differences in the size of additional shareholder wealth created in specific industries compared to an aggregate sample of all companies. Due to the impact of the real estate component in the valuation of their businesses, the hotel and restaurant industries present a unique set of circumstances warranting a study into the shareholder wealth effects of acquisitions on the wealth of target shareholders.

This study estimated and examined the cumulative abnormal returns to 39 restaurant and 19 hotel target companies acquired between 1980 and 1990. All the companies were listed on the New York Stock Exchange, the American Stock Exchange and the NASDAQ. Stock return data for the companies were obtained from the CRSP database. The CARs were estimated for the restaurant and hotel companies separately, and then for

the aggregate sample of hotel and restaurant companies using event study analysis.

The results show that shareholders of target restaurant stocks earned 8.86% cumulative abnormal returns over a period of thirty days before and after the announcement of the acquisition. Hotel shareholders, on the other hand, earned 29.86% cumulative abnormal returns, while the size of the abnormal returns to the aggregate sample was 15.47%. The size of the CARs for the aggregate sample and the hotel sub-group were significant at the .01 level while the restaurant CAR was significant at the .05 level. The difference between the hotel and restaurant CARs was also significant at the .01 level. The size of the CAR for the aggregate sample was about half the size of the CAR found using non-hospitality companies.

Target shareholders of restaurant stocks receive significantly positive additional wealth yet the size is nowhere near what is received by non-hospitality and hotel shareholders. As an aggregate sample the hotel and restaurant stocks earned about half the additional wealth earned by hotel shareholders. Therefore, the industry effect on the size of CARs appears important in this study. Based on the significant difference between the hotel and restaurant returns, it may be concluded that the magnitude of the cumulative average residuals for target shareholders in an

acquisition depends on whether the stock is a hotel or restaurant stock. A reason that may explain the relatively poor performance of restaurant stocks is their persistent high failure rate. The restaurant industry (eating and drinking places) was consistently the one segment in the retail sector with the highest failure rates throughout the eighties (Kwansa and Parsa, 1991). This in turn diminishes the expectations of future growth opportunities, and investors reflect this perception in their valuation of the restaurant stock prior to an acquisition.

Contrary to the expectation of this study there appears to be no consistent undervaluation of the hotel and restaurant stocks, thus the stock market can be considered efficient in valuing these stocks. That is, whereas the real estate component in hotel business may be a factor in attracting potential acquirers to target companies, the market is sufficiently efficient not to allow these shareholders to make any more or less additional wealth than occurs in the stock market generally. This will suggest that in comparing real estate to other investment classes, real estate returns generally would equal common stock returns.

Another consequence of the study is in regard to portfolio management. The real estate literature shows studies that confirm that real estate returns are usually negatively correlated to common stock returns (Zerbst and

Cambon, 1984; Firstenberg et.al., 1988). Coupling this knowledge with the results from this study that show no difference in the CARs of hotels versus non-hospitality firms, one may suggest that hotel stocks can indeed be an important diversification element in a portfolio of stocks because of their ability to add comparable returns without significantly increasing the total variability of the portfolio's returns.

Future research should examine the factors which render restaurant companies targets of acquisitions to see their differences from the factors that determine hotel acquisition targets. Besides the high failure rate there may be other factors that explain the relatively low performance of the restaurant stocks.

5.1 Implications of study

The method of event study analysis used in this study has relevance to many research problems in the hospitality field. It is well-suited to the investigation of the impact of discrete events where some objective way is available for measuring such impact. Such events may be industry-wide such as the passage of legislation like the reduction in the meal deduction rate, or changes in the federal minimum wage rates, and many more. Other events may be more specific to a company, such as the recent spin-off by Marriott Corporation, or the food poisoning scare involving the Jack-in-the-box

company. The monitoring and analysis of these events are made possible using this method because one of the characteristics of the equity market is that all public information is taken into account and reflected in a company's stock price. That is, investors immediately reflect their reaction to an event, adverse or otherwise, through their demand and supply decisions for a stock thereby affecting the size of the shareholder return.

Another implication of this study is that, on average, acquisitions are value-creating transactions for the target firms, and attempts at preventing their occurrence through antitakeover measures in corporate charters may be a disservice to target shareholders.

5.2 Limitations of the study

As with many studies using hotel and restaurant samples there are not many publicly traded companies, and as a result the pool of potential target corporations involved in acquisitions is even smaller. Inspite of the very low probabilities (.01) for Type I error it may not be possible to consider the samples of hotel and restaurant companies as representative of their industries. The corollary to that observation is whether the results of this study can be generalizable to the hospitality industry. Several more such studies are necessary for a consensus to be developed

regarding the impact of acquisition on shareholder wealth in the hotel and restaurant industries.

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He has published several articles in scholarly journals and made presentations at several national hospitality conferences. Some of his honors and awards include Virginia Tech Excellence in Teaching, Virginia Tech Affirmative Action Award, HRIM Faculty of the Year and two nominations for the Virginia Tech Excellence in Undergraduate Advising Award.

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