Acquisition Premiums and Performance Improvements for Acquirers and Targets in the Lodging Industry

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Abstract
Given that the stated purpose of mergers and acquisitions (M&A) is to create value for the newly merged firm, the M&A offer premium ought to be positively related to the realized benefits or realized synergies that result from combining the target and the acquirer. Not all empirical evidence supports this notion, however. Because some M&A activities have not been found to be consistently value enhancing, other M&A motives have been proposed, most notably empire building and personal rewards. In contrast to those notions, this paper's analysis of lodging M&A results suggests that lodging M&A is in fact motivated by value creation. Furthermore, our evidence supports the supposition that the premium reflects the value of synergy, as postulated conceptually. Using a property-level dataset, this paper infers lodging managers' intentions by investigating the relationship between the final offer premium paid to the target shareholders and the change in the pre- and postacquisition operating performance of the target's and the acquirer's properties. Refuting the argument of the market for corporate control as well as the non-value-related motives, this analysis finds that the premium is related to the performance changes of the acquirer's properties but is not related to that of the target's properties. Interestingly, this suggests that the target's properties serve as a crucial resource to improve the performance of the acquirer's properties, and consequently, the premium may be viewed as the payment to gain control over the targets' resources.

The economic significance of merger and acquisition (M&A) transactions in the lodging industry is substantial, especially considering the 395 deals announced from the beginning of 1981 through 2009, with a total target value of $87,891 million and an average target value of $443.9 million.[1] The economic rationale for mergers and acquisitions is value creation through synergistic gains by combining two organizations. Even though M&A is regarded as an important corporate strategy (Collins et al. 2009; Cunill 2006; Huyghebaert and Luypaert 2010; Kobeissi, Sun, and Wang 2010; Pablo 2009), little empirical evidence exists regarding the motivations for mergers and acquisitions in the lodging industry. Nevertheless, researchers have offered several explanations beyond value creation.

The classic rationale for an acquisition is to create value derived from a variety of sources, such as economies of scale or scope and streamlining the target's management. However, an abundance of empirical research in many industries has failed to find consistent support for that argument. One of the most persistent findings throughout the M&A literature is that target firms typically experience large, significant abnormal returns at deal announcements, while acquirers' abnormal returns are either insignificant or

even negative. This interpretation of the findings, however, has been questioned since the result is not observationally distinguishable from the mere transfer of wealth from the acquirer shareholders to the target shareholders without creating any value.

In place of stock-price changes, value creation from mergers has also been investigated by comparing the operating performance of the merged firm before and after the acquisition. The findings have generally been mixed. Healy, Palepu, and Ruback (1992) and Andrade, Mitchell, and Stafford (2001) reported improved performance, while Ravenscraft and Scherer (1987) and Ghosh (2001) found no improvement. In sum, as Lees (2003) points out, value creation is an unanswered question regarding M&A.

Studies regarding the stock returns of lodging M&A deals are likewise mixed. Canina (2001) reported positive abnormal returns for both the target and the acquirer on the

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announcement date. Ma, Zhang, and Chowdhury (2011) reported positive abnormal returns for the acquirers, which are mainly realized in deals involving private targets. Yang, Qu, and Kim (2009) also reported positive long-term abnormal returns for merged firms, while Hsu and Jang (2007) found negative results.

Often, the underperformance of the acquirer's stock return surrounding the merger announcement is ascribed to the excessive price paid above the current stand-alone value of the target, referred to as the premium (Agrawal and Jaffe 2000; Jarrell and Poulsen 1989). In fact, Sirower (1997) suggested that excessive premiums have been paid in many deals. While the premium is often blamed for the failure of M&A to create value for the acquirers, fundamentally, the premium ought to reflect the value of synergy (Betton, Eckbo, and Thorburn 2008) if the true motive of the M&A is value creation. Despite this debate, studies regarding how the premium is related to the actual synergistic gains of the mergers and acquisitions are few. The argument here is that if managers expect synergistic opportunities, their estimated value of such gains will be reflected in the premium. In this case, we should observe a positive relationship between the premium and the postacquisition realized synergies. Another value-oriented motive of M&A is that of management discipline, whereby inefficient managers of the target are replaced by more capable managers of the acquirer. Under this scenario, the premium will mainly reflect the value gain that will accrue to the target's operation.

The lack of consistent evidence of value creation combined with the evidence of excessive premiums has raised questions among academics about other motives of M&A. In this regard, scholars have suggested that mergers may be driven by the managers' private objectives such as achieving a higher social status by running a larger organization or receiving pecuniary benefits (Shleifer and Vishny 1989). Under this scenario, which we call the private benefits hypothesis, managers undertake M&A investments for their own benefit and consciously disregard shareholders' interests (Malmendier and Tate 2008). Indeed, studies by Grinstein and Hribar (2004) and Harford and Li (2007) found that managers of acquiring firms at times have been richly rewarded through takeover activities. Under this scenario the premium represents an overpayment for the target and amounts to a transfer of wealth from the stockholders of the acquirer to the stockholders of the target. The transfer of wealth is consistent with the vast amount of empirical evidence that has found a positive stock-price reaction for the target and a negative or insignificant reaction for the acquirer (Roll 1986).

In sum, if the merger is driven by expected synergistic gains, a positive relationship will exist between the observed premium and the realized synergy (Betton, Eckbo, and Thorburn 2008), whereas if the merger is driven by the managers' private benefits, there will be no such association (Jensen 1986; Jensen and Meckling 1976; Malmendier and Tate 2008; Roll 1986). This paper investigates this matter and aims to empirically infer managers' motivations in lodging M&A. We analyze the relationship between the pre- and postacquisition performance differences at the property level (realized synergistic gains), and the offer premium for the target and, separately, for the acquirer. The synergistic gains such as cost savings and higher revenues will show up in the performance of individual properties, which will transfer to the corporate level. If a higher premium is consistent with higher synergistic gains, the premium will be positively associated with the change in the property performance. This is the first study we are aware of that has examined the actual benefits of the merger that accrue to the acquirer and target separately.

In the remainder of this paper, we first discuss the conceptual framework and establish our hypotheses. Then, we describe the methodology and sample, followed by the results and concluding remarks.

Conceptual Framework

As we said at the outset, the economic rationale for M&A is value creation through realizing synergistic gains by combining two organizations. The economic and finance literature has categorized these synergistic gains as collusive, operating, managerial, and financial synergy (Canina and Kim 2010). Collusive synergy refers to the market power in the output market and buying power in the input market as the industry moves closer to a monopolistic structure. Operating synergy is expected from economies of scale and scope through the higher utilization of facilities and personnel, spreading of overhead, or advantages of common learning curves. Managerial synergy is realized when more competent management puts better capabilities and know-how in place. By extension, inefficient management will become takeover targets. Financial synergy is the gain expected from the reduction in the cost of capital due to diversification or a more efficient capital structure, and interest and other tax savings that result from the merger (Andrade, Mitchell, and Stafford 2001; Bradley, Desai, and Kim 1988; Devos, Kadapakkam, and Krishnamurthy 2009). If mergers truly create value for shareholders, the gains will eventually show up in the postacquisition operating performance of the target and the acquirer properties.

Mathematically, synergy is created when the value of the combined firms exceeds the sum of the value of the two firms as separate entities. This implies that the maximum price that the acquirer will be willing to pay to create value is the current stand-alone value of the target plus the expected synergy.

Two common competing explanations for the existence of offer premiums are the free-riding problem of the target

shareholders (Grossman and Hart 1980) and the winner's curse (Giliberto and Varaiya 1989). Grossman and Hart (1980) considered the free-riding problem in the context of tender offers. They proposed that target shareholders will not tender their shares unless the price equals or exceeds the post-takeover value of the shares (Hirshleifer and Titman 1990), resulting in excessive premiums or no deal. The winner's curse hypothesis suggests that the winner of a sealed-bid auction tends to be the one who most overestimates the true value of the auctioned object (Giliberto and Varaiya 1989). As a result, auction winners are likely to be "cursed" by having paid more for the object than its true worth. This hypothesis has been applied to corporate takeovers (Roll 1986; Varaiya 1988). Varaiya and Ferris (1987) reported that the average premium in the winning bids overstates the market's estimate of the expected takeover gain.

If the offer premium is expected to be excessive due to the free-riding problem or winner's curse compared with the value of synergy, the bidder whose objective is to enhance the value of the firm will ultimately withdraw the bid. In contrast, if the deal is driven by the private benefits, the managers will undertake the bid while paying too much for their targets, even though there is no synergistic gain available. In line with this argument, Moeller, Schlingemann, and Stulz (2004) reported that the greater premium paid by large firms was found to decrease the average abnormal return. Grinstein and Hribar (2004) found that CEOs with more power also tend to engage in larger deals relative to the size of their own firms, and the market responds more negatively to their acquisition announcements. Harford and Li (2007) reported that even when the shareholders of the bidder are worse off, bidding CEOs are better off three quarters of the time.

According to this "private benefits" hypothesis, managers of the bidding firm pursue M&A transactions for their self-interest without regard to possible synergies, and the resulting offer premiums are excessive. In Hypothesis 1, we test this notion that there will be no association between the premiums, and the change in performance of the target and the acquirer properties:

> *Hypothesis 1*: There is no relationship between offer premiums and realized synergy for both the acquirer and the target properties.

In contrast to the overpayment argument, Laamanen (2007) proposed that premiums constitute the necessary payment for a valuable resource that is expected to create synergy. According to the resource-based theory of the firm (Lei and Hitt 1995; Wernerfelt 1984), the target's resources are acquired because they would be more costly to make, develop internally, or purchase through the input market. As a result, M&A enhances value, by allowing firms to utilize valuable resources at a cost that is lower

than developing them. Laamanen showed that the high premiums in the high-tech sector, for instance, are explained by the existence of a unique value-creating resource combination related to the target's R&D and technological capabilities. Consistent with this view, he found that a high premium does not cause negative abnormal returns of the acquirer. The resource-based view of the target also applies to the lodging industry, in which the target's resources, notably, brand equity or property locations, are difficult to replicate or build in a short time. Thus, if the premium is consistent with value creation, it will show a positive relationship with the realized synergy. This is tested in Hypothesis 2:

> *Hypothesis 2*: Offer premiums are positively associated with the realized synergy of the target or acquirer properties.

As explained earlier, the theory of the market for corporate control argues that takeovers are a mechanism to replace inefficient managers of the target companies (Jensen 1986). If the managers of the acquiring firms are more capable than those of the target firms, the takeover can improve the overall efficiency of the target firm. This hypothesis has been tested by examining the performance of tender offers that are intended to replace the incumbent managers of the target. Once again, the findings regarding the market for corporate control argument are mixed. Some studies reported superior performance for tender offers relative to mergers at the announcement date (Betton, Eckbo, and Thorburn 2007; Bouwman, Fuller, and Nain 2009; Jensen 1986; Jensen and Ruback 1983), but others found a nonsignificant announcement return for acquirers involved in tender offers (Huang and Walkling 1987). If the central motivation of the merger is to take over the poorly managed target and enhance its operating performance, the bidder will be willing to pay a higher premium as the potential value of the target becomes greater. This is tested in Hypothesis 3:

> *Hypothesis 3*: Offer premiums are positively associated with the realized synergy of only the target properties.

Data Sample and Method

We analyzed hotel property data from STR for 1991 through 2009, which included monthly room revenue, number of rooms available, and rooms sold at the property level, as well as some property characteristics, such as product type, location type, and local market information. STR also provided annual revenue and expense data for some properties from its Hotel Operating Statistics (HOST) database. The SDC global mergers and acquisition database provided data

on qualifying transactions according to the following criteria: First, the deal was completed. Second, both the target and the acquirer were publicly traded lodging industry firms. Third, only transactions that involved the whole unit of single or multiple lodging brands were included (i.e., mergers between two corporations or acquisition of an entire brand unit, such as Starwood's purchase of the Le Méridien brand). Finally, neither the target nor the acquirer was sold within three years from the deal's completion date. We chose the three-year window for reasons explained next.

This study utilizes a variant of event study methodology to analyze the relationship between the offer premium and realized synergy, measured as the change in performance at the property level before and after the M&A announcement or completion.[2] We note that there is no set rule for the event window. Some studies of merger performance have used a five-year window (e.g., Healy, Palepu, and Ruback 1992); Bouwman, Fuller, and Nain (2009) used a two-year period; and others (Franks, Harris, and Titman 1991; Ghosh 2001; Magenheim and Mueller 1988; Rau and Vermaelen 1998) used a three-year window. We used a three-year window for two reasons. First, the study needs to isolate the impact of one takeover event without interference from any subsequent takeovers, and we anticipated that the lodging industry's busy M&A activities would result in the elimination of too many sample events if we went longer than three years. Second, we felt that three years allowed time for operations to stabilize after the merger completion (Ghorbal-Blal 2011; Piloff and Santomero 1998). The preacquisition window is defined as one year prior to the announcement.

We tested the hypotheses using multivariate regression in which realized synergy gains for each property was the dependent variable, and the premium was the independent variable of interest. A two-stage selection model was used to estimate the following equation:

$$
\begin{aligned}
\text{Realized Synergy}_{ij} = \beta_0 + \beta_1 \text{Premium} + \\
\beta_2 \text{Demand Change} + \beta_3 \text{Supply Change} + \\
\beta_4 \text{LOGSize} + \beta_5 \text{Selection} + [\text{Product Type}] + \\
[\text{Location}] + \zeta_j + \varepsilon_{ij},
\end{aligned}
\tag{1}
$$

where the realized synergy is measured as the change in the peer-adjusted performance measure of property i for acquisition j—that is, the property-level change in peer-adjusted revenue per available room (RevPAR_{cpa}) and the change in peer-adjusted operating income per available room (OIPAR_{cpa}). The measure of the synergistic outcome (realized synergy) controls for changes in the overall market and the industry since it is peer-adjusted; Premium is the final offer premium, Demand Change and Supply Change represent the change in the local market demand and supply conditions, LOGSize is the log of the number of rooms, Selection is the inverse Mill's ratio estimated in the first stage of the two-stage process, Product Type consists of

four indicator variables (i.e., luxury, upscale, midprice, and economy), Location represents four indicator variables (i.e., urban, suburban, airport, and highway), ζ_j is the deal random effect, and ε_{ij} is a random error.[3] Equation 1 is estimated separately for the target and the acquirer properties. The model was estimated by the restricted likelihood method (REML).

Considering that the properties in the merger are not likely to be random, the application of ordinary least squares (OLS) leads to inconsistent parameter estimates (Heckman 1979), due to the possibility of selection bias. As a result, in the first stage of the two-stage estimation process, a probit model was estimated to obtain the probability of being a target or acquirer property using the preacquisition RevPAR, one year before the M&A announcement, product dummy, and year dummy variables.[4] The inverse Mill's ratio was obtained from this first stage and included in the second stage regression models as an additional independent variable (Selection) in Equation 1. In addition, to account for the cross-correlation between error terms for properties in the same deal, a random effect specification was used instead of a fixed-effect model. Since premiums are defined at the deal level, there is no within-deal variation, and thus fixed effects are not feasible. A random effect model was used in a similar context in La Porta et al. (2002) and Hau (2001).

Realized Synergy

We analyzed the changes in the pre- and postacquisition peer-adjusted performance measure by hotel property. To isolate the impact of mergers and acquisitions from any external shocks, the performance measures of the sample properties are matched to a sample of peer properties based on the same product type and similar performance. The performance measures of the sample properties are then adjusted by the performance measure of the matched sample of peer properties. The realized synergy is measured by using two different performance measures: RevPAR_{cpa} and OIPAR_{cpa}.

To compute the changes in the peer-adjusted performance measures, RevPAR_{cpa} and OIPAR_{cpa}, we first computed the performance measures themselves as follows: RevPAR for each property and for each year is computed as the total annual room revenue divided by the total annual number of rooms available. OIPAR for each property and for each year is measured as income before interest, taxes, depreciation, and fixed charges normalized by the total annual room supply of the property.

The peer-adjusted performance measures were constructed using a variant of Barber and Lyon's (1996) approach, in which RevPAR is used to determine peer properties. We further matched the peer group based on product similarity. The detailed algorithm for choosing the peer

properties is as follows: (1) Standard deviations of annual RevPAR were computed for year −3 using all properties in the STR database by product type and year. (2) For each target or acquirer property, we selected a set of matching properties from a pool of nondeal involved properties (i.e., same product type, and RevPAR was within plus or minus one standard deviation), provided data were available for each of the three years before and after the announcement or completion year and they were not themselves involved in an acquisition over the test period. We subtracted the peer-group median from the test property values. The synergy outcome is estimated by the change in peer-adjusted performance in RevPAR and OIPAR between year −1 and year +3.

For the RevPAR$_{cpa}$ performance model, 1,218 properties of the acquirer and 789 properties of the target are included in the final sample, while the sample for the OIPAR$_{cpa}$ performance model is 397 acquirer properties and the 226 target properties.

Offer Premium

Since the main focus of this study is the relationship between the offer premium and the synergistic gains, the premium is defined as the final offer price as a percentage of the target's price one day prior to the announcement of the deal. That is, $(p_{final} / p_{-1}) - 1$, where p_{final} is the final offer price and p_{-1} is the stock price the day before the announcement.

We note that many empirical studies define the offer premium based on the price going further back. The price as far as forty-two days in advance is often used since the run-up in the share price of the target is manifested mainly after the forty-second day before the announcement (Schwert 1996) due to takeover rumors (Betton, Eckbo, and Thorburn 2007), or the probability of bidding competition. Since our main focus is to evaluate the manager's motives of the acquisition, we exclude the market's run-up premium and capture either the managers' expectation of synergy beyond that expected by the financial market (Betton, Eckbo, and Thorburn 2008) or the results of managers' non-value-related motives (Roll 1986).

Control Variables

Since there are many other factors that can affect the performance of the lodging properties, we carefully considered the control variables, which included property size, location type, and product type, as we explain further below. Because changes in local market demand and supply conditions are of particular concern, we also used the local market as the control variable, defined according to the U.S. Census tract.[5] The tract was used to define the local market because counties and Metropolitan Statistical Areas (MSAs) vary

far too greatly in terms of size, and ZIP codes generally are too small to capture local competition (Kalnins 2004).

Change in Local Demand Condition (Demand Change). The change in the local demand condition is defined as the change in the occupancy rate within the tract between year −1 and year +3. For each tract, we aggregated the total number of rooms sold and rooms available. From this, we derived the local market occupancy rate (the total annual rooms sold divided by the total annual rooms available in the tract).

Change in Local Supply Condition (Supply Change). The change in the local supply condition is defined by the percentage change in the room supply in the tract where the property is located between year −1 and year +3. This measure is computed by using all the properties within the tract except for the sample properties. The percentage change in local market supply is computed as the difference between total annual rooms available in the tract in year +3 and year −1 divided by total annual rooms available in year −1.

Property Size. The size of the property is included in the analysis as the log of the annual room supply (LOGSize). The logarithmic measure is used to mitigate scale differences.

Location. STR provides five location types, namely, urban, suburban, airport, highway, and resorts. A dichotomous variable for each of these five groups was created and assigned a value of 1 signifying that the characterization was true and 0 if it was not. The resort category was excluded from the estimated model and, as a result, is the reference group for the location variables. According to O'Neill and Mattila (2006), the hotel's region does not significantly affect net operating income, and thus, we included only the location category factor in the model.

Product Type. Even though the performance measures have been peer-adjusted, we still had to control for the product type (namely, luxury, upscale, midprice, economy, and budget). A dichotomous variable for each of these five groups was created and assigned a value of 1 signifying that the characterization was true and 0 if it was not. The budget category was excluded from the estimated model and, as a result, is the reference group for the product type variables, with the budget category being a baseline.

Exhibit 1 presents the summary statistics for the RevPAR$_{cpa}$ and the OIPAR$_{cpa}$ samples. For the acquirer properties, the RevPAR$_{cpa}$ value of 1.07 means that acquirer properties achieved a 1.07 improvement in peer-adjusted RevPAR three years after the merger relative to one year before the merger. For the OIPAR$_{cpa}$ measure, the acquirer properties achieved a 1.30 improvement in peer-adjusted OIPAR in year 3 after the merger relative to year 1 before

Exhibit 1:
Descriptive Statistics and Correlation Coefficients.

	M	Median	SD	1	2	3	4	5
Acquirer properties								
RevPAR$_{cpa}$ sample (N = 1,218)								
1. RevPAR$_{cpa}$	1.07***	2.33***	9.94	1				
2. Premium	0.19***	0.15***	0.11	0.06**	1			
3. Demand change	−0.05***	−0.05***	0.06	0.43***	−0.06**	1		
4. Supply change	0.10***	−0.00***	0.61	−0.04	−0.06*	0.07**	1	
5. LOGSize	10.95***	10.81***	0.59	−0.16***	0.05*	−0.05*	0.17***	1
OIPAR$_{cpa}$ sample (N = 397)								
1. OIPAR$_{cpa}$	1.30**	1.57***	11.85	1				
2. Premium	0.19***	0.15***	0.16	0.10*	1			
3. Demand change	−0.06***	−0.06***	0.06	0.26***	−0.12**	1		
4. Supply change	0.12***	−0.01***	0.86	−0.04	0.06	0.06	1	
5. LOGSize	11.28	10.97	0.59	−0.11**	0.3***	0.03	0.15***	1
Target properties								
RevPAR$_{cpa}$ sample (N = 789)								
1. RevPAR$_{cpa}$	0.29	0.13	10.37	1				
2. Premium	0.29***	0.23***	0.19	−0.17***	1			
3. Demand change	−0.05***	−0.05***	0.06	0.44***	−0.07**	1		
4. Supply change	0.22***	0.00	0.63	−0.05	0.39***	0.13***	1	
5. LOGSize	10.85***	10.72***	0.49	−0.12***	0.39***	−0.13***	0.13***	1
OIPAR$_{cpa}$ sample (N = 226)								
1. OIPAR$_{cpa}$	0.05	−0.51	11.21	1				
2. Premium	0.33***	0.28***	0.21	0.06	1			
3. Demand change	−0.05***	−0.05***	0.06	0.38***	−0.14**	1		
4. Supply change	0.56***	0.32***	0.91	0.15**	0.12*	0.30***	1	
5. LOGSize	11.02***	10.82***	0.43	−0.00	0.47***	−0.28	−0.20***	1

Note: RevPAR$_{cpa}$ = change in peer-adjusted revenue per available room; OIPAR$_{cpa}$ = change in peer-adjusted operating income per available room.
*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

the merger. RevPAR$_{cpa}$ and OIPAR$_{cpa}$ changes for the target properties were insignificant.

Although the premium is positive on average in both measures, the supply change was positive while the demand change was negative. We infer that, on average, the number of rooms in the market increased over the merger event periods. Occupancy may have dropped either due to a reduction in demand or an increase in rooms available. We also note that the premium shows weak positive correlation with RevPAR$_{cpa}$ and OIPAR$_{cpa}$ for the acquirer properties, while for the target properties, there is a negative correlation between the premium and RevPAR$_{cpa}$ and an insignificant relationship between the premium and OIPAR$_{cpa}$.

Results

Offer Premium

Exhibit 2 summarizes the offer premiums, $(p_{final} / p_{-1}) - 1$. The mean offer premium is 30.03 percent, and the median is 24.23 percent. That is, the final bid price on average

Exhibit 2:
Offer Premium for Public Targets.

	Final offer premium
M	30.03%***
Median	24.23%***
SD	25.68%
Maximum	94.29%
Minimum	3.07%
N	11

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

jumped 30.03 percent from day −1 to the final offer price on the announcement date. This is similar to the results of Betton, Eckbo, and Thorburn's (2008) study that used cross-sectional market-wide data over the period between 1980 and 2002, and found that the mean final offer premium for successful bids was 27.8 percent.

Exhibit 3:
Multivariate Analysis.

| | Dependent variable: RevPAR$_{cpa}$ | | | | Dependent variable: OIPAR$_{cpa}$ | | | |
| | Acquirer | | Target | | Acquirer | | Target | |
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	34.28***	4.65	−77.06**	−2.81	43.71*	3.02	6.95	0.20
Premium	23.71***	3.57	25.57	0.57	33.89***	6.78	6.17	0.72
Demand change	60.89***	15.31	70.9***	13.4	67.42***	7.49	75.99***	6.23
Supply change	0.78***	1.64	1.75***	2.74	1.08	1.53	0.94	1.10
LOGSize	−1.12**	−1.82	0.44	0.45	−2.3*	−1.86	−0.82	−0.28
Luxury	7.55***	3.47	0.74	0.34	3.02	0.87	5.11	0.48
Upscale	5.98***	2.77	1.39	0.69	6.47*	1.90	13.1	1.27
Midprice	3.73*	1.68	0.25	0.14	5.74	1.58	7.34	0.73
Economy	0.79	0.60	−0.48	−0.31			5.44	0.52
Urban	5.21***	3.40	3.97**	2.55	−4.37	−1.63	−0.82	−0.25
Suburban	0.57***	0.42	8.9***	5.14	−9.13***	−3.36	−4.46	−1.38
Airport	2.21	1.54	9.64***	5.22	−5.44*	−1.93	−1.39	−0.41
Highway	0.34	0.24	8.31***	5.36	−5.51*	−1.84	−1.57	−0.47
Selection	−16.11***	−7.68	19.63***	5.03	−16.96***	−5.68	−0.52	−0.29
N	1,218		789		397		226	
R^2	.098		.264		.341		.5423	

Note: RevPAR$_{cpa}$ = change in peer-adjusted revenue per available room; OIPAR$_{cpa}$ = change in peer-adjusted operating income per available room.
*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

Multivariate Analysis

For the acquiring firms, the estimation results presented in Exhibit 3 indicate that a 1 percent higher premium is associated with 23.71 cents greater change in peer-adjusted change in RevPAR (RevPAR$_{cpa}$) and 33.89 cents greater OIPAR$_{cpa}$. As we said, no significant relationship was found for the target properties. These results support Hypothesis 2, the value creation theory, for the acquirer properties. Contrary to theories regarding private drivers for acquisitions, we found no support for Hypothesis 1, which posits no relationship between the premium and the change in the pre- and postacquisition performance of both the target and the acquirer properties. We also did not find any evidence that supports Hypothesis 3, the corporate control argument, which proposes a premium for target hotel's performance.

Contrary to the suppositions that lodging CEOs are building empires, seeking personal rewards, or seeking to improve weak target management with their acquisitions, our findings suggest that lodging managers appear to be motivated by value creation. Our results are consistent with the idea that the target is a valuable resource that enhances the acquirers' performance. Even though the premium is not related to the target's performance improvement, it may be justified as a payment for enhancing the acquirer's performance.

These findings are also consistent with the resource-based theory of the firm, which suggests that M&A is a mechanism for a firm to internalize the resources of the target for the acquirer (Lei and Hitt 1995). This implies that hotel brands and other resources are costly to develop internally or to purchase through the input market. Instead, M&A serves as an opportunity to combine specialized (and otherwise nonmarketable) resources of the target and the acquirer more efficiently and effectively, as opposed to operating them separately (Wernerfelt 1984).

The realized synergies for the acquirer can be derived from a variety of channels. The acquirer properties may achieve additional buying power with the suppliers, and they also gain the ability to market the acquirer's brand to the target's customers, who then may be willing to purchase rooms from the acquirer.

With respect to the selection variable, note that the acquirer group shows consistently negative and significant coefficients, while the target group shows a positive and significant coefficient for the RevPAR$_{cpa}$ sample and an insignificant coefficient in the OIPAR$_{cpa}$ sample. This means that the probability of being an acquirer property is negatively associated with performance. The results imply a complementary nature of the growth pattern between the target and the acquirer properties. Researchers have recognized that when one of the merging firms has an imbalance

between its resources and growth opportunities, and the other firm has an opposite but complementary imbalance, their combination creates value (Morellec and Zhdanova 2008; Myers and Majluf 1984). Consistent with such a notion, our findings suggest that the acquirer chooses M&A to improve its performance by taking over the necessary resources from the target.

With regard to the "managerial discipline" theory, our results are not consistent with the claim that the premium represents a payment for expected improvement of the target's performance through the acquirer's managerial and informational superiority. If this were the case, a higher premium would represent the acquirer's confidence about the target's performance improvement under the acquirer's management systems. Under this scenario, the acquirer's superior management capability would improve the target properties' performance. However, the insignificant coefficients of premium for the target properties suggest that the premium is not directly related to the postacquisition performance improvement of the target properties.

We also included various control variables that are known to affect the performance of the hotel properties. Among these control variables, the local demand condition (Demand Change) shows significantly positive results for $RevPAR_{cpa}$ and $OIPAR_{cpa}$ for both the acquirer and the target groups. For the local supply condition (Supply Change), the results are significant only for the acquirer. It is speculated that the local market where the supply is growing tends to be the location where there are demand drivers. In such a local market, if the hotel properties have a significant brand equity and competitiveness, the performance may increase further. Our result implies that the acquirer properties may have such competitiveness. For the product type, the most notable result is the significant positive coefficients of luxury, upscale, and midprice for $RevPAR_{cpa}$ of the acquirer properties (in descending order). Given that the baseline is the budget category, the results suggest that the peer-adjusted RevPAR change is greater for the upper scale properties relative to the lower scale ones. For the location type, the $RevPAR_{cpa}$ model yields positive coefficients while the $OIPAR_{cpa}$ model yields negative coefficients. That is, relative to the baseline category, the resort location, the other locations had higher peer-adjusted RevPAR changes and lower peer-adjusted OIPAR changes. The results imply that the impact of mergers and acquisitions can manifest itself differently across various location characteristics.

The robustness of the results was checked further by estimating the model using the method of moments, and the main conclusions remain unchanged. The regressions in Exhibit 3 are estimated by REML. Furthermore, the information criteria, Akaike information criterion (AIC), corrected AIC (AICC), and Bayesian information criterion (BIC), were superior with the REML estimation of the second stage of the two-stage estimation process.

Conclusion and Discussion

This study provides evidence that lodging managers undertake M&A to create value. Since we evaluated the relationship between the premium and the realized postacquisitions performance of the target and the acquirer separately, we were able to disaggregate the realized synergy between the target and the acquirer. The offer premium showed a significant positive association with the peer-adjusted RevPAR and OIPAR gains for the acquirer properties, and insignificant results for the target properties. These results suggest that the target serves as a crucial resource to improve the acquirer's performance, and the premium is a payment to gain control over this resource, rather than a payment for the future improvement of the target per se.

This study also benefits from the considerable data resources provided by STR, which addresses one of the problems of the empirical studies of M&A. Not only do these studies require a great deal of detailed data (Calomiris and Karceski 2000; Piloff and Santomero 1998), but it is often impossible to isolate the effect of mergers and acquisitions. Our dataset was sufficiently detailed that we could test the impact of mergers and acquisitions while controlling for other confounding factors.

Moreover, our study addresses the selection issue, in that the properties of the target and the acquirer are likely to be nonrandom, and there may be underlying characteristics that affect the probability of being selected into the sample as well as the performance of the properties. Consequently, observed changes in performance can over- or understate the true impact of the merger and acquisitions (Li and Prabhala 2007). By using the selection model, we estimated the relationship between the premium and the realized synergy more precisely.

Our study was limited by the relatively small number of deals involving public companies. Thus, this study was not able to link the announcement returns and realized performance improvements in the postacquisition period. However, some conjecture is possible. With the lodging industry data, both target and acquirer were found to experience a positive announcement return (Canina 2001). For the target, this outcome can be driven by the premium, and for the acquirer, it can be driven by the expected synergy gain. If the premium was excessive relative to the acquirer's synergy gain, the acquirer would have experienced a negative announcement return while the target would have experienced a positive return due to the premium. Future research may investigate this empirically when additional data become available.

Notes

1. Source: SDC Platinum.
2. In this sample, the announcement and completion of the M&A occurred in the same year.
3. The validity of the random effect is tested by the *z*-test through examining whether σ_{ζ}^2 (variance of ζ_j, random effect for deal *j*) is zero (Littell et al. 2006). While the Breusch and Pagan Lagrange multiplier test is often used to check the validity of the random effect, it is only applicable when the dataset is a balanced panel. Since our sample is unbalanced, this method is not feasible.
4. The probability of being a target or acquirer property was estimated separately. The inverse Mill's ratio for the target (acquirer) group was obtained from the probit model applied to the target (acquirer) properties and the non-merger-affected properties.
5. From http://www.census.gov/geo/www/cen_tract.html viewed on March 2010.

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