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Factors Affecting Return on Assets in the Korean Lodging Industry:
A Preliminary Empirical Investigation

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Three tables belong to this manuscript.

ABSTRACT

This study investigates the factors that affect Korean lodging firms' performance measured in terms of return on assets (ROA). Using the 2005 financial data of a sample of 112 publicly traded Korean lodging firms and a stepwise regression procedure, the study identified the ratio of earnings before interests, taxes, depreciation, and amortization to total liabilities and debt ratio as significant determinants of ROA. The estimated regression model was able to explain 56 percent of variation in ROA across the sample lodging firms. The two variables retained by the model suggest that to improve ROA, the Korean hotel industry must exert tight control over operating costs to raise the operating profit margin. In the meantime, Korean lodging firms should adopt a more conservative debt-financing policy.

Keywords: Korean lodging firms; financial ratios; stepwise regression; return on assets; EBITDA; debts

INTRODUCTION

As a consequence of the Asian financial crisis in 1997, the Korean economy had to face substantial difficulties such as the currency crisis, soaring unemployment rates, and bankruptcies of business firms. To overcome this crisis, the Korean government has focused on the thorough ongoing structural reform of the entire economy while trying to maintain stable growth trends (Bank of Korea, 2006). With the help of the IMF (International Monetary Fund), along with both individual and corporate efforts, the Korean economy was able to pull itself out of the post-crisis recession and started to recover rapidly by 2002 (Bank of Korea, 2006). While the overall Korean economy has rebounded successfully, there is still obvious weakness in some industries with performance lagging far behind their international peers. The Korean lodging industry is one of such industries.

An initial investigation of the operation status of the Korean lodging firms found that the average earnings before interest, tax, depreciation, and amortization (EBITDA) to sales ratio, or the operating profit margin, of 112 publicly traded Korean lodging firms in 2005, the most recent year with available data when this study was conducted, was 18 percent. In contrast, according to the Hotel Online Special Report (2005), the operating profit margin of the U.S. lodging industry for 2005 was 26 percent. The operating performance of the Korean lodging industry was about 31 percent lower than its U.S. counterpart. Evidently, there was a huge performance gap between the lodging industries in the two countries. A further examination of the return on assets (ROA), a ratio of net income to total assets, of the 112 Korean lodging companies indicated that the Korean lodging industry had a loss in 2005, with an average ROA at negative one percent.

Why was the Korean lodging industry performing so poorly? What could be the factors contributing to the negative ROA of the industry? The purpose of this study is to answer these

questions by examining firm-specific financial variables of Korean lodging firms that may be related to their ROA ratios. While the findings of the study should help practitioners in the Korean lodging industry identify causes of their poor performance and find ways to improve their ROA ratios, the study will also empirically contribute to the hospitality financial management literature by providing evidence on how to improve lodging operation profitability from the perspective of the Korean Lodging Industry.

RETURN ON ASSETS RATIO

In general, there are three most commonly used measures of firm profitability: net profit margin (NPM), return on assets (ROA), and return on equity (ROE) (Carey, 1974). NPM is essentially net income over net sales; ROA, as mentioned earlier, is calculated by dividing net income by total assets; and ROE is defined as the ratio of a firm's net income to its common equity. Schmidgall (2007) argues that unlike other profitability ratios, ROA compares bottom line profits to the total assets, thus measuring the return to total investment. According to Rothschild (2006), ROA incorporates both net income and firms' assets into its computation and is therefore the premier metric in evaluating the performance of management.

By conducting DuPont analysis, Dehning and Stratopoulos (2002) show that ROA, as a performance indicator of a company, can be broken down into two components: profitability and efficiency. The major advantage of using ROA as a performance measure is that it allows its users to analyze a firm's profitability and efficiency at the same time. In the DuPont analysis, profitability, measured in terms of net profit margin (NPM), interacts with total assets turnover (TAT) to determine ROA. Equations (1) below illustrates the relationship among NPM, TAT, and ROA (Dehning & Stratopoulos, 2002):

$$\begin{aligned} \text{ROA} &= \text{Net Income} / \text{Total assets} = (\text{Net Income} / \text{Sales}) \times (\text{Sales} / \text{Total Assets}) \\ &= \text{NPM} \times \text{TAT} \end{aligned} \tag{1}$$

NPM measures the profitability performance of a firm while TAT measures efficiency of a company in utilizing its assets to generate sales. Higher NPM and TAT will lead to higher ROA and vice versa. As Equation (1) shows, when the other variables are held constant, an increase in sales alone will not lead to higher ROA. There are two ways to increase ROA: either to increase net income for given assets or to generate given amount of net income using fewer total assets. Therefore, ROA is a performance ratio reflecting not only profitability but also efficiency.

Among the three most commonly used profitability measures, namely NPM, ROA, and ROE, this study selected ROA to investigate the relationship between performance and contributing factors because the ratio incorporates information of both profitability and efficiency. Furthermore, ROE was not considered because it is overly affected by a firm's financing decisions (Dehning & Stratopoulos, 2002).

PREVIOUS RESEARCH ON FIRM PERFORMANCE USING ROA

Many previous studies have measured firm performance using ROA. Fraser and Kolari (1985) examined the financial performance of 1,000 small banks during the 1970-1983 periods. They measured the banks' performance from three dimensions, namely profitability, cost efficiency, and credit loss experience. To measure profitability, they used ROA as they believed that ROA is the most widely used ratio for measuring profitability.

In their study to identify determinants of firm performance, Hansen and Wernerfelt (1989) used a five year average ROA as the measure of firm performance. The sample for this study included 60 Fortune 1,000 firms representing over 300 areas of business. Based on these

firms, Hansen and Wernerfelt (1989) developed regression models for estimating ROA determinants. Their final model included both economic and organizational variables and achieved an adjusted R^2 of 0.457, indicating that economic and organizational variables have little overlap and a more reliable model can be developed by incorporating both types of variables.

Kim and Burnie (2002) examined the role of economic cycle on small firm's performance. Using ROA as the performance measure, they found that small firms perform better than large firms during good economic conditions. When the economic condition is weak, however, small firms tend to have poor performance and high bankruptcy risk. This is more than likely because small firms tend to have lower ROA and higher leverage (D/E ratio) in comparison to large firms (Chan & Chen, 1988).

Another study conducted by Reinartz et al. (2004) investigated the relationship between customer relationship management process and economic performance of firms, with sample firms derived from financial services, hospitality, online retailing, and power utilities industries. They used two types of performance measures in their study. Perceptual economic performance was measured through respondents' subjective ratings about their company using a seven-point Likert scale. Respondents were asked to rate the company, relative to its competitors, in terms of 'achieving overall performance,' 'attaining market share,' 'attaining growth,' and 'current profitability.' On the other hand, objective economic performance was measured using ROA. The model by Reinartz et al. (2004) achieved a R^2 of 0.24 for perceptual performance and a R^2 of 0.49 for objective performance.

In their study of U.K. hotel companies, Phillips and Sipahioglu (2004) assessed whether there is a statistically significant relationship between a firm's level of debt and its financial

performance. Their primary interest was to see whether a combined set of debt ratio (total debt over total assets) and gearing ratio (total debt over total equity) could significantly influence ROA and ROE of sample companies. The results indicated that at the 0.05 significance level, there is no significant relationship between the amount of debt and the firm performance.

A review of the literature indicates that ROA is a widely used and preferred performance measure in financial research. While many studies have examined various factors that may have contributed to firm performance measured by ROA, no such studies, to the best of our knowledge, have been conducted for the Korean lodging industry. Given the poor ROA of the Korean lodging firms, it is highly necessary to investigate its causes or determinants. Realizing the necessity, this study attempts to estimate a regression model to identify firm specific variables that may have affected the ROA of Korean lodging firms. The findings of this study should help researchers as well as industry practitioners better understand how lodging operations may be improved in Korea.

SAMPLES

The data source for this study is the Korean Financial Supervisory Service (KFSS) database. This database is fairly new and contains financial statements of Korean lodging firms since 2000. This study examined Korean lodging firms in 2005, the most recent year with available data when the study was conducted. The database contained financial statements for 163 lodging firms in 2005. Excluding firms with unavailable or incomplete financial information, 112 firms were retained. The sample firms had average assets of \$139.40 million. ROA were calculated from the financial statements of the sample firms in 2005. Relevant financial ratios in 2005 that might have an impact on ROA were also computed for all firms and used to estimate the regression model. All the sample firms are publicly traded.

MULTIPLE REGRESSION MODEL

Multiple linear regression is one of the most popular statistical techniques used in social science settings (Norusis, 2005). The primary purpose of using multiple regression analysis is to predict the values of a dependent variable as a linear combination of the values of one or more independent variables (Norusis, 2005). Typically, the linear model takes a form of:

$$\hat{Y} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n, \quad (2)$$

where $\hat{Y}$ = predicted value, X_i = i^{th} independent variable

In this study, the variable to be explained, ROA, is defined as the ratio of a firm's net income to its total assets measured at book value. The purpose of developing a regression model is to express the ROA as a linear function of financial ratios that may have affected ROA.

Therefore, the final model will be:

$$\text{ROA} = \beta_0 + \beta_1 \chi_1 + \beta_2 \chi_2 + \dots + \beta_n \chi_n, \quad (3)$$

where the coefficients $\beta_0, \dots, \beta_n$ are estimated from the data using the ordinary least squares procedure.

A linear model is adopted in this study due to its simplicity and the fact that there is no prior evidence to believe that the relationships are non-linear.

PREDICTING VARIABLES

A considerable amount of literature states that the primary purpose of analyzing financial ratios is to examine the relationships among financial statement data in order to identify a firm's

financial strengths and potential problems (Pohlman & Hollinger, 1981). According to Whittington (1980), there are two main purposes of using ratio analysis – normative and positive – when studying a firm’s financial statements. The normative approach focuses on a comparison between a firm’s financial ratios and benchmark ratios in order to evaluate the firm’s performance. On the other hand, the primary purpose of the positive approach is to predict the performance of a firm using ratio analysis. The use of financial ratios for different purposes has been a topic of interest for a long time. It is widely known that certain sets of ratios hold specific sets of information about a firm and hence can be used to study a various aspects of the firm’s financial condition (Pohlman & Hollinger, 1981). Financial ratios can be used to predict a firm’s performance in the future, to describe current financial situations, or to observe a particular feature of its financial condition (Pohlman & Hollinger, 1981).

Based on the previous literature and the availability of data, this study selected 10 financial ratios representing the liquidity, solvency, and efficiency aspects of Korean lodging firms as candidate variables for estimating the regression model.

Liquidity ratios measure a firm’s ability to meet its short-term financial obligations (Schmidgall, 2007). A weak liquidity indicates that the firm may be in trouble paying off its short-term financial obligations or it is generating insufficient cash flow from operation to cover its short term liabilities. On the other hand, too much liquidity may imply low efficiency in using current assets and hence low profitability. Therefore, either insufficient or excessive liquidity may have a negative impact on firm performance in terms of ROA. Three liquidity ratios were selected as potential predictors in this study. These were current ratio (current assets divided by current liabilities), quick ratio (quick assets divided by current liabilities), and EBITDA to current liabilities (CL) ratio.

Solvency ratios indicate a firm's ability to pay off its long-term debt as well as the extent to which the company is relying on borrowed funds (Schmidgall, 2007). A firm with heavy debt is likely to be troubled with heavy interest payments and thus may have a higher probability to generate lower net income and lower ROA. Three solvency ratios were selected as potential predictors. They were debt ratio (total liabilities divided by total assets), EBITDA to total liabilities (TL), and interest coverage ratio (EBIT divided by interest expenses).

Efficiency ratios assess the efficiency of a firm in using its assets to generate sales (Schmidgall, 2007). Inefficient use of assets contributes to high operating costs and may lead to lower net income as well as lower ROA. Four efficiency ratios were chosen as potential predicting variables. They were inventory turnover (costs of goods sold to average inventory), accounts receivable turnover (credit sales to average accounts receivable), fixed assets turnover (total revenue to average fixed assets), and assets turnover (total revenue to average total assets). These four ratios represent Korean lodging firms' efficiency in using its inventory, accounts receivable, fixed assets, and total assets to generate sales revenue, respectively.

Table 1 presents average values for all potential predicting variables along with ROA for the Korean sample firms. In addition, the identical financial ratios for an average U.S. lodging firm are also provided for comparison. It should be noted that due to the limited data availability, the average ratios for Korean firms were at the end of 2005, whereas the U.S. average ratios were computed in July 2005. The average ROA for Korean sample firms is -0.01 or negative one percent, implying that on average sample firms experienced a net loss in 2005. On the other hand, ROA for an average U.S. lodging firm was 0.02, indicating positive return on assets. EBITDA to CL and EBITDA to TL ratios measure the operation generated cash flows to meet a company's short-term and total liabilities, respectively. While it is common to see these ratios having values

of less than one, it is alarming to see Korean lodging firms' average EBITDA to TL ratio of 0.09 as it means that the amount of cash flow generated was significantly small compared to the amount of total liabilities. The two ratios of the U.S. hotels were much larger than their Korean counterparts, implying U.S. hotels' much better cash flow coverage for the short-term and total liabilities. In the table, both the current ratio and quick ratio for the average Korean firm were lower than one, indicating that on average sample Korean firms did not have enough current and quick assets to cover their short-term liabilities. U.S. lodging firms, however, had much larger averages for the two, with current ratio at 1.61 and quick ratio at 0.98, implying much better liquidity than Korean hotels. In the table, Korean hotels' much larger debt ratio and smaller interest coverage ratio, in comparison to their U.S. peers, indicate that Korean lodging firms were more heavily leveraged with much lower ability to cover the interest expenses. Korean lodging firms were dominated by debt financing while U.S. lodging firms' debt financing was roughly half of total financing. Especially, to cover each dollar of interests, an average U.S. lodging firm had \$2.45 of EBIT available, whereas an average Korean hotel firm had only \$0.64, an insufficient coverage of the interests. As the table shows, the U.S. lodging firms had much higher total assets and fixed assets turnovers than Korean hotel firms, demonstrating U.S. lodging firms' better efficiency in using the assets to generate sale. Korean lodging firms only had faster accounts receivable turnover than U.S. hotels. The comparison shows that U.S. hotel firms were much better positioned in terms of both financial strength and operation performance.

(Table 1 here)

ESTIMATED MODEL AND PREDICTION RESULTS

The SPSS 14.0 statistical program was used to estimate the regression model. The study utilized stepwise linear regression procedure with the 0.05 significance level as the cutoff value for entering and retaining a variable. While Table 2 presents the stepwise regression procedure with associated R^2 values, Table 3 demonstrates the coefficients, both un-standardized and standardized, of the variables entered and retained in the model.

(Tables 2&3 here)

Only two variables, EBITDA to TL and debt ratio, were entered and retained in the stepwise procedure, resulting in a final regression model with the two variables as significant determinants of ROA, the dependent variable. As Table 2 shows, the model has a R^2 value of 0.571 and an adjusted R^2 value of 0.563. The adjusted R^2 is a relatively conservative estimate of the proportion of variance in the dependent variable that is explained by the weighted combination of independent variables (Grimm & Yarnold, 1995). Therefore, about 56 percent of the observed variability in the ROA is attributable to variations in EBITDA to TL and debt ratios across the examined lodging firms. In Table 3, while the VIF (Variance Inflation Factor) values are much lower than 10, the tolerance values are substantially higher than 0.1, indicating that multicollinearity problem is not present in the model (Kleinbaum, Kupper & Muller, 1988)

The final model includes two financial ratios, which are significant at 0.0005 level. Based on Table 3, the final regression model is presented below:

$$ROA = 0.005 + 0.221 X_1 - 0.039 X_2 \quad (4)$$

where X_1 = EBITDA to TL, X_2 = Debt ratio

In Table 3, the regression coefficients associated with each predictor can be interpreted as the amount of change expected in the ROA for each unit change in the predictors (Grimm & Yarnold, 1995). The signs of the coefficients are also important as they indicate the direction of the ROA's change. With other things held constant, if the coverage of EBITDA over TL increases by one, ROA will increase by 0.221. On the other hand, the negative coefficient associated with the debt ratio implies that if the debt ratio increases by one, then ROA will decrease by 0.039. Obviously, the EBITDA to TL variable has a greater impact on ROA as compared with the debt ratio variable. The standardized regression coefficients of the two variables confirm the greater impact of EBITDA to TL on ROA. According to Grimm and Yarnold (1995), standardized regression coefficients put all the variables in the same measurement units, with means of zero and standard deviations of one, so that one can examine the independent contribution of each coefficient to the prediction. Evidently, the EBITDA to TL variable, with its standardized coefficient at 0.592 in comparison to debt ratio's -0.272, has a greater influence on ROA in our model.

DISCUSSION OF THE IN-MODEL VARIABLES

The estimated model (Equation 4) shows that EBITDA to TL and debt ratios are significant determinants of Korean lodging firms' ROA. The inclusion of EBITDA to TL in the model indicates the importance of EBITDA or operating cash flow to the financial performance of a Korean lodging firm. With the total liability held constant, a lodging firm that is able to generate sufficient operating cash flows will have a higher EBITDA to TL ratio, thus increasing the ROA. On the other hand, with the EBITDA held constant, a firm that has lower debts – both short-term and long-term – will have higher EBITDA to TL ratio and hence higher ROA. The implication of this finding is clear. First of all, a tight control of the operating costs of a lodging

operation, ranging from costs of goods sold to payroll and marketing expenses, is needed for Korean lodging firms. As our model shows, the EBITDA to TL ratio had a greater impact on ROA than debt ratio. Therefore, reducing operating costs and raising EBITDA or operating profits should be more important than lowering debts. Compared with the U.S. lodging industry's operating profit margin, 26 percent in 2005 (Hotel Online Special Report, 2005), the mean operating profit margin of our 112 lodging firms in the sample was only 18 percent in the same year. In other words, from every one dollar of hotel sales revenue, a Korean lodging firm incurred eight cents more on operating expenses. Korean lodging firms may need to learn from their U.S. peers to lower their operating costs. A reduction in operating costs will improve Korean hotels' EBITDA to TL ratio and help them achieve higher ROA.

Second, for Korean hotels, a cautious or conservative use of debts is recommended. Lowering debts, especially interests-bearing long-term debts, should help Korean lodging firms lower their interest expenses and raise the net income, thus increasing their ROA. The 112 Korean hotel firms examined in this study had an average debt ratio of 0.81 in 2005, significantly higher than the average debt ratio of U.S. lodging firms, 0.54, for the same year (Industry Financial Analysis Profile, 2007). Debt ratio indicates the extent to which a company relies on debt to finance its assets. It is well known that having excessive debt leads to higher financial risk for the company due to the debts' leverage effect and default risk (Keown et al., 2006). Reducing debt use will not only help Korean hotels improve their ROA ratios but also reduce the financial risk. Korean lodging firm owners and operators must change their heavily debt-inclined financing policy and move towards more equity financing.

CONCLUSIONS

This study developed a linear regression model to identify factors affecting Korean lodging firms' ROA ratios. The final model with two retained variables suggests that tight control of operating costs and sensible use of debts are the two key factors that exert significant impact on ROA ratios. Hansen and Wernerfelt (1989) showed that a typical economic model predicting firm performance explains between 15 and 40 percent of the variance in profitability across firms. Considering this, the adjusted R^2 value of 56.3 percent associated with our model indicates that our model has explained a significant part of ROA variation across Korean lodging firms.

Some important conclusions can be drawn from our findings. First, the operating costs of Korean lodging firms were too high and therefore their operating profit margins were too low. This may have led to low EBITDA to TL ratios across the industry and have negatively affected ROA. In recent years, Korea's lodging market was approaching saturation (Hotel & Restaurant, 2005). Given this lodging market condition, it is advisable that lodging firms concentrate on cost saving for existing operations rather than market expansions. In a saturated lodging market, the competition is intense and market expansions could be extremely costly. Second, Korean lodging firms had too much debt. The high debt ratio is likely affecting the industry's ROA in a negative way. As shown in our model, the debt affects ROA via the two retained variables. More debts raise the debt ratio and in the meantime lower the EBITDA to TL ratio, thus lowering the ROA. Bongini, Ferri, and Hahm (2000) conducted a study on 555 Korean public firms to identify the determinants of corporate leverage and bankruptcy. They found that Korean firms tend to have distinctly higher leverage, lower return on assets, and lower interest coverage ratio compared to those of other Organization for Economic Cooperation and Development countries. For Korean

lodging firms to improve their ROA ratios, it would be critical for them to realign their capital structure from debt to equity.

FUTURE RESEARCH

This study is only a preliminary investigation of factors that may affect Korean lodging firms' ROA performance. A major limitation is that only the accounting performance ROA was examined using financial statement-based accounting ratios. McGuire, Sundgren and Schneeweis (1988) criticized the use of accounting-based measures claiming that these values assess only historical aspects of firm performance and subject to bias from managerial manipulation. They recommend using both accounting- and stock-market-based measures to examine firm performance. Future studies may incorporate both types of measures to evaluate Korean lodging firms' performance to avoid these limitations.

Secondly, this study only utilized the cross-industry data for 2005. When assessing profit levels, use of cross-sectional design can be a limitation as firm's profit level evolves over time. Phillips and Sipahioglu (2004) recommended using a time series analysis as data relating to firm's financial performance should be examined over longer period of time rather than a single point in time. As such, future studies may examine a firm's average ROA over several years along with its relationship with the averages of other variables over years to obtain a better understanding of the determinants of Korean lodging firms' ROA performance.

REFERENCES

- Bank of Korea (2006). *Korean economy*. Available from: <http://www.bok.or.kr/index.jsp>. [Accessed on: 27 May 2007].
- Bongini, P., Ferri, G., & Hahm, H. (2000). Corporate bankruptcy in Korea: Only the strong survive? *The Financial Review*, 35(4), 31-50.
- Carey, K.J. (1974). Persistence of profitability. *Financial Management*, 3(2), 43-48.

- Chan, K., & Chen, N. (1988). An unconditional asset-pricing test and the role of firm size as an instrumental variable for risk. *Journal of Finance*, 43(2), 309-325.
- Dehning, B., & Stratopoulos, T. (2002). DuPont analysis of an IT-enabled competitive advantage. *International Journal of Accounting Information Systems*, 3(3), 165-176.
- Fraser, D.R., & Kolari, J.W. (1985). How are the small banks doing? *American Journal of Small Business*, 9(3), 1-9.
- Grimm, L.G., & Yarnold, P.R. (1995). *Reading and understanding multivariate statistics*. Washington, DC: American Psychological Association.
- Hansen, G.S., & Wernerfelt, B. (1989). Determinants of firm performance: The relative importance of economic and organizational factors. *Strategic Management Journal*, 10(5), 399-411.
- Hotel & Restaurant. December 2005. *The overview of hotel industry in 2005*. Available from: <http://www.hotelrestaurant.co.kr/hotel/hotel.html>. [Accessed on: 27 May 2007].
- Hotel Online Special Report. *Perspectives on the Road to Recovery: U. S. Lodging Industry 2005*. Available from: http://www.hotel-online.com/News/PR2004_4th/Nov04_HRGReport.html. [Accessed on: 10 June 2007].
- Industry Financial Analysis Profile. June 2007. *Hotels and Motels: [128-011] Sector: Services*. Available from: <https://www.bizminer.com/my.asp>. [Accessed on: 30 July 2007].
- Keown, A. J., Martin, J. D., Petty, J. W. & Scott, D. F. (2006). *Foundations of finance: The logic and practice of financial management*. Upper Saddle River, NJ: Prentice Hall.
- Kim, M.K., & Burnie, D.A. (2002). The firm size effect and the economic cycle. *The Journal of Financial Research*, 25(1), 111-124.
- Kleinbaum, D. G., Kupper, L. L., & Muller, K. E. (1988). *Applied regression analysis and other multivariable methods*. Boston: PWS-KENT.
- McGuire, J.B., Sundgren, A., & Schneeweis, T. (1988). Corporate social responsibility and firm financial performance. *Academy of Management Journal*, 31(4), 854-872.
- Norusis, M.J. (2005). *SPSS 14.0 Statistical procedures companion*. Upper Saddle River, NJ: Prentice Hall Inc.
- Phillips, P.A., & Sipahioglu, M.A. (2004). Performance implications of capital structure: Evidence from quoted UK organisations with hotel interests. *The Service Industries Journal*, 24(5), 31-51.
- Pohlman, R.A., & Hollinger, R.D. (1981). Information redundancy in sets of financial ratios. *Journal of Business Finance & Accounting*, 8(4), 511-528.

- Reinartz, W., Krafft, M., & Hoyer, W.D. (2004). The customer relationship management process: Its measurement and impact on performance. *Journal of Marketing Research*, 41(3), 293-305.
- Rothschild, M. (2006). Shareholders pay for ROA. *Strategic Finance*, 88(5), 26-31.
- Schmidgall, R.S. 2007. *Hospitality industry managerial accounting, 6th edition*. East Lansing, MI: Educational Institute of American Hotel & Motel Association.
- Whittington, G. (1980). Some basic properties of accounting ratios. *Journal of Business Finance and Accounting*, 72(2), 219-223.

Table 1: Summary of Average Ratio Statistics

	Korean Lodging Firms (N = 112)	U.S. Lodging Firms (N = 28,728)*
ROA	-0.01	0.02
EBITDA to Current Liabilities	0.21	0.97
EBITDA to Total Liabilities	0.09	0.16
Current ratio	0.71	1.61
Quick ratio	0.64	0.98
Debt ratio	0.81	0.54
Interest coverage ratio	0.64	2.45
Inventory turnover	58.87	36.98
Total assets turnover	0.29	0.66
Accounts receivable turnover	52.19	18.66
Fixed assets turnover	0.32	1.38

*Source: Industry Financial Analysis Profile (June 2007).

Table 2: Summary of Stepwise Multiple Regression Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.756	0.571	0.563	0.042

Model 1 Predictors: (Constant), EBITDA to TL, Debt ratio

Table 3: Summary of Regression Analysis for the variables included in the equation

	Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.	Collinearity Statistics	
						Tolerance	VIF
(Constant)	0.005	0.010		0.483	0.630		
EBITDA to TL	0.221	0.026	0.592	8.414	0.000	0.794	1.260
Debt ratio	-0.039	0.010	-0.272	-3.858	0.000	0.794	1.260

*Model F value = 72.524, Sig. level < .0005