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**PERFORMANCE GAP BETWEEN KOREAN AND U.S. HOSPITALITY
FIRMS: A PRELIMINARY EXAMINATION BASED ON 2006 DATA**

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Two tables belong to this manuscript.

ABSTRACT

The purpose of this study was to identify problems and weaknesses existing in the Korean hospitality industry by examining some key financial ratios in comparison with those of its U.S. peer. Using the 2006 financial data of 194 Korean hospitality firms and 80 U.S. hospitality firms, 13 financial ratios representing liquidity, leverage, solvency, efficiency, and profitability were computed for each firm. Independent sample t-test was performed to determine if there were significant cross-country differences in the ratios. The results show that there was a huge performance gap between the hospitality industries of the two countries, and the U.S. hospitality firms outperformed their Korean counterparts in all five dimensions. The findings suggest that over reliance on debt financing, overcapacity, and lack of economies of scale are the likely causes of the underperformance of the Korean hospitality industry. To catch up with its U.S. peer, the Korean hospitality industry must change its pro-debt financing policy, adopt a conservative growth strategy to minimize overcapacity, and enlarge the operation scale via some structural reorganization within the industry.

Keywords: Korean hospitality firms; U.S. hospitality firms; financial ratios; cross-country comparison; performance gaps; financial benchmarking

Introduction

As in the U.S., the hospitality industry in Korea bears significant implications to the nation's well being, although the industry is much smaller than its U.S. counterpart in size and scope. According to the Korean Statistical Information Service (KOSIS, 2008), in 2006, there were 43,739 lodging firms and 574,562 restaurant operations in Korea. Combined, the lodging and restaurant sectors generated approximately 1.7 million jobs in 2006, which represented about 11% of all available jobs in Korea. Revenue-wise, the hospitality industry, including both lodging and restaurant sectors, generated a revenue totaling \$15.15 billion in 2006, representing about 2% of the nation's gross domestic product (GDP). However, Korea's hospitality industry has been facing great challenges in recent years. Due to the nuclear threat from North Korea and the appreciation of the Korean currency, the number of international tourists has been declining since 2005, and the hospitality market saturation has led to the dreadful operating performance of the overall hospitality industry (Park, Choi, & Ahn, 2008). Facing a shrinking international market, the competition among lodging firms has heated up in recent years. The introduction of serviced apartments targeting foreigners for both short-term and long-term stays has further intensified the competition. The units of serviced apartments increased from 1,000 in 2002 to 7,000 in 2007 (Park, 2007). As lodging firms began to realize that there was a limited demand for rooms, they started to develop their own strategies for survival. Larger lodging firms started to aggressively market and rely heavily on their non-room products, such as conference facilities, food and beverage outlets, and health clubs, in order to stay in business (Park et al., 2008). On the other hand, smaller and rooms-only operations aimed at day time users, marketing themselves as a place to "take a break" for a few hours during the day and attempted to

maximize daytime turnover. Despite these efforts, however, Korean lodging firms failed to break free of their downward trend (The Bank of Korea, 2006). Korean restaurant firms were not faring any better, and numerous firms went out of business within the early stages of their operations (The Bank of Korea, 2008). A recent study initiated by Korean government also reports that out of all the lodging and restaurant firms opened in 2001, only 28.7% remained in the business as of 2005 (Choi, 2008). In other words, more than 70% of these firms failed within the first five years of operation.

How is the Korean hospitality industry doing financially under such challenging market conditions? What are the problems and weaknesses of the industry? Analyzing financial ratios of the industry with some benchmark may provide answers to these questions. According to Schmidgall and DeFranco (2004), benchmarking is essentially a firm's comparison against itself, to the competition, or to the industry as a whole, in the forms of financial ratios. To be more specific, financial benchmarking is a tool used for comparing financial performance of different firms using quantitative financial ratios (Ozgulbas & Koyuncugil, 2006). Through benchmarking, a firm may identify its weaknesses and opportunities for future improvement. The same benchmarking approach can be applied to a nation's hospitality industry of a country. For the hospitality industry of a particular country, benchmarking may be provided by comparing it with the hospitality industry in another country. This study attempts to conduct such a benchmarking analysis for the Korean hospitality industry. Here the benchmark selected for comparison is the U.S. hospitality industry, the leading player in the world's hospitality business.

Cross-Country Studies Using Financial Ratios

Cross-country studies using financial ratios have been used in the hospitality and non hospitality industries for benchmarking purpose. Lee and Blevins (1990) examined the financial performance of large American, Japanese, South Korean, and Taiwanese companies for the 1980-1987 period. The study employed four profitability ratios, return on equity (ROE), return on assets (ROA), return on investment (ROI), and return on sales (ROS), to measure the average profitability of firms in each country. The findings indicated that large U.S. companies consistently outperformed their foreign rivals in all the four ratios during the observed period.

Blaine (1994) also examined and compared the profitability of large industrial firms in Germany, Japan, and the United States using ROA, ROE, and operating margin (OM) ratios. He randomly selected 100 companies from each country and computed annual averages for each profitability indicator over the 1984-1990 period. He also calculated a five-year national average for each ratio over the 1985-1989 period in order to reduce the impact of short-term market volatility. The ratio analysis found significant differences in the average annual OM and ROA across countries. For OM, American firms showed the highest value (6.67%) followed by Japanese (5.96%) and German (2.91%) companies. For ROA, American firms' value (6.03%) was almost twice that of German (3.91%) and Japanese (3.69%) companies, again indicating their superior profitability. The analysis did not find any significant differences in ROE across nations.

Brown, Soybel, and Stickney (1994) made comparisons between U.S. and Japanese business firms using ratio analysis. By examining financial statement data of sample firms, the authors tried to gauge the operating performance using three primary profitability ratios: total asset (TA) turnover, profit margin (PM), and ROA. The initial investigation found that on average, U.S. firms generated significantly higher TA turnover and ROA than Japanese entities. For PM ratio, however, there was no significant difference between the two groups. The authors examined the TA turnover and ROA ratios relative to accounts receivable (AR) turnover, inventory turnover, and fixed assets (FA) turnover ratios in order to obtain more information. It was found that various factors, such as credit-granting practices, inventory carrying costs, depreciation methods, and operating efficiencies affect these turnover ratios. In summary, higher AR and FA turnovers were the major driving sources of the higher TA turnover and ROA for U.S. firms.

In a study of the business failure for manufacturing firms, Lee (1998) compared the financial structure of Korean firms to that of American firms. Employing key financial ratios, the author attempted to find an answer to high rate of firm failures prevalent in Korean manufacturing industry that was not present in the U.S. The findings indicated that Korean firms were heavily leveraged, with debt-to-equity ratio two times higher than that of the American firms. Although Korean and American firms had comparable operating profits, Korean firms showed surprisingly poorer net profits due to the extremely high financing charges. The findings indicated that the two main reasons for high failure rate of Korean manufacturing firms were: (1) the lack of corporate governance mechanisms that should prevent firms from making wrong investment decisions; and (2) the ill effects of government-led credit allocation policy that encouraged business firms to make more investments using borrowed funds. The financial ratio comparison

clearly showed that Korean firms were, compared to U.S. firms, burdened by heavy financial charges. Because these firms relied excessively on borrowed funds, they became more vulnerable to unfavorable shocks and prone to failures.

In the hospitality field, cross-country financial ratio analysis has been employed to compare the strengths and weaknesses of hospitality operations across destinations. Gu (2002) examined the performance of U.S. casinos in contrast with Dutch and French casinos in 1998 using financial ratios. It was found that Dutch and French casinos outperformed U.S. casinos in both revenue efficiency and profitability, most likely due to the noncompetitive European gaming markets. The study concludes that oversupply, which often results in cutthroat competition among casinos, is detrimental to the healthy growth of the gaming industry in the U.S. To improve their performance, U.S. casino operators should take measures to curb the overcapacity and alleviate market saturation.

Also using ratio analysis, Gu and Gao (2006) identified the financial strengths of Macau casinos as compared with the casino industries in other gaming destinations. Using ratios, the study analyzed financial competitiveness of the Macau gaming industry against its peers in North America and Europe. The analysis involved product structure, revenue composition, assets efficiency and profitability of Macau versus those of gaming destinations in North America and Europe. The findings revealed that while Macau was better positioned in terms of assets efficiency and financial returns, its casino product and revenue structures were at odds with the gaming trend. To maintain a stable gaming revenue growth and retain its competitiveness, Macau must modify its casino product structure and revenue composition.

As can be seen from the reviewed literature, cross-country or cross-destination comparisons of financial ratios can be a useful tool for identifying strengths and weaknesses, successes and problems of business operations at a macro level. The findings may provide guidance for improving industry performance in a country or a destination.

Purpose of the Study and Research Hypothesis

The U.S. hospitality industry has been a leading player in the world. According to *Hotel Online* (2007), eight of the 10 largest hotel groups in the world are U.S. based and about 60% of the world's hotel capacity or 3.2 million hotel rooms are located in the U.S. Using the U.S. hospitality industry as a benchmark, this study attempts to identify problems and weaknesses, if any, existing in the Korean hospitality industry by examining some key financial ratios in comparison with those of its U.S. peer in 2006, the most recent year with available data when this study was conducted. Here, our null research hypothesis is that there is no difference in key financial ratios between the hospitality industries of the two countries whereas the alternative hypothesis is that those ratios differ across the countries. Suggestions regarding how the Korean hospitality industry may improve will be provided based on the comparison.

To the best of our knowledge, no cross-country benchmarking studies have been conducted for the Korean hospitality industry so far. The current study will enable Korean lodging and restaurant operators to better understand their standing vis-à-vis the leading player in the world's hospitality industry, thus helping them formulate policies and strategies to overcome problems

and weaknesses, if any. Meanwhile, the findings of the study should help enrich the hospitality finance research from an international perspective.

Sample Firms and Ratios Examined

The sample of Korean hospitality firms in this study was drawn from the Korean financial supervisory service database. First, all lodging and restaurant firms with available financial statements in 2006, the most recent year with accessible data when the study was conducted, were searched. This study identified a usable sample of 194 firms with 165 firms from the lodging sector and 29 firms under restaurant category. The data source for U.S. hospitality firms was Standard & Poor's COMPUSTAT contained in the WRDS (Wharton Research Data Services) database for the same year. First, all available companies in 2006 with a Standardized Industrial Classification (SIC) code of 7011, which refers to "Hotels and Motels," were searched. This search resulted in 14 companies. Next, all companies in 2006 with SIC code of 5812, which represents "Eating Places" were explored. The search ended up with 66 listed companies. Combined together, the U.S. sample was composed of 80 hospitality firms. For some financial ratios, the numbers of observations are fewer than 194 for Korean firms and 80 for U.S. firms due to missing data.

According to Singh and Schmidgall (2001), financial ratios can be grouped into five general categories based on their purposes. Liquidity ratios indicate a firm's ability to pay its short-term obligations on time while leverage ratios measure the extent to which a company is relying upon debt financing. Solvency ratios evaluate a firm's capability to cover all of its financial charges.

Efficiency ratios measure the productivity of an operation for a given level of inputs. They assess the productivity of a firm's assets in generating revenues. Profitability ratios determine the management's effectiveness in generating returns on sales and investment. These five groups of ratios reflect the overall financial condition and performance of a firm. Based on the ratio categorization provided by Singh and Schmidgall (2001) and the availability of financial information for deriving ratios of the sample hospitality firms, 13 financial ratios encompassing the five categories, namely liquidity, leverage, solvency, efficiency, and profitability, were selected for the comparative analysis in this study. Those ratios and their derivation formulas are presented in Table 1.

(Table 1 here)

Based on the financial statements of the sample firms in 2006, the 13 financial ratios were computed for each firm. The cross-sample mean value of each of the 13 ratios was calculated for the Korean hospitality firms and the U.S. hospitality firms respectively. Independent sample t-tests were then employed to test the difference between the group means of the Korean and U.S. hospitality firms for each ratio.

Findings

Table 2 presents the group means of each country for the 13 financial ratios calculated based on the 2006 data. The t-test statistics and related significance levels are also presented.

(Table 2 here)

The results of the independent sample t-tests show that at the 0.01 significance level, the two groups are significantly different in four ratios – earnings before interest, tax, depreciation and amortization (EBITDA) to current liabilities (CL), debt ratio, FA turnover, and TA turnover. At the 0.05 level, inventory turnover ratios of the two groups are also significantly different. At the 0.10 level, two more ratios are significantly different between the two countries, namely EBITDA to total liabilities (TL) and ROA ratios. Hence, the null hypothesis that the two group means are equal can be rejected at least at the 0.1 significance level for the following seven ratios – EBITDA to CL, EBITDA to TL, debt ratio, inventory turnover, FA turnover, TA turnover, and ROA.

Based on Table 2, it is obvious that there was a huge performance gap between the hospitality industries of the two countries in 2006. Although the differences in the two conventional liquidity ratios – current ratio and quick ratio – are not statistically significant between the two countries, the EBITDA to CL ratio, which indicates the liquidity provided from the operation, shows statistically significant difference between the two groups. The U.S. hospitality firms generated more than three times higher EBITDA or operating earnings to cover current liabilities than their Korean counterparts. This ratio essentially indicates a firm's ability to cover its short-term liabilities using EBITDA – an approximation of operation generated cash flows. A higher EBITDA to current liabilities ratio indicates better liquidity from the operation

perspective (Ryu & Jang, 2004). Our result demonstrates that U.S. hospitality firms were in a much stronger position to cover their current obligations using operation generated earnings.

Debt ratio was used as a means to examine a firm's leverage status. The debt ratio basically measures a firm's indebtedness by expressing the proportion of the company's assets that are supported by debt (Kim & Ayoun, 2005). Higher total liabilities to total assets or a higher debt ratio indicates that a firm relies heavily on debt financing. The comparison of the two groups' mean debt ratios shows that Korean firms were on average twice more indebted compared to their U.S. counterparts. The mean debt ratio of the Korean firms shows that these firms were, on average, financed by 80 percent of debts and 20 percent of equity. This is significantly different from the financial structure of the U.S. firms with 35 percent debt-financing and 65 percent equity-financing as indicated by the U.S. mean debt ratio of 0.35. It has been previously reported that in general, Korean firms were heavily leveraged and their over reliance on debt financing was a major cause of the business failure (Cho et al., 1983). It seems that the debt-inclined financing pattern remains unchanged in the Korean hospitality industry after two decades.

In terms of solvency, the EBITDA to TL ratio, which indicates the extent to which operating earnings can be used to cover the total debt (Kim & Gu, 2006; Schmidgall & DeFranco, 2004), shows that U.S. hospitality firms were better positioned at the 0.10 level. The EBITDA to TL ratio of 0.21 for U.S. firms, in comparison to the same ratio of 0.09 for the Korean firms, shows that the U.S. hospitality firms' ability to cover debts with operation generated profits was about twice that of their Korean counterparts. In other words, an average U.S. hospitality firm was twice more solvent than a Korean hospitality firm in terms of operation provided cash coverage.

Interest coverage ratio measures the ability of a firm to cover its interest expenses (Schmidgall & DeFranco, 2004). This ratio is particularly useful to creditors as it measures the solvency of a business from an income perspective by indicating the company's ability to take on new debt (Kim & Ayoun, 2005; Schmidgall & DeFranco, 2004). While this ratio was not significantly different between the two groups, the much higher interest coverage of the U.S. firms demonstrates that U.S. firms had better ability to pay debt interests using earnings before interests and taxes.

For the efficiency ratios, three out of four ratios, namely inventory turnover, fixed asset turnover, and total asset turnover, turned out to be significantly different between the two groups at least at the 0.05 level. Accounts receivable turnover ratio assesses the speed of conversion of accounts receivable into cash (Schmidgall & DeFranco, 2004). As Table 2 shows, U.S. hospitality firms had higher average accounts receivable turnover, although not at a statistically significant level. Inventory turnover is an important ratio that evaluates the efficiency of a firm in using the invested resources (Schwei, 1996). Higher inventory turnover means more efficient inventory management (Kim & Ayoun, 2005). Korean hospitality firms had significantly lower inventory turnover ratio compared to U.S. hospitality firms, suggesting that they were selling inventories much slower than their U.S. peers. While there are no guidelines that specify an optimal level of inventory turnover for each industry, it is generally recommended to strive for as high rate as possible (Schwei, 1996). This is because instead of spending cash on a large amount of inventory, a company may do other things with the cash such as pay off bank loans or invest in new capital equipment (Schwei, 1996). Fixed asset turnover determines the effectiveness of management in using the fixed assets (i.e., rooms, restaurant spaces, cooking equipments) to

generate sales revenue (Schmidgall & DeFranco, 2004). A higher fixed assets turnover implies that the fixed assets are generating more revenues for the company. Hospitality industry is typically fixed asset intensive and in order to be successful, a firm needs to efficiently use its existing fixed assets to attract customers and generate revenue. As Table 2 indicates, on average, U.S. firms were very efficient and generated \$2.17 in sales for every \$1 of fixed assets. In contrast, an average Korean firm managed to produce just \$0.82 in revenue for every \$1 invested in the fixed assets. The total assets turnover ratio was also significantly different between the two groups. Similar to the fixed assets turnover ratio, this ratio evaluates the efficiency of a firm in using its total assets to generate sales. The findings indicate that on average, U.S. hospitality firms were three times more efficient than Korean hospitality firms in using the total assets to generate sales revenue.

The profit margin ratio expresses the firm's profitability of sales as net income per dollar of sales (Kim & Ayoun, 2005). In Table 2, the negative mean profit margin ratios of the two groups indicate poor profitability for both in 2006. However, Korean firms were about 10 times worse than their U.S. peers. The ROA ratio measures the relationship between net income and total assets (Schmidgall & DeFranco, 2004). This ratio indicates the amount of net profit generated from each dollar invested in the firm's assets. In 2006, U.S. hospitality firms were able to generate an average of \$0.03 for every dollar invested in assets, while Korean hospitality firms on average had a negative return on the assets. The difference between two groups' ROA ratios was significant at the 0.1 level. Among the three profitability indicators used in this study, ROA is the most reliable one as it incorporates information of both profitability and efficiency into its computation (Rothschild, 2006). While all three profitability ratios have frequently been

employed in previous studies to evaluate a firm's profitability, ROA is the most widely used and preferred ratio (Fraser & Kolari, 1985). The ROE ratio computes the return to the investment made by the owners. Higher ROE means greater net return on every dollar the shareholder invested in the firm. Although the difference in the ratio between the two groups is not statistically significant, U.S. firms were able to produce a positive ROE on average whereas Korean hospitality firms brought a loss to their owners. Here it must be pointed out that the ROA ratio is a more reliable indicator of U.S. firms' better profitability because the t-test shows that the difference between two groups' ROA ratios is significant at the 0.1 level.

In summary, the results of the ratio comparison suggest that U.S. hospitality firms were better positioned than their Korean counterparts in all five dimensions, namely liquidity, leverage, solvency, efficiency, and profitability. In 2006, the mean values of the liquidity, solvency, efficiency, and profitability ratios were noticeably lower for the Korean hospitality industry in comparison to the U.S. hospitality industry. On the other hand, the mean value of the leverage ratio is much higher for the Korean group than for the U.S. group. Evidently, the debt-burdened Korean hospitality industry was outperformed by its U.S. peer.

What's Behind the Gap?

The above findings indicate that in 2006 there existed a significant performance gap between the Korean and U.S. hospitality industries. At least at the 0.1 significance level, an average U.S. hospitality firm outperformed its Korean counterpart in ratios representing liquidity, leverage, solvency, efficiency, and profitability. What has caused this gap? This study has identified the

following plausible reasons that may explain the underperformance of the Korean hospitality firms.

First, the significantly higher debt ratio (0.80) of Korean hospitality firms is likely to be responsible for, at least partially, their poorer profitability. In the study comparing the financial performance of U.S. and Korean manufacturing firms, Lee (1998) found that Korean firms' poor performance was due to the extremely high financing charges that these firms had to pay as a result of heavy borrowing. According to Kim (2003), if a primary source of financing for a hotel firm is debt, the firm is likely to suffer for a considerable period of time as it is burdened by high interest expenses. For the restaurant industry, Yoon and Jang (2005) pointed out that, due to the high-cost nature of the restaurant operation, profitability may vary based on the level of interest expenses. Traditionally, Korean firms have relied heavily on debt financing. This is mainly because the government-led credit allocation policy has excessively promoted the business firms to grow by making more investments using debts (Lee, 1998). In a saturated market with high competition like the Korean hospitality industry, heavy debt financing charges further strain the already tight profit margins, leading to poor or negative profits.

Second, overcapacity in both the lodging and the restaurant sectors should have negatively affected the performance of the Korean hospitality industry. Korean hospitality industry's overcapacity is reflected in its less efficient use of assets. As revealed in our analysis of efficiency ratios, Korean hospitality firms' operating efficiency falls far behind their U.S. counterparts, especially in terms of fixed assets turnover and total assets turnover ratios. Another indicator of Korean lodging industry's overcapacity is its low room occupancy. From 1998 to

2004, Korean hotels' average occupancy rate was 58.91%, a sign of oversupply of rooms in the market (KOSIS, 2008). In 2001, the U.S. lodging industry was experiencing its lowest occupancy in 10 years at 63.7% ("U.S. Hotel Occupancy", 2001) due to the 9/11 terrorist attacks and an economy recession. This occupancy rate, however, was still much higher than Korea's average occupancy during the 1998-2004 period. Facing low demand for hotel rooms, many Korean lodging firms had to switch their business focus from rooms operation to non-room operations. As revealed by KOSIS (2008), between 1998 and 2004, on average, only 42.33% of lodging firms' total revenue was generated from rooms department while the remaining 57.77% came from non-room operations. The under-utilization of room assets was severe in the industry due to overcapacity. Inefficient use of rooms implies waste of the largest hotel asset and will eventually lead to low profitability.

Oversupply in Korea's restaurant sector is also a serious problem. According to Korea Rural Economic Institute (KREI) (2005), during the economic slump starting from the late 1990's, the country's unemployment rates soared and many unemployed persons used their retirement grants to open restaurants, primarily because they perceived the industry to have low barriers to entry. As a result, the total number of restaurant firms soared despite poor market conditions, leading to severe oversupply in the restaurant industry. In Korea, there is one restaurant for every 64 people in comparison to one restaurant for every 334 people in the U.S. (KREI, 2005). In addition, a survey of independent restaurants in Korea found that only 8.4% of them were making profits, while 26.4% of them could not even pay rent or cover operating expenses (KREI, 2005). Oversupply and hyper competition prevalent in the Korean hospitality industry appears to have diluted the limited amount of hospitality revenues across numerous hospitality firms. The sample

Korean firms in this study had average annual sales of \$29.86 million whereas the annual sales of our sample U.S. firms averaged at \$1.03 billion.

Lastly, a lack of economies of scale in the Korean hospitality industry may be another reason for its poorer performance. The Korean hospitality firms are much smaller than their U.S. peers. The Korean companies in this study had average assets of \$116.39 million, while the assets of the sample U.S. firms averaged at \$1.28 billion, 10 times larger than the Korean firms. Cullen (1997) suggests that large hotels can achieve better efficiency and profitability due to economies of scale in purchasing, production, management, personnel, marketing, and finance. Lin and Liu (2000) examined the relationship between costs and operating scale of international tourist hotels in Taiwan and their results supported the existence of economies of scale in hotel operations. Investigating the performance of China's hotel industry in the 1990's, Gu (2003) found declining operation size as a major contributor to the industry's declining profitability. The Korean hospitality industry is featured with numerous small hotels and restaurants. The much smaller size of Korean lodging and restaurant operations implies higher operating costs per unit output and is a likely reason for its lower efficiency, especially in its use of inventory and fixed assets, and poor profitability.

Suggestions for Korean Hospitality Firms

Over reliance on debt financing, overcapacity, and a lack of economies of scale are the likely contributors to the underperformance of the Korean hospitality industry. To catch up with their

U.S. counterparts, Korean hospitality firms need to reevaluate their strategies regarding financing, investments, and operations.

First of all, it is recommended that Korean firms change their debt-inclined financing habit and increase the proportion of equity in financing. Traditionally, Korean firms have been heavily leveraged compared to firms in other countries (Bongini, Ferri, & Hahm, 2000). This study has found that debt-oriented financing tradition still prevails in the Korean hospitality industry. Debt-financing has the tax shield as its advantage and financial distress risk as its disadvantage. The trade-off financing theory suggests that there exists an optimal leverage ratio at which the present value of tax shield of additional debt is just offset by the decrease in the present value caused by financial distress cost (Myers, 2001). In the early 2000's, tough economic and market conditions put numerous Korean lodging firms on the brink of insolvency (Shin & Lee, 2002). With an average debt ratio of 0.8, the Korean hospitality industry may have far exceeded the optimal leverage ratio. Korean hospitality firms should cut back from their excessive debt financing as the risk of business failure is always high to firms with heavy borrowings (Altman, Eom, & Kim, 1995). Furthermore, heavy borrowing is associated with heavy interest burdens. Excessive use of debt will greatly increase the financial risk of Korean hospitality firms that are already exposed to high business risk due to overcapacity. Changing its pro-debt financing habit and increasing equity financing is critical for the Korean hospitality industry to improve its performance.

To reduce overcapacity, the Korean hospitality industry should work on both supply and demand sides. On the supply side, the industry should place some control over growth so as to alleviate overcapacity. During the 6 years from 1998 to 2004, the Korean lodging sector's

capacity in terms of rooms available for sale increased at an average annual rate of 3.23% while the number of rooms sold, on average, increased only by 2.32% (KOSIS, 2008). Evidently, room capacity has increased faster than the demand. In a saturated lodging market with intense competition, such as the one in Korea, it is important for firms to make full use of their existing capacity before expanding. For Korean hospitality firms, restricting new lodging developments may be necessary for raising the efficiency of its existing properties. On the demand side, the lodging sector needs to reexamine its pricing strategy. According to Yoon (2004), Korean lodging firms, on average, have higher average daily room rates but lower profit margin, compared to lodging firms in other countries. Offering lower room rates would be especially important to attract foreign tourists as they are highly sensitive to changes in the room rates. It has been found that a 10% increase in room rates will result in a decrease of 100,000 in foreign tourists and a \$130 million loss in revenue for Korea (Yoon, 2004).

Finally, Korean hospitality firms should increase their operation scale to achieve economies of scale. As Cullen (1997) points out, lodging firms can benefit from economies of scale in terms of purchasing, production, management, personnel, marketing, and finance. This study has found that on average, the hospitality firm in Korea is about one-tenth the size of its U.S. counterpart. The Korean hospitality industry is dominated by small operations. As of 2006, 41,932 or 96% of all Korean lodging firms had less than 50 rooms (KOSIS, 2006). According to American Hotel & Lodging Association (AHLA), a lodging firm in the U.S. has 93 guest rooms on average (AHLA, 2007). On the other hand, KREI (2005) reported that the vast majority or 85.1% of restaurant firms in Korea generate less than \$0.1 million per unit in annual sales. In contrast, in

the U.S., average unit sale is \$0.83 million for a full service restaurant and \$0.69 million for a limited-service restaurant (National Restaurant Association, 2006).”

With very small operations prevailing, it would be hard for the Korean hospitality industry to achieve cost efficiency. To realize economies of scale, Korean hospitality developers should consider building fewer but larger properties if new facilities are needed. For existing hospitality operations, there are two ways to increase the operation scale. One is to consolidate numerous small operations into large hotel and restaurant chains via mergers and acquisitions. Consolidation within the industry will not only increase hospitality operation sizes but also help reduce competition among numerous small firms. If consolidation via mergers and acquisitions is not desirable or feasible for small Korean hospitality firms, then operating consortiums may be organized as an alternative way to realize some economies of scale (Gu, 2003). The operating consortium allows participating firms to operate as chain-properties and realize the benefits of larger scale economies while still maintaining each property’s identity.

In summary, there are many reasons for the performance gap between the Korean and U.S. hospitality industries. However, the major causes of the underperformance of the Korean hospitality firms are likely to be their debt-oriented financial structure, overcapacity in a saturated market and a lack of economies of scale. Therefore, to catch up with its U.S. peer and eliminate the performance gap, the Korean hospitality industry must change its pro-debt financing policy, adopt a conservative growth policy to minimize overcapacity, and enlarge the operation scale via some structural reorganization within the industry.

Limitations and Suggestions for Future Research

This study is only a preliminary cross-country benchmarking analysis for hospitality firms using financial ratios. A major limitation of this study is that it only utilized the company data for 2006, the most recent year with available data when the study was conducted. It was not until recently that data of public Korean hospitality firms became widely available. Extending the time frame of our investigation to earlier years would result in a much smaller sample, making the findings less representative of the Korean hospitality industry reality. The limitation of this one-year data analysis is obvious because our findings are valid only for 2006 and cannot be generalized to other time periods. As more Korean hospitality firms started to release data after 2006, future studies on Korean firm performance definitely need to extend the time frame to include more years of observations, thus increasing the cross-time validity of performance analysis.

Our preliminary study of Korean hospitality firms' performance used a combined sample of lodging and restaurant firms without separating hotels from restaurants, and this is another limitation of our analysis. According to Brigham and Gapenski (1994), use of industry-specific sample is always preferable to the use of combined sample because characteristics pertaining to restaurant firms are likely to differ from those representing lodging firms. As such, future benchmarking research for the Korean hospitality industry should investigate individual sectors of restaurants and hotels separately, thus identifying weaknesses and problems more accurately for each sector of the Korean hospitality industry.

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Table 1: Summary of financial ratios used in the study

Ratio Category	Ratio	Formula
Liquidity	Current ratio (CR)	Current assets / Current liabilities
	Quick ratio (QR)	(Current assets – inventories – prepaid expenses) / Current liabilities
	Earnings before interest, tax, depreciation and amortization (EBITDA) to current liabilities (CL)	EBITDA / Current liabilities
Leverage	Debt ratio	Total liabilities / Total assets
Solvency	Earnings before interest, tax, depreciation and amortization (EBITDA) to total liabilities (TL)	EBITDA / Total liabilities
	Interest coverage ratio	(Net income + interest expense) / Interest expense
Efficiency	Accounts receivable (AR) turnover	Total revenues/ Average accounts receivable
	Inventory turnover	Cost of goods sold / Average inventories
	Fixed assets (FA) turnover	Total revenues / Average fixed assets
	Total assets (TA) turnover	Total revenues / Average total assets
Profitability	Profit margin (PM)	Net income / Total revenues
	Return on assets (ROA)	Net income / Total assets
	Return on equity (ROE)	Net income / Equity

Table 2: Summary of ratio statistics of U.S. and Korean firms in 2006

Ratios	Average of U.S. Firms	Average of Korean Firms	t-value	Sig.
Liquidity				
CR	1.3551 (n = 79)	0.9386 (n = 194)	1.3370	0.1820
QR	1.0394 (n = 79)	0.8645 (n = 194)	0.5780	0.5640
EBITDA to CL	0.6741 (n = 79)	0.1982 (n = 194)	4.5470	0.0000***
Leverage				
Debt Ratio	0.3546 (n = 80)	0.7998 (n = 194)	-7.6560	0.0000***
Solvency				
EBITDA to TL	0.2125 (n = 80)	0.0899 (n = 194)	1.7260	0.0880*
Interest Coverage	6.5800 (n = 69)	1.5417 (n = 174)	1.0080	0.3140
Efficiency				
AR turnover	83.9073 (n = 78)	52.7813 (n = 189)	1.3290	0.1850
Inventory turnover	90.7164 (n = 76)	62.1766 (n = 162)	2.3360	0.0200**
FA turnover	2.1721 (n = 79)	0.8160 (n = 193)	3.6590	0.0000***
TA turnover	1.4579 (n = 80)	0.4849 (n = 194)	10.0490	0.0000***
Profitability				
Profit Margin	-0.0958 (n = 80)	-0.9624 (n = 194)	1.5820	0.1150
Return on Assets	0.0283 (n = 80)	-0.0043 (n = 194)	1.8550	0.0650*
Return on Equity	0.0552 (n = 80)	-0.0319 (n = 194)	0.4410	0.6590

Note. * indicates $p < 0.1$, ** indicates $p < 0.05$, *** indicates $p < 0.01$