

# Winners and Losers during the Great Recession: The Positive Impact of Marketing Expenditures

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## Abstract

One of the factors that separated winning hotels from losers in the recession was the hotels' management of marketing expenses. By matching a group of 100 winners to 106 losers, based on high or low financial performance during the nadir of the recent recession, the study highlights the effects of marketing expenses as one primary driver of revenue and profit. The study compares the two groups' revenue and profitability metrics to determine the two groups' financial performance as the recession wore on. The results of this study show significant differences between winners and losers when measured by top-line indicators (Average Daily Rate [ADR], RevPAR, TRevPAR) and profitability (GOPPAR and NOIPAR). Winners were also found to spend significantly more on marketing than losers. The relationship between marketing expenditures and performance is significantly positive, with franchise expenses and other sales expenses emerging as the most important determinants of RevPAR, GOPPAR, and NOIPAR. In particular, these results highlight the importance of personal sales efforts, including promotions, familiarization trips, trade shows, and the training of sales personnel, personal sales visits to clients, and use of outside sales representatives to help hotels thrive in a recession. These data lead to the conclusion that firms that "invest" in marketing, especially in tough times, can achieve a payoff via various revenue drivers (e.g., trade shows) and will realize gains beyond just the short term.

## Keywords

recession; hotels; profitability; marketing expenditures

The U.S. lodging industry suffered one of its worst declines in financial performance in 2009, a direct result of the global financial crisis and ensuing economic recession. In that year, data from PKF Hospitality Research (2010) recorded an overall 18.5 percent decline in average daily rate and a painful 37.4 percent drop in net operating income (NOI) for all hotels. Similarly, Smith Travel Research's (STR) Host Study observed a 16.6 percent decline in revenue per available room (RevPAR), which led to a 19.5 percent drop in gross operating profit (GOP), as well as a 38 percent decline in pre-tax income (Smith Travel Research [STR] 2010). Although the pain was felt industry-wide, the luxury segment exhibited the industry's worst performance in percentage terms with a 23.6 percent decline in RevPAR and a 37 percent decline in GOP (Wilson 2010).

## Purpose of the Study

Although the entire industry felt the effects of the recession, clearly some hotels performed better than others. In this study, we examine the differences in financial performance between matched sets of winners and losers. This analysis extends and complements the literature on hotel financial

performance, as it intentionally focuses on a narrowly defined time period to better understand the effects of recession on financial performance.

## Research on Hotel Revenue

The well of data on hotel performance is deep but not broad, as most data are provided by two comprehensive sources: PKF Hospitality Research and STR. However, operating data are otherwise difficult to acquire. Among the studies that have utilized STR data, Enz and Canina (2002) showed variations in performance across regions, states, and cities, as well as across chainscale segments. In that regard, Mattila, O'Neill, and Hanson (2009) found that hotels in upper quartiles of NOI were significantly more likely to be lower priced, midscale, limited-service properties, while

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high-price upscale and luxury hotels resided in the lower NOI quartiles. Several studies have attempted to parse the relative strength of occupancy and daily rate in driving income measures. O'Neill and Mattila (2006a), for instance, concluded that occupancy was the larger contributor to a hotel's NOI and that hotels with higher occupancy rates were more profitable during recessionary periods while the effect of ADR depended on the state of the economy. In a subsequent study, however, O'Neill and Mattila (2006b) observed a lower effect of occupancy on NOI when NOI was measured in raw dollars. Then again, when NOI was measured as a ratio to revenue, both ADR and room revenues were found to be insignificant predictors of NOI.

Other studies have examined the effect of brand affiliation on financial ratios. While NOI for branded and independent hotels show no significant differences during periods of economic expansion, research by O'Neill and Carlback (2011) reveals that branded hotels with higher occupancy levels achieved significantly higher NOIs when compared with independent hotels during an economic recession. Furthermore, branded hotels were found to be more valuable and profitable than independent hotels because of their lower variability in profit. Moreover, some brands generated higher NOI than others (O'Neill and Mattila 2006a, 2006b). Guest satisfaction is another factor with a positive influence on both occupancy and ADR, especially for brands with higher levels of guest satisfaction (O'Neill and Mattila 2004).

A study by Love, Walker, and Sutton (2012) evaluated a brand's contribution to hotel performance by measuring the change in revenue when a hotel switched brands. Their case study of nine hotels illustrated the use of a RevPAR index as a tool for estimating the amount of intangible value that could be attributed to a hotel's brand affiliation. Based on an analysis of six brands, Love, Walker, and Sutton (2012) concluded that some hotels performed significantly better when operating under an upper-tier brand as opposed to operating as independent hotels or marginally branded hotels.

The link between hotel financial performance and market value has also been well documented (O'Neill 2004; O'Neill and Lloyd-Jones 2002; O'Neill and Xiao 2006). For example, following the events of 9/11, declines in RevPAR performance led to a drop in hotel values stemming from the limited availability of financing and widespread market uncertainty that depressed hotel sales transactions (O'Neill and Lloyd-Jones 2002). Although a hotel's brand contributes significantly to its market value, the effects of brand vary across chainscale segments (O'Neill and Xiao 2006).

Highlighting factors that influence hotel performance, a study by Xiao, O'Neill, and Mattila (2012) found that the best performing hotels were located in particular areas of the country within specific segments, affiliated with certain brands, and managed by a select group of operators. In that

vein, O'Neill and Xiao (2006) suggested that superior management helps owners maximize financial performance.

Despite research linking occupancy to income, lodging demand studies have also provided strong evidence pertaining to the effect of pricing strategies on hotel performance. Perhaps the most consistent thread in this line of research involves hotels' relatively low-price elasticity and the related finding that discounting relative to competitors results in relatively lower performance (see, for example, Canina and Carvell 2005; Canina and Enz 2006; Enz, Canina, and Lomanno 2004, 2009).

Of particular interest to our recession-driven study, Enz, Canina, and Lomanno (2009) suggest that price discounting does not always work during recessionary periods because of demand inelasticity. Thus, revenues will decline when prices are reduced and price promotions are insufficient to stimulate demand to generate higher revenues. Enz, Canina, and Lomanno's (2004, 2009) advice to hotel owners and managers: maintain rate integrity during a recession even when competitors do not.

A particular element of interest in our study is the effect of expenses on revenues and profits. Needless to say, operating expenditures generally reduce net income, but research has also indicated that marketing expenditures significantly influence hotel performance. Based on a 2005 exploratory study of 2,815 hotels in the period following 9/11, for instance, O'Neill, Hanson, and Mattila (2008) provided evidence that higher marketing expenditures translated into higher room revenues and NOI. Not surprisingly, however, this effect differed by chainscale and by type of marketing expenditure. In particular, franchise fees yielded mixed findings. In this study, we answer the call by O'Neill, Hanson, and Mattila (2008) for further research to provide hotel operators with relevant and useful information about the relationship between marketing expenditures and hotel performance.

## Study Objectives and Scope

Our study's primary objective is to compare the financial ratios of the high and low performers at the nadir of the great recession in 2009 based on occupancy, ADR, and RevPAR and also on GOP and NOI. Of greater interest, we examine the relationship between marketing expenditures and profitability at the property level within the two groups of hotels to determine whether changes in marketing expenditures had any effect on hotel profitability. To the best of our knowledge, ours is only the second study to analyze the link between marketing expenditures and financial performance in this way. Having said that, we must note that our study differs from O'Neill, Hanson, and Mattila (2008), in that our data come from a period of economic recession while their study was performed during a period of economic expansion.

There are four other differences between the O'Neill et al. study and the one we describe in this article. In addition to using absolute levels to measure variables, we perform our analysis using percentage changes in both operating and financial metrics to capture the effects of managerial strategies on various revenue, expense, and income-related items during the recession. Measuring changes over time using percentages rather than absolute dollar figures to quantify financial performance is more useful when economic or market conditions change (Love, Walker, and Sutton 2012), and it also allows comparison between hotels of different sizes. Because third-party managers derive some of their incentive fees from gross operating profit, we include GOP as an explanatory variable.

In addition, we noted that O'Neill, Hanson, and Mattila (2008) separated franchise and loyalty-program fees, which may be why they observed mixed findings regarding the franchise fees. Thus, we aggregate all franchise-related and loyalty expenses into a single line item, in accordance with the *Uniform System of Accounts for the Lodging Industry* (Hotel Association of New York City 2006). Finally, drawing on the study by Love, Walker, and Sutton (2012), we use a RevPAR index to capture the performance of each hotel relative to its competitive set, thereby allowing us to make a direct comparison (Enz, Canina, and Lomanno 2009). This competitive set approach differs from the common approach of computing a RevPAR average for a segment of hotels located across the country.

Going beyond the studies by Enz, Canina, and Lomanno (2009) and Love, Walker, and Sutton (2012), we also link revenue metrics with profitability measures. Again, we are unaware of studies other than those two that specifically account for the relative difference in RevPAR between a hotel and its competitive set.

Our goal in analyzing the financial performance of winners and losers was to find out what makes a hotel a winner or loser in a tough economic environment. In addressing this question, we particularly analyze the effects of marketing expenditures, which had noticeably diverse effects between winning and losing hotels. We note that our approach to classifying hotels by revenue index is consistent with approaches adopted in other research that has provided useful insights into hotel characteristics and financial performance when hotels are grouped by various financial outcomes (Mattila, O'Neill, and Hanson 2009; Xiao, O'Neill, and Mattila 2012). In short, we identify the marketing expenditure categories that created the most and least value for hotel managers and owners during the recession.

## Study Methods and Procedures

To develop our sample of 416 hotels, we applied several filters to a set of 1,581 U.S. hotels drawn from the PKF Hospitality Research *Trends*® database. Eligible hotels had

at least three years of detailed operating and financial data from 2007 through 2009 on revenue and expense measures such as room revenue, total revenue, occupancy, ADR, GOP, and NOI, as well as other characteristics, such as management company, brand, chainscale, property type, and markets (MSA).

To create competitive sets using STR's definitions of markets and submarket hotel locations, we manually matched each hotel to a similar set of competitive and comparable hotels using submarket location, size, and the established STR chainscale segments. We excluded hotels for which we were unable to find matches, and we also excluded 867 economy hotels, because they all belonged to the same brand and would have biased the sample.

Our competitive sets were made up of three to five hotels within a chainscale segment in a submarket. One limitation we faced in the matching process was the inability to add more hotels to a competitive set in a segment if we found too few hotels competing in a particular submarket. In many submarkets, we were able to match only two properties, which is why we were forced to exclude so many hotels. In practice, managers would typically add hotels that are one notch above or below their chainscale segments to create a competitive set of a minimum of four but preferably five hotels (including their own hotel) so that they could participate in and obtain STR reports.<sup>1</sup> Hence, our final sample of 416 hotels represented a mix of hotels with a variety of branded and third-party management and franchise combinations. Of these, we were able to compare 206 winning and losing properties.

To develop the RevPAR index, we first calculated the average RevPAR for each competitive set and divided each hotel's individual RevPAR by the competitive set's RevPAR average. To classify hotels as winners or losers, we adapted the approach of Love, Walker, and Sutton (2012), who used an index score of 80 percent and 120 percent as cutoff points to classify hotels as performing below average or above average. Our adaptation was to use a RevPAR index of 90 percent and below for the losers and 110 percent and above for the winners, based on the benchmark commonly used in performance clauses found in hotel management agreements. Typically, these agreements consider the management company to be in default if the RevPAR index drops below 90 percent of competitive set average. Logically, if one is in default at the 90 percent level, then a hotel would be a high performer at 110 percent. We considered hotels with RevPAR between 90 percent and 110 percent to be average performers and set them aside. In our sensitivity analysis, we replicated Love, Walker, and Sutton (2012) cutoff of 80 percent and 120 percent to test the robustness of our results, as shown later. We classified the hotels as winners or losers using 2007 financial data, just before the recession. Our final sample comprised 100 high-performing hotels and 106 low-performing hotels.

**Exhibit 1:**  
**Breakdown of Sales and Marketing Expenses.**

Variable	Definition
Marketing labor	Salaries and wages Employee benefits Total payroll and related expenses
Franchise expenses	Franchise and royalty fees Franchise assessments and affiliation advertising Loyalty programs and affiliation fees Total franchise expenses
Advertising related	Marketing e-commerce Media/outdoor advertising Other marketing expenses Total advertising and related expenses
Other sales expenses	Other sales expenses including family trips, outside sales reps, trade shows, local promotions, complimentary gifts and services, training, travel
Sales and marketing	Total sales and marketing dept. expenses

For all hotels in the study, we computed occupancy, ADR, and RevPAR. To control for hotel size, we also scaled all our profitability measures by the number of available rooms during the year. Thus, the bottom-line measures we derived were GOP per available room (GOPPAR) and NOI per available room (NOIPAR).

Our analysis included the following four key expense categories because of their magnitude and importance in controlling operations: room department expenses, administrative and general expenses (A&G), property operations and maintenance (POM) expenses, and utilities expenses. PKF's *Trends* report (PKF Hospitality Research 2010) showed that room department expenses absorbed 27 percent of total room revenues, while total undistributed operating expenses equaled 27 percent of total revenues for full-service hotels and 30 percent for limited-service properties. We ignored other departmental expenses such as food and beverage due to missing observations for many limited-service hotels and extreme variability in classifying these expenses.

For our analysis of the relationship between marketing expenditures and profitability, we gathered data on each hotel's marketing expenses, which average 8 percent of total revenues industry-wide. Marketing expenditures represent the second largest undistributed operating expenses incurred by a hotel after A&G expenses (PKF Hospitality Research 2010). We found some variation in our data and many missing observations for specific accounts, largely because full-service hotels typically had marketing departments that kept track of specific expenses while limited-service hotels often did not have separate marketing departments or record those expenses. Consequently, to minimize the loss of observations, we consolidated marketing expenses into four main categories, as shown in Exhibit 1. These categories are marketing labor (payroll and related expenses), franchise expenses, advertising-related expenses,

and other sales expenses. Marketing labor included salaries, wages, and benefits; franchise expenses included franchise and royalty fees, franchise assessments and affiliation advertising fees, and cost of loyalty programs; advertising-related expenses comprised e-commerce, media and outdoor advertising, and other marketing expenses; and other sales expenses comprised costs associated with personal sales efforts, trade shows, familiarization tours, and outside sales representatives.

We performed our analysis on hotel performance from 2007 through 2009 in terms of dollar amounts per available room, percentage changes, and a common-size ratio analysis (ratio to sales) for all our measures. Despite smaller sample sizes, we also compared differences in franchise-related expenses. In the interest of parsimony, we present only results that indicated differences between winners and losers and provided relevant and useful insights into financial performance.

## Results

### *Descriptive Statistics*

The dataset comprised performance data for 416 hotels (1,248 observations) from 2007 through 2009 representing largely branded hotels. Of the 416 hotels, only twenty-three were independent and the rest (393) were branded or chain-affiliated, a makeup that is generally consistent with that observed in other studies (Mattila, O'Neill, and Hanson 2009; O'Neill and Mattila 2006a). As indicated by the data shown in Exhibit 2, despite having fewer properties in the luxury and midscale with food and beverage segments, we observe two groups of similar size—100 winners and 106 losers. All segments are well represented in these two groups, although there is a slightly greater number of luxury

## Exhibit 2: Hotel Frequency Statistics.

Affiliation	Number of Hotels	Observations	Percentage
Independent	23	69	5.3
Branded	393	1,179	94.7
Total	416	1,248	
Chainscale			
Luxury	26	78	6.3
Upper upscale	137	411	32.9
Upscale	96	288	23.1
Midscale with F&B	3	9	0.7
Midscale without F&B	65	195	15.6
Extended stay	89	267	21.4
Total	416	1,248	
Performers			
High performers	100	300	24.0
Average Performers	210	630	50.5
Low performers	106	318	25.5
Total	416	1,248	

and upper upscale hotels in the loser group than in the winner group.

As shown in Exhibit 3, the descriptive statistics show that, on an absolute dollar basis, winners (by definition) enjoyed higher ADRs, RevPARs, and TRevPAR than losers, as well as higher overall occupancy rates. In terms of median values, winners outperformed losers by 7 percent in occupancy, \$27 in ADR, and \$30 in RevPAR. So, each \$1 of ADR difference translated into an approximately \$1 RevPAR premium.

Although winners incurred greater expenses relative to losers for room expenses and all undistributed operating expenses, they also achieved higher revenues and profits. For example, winners spent on average \$12 per available room on A&G expenses compared with \$8 for losers. When the expenses are compared on a ratio-to-sales basis, it appears that losers expended more as a proportion of sales in all major expense categories, except for sales and marketing expenses. Looking at our measure of interest, winners, on average, spent about eight cents out of every dollar of revenue on sales and marketing efforts while losers spent only six cents.

Regardless of whether they were measured on an absolute dollar basis or as a percentage of sales, winners were more profitable than losers with respect to GOPPAR and NOI PAR. Winners generated a mean of \$23 in net operating income per available room compared with losers (median, \$17), four percentage points higher when measured as a ratio to sales. Thus, winners generated thirty-six cents in NOI out of every dollar of revenue compared with thirty-one cents for losers.

Looking at overall marketing expenditures, we find that winners incurred a higher overall level of marketing

expenditures than losers. Winners spent an average of \$11.50 per available room on total marketing expenditures (median, \$9.60) compared with \$6.10 per available room for losers (median, \$4.50), a difference of more than \$5 per available room. Looking at the four categories of marketing expenditures, the amounts spent on marketing labor, franchise expenses, advertising, and other sales expenses were greater for winners than for losers. However, in terms of ratio to sales revenue, winners incurred a greater proportion of franchise expenses and other sales expenses compared with losers. On average, winners spent almost 5 cents out of every dollar on franchise-related expenses compared with 3.5 cents for losers. However, the proportion of marketing labor costs and advertising expenses appear to show few if any differences between the two groups.

In our assessment of the category of franchise-related expenses, we find, on average, winners spent \$4.45 per available room on franchise royalty fees, \$2.51 on franchise marketing assessment fees, and \$1.78 on loyalty-program fees. In contrast, losers incurred only \$2.47 for royalties, \$1.50 for marketing, and \$1.02 for loyalty programs. Similarly, as a ratio to sales, each of this above-mentioned franchise-related expense is also greater for winners when compared with losers. Winners spent, on average, 3.5 cents out of every dollar on royalty fees, 2.2 cents on marketing assessment fees, and 1.5 cents on loyalty fees. However, losers spent 2.6 cents on royalties, 1.8 cents on marketing assessments, and 1 cent on loyalty fees.

### Univariate Analysis

Given our concerns over the presence of outliers in the data, we employed both parametric (unequal variance  $t$

**Exhibit 3:**  
**Descriptive Statistics (2007-2009).**

Top-Line Measures	Winners			Losers		
	<i>M</i>	Median	<i>SD</i>	<i>M</i>	Median	<i>SD</i>
Number of rooms	247	146	311	268	143	254
Occupancy (%)	72.3	72.8	8.5	65.2	65.5	10.7
ADR	149.1	116.8	86.1	97.3	89.5	47.5
RevPAR	108.7	86.8	65.0	65.5	57.4	39.8
TRevPAR	147.3	92.6	128.6	86.3	65.4	63.5
Major operating expenses (\$PAR)						
Room department expenses	25.37	20.26	16.37	16.74	12.88	11.73
Room expenses/room revenues (%)	23.31	23.24	4.79	25.04	24.62	7.10
Admin and general	12.36	8.38	11.21	8.27	6.02	5.42
A&G/Total Revenues (%)	8.68	8.62	1.72	10.45	10.06	2.71
Sales and marketing	11.47	9.58	8.64	6.06	4.51	5.70
Sales and marketing/total revenues (%)	8.31	7.49	2.90	6.02	6.09	3.88
Property, operations, maintenance	6.70	4.70	5.78	4.50	3.28	2.92
POM/total revenues (%)	4.77	4.58	1.25	5.84	5.64	1.82
Utilities	5.65	4.28	3.80	4.02	3.32	2.17
Utilities/total revenues (%)	4.51	4.21	1.63	5.79	5.26	2.53
Profitability measures (\$PAR)						
GOPPAR	58.8	44.1	43.7	32.3	26.7	23.6
GOPPAR/TRevPAR (%)	43.4	43.2	9.4	40.3	39.9	14.1
NOIPAR	47.6	37.2	35.7	24.9	20.7	18.8
NOIPAR/TRevPAR (%)	35.6	35.7	9.9	31.4	32.4	14.5
Marketing expenditures (\$PAR)						
Marketing labor	3.30	2.36	3.50	2.52	2.08	2.34
Marketing labor/total revenue (%)	1.97	2.00	1.15	2.10	2.00	1.76
Franchise expenses	6.00	4.26	5.01	3.17	2.12	3.00
Franchise expenses/total revenue (%)	4.92	3.66	3.00	3.50	3.32	1.85
Advertising related	0.93	0.42	2.23	0.57	0.31	0.73
Advertising/total revenue (%)	0.51	0.45	0.72	0.60	0.43	0.67
Other sales expenses	1.65	0.83	2.18	1.01	0.36	0.22
Other sales/total revenue (%)	1.14	0.71	1.14	0.99	0.50	1.16

Note. All figures are expressed as \$PAR. With the exception of occupancy, italicized figures represent ratios (percentage) to sales. RevPAR = revenue per available room; TRevPAR = total revenue per available room; \$PAR = Dollar per available room; POM = Property Operations and Maintenance; GOPPAR = gross operating profit per available room; NOIPAR = NOI per available room.

tests) and nonparametric tests (Wilcoxon Rank-Sum tests) of differences. We first performed a levels analysis by comparing the two groups based on absolute dollar amounts per available room. In this analysis, we found significant differences between winners and losers by all the top-line measures, operating expenses, and profitability measures. Having noted these significant findings, we move on because they yielded few insights into how winners and losers responded to recessionary effects. Instead, our focus shifts to evaluating percentage changes in top-line measures, operating expenses, and profitability to determine whether there were any differences between the two groups that would capture managerial behavior during the recession. The results of these tests of differences are presented in Exhibit 4.

What is striking about the results is the lack of any significant differences between the winners and the losers at the 5 percent significance level by all measures from 2007 through 2008, followed by a substantial change in 2009. Holding all else constant, if winners and losers employed similar strategies in response to the recession, we would have observed no significant differences in 2009. Instead, their responses differed significantly in 2009, which suggests that hotel managers employed divergent strategies in response to the recession. To begin with, both groups of hotels saw revenue and occupancy declines between 2008 and 2009. So, for example, losers' occupancy rates declined from a mean of 66.4 percent in 2008 to 60.7 percent in 2009, a 5.7 percent decline. At the same time, the winners' occupancy loss was slightly less dramatic, from 73.1

**Exhibit 4:**  
**Parametric and Nonparametric Tests of Differences between Winners and Losers.**

Measures	2007-2008 % Change			2008-2009 % Change		
	Difference	t Stat	z Stat	Difference	t Stat	z Stat
Top-Line						
Occupancy	0	0.02	-0.60	-.020	-1.49	-2.09**
ADR	0	-0.06	-0.03	-.019	-2.05**	-2.16**
RevPAR	-.01	-0.07	-0.92	-.039	-3.34***	-2.96***
TRevPAR	0	-0.02	-0.66	-.041	-3.54***	-3.02***
Operating Expenses						
Rooms expenses	-.025	-1.01	-0.63	-.007	-0.28	-0.90
Admin and general	-.042	-1.46	-0.73	.033	1.03	1.20
Sales and marketing	-.029	-0.97	-0.63	-.068	-2.07**	-1.95**
POM	-.045	-1.57	-0.18	.009	0.32	-0.17
Utilities	-.045	-1.55	-0.87	.019	0.68	0.48
Profitability						
GOPPAR	.002	0.09	-0.42	-.102	-4.69***	-4.08***
GOPPAR/TrevPAR	-.021	-1.38	-1.36	-.056	-3.20***	-2.83***
NOIPAR	-.014	-0.48	-0.69	-.156	-4.84***	-4.62***
NOIPAR/TrevPAR	-.029	-1.86	-1.74	-.072	-4.04***	-3.44***
Sales and Marketing						
Marketing labor	-.235	-0.18	1.61	-.046	-0.33	0.04
Franchise expenses	-.057	-1.85	-0.78	.003	0.07	-0.77
Advertising related	-.448	-0.36	-1.42	-.039	-0.18	-0.03
Other sales expenses	-.074	-1.01	-0.93	-.200	-2.75***	-2.80***

Note. RevPAR = revenue per available room; TRevPAR = total revenue per available room; POM = Property Operations and Maintenance; GOPPAR = gross operating profit per available room; NOIPAR = NOI per available room.

\*\*Significant at the 5% level.

\*\*\*Significant at the 1% level.

percent to 68.4 percent. Even though the percentage decline was greater for winners (6.4 percent vs. 5.7 percent for losers), the winners increased their occupancy premium over losers by one percentage point in 2009. Note that the percentage change in occupancy between the two groups between 2008 and 2009 is not significantly different based on the parametric tests of differences.

However, the percentage change in ADR is significantly different between the two groups, although it is clear that both groups attempted to use rate discounts to stem occupancy losses. Average daily rates for losers declined by a mean of 13.3 percent between 2008 and 2009 (median, 14.8%) compared with an 11.6 percent decline for winners (median, 11.0%). This greater decline in losers' room rates translated into a greater revenue loss for losers, although both groups saw lesser percentage changes in RevPAR and TrevPAR. Losers' RevPAR declined by 21.1 percent in 2009 (TRevPAR, by 20.8%), compared with a decline of 17.2 percent for winners (TRevPAR, by 16.6%).

Both groups of hotel managers responded to the revenue loss with expense reductions, but it appears that not all of them could slash expenses to the same extent, and we see a difference in the two groups. Expense reductions ranged

from 4 to 12 percent, far less than the drop in revenues. Managers in both groups of hotels reduced room department expenses, A&G expenses, marketing expenses, maintenance expenses, and utilities expenses. With the exception of room expenses, the reductions in A&G, maintenance, and utilities expenses was greater for winners than for losers. With the exception of marketing expenses, we find no statistically significant differences between winners and losers in reducing room expenses and other undistributed operating expenses.

Looking more closely at reductions in marketing expenses, we see a significant difference between winners and losers. Losers reduced marketing expenses to a greater extent (17.5%) than winners did (10.6%). Perhaps most surprising, we found that losers reduced other sales expenses by 10.5 percent, while winners increased spending for those activities by 9.5 percent. As we indicated above, this category includes items related to personal sales efforts such as complimentary gifts and services, familiarization trips, local promotions, outside sales reps, training, travel, and trade shows (Hotel Association of New York City 2006).

To provide further information on franchise-related expenses, we also analyzed differences between winners

and losers in the amounts (per available room) incurred for royalty fees, marketing assessment fees, and loyalty-program fees. Compared with losers, winners incurred significantly greater amounts of royalty fees, marketing assessment fees, and loyalty-program fees. These differences were significant at the 1 percent level over the three-year period from 2007 through 2009. Similarly, the differences in these three specific franchise-related expenses, as a ratio to sales, were also significantly higher for winners than for losers.

Our data demonstrate the staggering overall effect of the economic recession on hotel profitability. But it is clear that this effect differs significantly between winners and losers. Losers suffered a 34.1 percent decline in GOPPAR and a 43.1 percent NOIPAR drop in 2009, compared with a 23.9 percent GOPPAR decline and a NOIPAR drop of 27.5 percent for the winners. The results were similar when we computed GOP and NOI as a percentage of total revenue. Once again profitability declined for both groups of hotels, but the decline was significantly greater for losers than for winners. For losers, GOP as a percentage of total revenue declined from 42.3 percent in 2008 to 34.7 percent in 2009. Their NOI drop was similar, from 34.0 percent to 24.7 percent. For winners, those figures were 2008 GOP, 44.4 percent; 2009 GOP 40.3 percent; winners' 2008 NOI, 36.9 percent; and 2009 NOI, 31.9 percent.

The difficulty hotel managers experienced in quickly reducing expenses to match revenue declines further magnified the negative effect on profitability, as indicated by the flow-through ratio. Dividing the changes in GOP and NOI by changes in RevPAR, we found the overall mean flow-through ratios for winners (1.41 for GOP and 1.61 for NOI) were lower than those for losers (1.65 for GOP and 2.30 for NOI) indicating that, despite drops in absolute revenues and profits, winners were able to translate more of their revenue into profit compared with the losers.

### *Additional Descriptive Findings*

To provide further information on the effects of top-line measures on profitability, we sorted the sample data into four quartiles based on occupancy, ADR, RevPAR, GOPAR, NOIPAR, and additionally GOP and NOI as a ratio to total revenue, yielding the following observations:

- Hotels with high occupancy rates, high ADRs, or high RevPARs also had high GOP and NOIPAR but lower GOP and NOI ratios to total revenue. Typically, these were large full-service hotels within the luxury and upper upscale segments located in urban areas. These findings are consistent with those of O'Neill and Mattila (2006a) on the basis of absolute dollar levels. Similar results are obtained if hotels are sorted on the basis of GOPPAR and NOIPAR.

- Hotels with a high GOP and NOI ratio to sales also had lower occupancy rates, ADR, and RevPAR. These hotels were largely midscale limited-service hotels without food and beverage facilities and middle- or upper-tier extended stay properties. These results are consistent with those of Mattila, O'Neill, and Hanson (2009) as well as data reported in annual profitability reports produced by STR and PKF that show limited-service hotels enjoy higher profitability ratios largely because of their operating cost and scale efficiencies.
- Among winners, extended stay properties and those in the luxury segment exhibited the lowest percentage change in all top-line and profitability measures, implying greater success on the part of management in these hotels to minimize the effect of the recession.
- We also computed changes in the ADR and occupancy indexes based on a hotel's performance relative to its competitive set, following Enz, Canina, and Lomanno (2009). The results of this analysis reveal that losers' RevPAR performance deteriorated relative to that of their competitive set in 2009, driven largely by greater drops in ADR relative to occupancy changes. However, winners improved their RevPAR performance relative to that of their competitive set in 2009, driven by increases in occupancy. For example, a less than 1 percent (0.04) drop in the ADR index coupled with a 1.54 percent increase in the occupancy index led to a 1.29 percent improvement in the RevPAR index for winners in 2009. However, a 1.37 percent decline in the ADR index combined with a 1.04 percent decline in the occupancy index resulted in a 2.68-point decline in the RevPAR index for losers. This percentage change in RevPAR index between winners and losers is statistically significant ( $t = -4.28, p \leq .01$ ). Hence, unlike losers, winners improved their RevPAR performance relative to their competitive sets during the recession by dropping relative rates to enhance relative occupancy.

### *Multivariate Analysis*

Our final set of analyses examined the relationship between, on one hand, marketing expenditures and revenue, and, on the other hand, profitability. Although research has shown the varying effects of marketing expenditures on room revenue and net income, the effects vary by chainscale and type of marketing expenditure (O'Neill, Hanson, and Mattila 2008). Unlike other studies, we compare hotel performance during a recession, and we analyze percentage changes in the performance measures to provide additional insights into the relationship between marketing expenditures and revenue and profit.



**Exhibit 5:**  
**Correlations between Top-Line Metrics and Bottom-Line Profitability.**

Measures	RevPAR	GOPPAR	NOIPAR	Labor	Franchise	Advertising	Other	Total Market
RevPAR	1.000							
GOPPAR	.921*	1.000						
NOIPAR	.854*	.900*	1.000					
Labor	.039	.003	.014	1.000				
Franchise	.357*	.298*	.289*	.011	1.000			
Advertising	.059	.048	.047	.015	.048	1.000		
Other	.033	.052	-.006	-.011	.058	.029	1.000	
Total Mkt.	.320*	.241*	.227*	.084	.690*	.140	.336*	1.000

Note. Percent changes between 2007 and 2009; Pearson's correlation \* $p < .01$ . RevPAR = revenue per available room; GOPPAR = gross operating profit per available room; NOIPAR = NOI per available room.

We first examine the correlation coefficients between the revenue, profitability, and marketing measures to provide some preliminary insights, and then employ regression analysis to further test the relationships. Because we found some extreme outliers driving some of our results, we Winsorized the profitability and marketing measures at 1 percent of the high and low extremes of each variable's distribution. Instead of dropping these observations, however, we replaced the extreme values with values equal to the high and low 1 percent of the variable's distribution to mitigate the undue influence of these outliers. Furthermore, we also found that many hotels in our sample do not report marketing expenditures in all categories. Again we particularly refer to limited-service hotels that do not have separate marketing departments. Therefore, we also performed our regression analysis using only absolute dollar amounts and percentage changes for total marketing expenditures as an independent variable.

As shown in Exhibit 5, based on percentage changes in the measures, total marketing expenditures are significantly and positively correlated with RevPAR, GOPPAR, and NOIPAR. This finding implies that an increase in marketing expenditures has a positive effect on revenue and profit. Furthermore, franchise expenses are also significantly and positively correlated with RevPAR, GOPPAR, and NOIPAR, indicating the importance of franchise expenses in influencing the performance measures.

The relationship between both the levels of and changes in total marketing expenditures and RevPAR, GOPPAR, and NOIPAR are presented in Panels A and B in Exhibit 6. In each of these regressions, total marketing expenditures are regressed on top-line and bottom-line measures. A dummy variable equal to one represented the winners, while losers were the omitted or reference group. In addition, we included an interaction of the dummy variable with total marketing expenses to capture differences between the two groups of hotels.

As shown in Panel A, total marketing expenditures are significantly and positively related to RevPAR, GOPPAR, and NOIPAR at the 5 percent significance level, explaining between 57 percent and 75 percent of the variation in those three variables. This demonstrates that an increase in marketing expenditures has a positive effect on both the top line and the bottom line. More important, the interaction between total marketing expenditures and group performance is also positively significant at the 5 percent level. The effect of marketing expenditures on RevPAR, GOPPAR, and NOIPAR is significantly and positively greater for winners than losers. Winners spent more on marketing, and this additional expense had a positive effect on performance.

The percentage changes shown in Panel B are similar, but the explained variation is much less than those in Panel A. Once again, the change in total marketing expense is also significantly and positively related to the top-line and bottom-line measures. We also ran the regression using only data from 2009 with similar results.

Seeking to identify which category of marketing expenditure had the greatest effect, we replaced total marketing expenditures with the four individual expenditure categories. We also included a dummy variable for 2009 to capture the effect of the recession, whereby first the year 2007 and then the year 2008 was omitted. We conducted a levels analysis (shown in Panel A of Exhibit 7) and a percentage change analysis presented in Panel B.

Consistent with the findings of O'Neill, Hanson, and Mattila (2008), the levels analysis findings (reported in Exhibit 6, Panel A) indicate a significant and positive relationship between all four marketing expenditure types and performance. Moreover, separating the marketing expenditure components certainly increased the explained variation in the performance measures. The explained variation in the performance measures is highest for RevPAR (71%) and lowest for NOIPAR (56%), implying that increasing marketing expenditures has a greater effect on revenues than on profit. One possible explanation for this finding is that, at

**Exhibit 6:**  
**Relationship between Total Marketing Expenditures and Top-Line and Bottom-Line Measures (2007-2009).**

Panel A: Absolute Levels	RevPAR	GOPPAR	NOIPAR
Constant	31.50 (16.95)***	15.58 (14.05)***	13.01 (14.44)***
Performer	-.057 (-0.01)	-4.852 (-1.45)	3.504 (1.83)*
Marketing expenses	5.617 (14.31)***	2.752 (11.92)***	1.968 (11.09)***
Performer × Marketing expenses	1.188 (2.05)**	1.479 (3.48)***	0.573 (2.28)**
N	618	618	618
F value	283***	178***	189***
R <sup>2</sup>	.754	.642	.573
Panel B: Percent Changes	RevPAR	GOPPAR	NOIPAR
Constant	-.106 (-10.90)***	-.180 (-10.48)***	-.234 (-9.88)***
Performer	.021 (1.78)*	.053 (2.63)***	.089 (3.27)***
Marketing expenses	.114 (3.29)***	.130 (2.24)**	.159 (1.88)*
Performer × Marketing expenses	.151 (2.71)***	.222 (2.54)**	.274 (2.34)**
N	412	412	412
F value	18***	15***	16***
R <sup>2</sup>	.124	.081	.082

Note. Dependent variables are RevPAR, GOPPAR, and NOIPAR. Performer is measured as equal to 1 for Winner and 0 otherwise. Marketing expenditures is measured as the sum of all marketing expenditures. With the exception of the dummy variable, all independent variables are scaled by the number of available rooms. Heteroskedasticity-robust t-stats in parentheses. RevPAR = revenue per available room; GOPPAR = gross operating profit per available room; NOIPAR = NOI per available room.

\*Significant at the 10% level.

\*\*Significant at the 5% level.

\*\*\*Significant at the 1% level.

the margin, if additional marketing expenditures bring in lower margin business, revenue will increase by a greater percentage than profit. This would be the case, for instance, if the hotel lowers rates to drive occupancy. Revenues rise, but profits are diminished by the incremental costs associated with “filling beds” with low-yield guests.

The results of the relative analysis of percentage changes in the variables (Exhibit 7, Panel B) confirm our findings in Panel A by providing the empirical support to show that franchise expenses and other sales expenses are significantly and positively related to RevPAR, GOPPAR, and NOIPAR. Once again, the explained variation is higher when marketing expenditures are disaggregated into categories. For example, the explained variation ranges in value from 39 percent for NOIPAR to 60 percent for RevPAR. These findings extend O’Neill, Hanson, and Mattila’s (2008) dollar amount findings.

The beta coefficients for our regressions showed that franchise expenses had the greatest relative strength among the marketing expenses, followed by other sales expenses, as shown in both Panels A and B. Note that the beta values for franchise expenses and other sales expenses shown in Panel A (between 0.34 and 0.43) are higher than those shown in Panel B (between 0.09 and 0.22). These values are also higher for RevPAR than for NOIPAR. These ratios indicate that a 1 *SD* increase in franchise expenses leads to a 0.43 *SD* increase in predicted RevPAR, with other variables in the model held constant.

These results suggest that franchise expenses have a greater effect on RevPAR and bottom-line profitability than other sales expenses, although both are important. Our analysis shows a mixed outcome for marketing labor cost and advertising, in that they are significantly and positively related to the absolute-dollar performance measures shown in Panel A but not to the percentage-change measures shown in Panel B. As noted by O’Neill, Hanson, and Mattila (2008), marketing labor cost may be correlated with higher revenues, but hoteliers should evaluate these payroll expenditures to ensure that these investments produce the desired incremental profits. The insignificant and negative relationship between changes in advertising expenditures and performance measures shown in Panel B suggests that hotel managers’ increases in advertising expenditures could not stem the dramatic declines in performance measures during the depths of the recession.

Finally, our sensitivity analysis using the 80 percent and 120 percent RevPAR index cutoff points to classify losers and winners yielded similar results to those of our existing approach.

## Summary and Conclusion

In 2009, during the worst year of the great recession, both the winners and losers in our sample suffered declines in occupancy and ADR (as did all hotels) with greater changes in ADR relative to changes in occupancy rates. Compared

**Exhibit 7:**  
**Relationship between Marketing Expenditures and Top-Line and Bottom-Line Measures (2007-2009).**

Panel A: Absolute Levels	RevPAR	GOPPAR	NOIPAR
Constant	29.71 (7.67)***	15.86 (6.91)***	14.60 (7.01)***
Marketing labor cost	5.27 (4.46)***	2.98 (4.22)***	1.77 (2.74)***
Franchise expenses	6.08 (11.19)***	3.07 (12.16)***	2.53 (11.69)***
Advertising-related expenses	7.09 (2.78)***	3.34 (2.86)***	2.42 (2.34)**
Other sales expenses	12.911 (8.34)***	7.07 (9.14)***	5.81 (8.61)***
Y2008	-0.26 (-0.07)	-1.61 (-0.68)	-1.68 (-0.83)
Y2009	-12.08 (-3.62)***	-11.84 (-5.11)***	-11.93 (-5.71)***
N	463	463	463
F value	68***	97***	80***
R <sup>2</sup>	.712	.625	.558
Panel B: Percent Changes	RevPAR	GOPPAR	NOIPAR
Constant	-.013 (-2.02)**	-.032 (-2.65)***	-.037 (-2.48)**
Marketing labor cost	-.001 (-0.70)	-.002 (-1.05)	-.002 (-0.84)
Franchise expenses	.089 (4.53)***	.119 (2.98)***	.159 (2.70)***
Advertising-related expenses	-.005 (-1.10)	-.013 (-1.44)	-.017 (-1.34)
Other sales expenses	.004 (5.65)***	.006 (4.95)***	.008 (5.00)***
Y2009	-.171 (-18.58)***	-.243 (-13.37)***	-.300 (-11.72)***
N	293	293	293
F value	83***	48***	38***
R <sup>2</sup>	.597	.441	.386

Note. Dependent variables are RevPAR, GOPPAR, and NOIPAR. In panel A, Year is a dummy variable that is measured as equal to 1 for Y2008 and zero otherwise. Y2009 is equal to 1 for 2009 or zero otherwise. In panel B, Year is measured as equal to 1 for 2009 or zero otherwise. With the exception of the dummy variable, all independent variables are scaled by the number of available rooms. Heteroskedasticity-robust t-stats in parentheses. RevPAR = revenue per available room; GOPPAR = gross operating profit per available room; NOIPAR = NOI per available room.

\* Significant at the 10% level.

\*\* Significant at the 5% level.

\*\*\* Significant at the 1% level.

with the winners, losers were unable to maintain occupancy and ADR, despite their best efforts. Although occupancy changes are important, of course, it was the significantly different percentage changes in ADR that hurt losers' revenue. Thus, losers saw significantly greater declines in RevPAR than winners.

Although both groups of hotels suffered declines in profitability, we again find that winners experienced significantly lower negative year-to-year changes in GOP and NOI when compared with losers. Similarly, when profitability is measured as a ratio to total revenue, the results indicate that winners had a higher ratio of profit relative to total revenue sales for both GOP and NOI. Furthermore, the year-to-year decline in these profitability ratios is also lower for winners than for losers.

We found no significant percentage changes in room expenses, administrative and general expenses, maintenance expenses, and utilities expenses between winners and losers. However, losers did make one noticeable expense reduction, and our analysis indicates that this may have been a false economy. Both groups perforce reduced overall marketing expenses, but losers made a significantly greater

reduction in total marketing expenses than winners. This is a key finding of this study. Of particular interest is the category of other sales expenses. Losers reduced those expenses during the recession, while winners actually increased this expense category.

Both in terms of absolute levels and percentage changes, total marketing expenses are significantly and positively related to RevPAR, GOPPAR, and NOIPAR. In this regard, we found a greater positive effect for winners than for losers. Although we found that an increase in marketing expenses will likely increase revenues and bottom-line profitability, further analysis found that franchise expenses and other sales expenses had the greatest influence on RevPAR and profitability. Of the two, franchise expenses exhibited a stronger effect on the performance measures than did other sales expenses. Moreover, the effect of these two expenditure categories is also higher for RevPAR than for profitability.

Future research could expand on this study by using a larger sample size and larger competitive sets of hotels to investigate the performance of similar hotels in the recovery period following the recession as well as to further

investigate the change in marketing expenses for these hotels. Our research also revealed the need to further study the effect of advertising, promotion, and e-commerce activities on revenue generation. Even though advertising expenditures account for the smallest amount and proportion of all marketing activities, they constitute one of the most important activities undertaken by any hotel. The expectation is that these expenditures contribute to the financial performance of the hotel, and the effect of increasing or decreasing them is expected to be of a longer duration (Graham and Frankenburger 2000).

### Limitations

This study is limited by the small sample sizes of the two groups of winners and losers, selection bias in matching hotels within a submarket, the small number of hotels within a competitive set, and the narrow time period under examination. In any submarket, one is likely to find many more hotels in practice that would permit the creation of larger competitive sets, but this study is limited to hotels that voluntarily participate in PKF's *Trends*® program. Having a larger sample size that also included economy hotels and more midscale hotels with food and beverage would have allowed us to further analyze the data by chainscale to provide more informative insights. Similarly, some of our competitive sets comprised only three hotels, which could be considered too small a sample to draw any meaningful conclusions. Having fewer hotels within a competitive set could also lead to greater variations in performance indices. We were also unable to discuss or provide any information on specific brands due to confidentiality requirements imposed by the data provider. In addition, such descriptive variables as the age of the hotel and facility type would have allowed us to draw further insights into differences between winners and losers. Obtaining more specific and detailed information on "other" marketing expenses would also have been useful. Finally, our results could also be driven by the lack of changes we observed in our measure of the RevPAR index that was used to classify hotels into the two groups. That is, winners remained winners and losers remained thus over the three-year period.

### Managerial Implications

Our study provides evidence of dramatic declines in top-line and profitability measures during the depths of the recession. From our data we can discern two responses undertaken by both winners and losers to mitigate the effect of the recession. Because losers suffered significantly greater declines in top-line measures in 2009, we can infer that they implemented greater levels

of discounting than did the winners, and thus saw more substantial losses in profitability. Neither group could reduce expenses as much or as quickly as they might have wished, but the losers' failure to reduce expenses speedily compounded the drop in profitability. Furthermore, losers reduced expenses across the board—including marketing expenses—which seems to have cost them both in revenue and profitability. We also note that losers spent less per available room on operating expenses than winners, but these expenses accounted for a higher proportion per dollar of revenue, which indicates a failure of effective resource use.

However, winners' willingness to stay the course on marketing expenses returned worthwhile results compared with the losers. Although winners spent more on operating expenses per available room, these expenses accounted for a lower amount per dollar of revenue. Before engaging in any action to reduce such expenses during an economic downturn, hotel managers should assess whether these investments are producing incremental revenues or profits. A breakeven or return on marketing investment analysis can be a useful tool for determining the incremental revenue or profits that need to be generated in this regard. If marketing expenditures produce the desired positive effects, then hotel managers should direct these investments into those activities that produce the desired profits. Treating marketing expenses as investments, especially in a downturn, can be an opportunity for hotel managers to gain market share.

Looking specifically at the positive payoff from franchise fees, using these fees as a proxy for the brand equity of the underlying brands, we can infer that during a recession the support a brand provides to a hotel can help stem occupancy and rate declines. This needs further exploration by comparing a large sample of a variety of branded hotels to independent hotels, something we could not do with our small sample of independent hotels.

As our findings indicate, the cost to be affiliated with a brand can be a significant expense for a hotel but the benefits can also be substantial. As loyalty-program fees are correlated with occupancy ( $r = .35, p < .01$ ), it appears that winners took greater advantage of loyalty programs than losers. Although winners were, on average, affiliated with brands that charge a higher royalty fee, our findings also suggest that these winning brands delivered value by contributing more to their hotels than the lower priced brands. Hotel management that is focused on building strong brand equity through greater investments in sales and marketing activities can expect to generate higher revenues and achieve greater customer satisfaction and loyalty in addition to a positive price-value relationship, which should translate to higher profitability (Prasad and Dev 2000).

Personal advertising and marketing expenses is one area where the winning hotels took matters into their own hands, to good effect. Our study also reveals the importance of other sales expenses as a determinant of revenue and profitability. We observed that winners increased other sales expenses while losers decreased these expenses during the recession. Given the positive effect on revenues and profitability from these activities, we believe hotel managers would be wise to avoid reducing these expenses in response to a negative situation without first assessing their incremental costs and benefits. It is worth repeating here that other sales expenses include such important activities as promotions, familiarization trips, trade shows and the training of sales personnel, personal sales visits to clients, and use of outside sales representatives. These appear to be effective techniques in the midst of a recession, when customers are also seeking to control costs. Personal contact and negotiation clearly brought in business. These sales expenses may be costly for full-service properties or group-oriented hotels and less so at limited-service hotels, but hotel managers must realize that these expenses are crucial in establishing and maintaining a long-term relationship with the guest.

Finally, our finding pertaining to marketing labor and advertising-related expenses is inconclusive. Even though the amounts spent on marketing labor and advertising were positively related to financial performance, the changes in these expenses were unrelated to changes in performance. Hotel managers should ensure that these expenses are under control and aligned with budgets or standards. As marketing labor cost is the second largest expense within the marketing department, hotel managers should also ensure that any reduction in these expenses does not compromise service quality or standards for potential clients and guests.

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### Note

1. STR specifies a minimum of five hotels including the participant hotel in a competitive set to generate reports so as to maintain the confidentiality of reporting hotels. See [www.strglobal.com/resources/glossary/en-gb](http://www.strglobal.com/resources/glossary/en-gb).

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