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## AN EVENT STUDY OF THE DELISTING OF HOSPITALITY STOCKS IN THE UNITED STATES

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**ABSTRACT.** Managers make important corporate strategic investment decisions such as mergers and acquisitions to improve the long-term competitiveness of their organizations; while at times they may be forced to manage for the short-term in order to satisfy the demands from the stock market. However, there is a lack of empirical research to examine the short- versus long-term view of management decision-making. This study analyses the mergers and acquisitions activities in the hospitality industry and particularly, investigates delisting behaviour of publicly traded hospitality firms and whether companies exhibit distinct patterns before delisting. Consolidation is prevalent in a maturing industry such as hospitality which currently faces a fiercely competitive global environment. The results of the study show that there is substantial difference between hospitality and non-hospitality stocks: not much information leakage in the delisting of hospitality stocks and a marked increase in institutional holdings with time but significant information leakage in non-hospitality stocks as reflected by positive and significant abnormal returns.

### INTRODUCTION

World Travel & Tourism Council TSA Research Report (2013) estimated that the tourism industry's economic contribution, directly and indirectly in 2012 was over \$1.3 trillion or 8.6% of the national GDP and the industry currently employs more than 14 million workers, or 10% of total U.S. employment. This implies that hospitality and tourism industry is one of the major income and employment generating industries in the U.S. Thus, it is critical to study the financial characteristics and performance of securities in this important industry.

Corporate acquisitions have become one of the crucial strategic weapons to achieve instant

growth in the hospitality industry despite the fact that some companies have experienced declining post-acquisition performance that has reduced shareholder wealth (Sirower, 1997; Borde, Byrd, & Atkinson, 1999). Abe Tarasofsky (1990) determined that approximately 40% of acquired firms experience improved performance, approximately 40% experience deteriorating performance, and approximately 20% experience no change in performance. In a study using stock market and accounting data examining the impact of industry concentration through acquisitions, he concluded that acquisitions are not a particularly good way to promote corporate efficiency. Kim and Arbel

(1998) found that acquisitions have had a significant influence on the structure of the hotel industry today. Decades ago, independent hotel chains were more prominent, today large public corporations dominate the lodging industry. This is due to the large number of consolidations, mostly via mergers and acquisitions (M&A), that have taken place.

This study analyzes the events in the context of hospitality stocks and compares the results with that of the general market and this would provide additional information about the characteristics of hospitality stocks. This has strong implication for the management of hospitality companies. Specifically, this study is significantly different from the finance and hospitality literature in several ways: (a) the study covers all hospitality stocks (hotels and restaurants) listed in NYSE, AMEX, and NASDAQ; (b) the study period is from 1981 to 2010, a relatively longer period of investigation compared to prior studies; (c) the study examines the delisting of hospitality stocks; (d) this study sheds light on the impact of institutional investors on hospitality stocks as institutional investors become increasingly important source of financing for hotels and restaurants seeking to expand; and (e) the study addresses the issue of information leakage in the event study as it is one of the most interesting events documented in the finance literature (Brown, Harlow, & Tinic, 1988). This study analyzes this event in the context of hospitality stocks and compares the results with that of the general market and provides additional information about the characteristics of hospitality stocks. This has strong implications for the management of hospitality companies.

## LITERATURE REVIEW

### Pros and Cons of Consolidation

Combining two separate organizations into a larger corporate entity has brought both benefits and problems. McCann (1996) identified seven major benefits that acquisitions provide service companies: (a) increased market share, (b) increased capacity to offer

new products/services, (c) improvements in brand & reputation, (d) improved efficiency in resource allocations, (e) increased scale economies, (f) an enlarged asset base, and (g) acquisition of management expertise.

Similarly, acquisitions have brought advantages to hospitality companies operationally. A public hotel company gains instant increase in revenues from acquiring existing properties than building new hotels; provides quick entry into new geographical regions and new market segments, such as Marriott's entry into the Asian upscale hotel market through its purchase of Renaissance Hotels; or even facilitate entry into related businesses such as gaming. Additionally, consolidation is good because there are so many fixed costs associated with operating hotels. In addition to traditional benefits-including lower overhead, larger companies can operate in a more cost-efficient manner and invest more capital in operations. The benefits include pooling resources of the acquiring and acquired companies, reducing redundant staff, enhancing purchasing power, sharing loyalty programs and improving marketing efforts through combined customer databases and reservations systems (Nigro, 1998).

On the drawbacks, hotel companies run the risk of making their chains overly homogenous, and of sacrificing quality and hospitality as they grow bigger. For this reason, some customers have become more attracted to boutique hotels such as Kimpton Group. As is true with mergers and takeovers in any business, hospitality industry has its share of problems, in terms of personnel and assets that no longer fit.

### Consolidation in the Hospitality Industry—The Last Thirty Years

Content analysis of the published articles regarding mergers and acquisitions activities/transactions for the last three decades as the hospitality industry has evolved was conducted. Data on acquisition and merger activities in the hospitality industry was obtained from the quarterly publications of *Mergers and Acquisitions* from 1980 to 2010. We found that M&A

activities in hotels were not significant until the mid-eighties.

### 1980s

By the 1980s, the hospitality industry started to show signs of maturity with lower customer count. It was experiencing intense competition with limited growth potential. Operators faced the challenge of increasingly competitive operating environment. For them, the only viable method of expansion was perhaps through acquisition of a competitor as opposed to greensite development. This period also reflected a more disciplined approach to expansion through acquisition. Generally, the 1980s were favorable for M&A activity due to reasons such as the economic and political conditions under the Reagan administration, especially its pro-industry tax; and interest rates that were more conducive to acquisitions. According to Tse and Crawford-Welch (1989), in the 1980s integration (across the marketing channel) was the underlying strategy for most corporations. The theme for acquisition activity was characterized by service companies buying other foodservice companies, and diversification within one's own industry (Waters, 1984; Anonymous, 1988). Prominent examples included Saga (acquired Grandy's and Spoon's which allowed the company to enter into growing segments of upscale chicken and gourmet hamburgers) and R. J. Reynolds Industries. For instance, Horizontal integration (where a competitor buys out another competitor) peaked during the 1980s with deals like Denny's Inc. acquiring El Pollo Loco; Godfathers Pizza acquiring Pizza Ventures, Inc.; Marriott Corp. acquiring Howard Johnson Co., etc. Vertical integration, on the other hand, was unsuccessful in the hospitality industry. The example of Allegis (which owned United Airlines, Hilton International, Westin Hotels, and Hertz Rent-A-Car) divesting itself of the hotel and rental car businesses in order to re-focus on its core business of airline management shows that in some industries end-to-end solutions for customers was not effective or desirable.

### 1990s

Most consolidations in the 1990s were by hotel groups buying up brands in market segments where they were weak, allowing them to offer a broader range of accommodation types (Canina, 1996; Cohen, 1999). Real estate investment trusts (REITs), tax efficient U.S.-based property companies, invested heavily in the U.S. hotel industry during this period. For example, of the 15 real estate deals valued at \$1 billion or more in 1998, 7 were from the lodging industry (Beals & Arabia, 1998; Bergsman, 1999). This caused a re-structuring of the industry with the emergence and prominence of REITs (Zhang & Deng, 2010) such as Starwood, Patriot American, Felcor, and Host Marriott. Established hotel brands such as Sheraton (Starwood acquired ITT, owners of the Sheraton chain), Westin, Intercontinental, Doubletree, and Ritz-Carlton were all absorbed by mega chains seeking dominance in the hotel market. Consolidation and multiple-tier strategies have resulted in extended brand families for the top lodging companies. The economies of scale, particularly on the systems side, assure that acquisition and consolidation will continue in the lodging industry. Also, acquisitions have become lucrative for shareholders of the target hospitality companies and this has attracted investors who in the past have had no interest in public real estate companies.

Another phenomenon occurring in this decade which changed the industry is the separation of hotel ownership from hotel management. Strategically, Marriott Corp. divested its debt-laden hotel properties through a spin-off while maintaining management contracts to the same hotels under its flag. Thus the traditional owner-operated hotels were replaced by hotels owned by insurance companies and other syndicates of investors and operated by large international hotel chains. This strategy delivered to shareholders simultaneously the value involved in hotel real estate investment and the value accruing from the management of the hotel business (Cohen, 1999).

### 2000s

In the new millennium, the impact of globalization and the internet is more visible

than ever. The hotel industry has experienced major M&A transactions, like the reunification of Hilton, and major disasters, from 9/11 and SARS to tsunamis and hurricanes. Globalization of the hotel industry has intensified with operators competing in various corners of the world to expand into new, fast-growing markets and key gateway cities in established regions of the world. These companies enter new territory by acquiring a local property or regional company. In the United States, most of the consolidation occurred within the real estate investment trusts and management companies (Kim, Gu, & Mattila, 2002; Kim, Mattila, & Gu, 2002; Strauss & Scoviak, 2006). The hotel companies have become more sophisticated in terms of better financial structures, strict discipline in negotiating deals and unexpected levels of operational flexibility. The forces of consolidation can be revealed in the ranking by the Hotels' 325. For example, in the late 1980s there were about 30 companies that oversaw 66 brands. With consolidation, the number of companies has reduced to only 9 for the same number of brands. That is, more and more hotel brands are under fewer, larger corporate umbrellas. The big four (Starwood, Hilton, IHG, and Marriott) continue to dominate the industry. Along with Wyndham International, their combined portfolios include more than two dozen hotel chains and the challenge has been to maintain each chain's individuality and identity. Accor acquired Red Roof Inns and All Season Hotels and caused its room inventory to increase by 21.6% to 300,000 rooms. Hilton Hotels acquired Promus Hotel Corp. because the company had to remain big enough to compete with other large American operators like Starwood (which acquired Le Meridien in 2005; Mollenkamp, 2005) and Marriott. In 2003, Six Continents became InterContinental Hotel Group (IHG), and Cendant became Wyndham Worldwide. The major operators sold off assets in the hot market as they continued to emphasize management contracting over the more traditional owner-operator model (Sanders, 2005). International expansion became a strong trend. For chains like Marriott International, 70% to 80% of their 2005 growth was outside of the United States. Asia became a

hot market. Hoteliers were maximizing their performance through aggressive yield management.

## METHODOLOGY

### Sample and Data Collection

The study focused on hospitality stocks listed on NYSE, AMEX, and NASDAQ from 1980 to 2010<sup>1</sup>, according to their SIC (Standard Industrial Classification) codes, in Center for Research in Security Prices (CRSP, University of Chicago) tape. The following two sectors by their Standard Industrial Classification (SIC) code are included: (a) Eating And Drinking Places (2-digit SIC = 58, hereafter "Eating") and (b) Hotels, Rooming Houses, Camps, And Other Lodging Places (2-digit SIC = 70, hereafter "Hotel"). Adjusted stock return with distributions, shares outstanding and market capitalization (equal to closing price \* shares outstanding) data are also from CRSP tape. Shares outstanding and market capitalization are the last available figures in the second quarter of each year. Institutional investor data (number of shares held by institutional investors in each quarter for each company) was obtained from *Spectrum 3-13 (f) Institutional Stock Holdings Survey*.<sup>2</sup> (Computer Directions Advisors [CDA] provides the Spectrum tapes that contain the institutional investor data). For each stock the institutional percentage was obtained by dividing the number of shares held by institutional investors by shares outstanding. Table 1 shows the institutional percentages of stocks in the two sectors from 1980 to 2010.

The number of hospitality stocks listed in NYSE, AMEX, and NASDAQ increased from 1981 to 1997 but then started to decline,

1. 2011 COMPUSTAT tape has complete data as current as 2010 only.

2. The Spectrum 3-13(f) survey is derived from reports filed with the Securities and Exchange Commission (SEC) by institutions (including banks, insurance companies, investment companies, investment advisors, pension funds, endowments, and foundations) with combined assets exceeding \$100 million. The survey contains institutional data for every quarter of each year starting from 1979.

TABLE 1. Institutional Percentages for Hospitality Stocks

Industry	Year of Study	1981	1985	1989	1993	1997	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Eating	Number of observation	79	122	95	117	155	97	85	82	79	75	74	63	58	57	58
Eating	Mean	0.074	0.124	0.164	0.242	0.250	0.332	0.368	0.391	0.449	0.522	0.575	0.603	0.616	0.606	0.565
Eating	Maximum	0.642	0.719	0.755	0.824	0.790	0.950	0.978	0.996	0.985	0.999	0.996	0.991	0.999	1.000	0.986
Eating	Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
Eating	No of obs without institutional investors	30	27	18	14	14	0	0	2	1	3	2	1	1	0	0
Eating	% of obs without institutional investors	0.380	0.221	0.189	0.120	0.090	0.000	0.000	0.024	0.013	0.040	0.027	0.016	0.017	0.000	0.000
Hotel	Number of observation	39	46	46	42	70	42	38	36	38	34	34	27	25	24	25
Hotel	Mean	0.086	0.149	0.197	0.247	0.367	0.359	0.400	0.459	0.527	0.512	0.634	0.668	0.670	0.592	0.642
Hotel	Maximum	0.731	0.598	0.761	0.806	0.881	0.946	0.943	0.931	0.926	0.934	0.981	0.981	0.969	0.961	0.995
Hotel	Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.036	0.000	0.000	0.123	0.132	0.026	0.106
Hotel	No of obs without institutional investors	11	9	6	4	4	0	1	1	0	1	1	0	0	0	0
Hotel	% of obs without institutional investors	0.282	0.196	0.130	0.095	0.057	0.000	0.026	0.028	0.000	0.029	0.029	0.000	0.000	0.000	0.000
All hospitality	Mean	0.078	0.131	0.175	0.243	0.287	0.340	0.378	0.412	0.474	0.519	0.593	0.622	0.632	0.602	0.588
No of obs without institutional investors		41	36	24	18	18	0	1	3	1	4	3	1	1	0	0
% of obs without institutional investors		0.347	0.214	0.170	0.113	0.080	0.000	0.008	0.025	0.009	0.037	0.028	0.011	0.012	0.000	0.000
Non-hospitality	Number of observation	5627	6739	7196	7964	9554	8146	7574	7120	7037	7058	7028	7176	6981	6775	6791
Non-hospitality	Mean	0.108	0.146	0.185	0.228	0.272	0.302	0.325	0.354	0.391	0.370	0.427	0.444	0.452	0.425	0.405
Non-hospitality	Maximum	0.982	0.955	0.990	0.999	0.998	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Non-hospitality	Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Non-hospitality	No of obs without institutional investors	1751	1424	997	733	574	261	219	246	170	480	159	170	109	140	224
Non-hospitality	% of obs without institutional investors	0.311	0.211	0.139	0.092	0.060	0.032	0.029	0.035	0.024	0.068	0.023	0.024	0.016	0.021	0.033

Note. Institutional percentages are equal to shares held by institutional investors for each stock in the second quarter of each year divided by shares outstanding on the last day of June for the corresponding stock in each year. Shares held by institutional investors are from Spectrum files and shares outstanding are from CRSP.

probably due to mergers and acquisition within the hospitality industry. This suggests that the U.S. stock market boom in the 1990s occurred in the hospitality industry as well.

### Institutional Investors

What is more interesting is that the percentage of stocks that have no institutional investors was close to 35% (41 divided by 118) in 1981 but the percentage dropped to 0% (0 divided by 83) in 2010. Institutional holdings (shares held by institutional investors divided by shares outstanding) also registered a marked increase from 7.8% in 1981 to 58.8% in 2010. Chan, Leung, and Wang (2003) studied the impact of institutional investors on Monday Effect and reported that the percentage of institutional investors is basically monotonically increasing from 1980 to 2010 for the general market. This marked increase in institutional holdings may be beneficial to all shareholders of firms because institutional investors tend to be more active shareholders. The activism of institutional shareholders helps reduce agency costs because they closely monitor the performance of corporate management. Smith (1996) documented, for example, that the California Public Employees' Retirement System (CalPERS) targeted 51 firms between 1983 and 1993. Seventy-two percent of the targeted companies after 1988 settled with CalPERS by adopting proposed changes or made changes in their corporate governance. Firms that adopted or settled exhibited increases in shareholder wealth and those that resisted changes exhibited decreases in shareholder wealth.

This also has strong implications for the hospitality industry. The distribution of institutional holdings in the hotel industry shows that it had a higher percentage increase over the same period compared to the general market (64.2% – 8.6% = 55.6%). By attracting more institutional investors, hospitality stocks could also benefit from an increase in shareholder wealth documented above. Institutional investors also bring more funding for existing operation and expansion because they are capable of buying large numbers of bonds and stocks issued by companies. Institutional

investors also play important roles in debt financing. Elgomy (2002) reports that insurance companies, pension fund companies and retirement systems financing is an important source of debt financing in the lodging industry. Moreover, institutional investors would bring more liquidity to the stocks too (Hong & Stein, 1999). With this increase in liquidity, investors have a reduced risk in investing in hotel companies and this in turn will attract more investors. Furthermore, institutional investors will also help dampen the volatility of stock return because they are more experienced and sophisticated investors and will tend to over-react less. The results show that this may be one of the most important reasons why hospitality stocks change from momentum stocks in the 1980s to price reversal stocks in the 1990s.

The authors obtained the delisting dates and codes from the 2011 CRSP tape. We only studied stocks with delisting codes between 201 and 232 (they are stocks when merged, shareholders primarily receive common stock or ADRs) and delisting codes between 301 and 332 (they are issues exchanged, primarily for another class of common stock). These stocks are then named stocks of mergers and acquisition and exchanges. The stocks of mergers and acquisition and exchanges are interesting because they will just become another listed stock after delisting dates. If there is any abnormal return around delisting dates, these abnormal returns would reflect leakage of information about the stock they will exchange into.

### The Market Model

The customary market return model measures the abnormal returns for the event window as

$$AR_{it} = R_{it} - R_{mt} \quad (1)$$

where  $R_{it}$  is a vector of event window returns and  $R_{mt}$  is a vector of market return at time  $t$ .

The excess returns are aggregated across securities, given the sample of  $N$  events, defining  $AR_t^*$  as the sample average of  $N$  abnormal returns for the event window:

$$AR_t^* = \text{average of } AR_{it} \text{ for } i = 1 \text{ to } N \quad (2)$$

### The Beta Model

We also obtained risk adjusted return (RAR) data from CRSP which is derived from beta values calculated by the methods described by Scholes and Williams (1977).

The abnormal returns at day  $t$  using beta for the event window is:

$$ER_{it} = R_{it} - RAR_t \quad (3)$$

where RAR is the risk adjusted return using beta from CRSP.

$AER_t$  is the sample average of  $N$  abnormal returns for the event window:

$$AER_t = \text{average of } ER_{it} \text{ for } i = 1 \text{ to } N \quad (4)$$

To test the null hypothesis that the average excess return ( $AR_t^*$  and  $AER_t$  for day  $t$ ) is equal to zero, we use the test statistic, which is the ratio of the average excess return of day  $t$  to its estimated standard deviation.

We use the event study methodology proposed by Campbell, Lo, and MacKinlay (1997). The delisting day is day 0. For each security, we choose a 31-day event window: 30 pre-event days and the event day.

### EVENT STUDY RESULTS

Table 2 provides the abnormal returns using equations 2 and 4 above for day  $-5$  to day 0 (we report only results for days  $-5$  to 0 because of space. Results for day  $-6$  to  $-30$  are available upon request).

Table 2 shows the mean and  $t$  statistics for the  $AR^*$  in equation 2 (CRSP value weighted return) and the AER in equation 4 (CRSP beta) for hotel and eating places stocks and all stocks listed in NYSE, AMEX, and NASDAQ except hotel and eating places stocks (non-hotel and eating places). The results show distinct differences between the hotel and eating places stocks and non-hotel and eating places stocks. The abnormal return for hotel and eating places stocks are either not significant and if they are significant, not of consistent sign. On the other hand, the abnormal returns for non-hotel and eating places stocks are consistently positive and significant. As the stocks studied here are going to be exchanged into another stock, the

positive and significant return is reflecting leakage of information about the stocks to be exchanged into.

But why do hotel and eating places stocks behave differently from the general market (non-hotel and eating places stocks)? Table 3 shows the mean institutional investor ratio (equal to shares held by institutional investors / shares outstanding) and market capitalization of the two groups of stocks. The mean institutional investor ratio and market capitalization of hotel and eating places stocks are lower than that of non-hotel and eating places stocks. As institutional investors are professional and sophisticated investors, they would be able to spot information which is private and thus able to out-perform the general public. Table 4 shows the monthly turnover (monthly transaction amount in dollar terms) and the increase in purchase of institutional investors in dollar terms in the quarter the delisting occurred. The mean monthly turnover of non-hotel and eating places stocks is \$137.2 million in the month of delisting, substantially higher than the \$62 million for hotel and eating places stocks. The average increase in purchase by institutional investors of non-hotel and eating places stocks is \$78.3 million, higher (though not significantly) than the \$65.1 million of hotel and eating places stocks. It seems this difference in abnormal return is related to the substantial difference in monthly transactions of the two groups of stocks which are probably related to the increase in purchase of institutional investors.

In Table 5, we show the difference in abnormal returns between hotel and eating places stocks and non-hotel and eating places stocks when we rank the stocks into low and high institutional investor ratio.

Table 5 shows that the abnormal returns for non-hotel and eating places stocks are mainly positive and significant from days  $-5$  to 0 (event day) while those for hotel and eating places stocks are either not significant or inconsistent in signs. Table 6 shows the difference in institutional investor ratio and market capitalization. For low institutional investor ratio, the institutional investor ratio of non-hotel and eating places is



**TABLE 2.** Event Study Results for Mergers and Acquisition and Exchanges of Hotel and Eating Places Stocks From 1980 to 2010

Days from delisting day	Using CRSP Beta						Using CRSP Value Weighted Return					
	Hotel and Eating Places			Non-Hotel and Eating Places			Hotel and Eating Places			Non-Hotel and Eating Places		
	n	Mean	t-stat	n	Mean	t-stat	n	Mean	t-stat	n	Mean	t-stat
-5	49	-0.0106	-1.73*	3811	0.0014	2.30**	49	-0.0115	-1.73*	3811	0.0022	3.48**
-4	49	-0.0063	-0.99	3812	0.0013	2.34**	49	-0.0067	-1.04	3812	0.0018	3.12**
-3	49	-0.0072	-1.53	3813	0.0017	2.87**	49	-0.0088	-1.84*	3813	0.0017	2.83**
-2	49	0.0074	0.93	3812	0.0035	2.93**	49	0.0078	0.99	3812	0.0036	2.94**
-1	49	0.0192	1.86*	3811	0.0041	4.13**	49	0.0189	1.85*	3811	0.0045	4.45**
0	49	0.0292	1.1	3814	0.0017	2.04**	49	0.0316	1.18	3814	0.0026	3.21**

\*Significant at the 10% level for a two-tailed t-test. \*\*Significant at the 5% level for a two-tailed t-test.

**TABLE 3.** Difference of Institutional Investor Ratio (IIR) and Market Capitalization (in mkt cap, \$ million) Between Hotel and Eating Places (hotel) and Non-Hotel and Eating Places From 1980 to 2010

Mean IIR for hotel	Mean IIR for non-hotel and eating places	Difference of IIR	t-stat for difference of IIR	Mean mkt cap for hotel	Mean mkt cap for non-hotel and eating places	Difference of mkt cap	t-stat for difference of mkt cap
0.2374	0.2463	-0.0089	-0.23	622	1,161	-539	-1.98**

\*Significant at the 10% level for a two-tailed t-test. \*\*Significant at the 5% level for a two-tailed t-test.

higher than that of hotel and eating places. Similarly for market capitalization, the market capitalization for non-hotel and eating places is \$535 million, significantly higher than the \$95 million of hotel and eating places. For high institutional investor ratio, the institutional investor ratio of non-hotel and eating places is significantly lower than that of hotel and eating places. Similarly for market capitalization, the market capitalization for non-hotel and eating places is \$1.834 billion, higher than the \$1.615 billion of hotel and eating places.

As shown in Table 7, when institutional investor ratio is low, the monthly turnover of non-hotel and eating places is significantly higher than that of hotel and eating places. Moreover, the increase in purchase of non-hotel and eating places is also significantly higher than that of hotel and eating places. This suggests that turnover and increase in institutional investor purchase may explain the difference in abnormal return in Table 5. However, for higher institutional investor ratio, the difference in turnover and increase in institutional investor purchase between hotel and eating places and non-hotel and eating places are not significant.

In Table 8 we show the difference in abnormal returns between hotel and eating places stocks and non-hotel and eating places stocks when the stocks are ranked into low and high market capitalization.

Table 8 shows that the abnormal returns for non-hotel and eating places stocks are mainly positive and significant from days -5 to 0 (event day) while those for hotel and eating places stocks are either not significant or inconsistent in signs. Table 9 shows the difference in institutional investor ratio and market capitalization. For low market capitalization, the institutional investor ratio of non-hotel and eating places is higher than that of hotel and eating places. Similarly for market capitalization, the market capitalization for non-hotel and eating places is \$51 million, significantly higher than the \$33 million of hotel and eating places. For high market capitalization, the institutional investor ratio of non-hotel and eating places is lower than that of hotel and eating places. However for market capitalization, the market capitalization for non-hotel and eating places is \$1.975 billion, significantly higher than the \$1.144 billion of hotel and eating places.

As shown in Table 10, when market capitalization is low, the monthly turnover of non-hotel and eating places is higher than that of hotel and eating places. Moreover, the increase in purchase of non-hotel and eating places is also significantly higher than that of hotel and eating places. This suggests that turnover and increase in institutional investor purchase may explain the difference in abnormal returns in Table 8. For higher market

**TABLE 4.** Difference of Monthly Turnover (in \$ million) Institutional Investor Purchase (purchase, in \$ million) Between Hotel and Eating Places (hotel) and Non-Hotel and Eating Places From 1980 to 2010

Mean turnover for hotel	Mean turnover for non-hotel and eating places	Difference of turnover	t-stat for difference of turnover	Purchase for hotel	Purchase for non-hotel and eating places	Difference of purchase	t-stat for difference of purchase
62.0	137.2	-75.2	-2.54**	65.1	78.3	-13.3	-0.33

\*Significant at the 10% level for a two-tailed t-test. \*\*Significant at the 5% level for a two-tailed t-test.

**TABLE 5.** Event Study Results for Mergers and Acquisition and Exchanges of Hotel and Eating Places Stocks From 1980 to 2010 by Institutional Investor Ratio

Days from delisting day	Using CRSP Beta						Using CRSP Value Weighted Return					
	Hotel and Eating Places			Non-Hotel and Eating Places			Hotel and Eating Places			Non-Hotel and Eating Places		
	n	Mean	t-stat	n	Mean	t-stat	n	Mean	t-stat	n	Mean	t-stat
Low institutional investor ratio												
-5	32	-0.0181	-2.18**	1981	0.0017	1.71*	32	-0.0177	-1.89*	1981	0.0027	2.67**
-4	32	0.0023	0.5	1982	0.0019	2.12**	32	0.0016	0.35	1982	0.0024	2.62**
-3	32	-0.0100	-1.48	1983	0.0028	2.90**	32	-0.0120	-1.74*	1983	0.0025	2.57**
-2	32	0.0138	1.17	1984	0.0043	1.94*	32	0.0150	1.29	1984	0.0044	1.99**
-1	32	0.0311	2.06**	1983	0.0033	3.14**	32	0.0304	2.01**	1983	0.0035	3.30**
0	32	0.0485	1.2	1984	0.0016	1.18	32	0.0508	1.25	1984	0.0027	1.99**
High institutional investor ratio												
-5	17	0.0035	0.47	1830	0.0011	1.61	17	0.0000	0	1830	0.0016	2.30**
-4	17	-0.0227	-1.42	1830	0.0007	1.04	17	-0.0222	-1.38	1830	0.0011	1.69*
-3	17	-0.0020	-0.42	1830	0.0005	0.79	17	-0.0028	-0.61	1830	0.0008	1.23
-2	17	-0.0046	-0.81	1828	0.0027	3.85**	17	-0.0058	-1.04	1828	0.0026	3.57**
-1	17	-0.0032	-0.55	1828	0.0050	2.87**	17	-0.0026	-0.46	1828	0.0055	3.14**
0	17	-0.0071	-0.69	1830	0.0017	2.03**	17	-0.0044	-0.44	1830	0.0026	2.94**

\*Significant at the 10% level for a two-tailed t-test. \*\*Significant at the 5% level for a two-tailed t-test.

**TABLE 6.** Difference of Institutional Investor Ratio (IIR) and Market Capitalization (mkt cap in \$ million) Between Hotel and Eating Places (hotel) and Non-Hotel and Eating Places From 1980 to 2010 by Institutional Investor Ratio

Institutional Investor Ratio	Mean IIR for hotel	Mean IIR for non-hotel and eating places	Difference of IIR	t-stat for difference of IIR	Mean mkt cap for hotel	Mean mkt cap for non-hotel and eating places	Difference of mkt cap	t-stat for difference of _mkt cap
Low	0.0679	0.0726	-0.0047	-0.4	95	535	-440	-4.66**
High	0.5564	0.4331	0.1234	2.45**	1,615	1,834	-220	-0.31

\*Significant at the 10% level for a two-tailed t-test. \*\*Significant at the 5% level for a two-tailed t-test.

**TABLE 7.** Difference of Monthly Turnover (turnover, in \$ million) Institutional Investor Purchase (purchase, in \$ million) Between Hotel and Eating Places (hotel) and Non-Hotel and Eating Places From 1980 to 2010 by Institutional Investor Ratio

Institutional Investor Ratio	Mean turnover for Hotel	Mean turnover for non-hotel and eating places	Difference of turnover	t-stat for difference of turnover	Purchase for Hotel	Purchase for non-hotel and eating places	Difference of purchase	t-stat for difference of purchase
Low	2.2	53.9	-51.7	-3.18**	0.7	5.4	-4.7	-4.94**
High	174.5	226.5	-52.0	-0.71	129.5	124.5	5.0	0.06

\*Significant at the 10% level for a two-tailed t-test. \*\*Significant at the 5% level for a two-tailed t-test.

capitalization, the monthly turnover of \$233.3 million of non-hotel and eating places stocks is significantly higher than the \$114.6 million of hotel and eating places stocks though the difference in increase in institutional investor purchase between hotel and eating places and non-hotel and eating places is not significant.

Table 11 shows the difference in abnormal returns between hotel and eating places stocks and non-hotel and eating places stocks when we divide the time into two periods: 1980 to 1995 and 1996 to 2010.

Table 11 shows that the abnormal return for non-hotel and eating places stocks are mainly positive and significant from days -5 to 0 (event day) while those for hotel and eating places stocks are either not significant or inconsistent in signs. Table 12 shows the difference in institutional investor ratio and market capitalization. For 1980–1995, the institutional investor ratio of non-hotel and eating places is significantly higher than that of hotel and eating places. Similarly for market capitalization, the market capitalization for non-hotel and eating places is \$329 million, significantly higher than the \$97 million of hotel and eating places. For 1996–2010, the institutional investor ratio of non-hotel and eating places is lower than that of hotel and eating places. However for market

capitalization, the market capitalization for non-hotel and eating places is \$1.622 billion, higher than the \$955 billion of hotel and eating places.

As shown in Table 13, for 1980–1995, the monthly turnover of non-hotel and eating places is significantly higher than that of hotel and eating places. Moreover, the increase in purchase of non-hotel and eating places is also significantly higher than that of hotel and eating places. This suggests that turnover and increase in institutional investor purchase may explain the difference in abnormal return in Table 11. For 1996–2010, the monthly turnover of \$199.7 million of non-hotel and eating places stocks is significantly higher than the \$99.4 million of hotel and eating places stocks though the difference in increase in institutional investor purchase between hotel and eating places and non-hotel and eating places is not significant.

## IMPLICATIONS FOR THE HOTEL INDUSTRY

Looking at the restaurant and hotel merger waves during the thirty-year period some underlying threads are discernible. First, in both the restaurant and hotel acquisitions many

**TABLE 8.** Event Study Results for Mergers and Acquisition and Exchanges of Hotel and Eating Places Stocks From 1980 to 2010 by Market Capitalization

Days from delisting day	Using CRSP beta						Using CRSP value weighted return					
	Hotel and eating places			Non-hotel and eating places			Hotel and eating places			Non-hotel and eating places		
	n	Mean	t-stat	n	Mean	t-stat	n	Mean	t-stat	n	Mean	t-stat
<b>Low market capitalization</b>												
-5	23	-0.0236	-2.10**	1604	0.0013	1.07	23	-0.0238	-1.91*	1604	0.0022	1.87*
-4	23	0.0041	0.65	1604	0.0010	0.95	23	0.0044	0.72	1604	0.0013	1.18
-3	23	-0.0143	-1.59	1605	0.0036	3.11**	23	-0.0175	-1.93*	1605	0.0038	3.19**
-2	23	0.0217	1.36	1606	0.0055	2.00**	23	0.0216	1.37	1606	0.0055	2.00**
-1	23	0.0425	2.10**	1603	0.0058	2.62**	23	0.0411	2.01**	1603	0.0063	2.83**
0	23	0.0756	1.37	1606	0.0009	0.56	23	0.0784	1.41	1606	0.0022	1.3
<b>High market capitalization</b>												
-5	26	0.0009	0.18	2207	0.0015	2.50**	26	-0.0007	-0.13	2207	0.0021	3.39**
-4	26	-0.0156	-1.46	2208	0.0015	2.70**	26	-0.0165	-1.56	2208	0.0022	3.65**
-3	26	-0.0010	-0.26	2208	0.0003	0.55	26	-0.0012	-0.32	2208	0.0002	0.35
-2	26	-0.0052	-1.2	2206	0.0021	3.50**	26	-0.0045	-1.02	2206	0.0021	3.44**
-1	26	-0.0015	-0.28	2208	0.0029	4.76**	26	-0.0007	-0.14	2208	0.0031	5.08**
0	26	-0.0119	-1.70*	2208	0.0022	3.03**	26	-0.0098	-1.38	2208	0.0030	4.05**

\*Significant at the 10% level for a two-tailed t-test. \*\*Significant at the 5% level for a two-tailed t-test.

**TABLE 9.** Difference of Institutional Investor Ratio (IIR) and Market Capitalization (mkt cap, in \$ million) Between Hotel and Eating Places (hotel) and Non-Hotel and Eating Places From 1980 to 2010 by Market Capitalization

Market capitalization	Mean IIR for hotel	Mean IIR for non-hotel and eating places	Difference of IIR	t-stat for difference of IIR	Mean mkt cap for hotel	Mean mkt cap for non-hotel and eating places	Difference of mkt cap	t-stat for difference of mkt cap
Low	0.0566	0.1332	-0.0766	-5.89**	33	51	-18	-3.02**
High	0.3973	0.3292	0.0681	1.23	1,144	1,975	-831	-1.70*

\*Significant at the 10% level for a two-tailed t-test. \*\* Significant at the 5% level for a two-tailed t-test.

**TABLE 10.** Difference of Monthly Turnover (turnover, in \$ million) Institutional Investor Purchase (purchase, in \$ million) Between Hotel and Eating Places (hotel) and Non-Hotel and Eating Places From 1980 to 2010 by Market Capitalization

Market capitalization	Mean turnover for Hotel	Mean turnover for non-hotel and eating places	Difference of turnover	t-stat for difference of turnover	Purchase for Hotel	Purchase for non-hotel and eating places	Difference of purchase	t-stat for difference of purchase
Low	2.5	3.6	-1.2	-0.84	0.2	1.3	-1.2	-11.23**
High	114.6	233.2	-118.6	-2.24**	92.1	115.8	-23.7	-0.42

\*Significant at the 10% level for a two-tailed t-test. \*\* Significant at the 5% level for a two-tailed t-test.

small chains often opted to be absorbed by larger chains in order to grow. Second, horizontal integration, popular in restaurant acquisitions in the eighties, became popular in hotel brand mergers in the nineties. Third, whereas diversification was a dominant theme in restaurant acquisitions, consolidation was dominant in hotel acquisitions. Finally, while historic undervaluation of restaurant stocks was a key driving force in stimulating acquisitions, this was not the case for hotels. At the height of acquisition activity in the nineties hotel companies, on the average, had better than average price/earning (P/E) ratios. Industry analysts anticipate that the next downturn in economy would only accelerate consolidation, as companies would have to maintain size to survive. The number of hotel sector transactions during the period has served to focus attention on the widely held belief that future profitability is being driven by scale. It now seems clear that the international market, led by the North American hotel groups, will be dominated by a few super-groups. The emergence of Starwood has been dramatic and it has highlighted the true challenge that REITs pose to "traditional" hotel groups. Others that have emerged in the super-

group category include Marriott International, Hilton, and, Intercontinental Hotel Group The underlying trend of emerging super-groups raises a number of interesting issues for the industry as a whole. The industry expects more consolidation, but at a slower, more deliberate pace. Some even predict that the hotel industry will have four or five major companies dominating, as is the case in the airline industry.

With the many hotel companies that are now publicly traded the equity markets and investors have become more aware of hotel companies and their potential profitability. Hotel executives must now develop and adjust operating strategies in response to demands by Wall Street. The short-term focus that has characterized the stock markets in the past will lead to pressures on hotel companies to continue to grow profits annually. On the upside, the involvement of Wall Street will force hotel executives to be more efficient and productive in operations by controlling costs and creating new sources of value for shareholders. Indeed this will require more sophisticated and talented pool of tourism management graduates in the future with skills to deliver what Wall Street wants.

**TABLE 11.** Event Study Results for Mergers and Acquisition and Exchanges of Hotel and Eating Places Stocks From 1980 to 2010 by Period

Days from delisting day	Using CRSP beta						Using CRSP value weighted return					
	Hotel and eating places			Non-hotel and eating places			Hotel and eating places			Non-hotel and eating places		
	n	Mean	t-stat	n	Mean	t-stat	n	Mean	t-stat	n	Mean	t-stat
<b>1980–1995</b>												
-5	19	-0.0128	-1.79*	1383	0.0007	0.63	19	-0.0099	-1.37	1383	0.0013	1.17
-4	19	0.0015	0.2	1383	0.0021	2.03**	19	0.0030	0.41	1383	0.0025	2.40**
-3	19	-0.0140	-1.84*	1385	0.0028	2.51**	19	-0.0146	-1.85*	1385	0.0027	2.38**
-2	19	0.0052	0.9	1383	0.0043	1.42	19	0.0048	0.79	1383	0.0044	1.45
-1	19	0.0214	0.99	1382	0.0051	2.13**	19	0.0225	1.04	1382	0.0055	2.29**
0	19	0.0761	1.13	1385	-0.0007	-0.47	19	0.0789	1.16	1385	0.0003	0.21
<b>1996–2010</b>												
-5	30	-0.0092	-1.02	2428	0.0018	2.55**	30	-0.0126	-1.26	2428	0.0026	3.63**
-4	30	-0.0113	-1.19	2429	0.0009	1.33	30	-0.0128	-1.37	2429	0.0014	2.04**
-3	30	-0.0030	-0.49	2428	0.0011	1.59	30	-0.0052	-0.86	2428	0.0011	1.64
-2	30	0.0088	0.7	2429	0.0030	4.13**	30	0.0096	0.78	2429	0.0031	4.00**
-1	30	0.0178	1.77*	2429	0.0036	4.68**	30	0.0167	1.68*	2429	0.0039	5.01**
0	30	-0.0005	-0.07	2429	0.0030	3.17**	30	0.0017	0.21	2429	0.0040	4.12**

\*Significant at the 10% level for a two-tailed t-test. \*\*Significant at the 5% level for a two-tailed t-test.

**TABLE 12.** Difference of Institutional Investor ratio (IIR) and Market Capitalization (mkt cap, in \$ million) Between Hotel and Eating Places (hotel) and Non-hotel and Eating Places From 1980 to 2010 by Period

Period	Mean IIR for hotel	Mean IIR for non-hotel and eating places	Difference of IIR	t-stat for difference of IIR	Mean mkt cap for hotel	Mean mkt cap for non-hotel and eating places	Difference of mkt cap	t-stat for difference of mkt cap
1980–1995	0.0974	0.1718	-0.0744	-2.13**	97	329	-232	-5.78**
1996–2010	0.3260	0.2876	0.0384	0.72	955	1,622	-667	-1.54

\*Significant at the 10% level for a two-tailed *t*-test. \*\*Significant at the 5% level for a two-tailed *t*-test.

**TABLE 13.** Difference of Monthly Turnover (turnover, in \$ million) Institutional Investor Purchase (purchase, in \$ million) Between Hotel and Eating Places (hotel) and Non-Hotel and Eating Places From 1980 to 2010 by Period

Period	Mean turnover for hotel	Mean turnover for non-hotel and eating places	Difference of turnover	t-stat for difference of turnover	Purchase for hotel	Purchase for non-hotel and eating places	Difference of purchase	t-stat for difference of purchase
1980–1995	3.0	19.1	-16.1	-5.90**	3.7	15.1	-11.4	-4.23**
1996–2010	99.4	199.7	-100.3	-2.15**	94.4	107.4	-13.0	-0.22

\*Significant at the 10% level for a two-tailed *t*-test. \*\*Significant at the 5% level for a two-tailed *t*-test.

The structure of the industry has also changed permanently. Today there are clear distinctions between hotel developers, hotel owners, management companies, REITs, and hotel franchisors. This has reduced operational risks for hotel companies in some cases and caused them to be more focused in defining what business they are in. It has enabled companies to leverage their corporate strengths into pursuing what they do best: development, ownership, or management. Finally, hotel companies must now invest time and resources into generating new ideas that lead to shareholder value creation and profitability. Because capital resources will be allocated to those industries that offer more attractive returns such as technology and internet stocks if hotels fail to consistently deliver growing profits.

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