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CORPORATE GOVERNANCE, OWNERSHIP STRUCTURE, AND CREDIT RATINGS OF HOSPITALITY FIRMS

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ABSTRACT. This study examines interrelated connections of corporate governance, ownership structure, and credit ratings. From the agency relationship perspective, the study analyzes this multiple association by accounting for firm-specific and ownership characteristics for the period between 1990 and 2007. In this context, logistic functions are used in regression models to predict the probable outcomes of these multiple relationships. Primary findings of this study revealed that hospitality firms with higher anti-takeover provisions (less shareholder power) enjoy higher credit ratings. Findings also revealed high coefficients of Gompers, Ishii, and Metrick (2003) index (the GIM index), suggesting that hospitality firms have strong governance provisions, reduced agency conflicts, and higher chances of getting better credit ratings.

INTRODUCTION

The concept of corporate governance emerged as a way to monitor agency conflict and to balance stakeholder interest. This concept is vital for maintaining management oversight, creating stable agency relationships, providing access to capital, assuring effective economic growth and strong financial performance, and improving risk management. Strong governance practices lead to improved credit ratings and economic prosperity. Conversely, weak governance and poor execution of managerial strategies can impair the financial position and market value of firms, which, in turn, can leave debt stakeholders (i.e., bondholders) unguarded to negative returns and vulnerable to credit risks (FitchRatings, 2004).

A firm's creditworthiness is determined by evaluating the likelihood of its future cash flows. Future expected cash flows must be sufficient to cover debt service costs as well as principal payments. As the mean of future cash flow

distribution shifts downward or as the variance of its future cash flows increases, the probability of default increases, leading to the eventual decline of the firm's credit rating (Ashbaugh-Skaife, Collins, & LaFond, 2006). Public corporations are required to have corporate governance practices and financial disclosure procedures in place to receive a credit rating. Therefore, credit ratings are assigned to corporate bonds (debt issuances), which determine firms' credit quality and likelihood of default. Credit ratings are denominated with letter designations.¹

It is worthwhile to mention an essential caveat of the corporate governance and ownership structure of the hospitality industry. Our motivation is to examine governance practices of hospitality firms because those

¹In our article, we used long-term issuer credit ratings compiled by Standard & Poor's extensive credit rating analysis. Letter designations for different credit ratings are demonstrated in Table 2 in detail.

firms have weak shareholder rights, which makes it different from the firms in other industries (i.e., government regulated utility firms with almost zero leverage). In addition, it is a unique industry where firms are highly levered given the enormous amounts invested in fixed assets, high proportions of capital expenditures, volatile operational risk structure, heightened borrowing costs, fluctuating free cash flow, and low levels of operating margins and cash holdings (i.e., Kizildag, 2015; Sheel, 1998; Upneja & Dalbor, 2001). Hence, cost of capital (especially cost of debt) and bond issuances play an important role for the hospitality firms in terms of their credit rating analysis. Furthermore, the ownership composition and characteristics vary across hospitality firms. Institutional ownership proportions vary between 20 to 98% in those firms (Oak & Dalbor, 2010). Taken all together, assessing the relation between corporate governance structure and hospitality firms' credit ratings becomes even more critical. The primary purpose of this article is to understand the influence of corporate governance on hospitality firms' credit ratings by establishing ownership characteristics with the GIM index along with the firm-specific proxies.

Prior literature often ignores the interest of different stakeholders, especially debtholders, in governance and credit rating analyses. Therefore, our article extends the existing empirical evidences on corporate governance and credit ratings by providing an economic outlook and practical understanding for highly levered, capital-intensive industry. By this way, we aim to observe the discrepancies and similarities with the mainstream findings.

This article is organized as follows: The second section reviews the evidences and findings relevant to the corporate governance properties and their influence on credit ratings. The third section presents methodological procedures for our analysis. The fourth section includes the empirical results and discusses the findings. The fifth section concludes the article with the discussions. The final section supplies limitations, implications, and future research directions.

CORPORATE GOVERNANCE PROPERTIES AND CREDIT RATING

The correlation between firms' credit ratings and corporate governance has been extensively exhausted by previous studies using several different governance attributes, such as shareholder claims and rights, blockholders or institutional investors, takeover issues, ownership structure (i.e., Gordon & Pound, 1993; Hermalin & Weisbach, 1991; Jensen, 1993; Shleifer & Vishny, 1997). A good fraction of these studies found a strong positive relation between corporate governance and credit ratings (i.e., Black, Jang, & Kim, 2006; Cremers & Nair, 2005; Gompers, Ishii, & Metrick, 2003). However, others have documented mixed findings or no relation in this context (i.e., Bhagat & Black, 2001; Demsetz & Villalonga, 2001). This issue has also drawn some attention in financial management research in the hospitality industry. Nevertheless, those research attempts have focused on limited aspects of corporate governance, such as (a) executive compensation (Gu & Choi, 2004; Guillet & Mattila, 2010; S. Kim & Kim, 2011); (b) ownership structure (H. S. Kim, 2010; Tang, Xi, Chen, & Wang, 2006); (c) managerial ownership (Chen, Hou, & Lee, 2012; Paek, Xiao, Lee, & Song, 2013); and (d) board of directors' size, involvement, and independence (Guillet & Mattila, 2010; Keiser, 2002; Oak & Iyengar, 2009). In this study, we have attempted to extend the previous work by establishing the empirical link among corporate governance, ownership structure, and credit ratings from the debtholders perspective by focusing on GIM index and firm-specific measures.

Ownership Characteristics

The influence that certain shareholders can exert on management is one of the most essential key areas of corporate governance. Owners with large equity ownership in the firm have a great degree of independence (i.e., block owners and institutional owners). They often use an unbiased approach and they have enough power to put pressure on management under certain corporate situations (Ashbaugh-Skaife

et al., 2006; Jensen, 1993). Thus, block owners establish positive relationships with bondholders and managements in relation to a firm's credit rating. This is because shareholders can benefit from long-term debt with lower cost, and thus, block owners might have motivation to protect bondholders' interests (Anderson, Mansi, & Reeb, 2004). Similar to this conjecture, institutional owners provide better monitoring activities by creating management disciplining, which benefits all stakeholders (Ashbaugh-Skaife et al., 2006).

Operational Characteristics (Firm Performance)

Prior research has documented a strong link between governance best practices and improved operating and financial performance for companies and shareholders (i.e., Black et al., 2006; Gompers et al., 2003; Bhojraj & Sengupta, 2003). Therefore, we capture the influence of operational characteristics on credit ratings with eight firm-specific variables in this article.

Credit ratings have a direct connection with firm-specific financial indicators, and they substantially affect firms' market value. Although there are many advantages of having high levels of leverage, such as tax savings and reduced cost of capital, most often high leverage limits new investment opportunities and increases financial distress and credit risk (DeAngelo & Masulis, 1980; Hsu & Jang, 2008; H. Kim, Gu, & Mattila, 2002; Shivdasani & Zenner, 2005).

According to Himmelberg and Morgan (1995), capital-intense firms enjoy easier access to debt markets because fixed capital is easier to be acquired by them, it is favorable to the outside investors, and it is less subject to agency problems. Firms with higher capital intensity have lower risk of default and achieve higher credit ratings (Ashbaugh-Skaife et al., 2006). Also, on the basis of the cost reduction argument, high capital intensity hospitality firms may reduce the level of operating costs and collateral (Lee, Koh, & Kang, 2011; Sheel, 1994).

Firm size is one of the most widely used variables in finance and economics literature

because of its effect on the firms' operational performance and financial outcome (Bonaccorsi, 1992; Evans, 1987). Avramov, Chordia, Jostova, and Philipov (2007) used firm size to approximate information asymmetry in credit ratings. There are also several other studies in hospitality industry research that used firm size as a control variable when testing the capital structure (i.e., Hsu & Jang, 2008; Lee, Singal, & Kang, 2012). On the basis of the arguments regarding firm size, we can conclude that its effects on governance and credit ratings cannot be avoided.

According to Treacy and Carey (2000), interest coverage is one of the debt characteristics that is used to assess borrower's loan payoff ability and it is heavily used by most of the credit rating agencies (Drury, 1981). Higher interest coverage indicates that it is easier for firms to cover interest payments, and thus, it puts the firms away from the default risk zone.

If any particular firm constantly realizes negative net income, it could be a sign that firms might characterize financial distress in their operations (Allayannis & Mozumdar, 2004). This will create problems for debt repayment, and it could be factored into the firms' credit rating assessment.

Fama (1971) stated that there is a relation between the risk and the expected return on assets. A lower return on assets is associated with lower operational performance and vice versa. In relation with the risk and return trade-off, we use beta as a measure of systematic risk in our regressions. A higher beta value indicates an increased level of risk and it could reduce the credit ratings of a firm (Bhojraj & Sengupta, 2003).

Rauh and Sufi (2010) found that firms with lower credit quality use a considerably higher fraction of secured and subordinated debt. Alali, Anandrajan, and Jiang (2012) also argued that firms with a subordinated debt (junior debt) are considered riskier because of differential claims made to assets (i.e., a junior debt that is not paid until the senior debts are paid in full). Thus, subordinated debt mostly has an inverse relation with firms' credit ratings.

Shareholder's Rights and Agency Relations

In recent years, laws and corporate governance practices have been built in support of greater shareholder rights when compared with the governance practices in the past decade. The fair balance of rights and effective communication between the agents and stakeholders (equity and debt holders) are the key for the agents to maintain critical financial and operational attributes in the corporations, such as firm value, shareholder value, and financial risk. Gompers and colleagues (2003) found that a democracy portfolio (GIM index ≤ 5 , strong shareholder rights) outperformed a dictatorship portfolio (GIM index ≥ 14 , weak shareholder rights) by 8.50% suggesting that higher shareholder rights will lower the opportunistic management style, thus increasing the firm value.

Bad governance raises many red flags especially between shareholders and bondholders (i.e., disparity in the balance of power among different types of holders). Lenders and shareholders may have different preferences in regard to firms' corporate governance practices and some governance provision could affect different parties differently (Bradley, Dallas, Snyderwine, & Chen, 2009; Dann & DeAngelo, 1983). For example, greater shareholder power could benefit shareholders at the expense of bondholders.

In this vein, risk shifting and wealth transfer between shareholders and bondholders can be problematic, and they can deteriorate the agency relations resulting from strategic managerial decisions. Bondholders' might be worse off because whenever managers invest in riskier projects that increase the variance of a firm's future cash flows, they have limited upside potential and high risk because of limited liability, and they bear most of the cost (Ashbaugh-Skaife et al., 2006; Fitch Ratings, 2004; Fama & Miller, 1972; Klock, Mansi, & Maxwell, 2005). In addition, in a takeover scenario, the motivation for shareholder approval could be due to the potential wealth transfer from bondholders to shareholders.

During a harsh takeover situation, obtaining additional debt to finance new investments may transfer some of the wealth from bondholders to shareholders, which create high shareholder's power because of lack of antitakeover provisions. Hence, it could increase the agency cost of debt (Almazan & Suarez, 2003; Klock et al., 2005; Stein, 1988). In contrast, managers can sometimes favor the debtholders. With the decision to implement antitakeover measures, they might focus on job protection to reduce their human capital risk, which, in turn, could reduce firm risk, cash flow variation, and thus, fixed long-term earnings for the bondholders (Klock et al., 2005).

METHOD

Data and Sampling Procedures

We used a wide array of data sources. Table 1 lists the definitions and measurements of all the variables used in the regression models.

Firm-specific variables were gathered from COMPUSTAT/CRSP merged files.² We used the quarterly data, which were collected from Thomson Reuters (13f). Arithmetic average of those quarterly reports was calculated for the ownership variables. Long-term credit ratings were obtained from the S&P's long-term credit ratings for the time window between 1990 and 2007.³ The credit ratings of the firms vary from AAA (the highest rating) to D (the lowest rating, indicating debt in default). Firms' credit ratings follow a non-linear relationship, particularly between A to BBB categories and BBB to BB categories. This nonlinearity forced us to use ordered logistic regression (proportional odds model), dividing ratings into investment and noninvestment grade. Because of this non-linearity issue, credit ratings have been collapsed into two categories as "investment grade" and "speculative grade" to determine

²We construct our sample based on the Security Industry Classification (SIC) identification system falling under the codes of 5812 (eating places: restaurants), 7990 (amusement and recreation: casinos/gaming), and 7011 (hotels and motels).

³S&P's long-term credit ratings are taken from https://www.standardandpoors.com/en_US/web/guest/article/-/view/sourceId/504352

TABLE 1. Variable Definitions

Variable	Definition	Measurement
Rating	S&P long-term credit rating	S&P's Long-Term Issuer Credit Ratings
GIM index	A proxy for antitakeover provisions	Index from the Investor Responsibility Research Center Institute
Firm-specific factors		
Lev	Leverage (debt level)	$[(\text{Long-term Debt} + \text{Short-term Debt}) / \text{Total Assets}]$
CapInt	Capital intensity	$(\text{Property, Plant, \& Equipment} / \text{Total Assets})$
Size	Firm size in terms of total assets	$\text{Ln}(\text{Total Assets})$
IntCov	Interest coverage ratio	$(\text{Income Before Depreciation} / \text{Interest Expense})$
Loss	Operating loss (net loss)	Dummy: "1": Net Income = 0, "0": Otherwise
ROA	Returns generated on the assets	$(\text{Net Income} / \text{Total Assets})$
Beta	Systematic risk coefficient	$(\text{Covariance of Market Return} / \text{Variance of Market Return})$
Subord	Subordinated debt	Dummy: "1": Subordinated Debt, "0": Otherwise
Ownership characteristics		
Block	Block owners	Number of shareholders with at least 5% ownership
InstOwners	Institutional owners	Number of institutional owners with an equity ownership
InstOwnPer	Institutional owner proportions	Percentage of total institutional owners with an equity ownership

Note. Beta variable is derived from Fama French & Liquidity Factors from CRSP files. GIM index is gathered from Investor Responsibility Research Center Institute. Ownership characteristics are compiled from Thomson Reuters (13f) files. The remaining variables are taken from COMPUSTAT—Capital IQ fundamentals.

firms' credit ratings by using the logistic regression analysis. Firms' credit rating assessment falls into seven categories as reported in Table 2.

The data for governance provisions and ownership characteristics were compiled from the Investor Responsibility Research Center and the GIM index measurements. Gompers and colleagues (2003) constructed the GIM index on 24 equally weighted 24 governance provisions. These provisions range from 0 to 24. The GIM index considers antitakeover

provisions for firms' power-sharing relationships between management and stakeholders. Total score depends on the number of provisions that promote antitakeover measures, which reduce shareholder power. The provisions were classified into one of five categories as follows:

1. Delay: It is the tactic for delaying hostile bidders.
2. Voting: It is the voting rights.
3. Protection: It covers director/officer protection.

TABLE 2. Standard & Poor's Long-Term Issuer Credit Ratings

Category	Credit-worthiness	Assigned credit score	Investment/speculative grade
AAA	Extremely strong capacity to meet financial commitments	7	1
AA	Very strong capacity to meet financial commitments	7	1
A	Strong capacity to meet financial commitments but somewhat more susceptible to the adverse effects of changes in circumstances	6	1
BBB	Adequate capacity to meet its financial commitments, adequate to the lowest investment grade	5	1
BB	Significant speculative characteristics, least degree of speculation, noninvestment grade speculative	4	0
B	Highly speculative and vulnerable	3	0
CCC	Extremely speculative and more vulnerable than "B"	2	0
CC	Virtual certainty of default. Little chance of recovery, extremely vulnerable	1	0
R	Under regulatory supervision owing to its financial condition	0	0
SD and D	In default	0	0

Note. Standard & Poor's long-term credit ratings are taken from https://www.standardandpoors.com/en_US/web/guest/article/-/view/sourceId/504352. Investment grade is labeled as "1" and indicates the low risk of default for a bond. Speculative grade is labeled as "0" and is the higher risk of default of a bond. Assigned credit score is also reported on COMPUSTAT Data (280).

4. Other: It counts the other takeover measures.
5. State: It is the state laws.

We used ordered logistic and logistic regression approaches to examine the influence of corporate governance on hospitality firms' credit ratings. The empirical model to test the hypothesis that credit rating is explained as a function of antitakeover provisions, ownership, and selected control variables, is defined as follows:

$$\text{Credit Rating} = f(\text{antitakeover provisions, ownership, control variables}) \quad (1)$$

Our initial sample included 389 firms. However, our sample went through several elimination processes, such as the deletion of the firms that have missing data for both financial variables and several GIM index factors. Thus, our final unbalanced panel data contains 135 firm/year observations from 33 hospitality firms.⁴

Firm-Specific Performance Characteristics

We have quantified firm-specific proxies in order to better assess the operational connection between corporate governance and firm's credit ratings. We subsequently discuss how we operationalize these control variables:

Firm's Leverage (Lev): The higher the debt in a firm's capital structure, the higher the probability that the firm might have problems in servicing debt obligations to the creditors (Bolton & Scharfstein, 1996). Thus, to see the effect of leverage on both capital structure and corporate governance, we derived the leverage proxy as the ratio of total debt to total assets.

$$\text{Leverage(Lev)} = \frac{[\text{Long-term Debt} + \text{Short-term Debt}]}{\text{Total Assets}} \quad (2)$$

⁴The breakdown of our final sample is as follows: 13 restaurants, 9 hotels, and 11 casinos and casino hotels.

Capital Intensity (Capint): Firm's capital intensity was calculated using Stickney and McGee (1983) approach. This approach suggests the nature of the relation between capital intensity and credit rating to be positive.

$$\text{Capital Intensity (Capint)} = \frac{(\text{Property, Plant, \& Equipment})}{\text{Total Assets}} \quad (3)$$

Size: Following Hall and Weiss's (1967) approach, we estimated this variable as the logarithmic form of total assets. Our intention was to reduce the variation of significant assets across the hospitality firms in our sample.

Interest Coverage Ratio (Intcov): The ability of covering the interest expenses is an important determinant for firms' credit rating assessment. It demonstrates firms' ability to cover the interest portion of their liabilities (J. E. Kim, 2008; Singh, 2012). Hence, the interest coverage ratio is included in our regressions. This variable is calculated using the Ahn and Walker (2007) approach as follows:

$$\text{Interest Coverage (IntCov)} = \frac{(\text{Income Before Depreciation})}{\text{Interest Expense}} \quad (4)$$

Net Income/Loss: Dummy structure is utilized for this variable and "1" is assigned if net income is negative and "0" if otherwise in the prior year.

Return on Assets (ROA): We estimate ROA as the ratio of net income to total assets as follows:

$$\text{ROA} = \frac{(\text{Net Income})}{\text{Total Assets}} \quad (5)$$

Beta: It is measured by covariance coefficient of firm's market return divided by the variance of the market return.

Subordinated debt (subord): "1" is assigned if the firm has subordinated debt and "0" if otherwise.

Ownership Characteristics: We also consider the following ownership factors in our regressions to reflect the importance of hospitality firms' credit ratings.

Block Owners (block): Block owners represent a segment of large shareholders who hold at least 5.00% ownership of outstanding equity.

Institutional Owners (InstOwners): Institutional owners represent the total number of institutional owners that have equity ownership in the firm. We also used quarterly Thomson Reuters (13f) data for this variable.

Institutional Owners Percentage (InstOwnerPer): Institutional owners' percentage represents total institutional ownership as a percentage of the institution's shares outstanding.

ANALYSIS AND RESULTS

Descriptive Analysis

Table 3 presents the selected descriptive statistics. Overall, the hospitality industry has a mean credit rating score of 4.48 between speculative and lower medium grade, and a mean value of 10.06 points in the GIM index. Clustering hospitality firms into sub-sectors,

TABLE 3. Selected Descriptive Statistics

Panel A: Overall descriptive results				
Variable	M	SD	Minimum	Maximum
Rating	4.48	0.93	2.00	7.00
GIM index	10.06	2.81	3.00	15.00
Lev	0.44	0.21	0.10	1.53
Capint	0.94	0.26	0.11	1.44
Size	3.35	0.49	2.40	4.46
Intcov	6.63	6.11	0.29	33.06
Loss	0.09	0.29	0.00	1.00
Return on asset	0.05	0.06	-0.16	0.37
Beta	1.09	0.49	0.14	2.73
Subord	0.42	0.50	0.00	1.00
Block	1.87	1.29	0.00	7.00
InstOwners	191.26	149.66	20.00	833
InstOwnPer	0.63	0.18	0.20	0.98

Panel B: Credit rating and GIM index for the subsectors of the hospitality industry		
	Credit rating	GIM index
Lodging	4.62	9.91
Restaurant	4.68	10.14
Casinos	4.17	10.08

Note. We construct our sample based on the Security Industry Classification (SIC) identification system falling under the codes of 5812 (eating places: restaurants), 7990 (amusement and recreation: casinos/gaming), and 7011 (hotels and motels). Compers and colleagues (2003) constructed the GIM index on 24 equally weighted 24 governance provisions ranging from 0 to 24.

restaurant industry achieved the highest mean GIM index of 10.14 while lodging industry had the lowest mean GIM index of 9.91. Restaurant firms seem to enjoy higher credit ratings of 4.68 (lower medium/adequate to lowest investment grade), and casinos had the lowest credit ratings of 4.17 (noninvestment/speculative grade). These results remark that the casino industry is considered as the riskiest investment for the bondholders. Of the selected time period and firms, there was no firm with a credit rating of 1 ("CC", "C", and "D" indicating default or little chance of recovery). Also, none of the hospitality firms earned an "AAA" rating from S&P long-term issuer credit rating chart. In terms of the chance of default, most of the restaurants had lower leverage ratios compared with the casinos and higher interest coverage ratio. In regard to the return aspect, overall ROA figures varied from -16.00% to 37.00% showing the high return fluctuations generated by firms' assets.

Table 4 reports the correlations between each of the selected firm-specific proxies and the firms' credit rating. The highest positive correlation was found between the firms size and the institutional owners (0.77 and the correlation is significant at $p < 0.001$). Besides those variables, "ROA", "Intcov", and "GIM" were also positively correlated with "Rating" variable. Naturally, debt and risk proxies, "Lev" and "Beta", have an inverse relation with firm's credit ratings. Furthermore, all of the variance inflation factor values are less than 10, indicating that multicollinearity is not a concern. Hair, Black, Babin, and Anderson (2010) and Kennedy (2003) have stated that postestimation variance inflation factor values that do not exceed a 10-point benchmark can be considered as a good signal of no serious multicollinearity among the study variables.

Before we conducted the multivariate tests, we performed some assumption tests to address possible regression issues. As demonstrated in Table 5, we can safely conclude that there is no major problem related to heteroscedasticity (Breusch-Pagan $\chi^2 = 0.71$ and $p = .39$),

TABLE 4. Correlation Matrix and Multicollinearity Analysis

Variable	Rating	GIM	Lev	Capint	Size	Intcov	Loss	ROA	Beta	Subord	Block	Inst. Owners	Inst. OwnPer.	Variance inflation factor
Rating	1.00													
GIM	0.30***	1.00												1.30
Lev	-0.20*	-0.02	1.00											1.61
Capint	-0.04	-0.14	-0.11	1.00										1.40
Size	0.47***	0.30***	-0.17*	-0.11	1.00									3.95
Intcov	0.35***	-0.02	-0.46***	0.21*	0.00	1.00								2.31
Loss	-0.39***	-0.20*	0.17	0.15	-0.24**	-0.22**	1.00							1.48
Return on asset	0.47***	-0.02	0.06	-0.04	-0.03	0.45***	-0.30***	1.00						2.06
Beta	-0.06	0.04	0.10	0.05	-0.04	-0.27**	-0.08	-0.09	1.00					1.19
Subord	-0.36***	-0.12	0.30***	0.14	-0.10	-0.43***	0.00	-0.27**	0.25**	1.00				1.82
Block	-0.30***	-0.07	0.11	0.12	-0.09	-0.09	0.03	-0.17*	-0.06	0.39***	1.00			1.95
InstOwners	0.65***	0.36***	-0.23**	0.08	0.77***	0.30***	-0.20*	0.28**	-0.16	-0.35***	-0.18*	1.00		5.11
InstOwnPer	-0.06	0.10	-0.23**	0.22**	0.18*	0.28***	-0.14	0.07	-0.06	0.11	0.53***	0.26**	1.00	2.03

Note. Estimated variance inflation factor values that are less than the 10.00-point benchmark demonstrates that multicollinearity is not an issue across the variables.

***p = .001, **p = .01, *p = .05.

normality (Shapiro Wilk $W = 0.99$ and $p = .4$), serial correlation (Durbin Watson = 1.89). Also, the Ramsey’s Regression Equation Specification Error (RESET) test provided that there are no omitted variables in our main regression model ($F = 0.26$ and $p = .85$).

Ordered Logistic Regression

Our data set is a form of unbalanced panel data. Thus, the first part of our analysis is the ordered logistic regression. The dependent variables we used have more than two categories and their values are in sequential orders even though the latter category having a higher value than the prior one. Because of the nature of the proxies and variables, it is best to apply ordered logistic regression because it will supply greater statistical power when compared with the multinomial logistic regression (Garson, 2012). Given these premises, the regression models were written as follows:

$$\begin{aligned}
 Credit\ Rating_{it} = & \beta_0 + \alpha_{it} + \beta_1 GIM_{it} \\
 & + \beta_2 Lev_{it} + \beta_3 Capint_{it} + \beta_4 Size_{it} \\
 & + \beta_5 Intcov_{it} + \beta_6 Loss_{it} + \beta_7 ROA_{it} \\
 & + \beta_8 Beta_{it} + \beta_9 Subord_{it} + \beta_{10} Block_{it} \\
 & + \beta_{11} InstOwners_{it} + \beta_{12} InstOwnPer_{it} + u_{it}
 \end{aligned} \tag{6}$$

To simplify the regression model aggregating 12 functions of credit rating:

$$Credit\ Rating_{it} = \sum_k^n \left[\beta'_k x_{kit} \right] + u_{it} \tag{7}$$

where, $Credit\ Rating_{it}$ is explained in terms of k explanatory variables $x_1 \dots \dots x_k$. Disturbance term u_{it} is assumed to be uncorrelated with mean zero and β'_k common factor to each firm.

Table 6 reports that the entire model including operational firm-specific and ownership characteristics is statistically significant as indicated with the likelihood ratio chi-square of 136.32 with $p = .00$ when $p < .05$. The positively estimated GIM index coefficient of 0.19 indicates an increased chance of higher credit rating level. In other words, a high GIM index increases the likelihood of being in a higher credit rating category for the firms, and thus, less

TABLE 5. Assumption Tests

Test	Test parameter	<i>p</i>	Acceptable significance level
Breusch-Pagan/Cook-Weisberg for heteroscedasticity	$\chi^2 = 0.71$.399	> .05
Ramsey RESET for omitted variables	$F(3, 119) = 0.26$.854	> .05
Shapiro Wilk <i>W</i> for normality	$W = 0.989$.404	> .05
Durbin Watson statistics	1.89	—	$1.50 < DW < 2.50$

Note. DW = Durbin Watson.

TABLE 6. Ordered Logistic Regression

Variable	Coefficient	SE	<i>p</i>	Odds ratio
GIM	0.19	0.08	.02*	1.20
Lev	-1.75	1.13	.12	0.17
Capint	0.21	0.87	.81	1.24
Size	1.31	0.80	.10	3.71
Intcov	0.07	0.05	.11	1.08
Loss	-2.04	0.73	.01*	0.13
Return on asset	16.22	4.89	.00*	1.11
Beta	0.32	0.43	.46	1.38
Subord	-0.44	0.52	.39	0.64
Block	0.17	0.20	.39	1.18
InstOwners	0.01	0.00	.03*	1.01
InstOwnPer	-6.91	1.58	.00*	0.00
/cut 1	-3.073			
/cut 2	0.000			
/cut 3	4.350			
/cut 4	8.460			
/cut 5	10.498			
Number of observations	135			
Likelihood ratio $\chi^2(8)$	136.32			
Prob > χ^2	0.00			
Pseudo R^2	0.39			

Note. Results shown are for the final sample between 1990 and 2007. The empirical model to test the credit rating is a function of 12 control variables. The model is derived as follows: $Credit Rating_{it} = \beta_0 + \alpha_{it} + \beta_1 IM_{it} + \beta_2 Lev_{it} + \beta_3 Capint_{it} + \beta_4 Size_{it} + \beta_5 Intcov_{it} + \beta_6 Loss_{it} + \beta_7 ROA_{it} + \beta_8 Beta_{it} + \beta_9 Subord_{it} + \beta_{10} Block_{it} + \beta_{11} InstOwners_{it} + \beta_{12} InstOwnPer_{it} + u_{it}$. Thus, $Credit Rating = f(\text{antitakeover provisions, ownership, control variables})$.

**p* < .05.

distress in returns for both bondholders and shareholders. Aligned with the estimated GIM index coefficients, "Loss," "ROA," and "Instowners" variables are also positive and statistically significant. That is, higher returns and higher proportions of institutional owners increase the chance of having higher credit rating for the firms. On the contrary, "InstOwnPer." is negative but statistically significant. This goes against what we predicted and this negative coefficient could be explained as an increased likelihood of takeover stemming from increased institutional ownership. Cremers and Nair (2005)

found that increased ownership might create takeover vulnerability for the firms.

Logistic Regression

To address the previously discussed non-linearity issues related to credit ratings, we used the logistic regression approach by applying the same regression model because the dependent variables in our models are binary measurements. One of the important features of the logistic regression is that it predicts the probability of the response rather than the value of response as in ordinary least regression (H. Kim & Gu, 2009; Youn & Gu, 2010). Thus, we integrated the logistic approach to the regression models suggested by Stock and Watson (2003).

$$F(u) = \frac{1}{1 + \exp^{-u}} \quad \text{Where } 0 < f(u) < 1 \text{ and} \quad (8)$$

$$P(Y = 1 | x_1, x_2, x_3, \dots, x_k) = \frac{1}{1 + (e^{-(\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k)})} \quad (9)$$

"GIM index," "Size," "Intcov," and "ROA" variables are statically significant and they have a positive relationship with credit ratings, while institutional ownership percentage is negatively associated with credit ratings. The sign of the other variables (i.e., negative net income - Loss) are also as predicted and they are not statistically significant. That is, loss on the income, firm's lower interest coverage ability, high capital intensity etc. signify a low credit rating. Table 7 reports the logistic regression results for the effect of the antitakeover provisions on the hospitality firms' credit ratings. We can extract from the omnibus test (likelihood ratio) that our model performed

TABLE 7. Logistic Regression

Variable	Coefficient	SE	Wald	p	Odds ratio
GIM	0.21	0.11	1.87	0.06	1.24
Lev	-0.26	2.16	-1.20	0.23	0.08
Capint	-0.53	1.27	-0.42	0.67	0.59
Size	3.04	1.29	2.35	0.02*	20.96
Intcov	0.13	0.08	1.75	0.08	1.14
Loss	-1.38	1.29	-1.07	0.28	0.25
Return on asset	33.11	12.26	2.70	0.01*	2.41
Beta	0.23	0.56	0.41	0.68	1.26
Subord	-0.54	0.67	-0.80	0.42	0.58
Block	0.33	0.27	1.22	0.22	1.39
InstOwners	0.00	0.01	-0.35	0.73	0.99
InstOwnPer	-7.22	2.15	-3.36	0.00*	0.00
Constant	-9.01	4.92	-1.83	0.07	
Likelihood ratio	$\chi^2 = 90.19, p = .00^*$				
Cox and Snell R^2	0.49				
Nagelkerke R^2	0.65				
Homer and Lemeshow test	$\chi^2 = 6.71, p = .57$				

Note. Results shown are for the final sample between 1990 and 2007. The empirical model to test the credit rating is a function of 12 control variables. The model is derived as follows: $Credit Rating_{it} = \beta_0 + \alpha_{it} + \beta_1 IM_{it} + \beta_2 Lev_{it} + \beta_3 Capint_{it} + \beta_4 Size_{it} + \beta_5 Intcov_{it} + \beta_6 Loss_{it} + \beta_7 ROA_{it} + \beta_8 Beta_{it} + \beta_9 Subord_{it} + \beta_{10} Block_{it} + \beta_{11} InstOwners_{it} + \beta_{12} InstOwnPer_{it} + u_{it}$. Thus, $Credit Rating = f(\text{antitakeover provisions, ownership, control variables})$. In the model, logistic function is defined as follows: $F(u) = \frac{1}{1 + \exp^{-u}}$ Where $0 < f(u) < 1$ and $P(Y = 1 | x_1, x_2, x_3, \dots, x_k) = \frac{1}{1 + (\exp^{-(\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k)})}$
* $p < .05$.

well since we achieved statistical significance level of .00 when $p < .05$ with the high χ^2 value of 90.19. In addition, the Homer and Lemeshow test is not significant ($\chi^2 = 6.71$ $p = .57$ at $p < .05$), which indicates a good fit of the model. Along with the results obtained from the fit indices, our model exhibits high explanatory power in regard to the effects of antitakeover provisions on the firms' credit ratings. Cox and Snell, and Nagelkerke test achieved high R^2 values ($R^2 = 0.49$ and $R^2 = 0.65$, respectively).

CONCLUSION AND DISCUSSION

Our article's stance is to investigate the relation between corporate governance with antitakeover measures as measured by GIM index and the quality of credit ratings of hospitality firms in the United States. Also, we explained the role of shareholder rights on the

credit ratings of those firms. Overall, the regression analyses demonstrate a positive and significant relation between firms' GIM index and the credit ratings as assigned by S&P's long-term issuer chart. Specifically, our findings and results display that antitakeover measures increase the likelihood of getting better credit ratings for hospitality firms. Findings from mainstream finance journals indicate lower coefficients as compared with our results. For example, the ordered logit result of Ashbaugh-Skaife and colleagues (2006) is 0.037, while our result is 0.19. Similarly, their logistic analysis result is 0.067 while our result is 0.21, indicating that antitakeover measures have a much higher effect on hospitality firms compared with overall firms. Moreover, the odds ratio for GIM indicates that every unit increase in GIM increases the odds of having an investment grade by 23.50%. The probability calculation, where all other independent variables are held at their constant mean values, shows that increasing GIM value from 3 to 15 (lowest and highest values in hospitality firms) increases the probability of getting an increased investment grade from 33.80% to 86.50%. This is an indication that increasing GIM value yields higher probabilities of getting investment grade instead of speculative grade in hospitality firms' credit ratings.

The existing literature in regard to antitakeover measures and firms' performance still yields tangled results. This might be the result of different approaches, such as different time periods, industry focus, and statistical procedures. When we consider the bondholder's perspective, the results may become clearer and help us understand this important part of the governance relationship. There is an ongoing discussion that not all provisions in governance structure benefit every stakeholder. In that way, we show that stronger shareholder rights are observed differently for bondholders compared with equityholders.

In capital-intensive industries as hospitality industry, factors affecting to access to the capital have immense importance. Even slight changes

in firms' credit ratings might reduce or eliminate the possibility of realizing desired profits and enhancing the shareholder's value. Therefore, corporate governance is considered one of the most important factors in determining the credit rating of the firm. As we can see from the results, antitakeover provisions are an essential and significant predictor of a hospitality firm's credit rating quality. Governance mechanisms could be used to assess and reduce both default risk and agency costs. We can then conclude that firms with stronger governance could be associated with better credit ratings and relatively lower interest rates as a result.

IMPLICATIONS, LIMITATIONS, AND FUTURE RESEARCH

Findings of this article add additional support and valuable extension to the understanding of how firms' corporate governance and ownership characteristics affect their credit rating quality and shareholders' (i.e., bondholders) investment utility. One of the most intriguing take away from the results is that hospitality firms can restructure their risk levels by reestablishing their governance mechanisms driven by their board expertise. Given that well-established governance activities along with a strong ownership concentration will minimize the unfavorable side of information asymmetry between internal and external stakeholders, agency costs will also be reduced. Strong governance mechanisms start with providing timely and reliable corporate financial information for outside investors. When corporate financial messages are conveyed at the right time, potential outside investors will be able to create their investment portfolios more accurately and efficiently. For example, by analyzing many factors (e.g., firm's capital structure, shareholder rights, accountability, transparency), those investors (either individual or institutional) could add more economic value to the firm with their investments.

Because hospitality firms are capital-intensive firms with high volatility in earnings

and cash flows, debt is a major source of capital for them and critical element for their credit ratings. Our results suggest that weak governance with lacking board expertise, mixed control, and board independence (i.e., board stock ownership with low institutional and high internal ownerships) can result in firms incurring higher debt financing costs. Parallel to this, those firms might also experience lower credit ratings on their new debt issues, which increase default risks for bondholders. As a result, creating operational strategies, which will yield optimized financial outcomes for both managements and investors, will be very difficult for the policy makers. For instance, managements have to follow a balanced wealth transfer strategy for the bondholders and stockholders. If the management supports positive net present value (NPV) projects more than focusing on generating adequate cash flows, bondholders bear greater risk that their fixed contractual claims on the firm's cash flows will not be paid since future cash flow distribution will be lower. In this case, shareholders potentially are better off until the shareholder rights are weakened to make the bondholders happy. However, firms' financial performance will take different stakes which will cause speculative investment grade on firms' bonds. Taken all together, the strength in governance provisions will mostly likely bring solid credit rating score with reduced cost of borrowing and capital, leverage, default and bankruptcy risk, and negative investment sentiment to the firms.

Our study examined publicly traded hospitality firms. However, because many firms in hospitality industry are privately owned, the analyses can be extended by including those firms with the data availability. Furthermore, we used the GIM index in our study. However, there are also different governance measurements such as, the entrenchment index created by Bebchuk, Cohen, and Ferrell (2004) and the Institutional Shareholder Services governance index used by Brown and Caylor (2006). Those indices with different proxies for corporate governance are used in some studies. For example, stock

ownership of corporate board, separation of chief executive officer and chairman, and board independence are used as corporate governance proxies in mainstream finance papers (i.e., Bhagat, Carey, & Elson, 1999; Hermalin & Weisbach, 1998; Imhoff, 2003). Different governance indices and variables could be further analyzed to investigate different aspects of the relation between governance and credit ratings in the hospitality industry.

Even with these limitations, evidences presented in this article developed an extensive outlook for the decision makers of hospitality firms in terms of corporate governance and credit ratings. Thus, they should supply key explanations of corporate decision-making process for both practice and existing corporate governance literature.

REFERENCES

- Ahn, S., & Walker, M. D. (2007). Corporate governance and the spinoff decision. *Journal of Corporate Finance*, 13(1), 76–93.
- Alali, F., Anandarajan, A., & Jiang, W. (2012). The effect of corporate governance on firm's credit ratings: Further evidence using governance score in the United States. *Accounting & Finance*, 52(2), 291–312.
- Allayannis, G., & Mozumdar, A. (2004). The impact of negative cash flow and influential observations on investment: Cash flow sensitivity estimates. *Journal of Banking & Finance*, 28(5), 901–930.
- Almazan, A., & Suarez, J. (2003). Entrenchment and severance pay in optimal governance structures. *Journal of Finance*, 58(2), 519–548.
- Anderson, R. C., Mansi, S. A., & Reeb, D. M. (2004). Board characteristics, accounting report integrity, and the cost of debt. *Journal of Accounting and Economics*, 37(3), 315–342.
- Ashbaugh-Skaife, H., Collins, D. W., & LaFond, R. (2006). The effects of corporate governance on firms' credit ratings. *Journal of Accounting and Economics*, 42(1–2), 203–243.
- Avramov, D., Chordia, T., Jostova, G., & Philipov, A. (2007). Momentum and credit rating. *Journal of Finance*, 62(5), 2503–2520.
- Bebchuk, L. A., Cohen, A., & Ferrell, A. (2004). *What matters in corporate governance?* Working Paper #491. Cambridge, MA: Harvard Law School.
- Bhagat, S., & Black, B. (2001). Non-correlation between board independence and long-term firm performance. *Journal of Corporation Law*, 27, 231–241.
- Bhagat, S., Carey, D. C., & Elson, C. M. (1999). Director ownership, corporate performance, and management turnover. *The Business Lawyer*, 54(3), 885–919.
- Bhojraj, S., & Sengupta, P. (2003). Effect of corporate governance on bond ratings and yields: The role of institutional investors and outside directors. *Journal of Business*, 76(3), 455–475.
- Black, B. S., Jang, H., & Kim, W. (2006). Does corporate governance predict firms' market values? Evidence from Korea. *Journal of Law, Economics, and Organization*, 22(2), 366–413.
- Bolton, P., & Scharfstein, D. S. (1996). Optimal debt structure and the number of creditors. *Journal of Political Economy*, 104(1), 1–25.
- Bonaccorsi, A. (1992). On the relationship between firm size and export intensity. *Journal of International Business Studies*, 23(4), 605–635.
- Bradley, M., Dallas, G., Snyderwine, E., & Chen, D. (2009). *The effects of corporate governance attributes on credit ratings and bond yields*. Working paper. Durham, NC: Social Science Research Network. No. 1327070. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1327070
- Brown, L. D., & Caylor, M. L. (2006). Corporate governance and firm valuation. *Journal of Accounting and Public Policy*, 25(4), 409–434.
- Chen, M.-H., Hou, C. -L., & Lee, S. (2012). The impact of insider managerial ownership on corporate performance of Taiwanese tourist hotels. *International Journal of Hospitality Management*, 31(2), 338–349.

- Cremers, K., & Nair, V. B. (2005). Governance mechanisms and equity prices. *Journal of Finance*, 60(6), 2859–2894.
- Dann, L. Y., & DeAngelo, H. (1983). Standstill agreements, privately negotiated stock repurchases, and the market for corporate control. *Journal of Financial Economics*, 11(1), 275–300.
- DeAngelo, H., & Masulis, R. W. (1980). Optimal capital structure under corporate and personal taxation. *Journal of Financial Economics*, 8(1), 3–29.
- Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance*, 7(3), 209–233.
- Drury, J. (1981). A study of industry financial ratios. *Management Decision*, 19(1), 24–35.
- Evans, D. S. (1987). The relationship between firm growth, size, and age: Estimates for 100 manufacturing industries. *Journal of Industrial Economics*, 35(4), 567–581.
- Fama, E. F. (1971). Risk, return, and equilibrium. *Journal of Political Economy*, 79(1), 30–55.
- Fama, E. F., & Miller, M. H. (1972). *The theory of finance*. New York, NY: Holt Rinehart & Winston.
- Fitch Ratings. (2004). *Evaluating corporate governance: The bondholders' perspective* Credit Policy Special Report. New York, NY: Author.
- Garson, D. (2012). *Ordinal regression*. Blue Book Series. Retrieved from <http://www.statisticalassociates.com>
- Gompers, P., Ishii, J., & Metrick, A. (2003). Corporate governance and equity prices. *Quarterly Journal of Economics*, 118(1), 107–155.
- Gordon, A. L., & Pound, J. (1993). Information, ownership structure, and shareholder voting: Evidence from shareholder-sponsored corporate governance proposals. *Journal of Finance*, 48(2), 697–718.
- Gu, Z., & Choi, Y. H. (2004). CEO compensation determinants in the casino industry. *Journal of Hospitality & Tourism Research*, 28(2), 143–155.
- Guillet, B. D., & Mattila, A. S. (2010). A descriptive examination of corporate governance in the hospitality industry. *International Journal of Hospitality Management*, 29(4), 677–684.
- Hair, J., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate data analysis* (7th ed.). Upper Saddle River, NJ: Pearson Education.
- Hall, M., & Weiss, L. (1967). Firm size and profitability. *Review of Economics and Statistics*, 49(3), 319–331.
- Hermalin, B. E., & Weisbach, M. S. (1991). The effects of board composition and direct incentives on firm performance. *Financial Management*, 20(4), 101–112.
- Hermalin, B. E., & Weisbach, M. S. (1998). Endogenously chosen boards of directors and their monitoring of the CEO. *American Economic Review*, 88(1), 96–118.
- Himmelberg, C. P., & Morgan, D. P. (1995). *Is bank lending special?* Vol. 39. Federal Reserve Bank of Boston Conference Series. Boston, MA. Retrieved from <http://www.bostonfed.org/economic/conf/conf39/conf39b.pdf>
- Hsu, L.-T., & Jang, S. (2008). The determinant of the hospitality industry's unsystematic risk: A comparison between hotel and restaurant firms. *International Journal of Hospitality & Tourism Administration*, 9(2), 105–127.
- Imhoff, E. (2003). Accounting quality, auditing, and corporate governance. *Accounting Horizons*, 17, 117–128.
- Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *Journal of Finance*, 48(3), 831–880.
- Keiser, J. D. (2002). Boards of directors of the hospitality and tourism industries: An exploratory analysis of composition and interlocks. *Journal of Hospitality & Tourism Research*, 26(2), 155–174.
- Kennedy, P. (2003). *A guide to econometrics*. Cambridge, MA: MIT Press.
- Kim, H., Gu, Z., & Mattila, A. S. (2002). Hotel real estate investment trusts' risk features and beta determinants. *Journal of Hospitality & Tourism Research*, 26(2), 138–154.

- Kim, H., & Gu, Z. (2009). Financial features of dividend-paying firms in the hospitality industry: A logistic regression analysis. *International Journal of Hospitality Management*, 28(3), 359–366.
- Kim, H. S. (2010). *Ownership structure and firm investment: An examination of hotel firms*. West Lafayette, IN: Purdue University.
- Kim, J. E. (2008). *Strategic choice and financial structure in casual themed restaurants*. Blacksburg, VA: Virginia Polytechnic Institute and State University.
- Kim, S., & Kim, W. G. (2011). Re-examining the determinants of executive compensation in the restaurant industry: a quantile regression approach. *Tourism Economics*, 17(5), 1035–1054.
- Kizildag, M. (2015). Financial leverage phenomenon in hospitality industry sub-sector portfolios. *International Journal of Contemporary Hospitality Management*, 27(8), 1949–1978.
- Klock, M. S., Mansi, S., & Maxwell, W. F. (2005). Does corporate governance matter to bondholders? *Journal of Financial and Quantitative Analysis*, 40(4), 693–719.
- Lee, S., Koh, Y., & Kang, K. H. (2011). Moderating effect of capital intensity on the relationship between leverage and financial distress in the U.S. restaurant industry. *International Journal of Hospitality Management*, 30(2), 429–438.
- Lee, S., Singal, M., & Kang, K. H. (2012). The corporate social responsibility–financial performance link in the US restaurant industry: Do economic conditions matter? *International Journal of Hospitality Management*, 32, 2–10.
- Oak, S., & Dalbor, M. C. (2010). Do institutional investors favor firms with greater brand equity?: An empirical investigation of investments in US lodging firms. *International Journal of Contemporary Hospitality Management*, 22(1), 24–40.
- Oak, S., & Iyengar, R. J. (2009). Investigating the differences in corporate governance between hospitality and nonhospitality firms. *Advances in Hospitality and Leisure*, 5(5), 125–140.
- Paek, S., Xiao, Q., Lee, S., & Song, H. (2013). Does managerial ownership affect different corporate social responsibility dimensions? An empirical examination of US publicly traded hospitality firms. *International Journal of Hospitality Management*, 34, 423–433.
- Rauh, J. D., & Sufi, A. (2010). Capital structure and debt structure. *Review of Financial Studies*, 23(12), 4242–4280.
- Sheel, A. (1994). Determinants of capital structure choice and empirics on leverage behavior: A comparative analysis of hotel and manufacturing firms. *Journal of Hospitality & Tourism Research*, 17(3), 1–16.
- Sheel, A. (1998). The relevance of financial leverage for equity returns of restaurant firms: An empirical examination. *Journal of Hospitality Financial Management*, 6(1), 21–31.
- Shivdasani, A., & Zenner, M. (2005). How to choose a capital structure: Navigating the debt equity decision. *Journal of Applied Corporate Finance*, 17(1), 26–35.
- Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *Journal of Finance*, 52(2), 737–783.
- Singh, A. (2012). Proposed lease accounting changes: Implications for the restaurant and retail industries. *Journal of Hospitality & Tourism Research*, 36(3), 335–365.
- Standard & Poor. (2012). *About credit ratings*. Retrieved from http://www.standardandpoors.com/aboutcreditratings/RatingsManual_PrintGuide.html
- Stein, J. C. (1988). Takeover threats and managerial myopia. *Journal of Political Economy*, 96(1), 61–80.
- Stickney, C. P., & McGee, V. E. (1983). Effective corporate tax rates the effect of size, capital intensity, leverage, and other factors. *Journal of Accounting and Public Policy*, 1(2), 125–152.
- Stock, J. H., & Watson, M. W. (2003). *Introduction to econometrics* (3rd ed.). New York, NY: Addison Wesley.
- Tang, F.-F., Xi, Y., Chen, G., & Wang, R. (2006). Ownership, corporate governance, and management in the state-owned hotels in the People's Republic of China. *Cornell Hotel*

- and Restaurant Administration Quarterly*, 47(2), 182–191.
- Treacy, W. F., & Carey, M. (2000). Credit risk rating systems at large US banks. *Journal of Banking & Finance*, 24(1), 167–201.
- Upneja, A., & Dalbor, M. (2001). An examination of capital structure in the restaurant industry. *International Journal of Contemporary Hospitality Management*, 13(2), 54–59.
- Youn, H., & Gu, Z. (2010). Predicting Korean lodging firm failures: An artificial neural network model along with a logistic regression model. *International Journal of Hospitality Management*, 29(1), 120–127.