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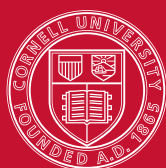


## Who's Next? An Analysis of Lodging Industry Acquisitions

### Cornell Hospitality Report

Vol. 10, No. 11, July 2010

by Qingzhong Ma, Ph.D., and Peng Liu, Ph.D.



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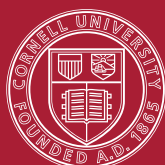
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## EXECUTIVE SUMMARY

The years 2004 through 2007 witnessed a rush of takeover deals in the lodging industry, in which numerous publicly traded hotel companies and hotel real estate investment trusts (REITs) were acquired—mostly by private equity firms, in many cases, Blackstone Group. Notwithstanding the suspension of such activities in the past two years, this article analyzes what factors determine the choice of the targets during that period in the lodging industry. An examination of these takeover deals determined that targets were most likely to: (1) be either a large hotel company or a relatively small REIT; (2) have a high percentage of fixed assets and a low level of debt; (3) have a mismatch between growth prospects and available resources; and (4) be in their middle age as publicly traded firms. Conditions that permit acquisitions, including availability of credit, will eventually return, making this analysis useful to current and future owners, investors, and executives in the lodging industry. Those who want to be acquired, for instance, can adjust their corporate profile to be more attractive, and those who wish to discourage acquisition can take on debt and spin off assets to be less attractive.

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## ABOUT THE AUTHORS



**Qingzhong Ma**, Ph.D., is an assistant professor of finance at the Cornell University School of Hotel Administration (qm26@cornell.edu). He does research in corporate finance, especially mergers and acquisitions, divestitures, corporate restructuring, investment banking, institutional investors, corporate governance, capital market efficiency, and real options in hotel management. His work has recently appeared in *Cornell Hospitality Quarterly*, and he has made numerous conference presentations.

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In July 2007, Blackstone announced the acquisition of Hilton Hotels Corp. for about \$20 billion in cash, making it one of the largest acquisitions in the lodging history. Despite its size, this deal was not exceptional for that year or for the years immediately prior. As Exhibit 1 shows (page 8), from 2004 to 2007 a total of twenty operating hotel companies and real estate investment trusts (REITs) specializing in hotels were acquired, mainly by private equity firms. These acquisitions, with a total deal value of over \$60 billion, involved 12 percent of all hotel companies and hotel REITs that are publicly traded in the United States, and represent 18 percent of the annual industry-wide total market capitalization over these years.<sup>1</sup>

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<sup>1</sup> Authors' estimates based on the data used for analysis, as explained in Exhibit 1.

Large scale hotel industry acquisitions stopped abruptly in 2008 when the credit markets froze, and throughout recession-plagued 2009 no single acquisition of a publicly traded lodging firm of comparable size took place.<sup>2</sup> In the first quarter of 2010, however, there have been increasingly strong signs that the economy is on the path of recovery and the acquisition market is about to return.<sup>3</sup>

Needless to say, a corporate acquisition results in dramatic changes to the targeted company and its constituents. For current investors of target firms (in an unexpected announcement), the typical stock price appreciation on the day of announcement is on average around 20 percent. Thus, if one could determine which companies were about to receive acquisition offers, one could gain substantial investment returns. For executives who manage targeted lodging companies, acquisitions mean that any ownership position they hold will increase in value. More immediately, they are likely to lose their job when the companies change hands. Given the dislocations and opportunities caused by acquisitions, investors and executives alike should understand what company characteristics are associated with takeover offers. In this article we explore the financial factors that were most strongly associated with lodging companies that became takeover targets from 2004 to 2007.

<sup>2</sup> The Dow Jones average of 30 industrials decreased from 13,365.87 on December 28, 2007, to its recent lowest point at 6,626.94 on March 6, 2009, a loss of more than 50 percent. The number of deals and the total deal volume also significantly decreased in 2008 and 2009. See: Linda Canina, Jin-Young Kim, and Qingzhong Ma, "What We Know about M&A Success: A Research Agenda for the Lodging Industry," *Cornell Hospitality Quarterly*, Vol. 51, No. 1 (February 2010), pp. 81–101.

<sup>3</sup> Michael Corkery, "J.P. Morgan's Braunstein: 'Optimism Is Back!' So, Ahh, Where are the Deals?" *The Wall Street Journal* Online, April 15, 2010. [http://blogs.wsj.com/deals/2010/04/15/jp-morgans-braunstein-optimism-is-back-so-ahh-where-are-the-deals/?mod=djemDeal\\_t&reflink=djemWLB](http://blogs.wsj.com/deals/2010/04/15/jp-morgans-braunstein-optimism-is-back-so-ahh-where-are-the-deals/?mod=djemDeal_t&reflink=djemWLB)

## Theoretical Underpinning

The finance literature has suggested numerous theories to explain which firms are targets of mergers and acquisitions. By and large, the theories can be summarized into the following four general categories: (1) room for improvement in targeted companies; (2) the preferences of acquiring companies; (3) an inefficient capital market; and (4) economic shocks. First, we'll explore the implications of these theories in the context of acquisitions by private equity firms and then discuss the financial measures that we used for this analysis.

### Room for Improvement in Targets

When a company has room for improvement, so the theory goes, other management teams find it profitable to take over that firm and operate it more efficiently.<sup>4</sup> The implication of this category of theories is straightforward: the likelihood of being a target is negatively correlated with a firm's performance. To measure this concept for our analysis, we use past stock returns and past accounting performance such as return on assets, profit margin, and asset turnover as measures of performance. In addition, if a company has a mismatch between its growth prospects and its resources, this can be a sign of mismanagement, making it more attractive as a takeover target.

To give examples of resource mismatches from the companies listed in Exhibit 1, Four Seasons had low sales growth but a high level of liquid assets with low leverage. On the other hand, Hilton Hotels Corp. had experienced

<sup>4</sup> See, for example: Henry Manne, "Mergers and the Market for Corporate Control," *Journal of Political Economy*, Vol. 73, No. 2 (1965), pp. 110–20; and Michael Jensen and Richard Ruback, "The Market for Corporate Control: The Scientific Evidence," *Journal of Financial Economics* Vol. 11 (1983), pp. 5–50.

## Deals involving public hotel companies and hotel REITs as targets from 2004 to 2007

Target	Type (Hotel or REIT)	Year	Acquirer	Deal value (\$ million)
Mandalay Resort Group	Hotel	2004	MGM Mirage, Inc	7,811
Prime Hospitality Corp.	Hotel	2004	Blackstone Group LP	570
Extended Stay America Inc.	Hotel	2004	Blackstone Group LP	2,066
Caesars Entertainment Inc.	Hotel	2004	Harrah's Entertainment Inc	6,332
John Q. Hammons Hotels Inc.	Hotel	2005	Investor Group	544
Wyndham International Inc.	Hotel	2005	Blackstone Group LP	1,367
La Quinta Corp.	Hotel	2005	Blackstone Group LP	2,344
Jameson Inns Inc.	Hotel	2006	JER Partners	374
Kerzner International Ltd.	Hotel	2006	K-Two Holdco Ltd	3,077
*MeriStar Hospitality Corp.	REIT	2006	Blackstone Group LP	1,846
Boykin Lodging Co.	REIT	2006	Braveheart Holdings LP	196
Four Seasons Hotels and Resorts Inc.	Hotel	2006	Investor Group	2,712
Fairmont Hotels & Resorts Inc.	Hotel	2006	Nova Scotia Ltd	3,640
Hilton Hotels Corp.	Hotel	2007	Blackstone Group LP	20,168
*Equity Inns Inc.	Hotel	2007	Whitehall Street Global Real	2,206
*Crescent Real Estate Equities	REIT	2007	Morgan Stanley Real Estate	6,434
Winston Hotels Inc.	REIT	2007	Inland American RE Tr Inc	438
Innkeepers USA Trust	REIT	2007	Apollo Investment Corp	805
Highland Hospitality Corp.	REIT	2007	JER Partners Acquisitions IV	1,458
Eagle Hosp Prop Trust Inc.	REIT	2007	AP AIMCAP	317

Notes: **Data source.** The sample is originally drawn from Securities Data Corporation (SDC) Platinum Online Mergers and Acquisition Database, where the targets' primary Standard Industry Codes (SIC) are 7011 (hotel and motels), 6799, and 6798 (REITs). The deals are announced between 2004 and 2007. Only completed deals are included. We then use a list of hotel REITs extracted from S&L to exclude REIT targets that are not specialized in hotels. The remaining targets are further required to have stock price data from the Center for Research in Security Prices (CRSP) at the University of Chicago and accounting data from Standard & Poor's Compustat at the yearend before the announcement.

\* MeriStar, Equity Inn, and Crescent are not included in our final sample for analysis because of missing data on plants, properties, and equipment (PP&E).

high sales growth but its liquid assets were limited and its leverage was high.

### Preferences of Acquiring Companies

This stream of the finance literature usually refers to the inefficiency in the management of the acquiring firms.<sup>5</sup> Theory aside, we do not have good information on the private equity firms that acquired the hotel firms in this study. We can infer something of the private equity firms' strategy and business model by comparing their actions to those of public acquirers. Private equity firms typically make profits by taking over companies, loading them up with debt, making improvements, and selling the companies to other

investors over a relatively short period of time. This model differs greatly from that of strategic acquirers, who acquire businesses to hold and run them. To begin with, to create necessary returns to their investors, private equity firms' acquisitions must be large; second, the debt level of the targeted companies has to be low (to allow the acquirers to take out debt); and third, to make improvements it is easier if the acquired company consists mostly of fixed hard assets instead of intangible assets, such as a brand. With regard to that last point, it is harder to improve the value of a brand over a relatively short period of time than it is to upgrade a building, for example. Consequently, this line of analysis predicts that the likelihood of a company being targeted is positively correlated with its size and the percentage of fixed assets, and negatively with its debt level.

<sup>5</sup> For example, see: Randall Morck, Andrei Shleifer, Robert W. Vishny, "Do Managerial Objectives Drive Bad Acquisitions?," *Journal of Finance*, Vol. 45, No. 1 (March 1990), pp. 31–48.

We see potential support for this theory among the companies listed in Exhibit 1, where the market value of most of the acquired hotel operating companies is above the industry median, while the market value of most of the hotel REITs was below the industry median. Also in keeping with this theory, the percentage of fixed assets for most of the targeted companies was well above the industry median. Extended Stay, Prime Hospitality, Jameson Inns, Innkeepers, and Eagle Hospitality were all ranked in the top 10 percent among industry peers on that criterion before they were taken over. Along the same line, the debt-to-asset ratio of many targets was lower than the industry median. However, we must note that Mandalay, John Q. Hammons Hotels, Park Place Entertainment, and Hilton already carried high debt levels when they were acquired. As a closing point for this strategy, it's worth noting that the credit freeze and recession brought to a halt the "round trip machine" of taking companies private, reconfiguring them, and then spinning them off into an initial public offering. Eventually that activity will resume.

### Inefficient Capital Market

A company presents an investment opportunity when the value of its outstanding stock trades lower than its (presumed) intrinsic or book value. To measure this value, we use a company's book-to-market or B/M ratio (book value of equity to market value of equity). The higher the B/M ratio, the more likely a company becomes a target. Targets that fell into this category are Eagle Hospitality and La Quinta.

### Economic Shocks

Mergers and acquisitions tend to follow economic shocks, such as deregulation.<sup>6</sup> The relevant economic shock for the period of 2004–2007 was actually increased regulation, in the Sarbanes-Oxley Act of 2002. Enacted in response to the Enron bankruptcy, "Sarb-Ox" imposes extra costs on publicly traded companies—costs which could be particularly burdensome for small firms. A direct implication of this theory is that smaller lodging companies are more likely to go private by being acquired by private equity firms. This theory's prediction about company size, however, contradicts theories based on preferences of acquiring firms. As a result, how company size affects the likelihood of becoming a target is essentially an empirical question.

### Empirical Findings

To test these theoretical propositions, we analyzed a panel of target and non-target publicly traded lodging companies and hotel REITs for the years 2004 through 2007.

<sup>6</sup> Mark L. Mitchell and J. Harold Mulherin, "The Impact of Industry Shocks on Takeover and Restructuring Activity," *Journal of Financial Economics*, Vol. 41 (1996), pp. 193–229.

Theory predicts that acquisition targets should be large, and have substantial fixed assets, relatively low debt-to-asset ratios, and room for improvement in operations..

Logit regression models are employed to estimate the strength of the factors identified and discussed above.<sup>7</sup> A logit model generates regression coefficients on the independent variables that indicate the direction of their effects and their statistical significance. Exhibit 2 presents the results of three logit regressions. In the column next to the independent variables are the expected signs according to the theoretical discussion above. Then, under each model the first column lists the regression coefficient and the second its T-statistics. The sign of the coefficient represents the direction of the effect (for comparison with the expected sign). For example, a positive coefficient on a variable means the larger the variable, the more likely the company becomes a target, and vice versa. Whether the effect is statistically significant, however, depends on whether the magnitude of its corresponding T-statistic is large enough. We note three levels of significance. The 10-percent confidence level (marked with a single asterisk \*), the 5-percent level (two asterisks \*\*), and 1-percent level (three asterisks \*\*\*). At the 1-percent level, we can be almost totally confident that the effect is significant, but at the 10-percent level there remains a 10-percent probability that the effect is actually insignificant even though we have erroneously concluded that it is

<sup>7</sup> Using Logit models to estimate binary variables is common in the finance, accounting, and economics literature, as well as in hospitality financial management. See: Krishna G. Palepu, "Predicting Takeover Targets: A Methodological and Empirical Analysis," *Journal of Accounting and Economics*, Vol. 8 (1986), pp. 3–35; Jose-Miguel Gaspar, Massimo Massa, Pedro Matos, "Shareholder Investment Horizons and the Market for Corporate Control," *Journal of Financial Economics*, Vol. 76, No. 1 (2005), pp. 135–165; and Woo Gon Kim and Avner Arbel, "Predicting Merger Targets of Hospitality Firms (A Logit Model)," *Hospitality Management*, Vol. 17 (1998), pp. 303–318.

**EXHIBIT 2**
**Logit regression models on the likelihood of public lodging companies being targeted**

Category	Variable	Expected Signs	Model (1)			Model (2)			Model (3)		
			Coef.	T	Sig.	Coef.	T	Sig.	Coef.	T	Sig.
Size and growth	REIT size	+/-	-0.52	-1.63		-0.54	-1.64		-0.57	-1.68	*
	Hotel size	+/-	0.33	1.85	*	0.30	1.70	*	0.30	1.77	*
	Sales growth	-	-1.00	-0.98		-1.10	-1.07		-1.00	-0.98	
Balance-sheet structure	PP&E/asset	+	4.35	2.59	***	3.88	2.22	**	4.56	2.74	***
	D/A	-	-3.67	-1.87	*	-3.27	-1.60		-3.66	-1.92	*
Historical performance	ROA	-	-3.61	-0.53							
	Profit margin	-				-0.81	-0.34				
	Sales/asset	-				-1.22	-0.71				
	Abnormal return, 1-year	-							0.46	0.61	
Structural problem	G-R mismatch	+	2.00	2.10	**	1.85	1.90	*	1.99	2.12	**
Future performance	Capx/asset	+/-	-9.92	-0.94		-9.12	-0.86		-11.65	-1.12	
Market valuation	B/M	+	-0.84	-1.36		-0.87	-1.36		-0.93	-1.49	
Other	Hotel operator	+/-	-2.14	-1.29		-2.13	-1.28		-2.08	-1.25	
	Middle age	+	1.23	1.82	*	1.18	1.69	*	1.25	1.86	*
Constant			-0.80	-0.38		0.05	0.02		-0.88	-0.43	
McFadden's LRI			0.24			0.25			0.24		

Note: The sample includes a panel of the targeted companies listed in Exhibit 1 and the non-targeted lodging companies and hotel REITs that have available necessary data. The dependent variable is binary, which is equal to one for a company and year if an announcement was made in that year that the company was to be acquired, and zero if no such announcement was made. The independent variables are defined as follows. REIT size is the ranked market value of assets (0 to 9) of hotel REITs for the year against the population;

- Hotel size is the ranked market value of assets (0 to 9) of hotel companies for the year against the population;
  - Sales growth is the growth rate in sales over the past two years;
  - PP&E/asset is the ratio of PP&E to asset of the past year;
  - D/A is the ratio of debt to assets, all measured at the previous year's end;
  - ROA is return on asset;
  - Profit margin is defined as net income/sales of the past year;
  - Sales/asset is the ratio of sales to total assets over the past year;
  - Abnormal return, 1-year is the buy-and-hold abnormal returns of the company adjusted by CRSP value-weighted market returns over the prior calendar year;
  - G-R mismatch is a binary variable that is equal to one if one of the following is true: **(a)** past-year sales growth is ranked in the top 1/3 but the liquid assets (cash plus receivables) as a percentage of total assets is ranked in the bottom 1/3 and the long term debt to equity ratio is ranked in the top 1/3 of the year among all lodging firms; or **(b)** past year sales growth is ranked in the bottom 1/3 but the liquid assets (cash plus receivables) as a percentage of total assets is ranked in the top 1/3 and the long-term debt to equity ratio is ranked in the bottom 1/3 of the year among all lodging firms;
  - Capx/asset is the ratio of capital expenditure to total assets;
  - B/M is the ratio of book value of equity (of past fiscal year) to the market capitalization (of past year end);
  - Hotel operator is an indicator equal to one if the company is a hotel operating company and zero otherwise; and
  - Mid age is a dummy variable if in the year the company's age as a publicly traded company is in the middle 40% among all existing lodging firms.
- Expected signs are listed in the first column. Asterisks denote statistical significance, as follows: ; \*\*\* indicates the 1% level; \*\*, 5%; and \*, 10%.

significant. So, the smaller the significance level number, the stronger the statistical significance of the coefficient. For comparison, we tested three models using alternative measures of past performance.

Across the three models, the following results are salient. First, larger hotel operating companies and smaller hotel REITs are more likely to become targets; second, the size of the company's fixed assets (measured as plant, property, and equipment, or PP&E) as a percentage of total assets have a significant positive effect on the company's becoming a target; third, the debt-to-asset ratios all have negative coefficients, and two out of three are statistically significant at the 10-percent confidence level; fourth, the growth-resource mismatch has a positive significant coefficient across all three models. The three models also show that companies in their "middle-age" as publicly traded companies are more likely to become targets. By contrast, no performance measure carries a significant coefficient, whether that measure is stock- or accounting-based; the book-to-market ratio does not appear relevant either, particularly since all three coefficients have a sign opposite to what would be expected; and the measure of future performance, capital expenditures as a percentage of assets, does not have significant coefficients. By and large, these findings are consistent with what the theories predict.

### Implications for Owners, Investors, and Executives

Summarizing this analysis, publicly traded targets during the acquisition wave in the lodging industry from 2004 through 2007 exhibited one or more of the following characteristics:

- They were larger hotel operating companies or smaller hotel REITs,
- Their PP&E as percentage of total assets was higher than most companies,
- They had relatively low debt-to-asset ratios,
- They displayed a mismatch between growth prospects and available resources, and
- They were "middle-aged," as a publicly traded company.

To the extent that the model helps identify potential targets among all lodging firms, the implications of our analysis should be clear to current and future owners and

The study found that acquisition targets were likely to be large hotel companies or small REITs, had substantial fixed assets and relatively low debt-to-asset ratios, and displayed a mismatch between growth prospects and available resources..

investors in lodging companies. To reap high returns from receiving takeover offers, potential investors should invest in lodging companies that share the characteristics listed above. Shareholders and executives of public lodging companies who wish to sell could position their companies toward the characteristics listed above. For example, operating hotel companies can increase their size by buying up other smaller lodging assets, especially those that can increase their fixed assets, and by lowering their debt level. Executives that do not welcome takeover offers could do the opposite, for example, by increasing debt load or shedding fixed assets.

This analysis is based on publicly traded lodging firms because only these firms have sufficient good quality financial and accounting data. For owners and future investors of privately held hotel companies, whether and to what extent this analysis extends to privately held lodging assets are open to discussion. Nonetheless, it seems safe to infer that private companies act in some ways like public firms, in regard to the effect of fixed assets and debt ratios on takeover potential. ■

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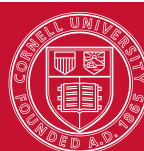
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