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Excess Returns in Hospitality Stocks

Katerina Annaraud, Thomas Pencek, Dipendra Singh
University of South Florida (Sarasota-Manatee), Florida, USA

Performance of hospitality stocks and financial ratios are relatively well discussed topics in hospitality finance. The current study contributes to the body of knowledge by attempting to identify if certain groups of hospitality stocks continually outperform market and if selected financial ratios can predict excess returns. Hospitality stocks betas were computed and most recent five-year annual returns were utilized for analysis. Study used Jensen's alpha to determine excess returns for various hospitality segments studied. Six major ratios were operationalized to determine the predictability of excess returns in hospitality stocks. Overall, the excess returns in hospitality company stocks were positive but no significance was found with an exception of one year. Out of six selected ratios, cash flow per share was determined to have significant predictive power for excess returns. In conclusions, study provides important implications for the investors and industry decision makers.

Keywords: hospitality stocks, excess returns, Jensen's alpha, key financial ratios, regression analysis

Introduction

In the United States, hotels, casinos, and real estate investment trusts (REITs) represent a significant share of the hospitality industry. According to the American Hotel & Lodging Association (2015), the American Gaming Association (2015), and the National Association of Real Estate Investment Trusts (2015), the lodging industry is worth about $163 billion, the casino industry is worth about $240 million, and the REIT lodging segment has about $57 billion market capitalization. Individuals and businesses that choose to purchase hospitality stocks hope to receive significant dividends or experience capital appreciation. Financial success of business may be measured in different ways, but stock prices and their dynamics perhaps is one of the key measurements. Over the course of the last several decades, academicians and practitioners have tried to find reliable ways to predict future stock performance.

The main objective of this study is to see if certain ratios can be used to predict the excess returns. Jensen's alpha (α) is utilized in calculation of excess returns for each of the said hospitality segments.

Literature Review

For past several decades, fundamental accounting information analysis has been part of several research studies focusing on firm valuation (H. DeAngelo, L. DeAngelo, & Skinner, 1992; Penman, 1992; Penman & Sougiannis, 1992). Ohlson (1995) and Feltham and Ohlson (1995) developed models based on utilizing firm fundamental information to value stock prices. Bauman (1996) elaborated that Ohlson and Feltham-Ohlson

Katerina Annaraud, Ph.D., CHAE, Associate Professor, College of Hospitality and Tourism Leadership, University of South Florida (Sarasota-Manatee). Email: annaraud@sar.usf.edu.
Thomas Pencek, Instructor, College of Hospitality and Tourism Leadership, University of South Florida (Sarasota-Manatee).
Dipendra Singh, Assistant Professor, College of Hospitality and Tourism Leadership, University of South Florida (Sarasota-Manatee).

models were primarily focused on firm performance measurement elements. In this respect, accounting information variables represent the static measure of firm value through the calculation of book value. Furthermore, the earnings of the firm record the increment to shareholder wealth over its operating time period. Thus, it is reasonable to believe that past firm performance can be a fair indicator for future performance, and will impact the stock price of a firm as well.

Ratio analysis is used to evaluate the financial conditions of a company, and different ratios communicate different financial information (Schmidgall, 2011). Multiple combinations of financial ratios can be developed that can provide valuable financial information. More than a dozen studies were conducted in the U.S. that focused specifically on the utilization of financial ratios in the hospitality industry (e.g., Gu, 2001; Singh, 2001; Upneja, Kim, & Singh, 2000; Singh & Schmidgall, 2001; Ryu & Jang, 2004; Schmidgall & DeFranco, 2004; Kim & Ayoun, 2005).

Gu (2001) examined the financial situation of large and small casinos. The size of the casinos was established based on annual gaming revenues. The study concluded that larger casinos have better liquidity, higher returns on invested capital, and higher returns on average assets in contrast with small casinos.

Upneja et al. (2000) examined the financial characteristics between small and large casinos. The classification of firms was done based on the median value of total assets for sample firms. The study concluded that smaller firms have higher liquidity and short-term debt ratios while larger firms have a higher proportion of long-term and total debt.

Singh and Schmidgall (2001) focused on the perceptions of importance of 500 lodging financial executives on liquidity, solvency, activity, profitability, and operating ratios. In terms of the ratios' importance, executives ranked operating ratios as being the most important and solvency ratios as being the least important.

Ryu and Jang (2004) conducted a study where they focused on the performance of commercial and casino hotels utilizing traditional and cash flow ratios. The study analyzed the financial statements for 19 commercial hotel companies and 23 casino hotel companies from 1998 to 2002 where five traditional and five cash flow ratios were calculated. The study did not find a significant difference in solvency and profitability ratios between commercial and casino hotels, but it was noticeable that casino hotels had better parameters on the majority of solvency and profitability ratios.

Schmidgall and DeFranco (2004) investigated a ratio topic related to private clubs where they surveyed 500 controllers who were members of the Hospitality Financial Technology Professional (HFTP) association. Payroll costs, cost of food sold percentage, cost of beverage sold percentage, current ratio, and debt equity ratio were ranked as the most important ratios.

Kim and Ayoun (2005) investigated 13 financial ratios of lodging, restaurants, airlines, and amusement sectors. The trend-analysis concluded that amusement parks have the lowest profitability ratios in contrast with other segments; all four segments showed different patterns in capital structure measurements. Cross-cultural analysis indicated that eight out of 13 ratios have significant differences among different sectors.

The investigation of Jensen'salpha is still very uncommon in hospitality financial studies despite the fact that several researchers attempted to look at this issue in a more detailed way.

Kim, Mattila, and Gu (2002) conducted a study that investigated the financial performance of hotel REITs between 1993 and 1999 in comparison with the overall market and other REITs by utilizing Jensen's alpha. The study concluded that hotel REITs possess the highest market risk and are not the most attractive investment option in comparison with other REIT sectors.

Wei (2013) applied Jensen's alpha to evaluate the investment returns of hotels and casinos hotels under different economic conditions in a period from December 2007 to December 2011. The study concluded that the risk-adjusted performances of both hotels and casino hotels were better than for an overall stock market.

According to Keown, Martin, Petty, and Scott (2005), the goal of the firm should be the maximization of shareholders' wealth, which means maximization of the price of a common stock. The capital asset pricing model (CAMP) is well known to individuals in the area of finance and is based on an assumption that a stock's required rate of return is equal to the risk-free rate of return plus a risk premium which reflects only the risk remaining after diversification (Brigham & Houston, 1998) and can be presented as:

$$R_a = R_f + \beta(R_m - R_f)$$

where:

R_a: Price of the asset;

R_f: Risk-free interest rate;

R_m: The market rate of return;

β: Beta coefficient that describes a relationship between risk and expected return and is defined as a measure of systematic risk.

Jensen's alpha (α) is another statistical measurement that investors can use for calculating a risk of investment. Jensen's alpha is capable of determining whether the return of a stock portfolio differs significantly from the overall market and can be seen as:

$$\alpha = R_p - [R_f + (R_m - R_f)\beta]$$

where:

R_p: Realized return of portfolio;

R_m: Market return;

R_f: Risk-free rate;

β: Beta coefficient.

Excess (abnormal) stock returns are not a new topic for the financial community and the returns may demonstrate the inability of investors to predict cash components accurately.

Methodology

The period of study was from 2009 to 2013. The stock price and rate of return time series data were obtained from the Center for Research in Security Prices (CRSP) tapes. The hospitality stocks were identified using Disclosure. The betas of the stocks were computed using the CRSP data, and the most recent five-year annual returns were used for this study. The betas were used with the S&P 500 returns to compute a required rate of return, and Microsoft Excel was used to calculate Jensen's alpha. Three categories of hospitality stocks were used in the study: hotels, hotel REITs, and casinos. The second half of the study was launched to identify certain financial ratios which could explain the excess returns.

To be included in the study, the stocks had to have a price of more than $5.00 per share. Furthermore, the stocks must have financial statement information from Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system available for the trading period. First, the excess return of hospitality stocks was calculated. In the investments area, how well a company stock price performs is used to determine the quality of management. If a company is well managed and generates positive results, the stock price should reflect this. Risk is another

consideration, and managers of publicly traded companies have to watch the stock price as it is a measure of how investors feel about the quality of management. If investors are not happy about how the company is being managed relative to the risk, they will sell the stock and put downward pressure on the stock. At some point, if the stock falls enough, changes in the management of the company will occur to stem the price decreases. The changes in management occur since the present owners have lost faith in the present management.

Results

Excess return was calculated by using the following formula:

$$Holding\ period\ return\ (HPR) = (P_1 - P_0 + Dividend) / P_0$$

where:

P_1 = Fiscal year end stock price;

P_0 = Beginning fiscal year stock price;

Dividend = Total dividend paid for the year.

Table 1

Excess Return Calculations

Period	Average excess return	*t*-value	Sig.
2009-2013	4.72%	1.27295	0.102
2009	16.17%	1.20727	0.118
2010	23.28%	2.66649***	0.006
2011	-15.80%	-4.299057	0.999
2012	-2.26%	-0.578278	0.716
2013	4.57%	0.56937	0.286

Note. ***: Significant at the 0.01 level.

This market proxy measure is adjusted for the risk level of the stock. This is computed by using the beta of the stock to adjust for the risk of the stock. The last fiscal years of trading are used (see Table 3). The purpose of this is to see if a certain stock consistently outperformed the market benchmarks.

In addition, the data were sorted by the three types: hotels, REITs, and casinos. Overall, 21 hotel stocks were identified. Hotels had excess returns of 3.31% (see Table 2). Eleven REITs were identified. For REITs, the excess return was 2.67%. Finally, five casinos had excess returns of 6.18%. No significant difference was discovered in positive returns.

On average, hospitality stocks outperformed the risk-adjusted market by 4.72% from 2009 to 2013. However, it was not found to be significant at the 95% confidence level. When the years are examined, only the 2010 fiscal year was found to have significant excess returns. The returns beat the market by an average of 23.28% (see Table 1).

Table 2

Excess Returns by Type

Type	Average excess return	*t*-value	Sig.
Hotel operators	3.31%	0.84522	0.200
REITs	2.67%	0.35413	0.362
Casinos	6.18%	0.51634	0.305

Note. ***: Significant at the 0.01 level.

The second step is the computation of the beta. The beta is computed by regressing the returns of the company utilizing the overall market using the S&P 500 as a proxy (see Table 3). The corresponding period of the holding periods of the stocks is used to compute the betas. The market proxy (MP) is computed by multiplying the beta times the S&P 500 return for the corresponding period. Betas are used to adjust the market rate of return to the level of systematic risk that the stock possesses. The S&P 500 is the market-based measure. Betas are multiplied by the market return to compute the risk adjusted market return (MP). These market returns are then subtracted from the stock's return to compute the excess return. If positive, the stock outperformed the market. If negative, the stock underperformed the market. A *t*-test is used to test for significance from zero.

Table 3

Betas of Stocks

Stock	Beta
MGM Resorts International	0.073
China HGS Real Estate Inc.	-1.514
Host Hotels & Resorts Inc.	2.569
InnSuites Hospitality Trust	-0.551
InterGroup Corporation	0.130
Marcus Corporation	1.264
Marriott Vacations Worldwide Corporation	1.341
Stratus Properties Inc.	1.832
Full House Resorts Inc.	1.428
Monarch Casino & Resort Inc.	1.675
Chatham Lodging Trust	0.961
China Lodging Group Ltd.	0.857
Starwood Property Trust Inc.	0.651
Home Inns & Hotels Management Inc.	1.479
Wyndham Worldwide Corporation	2.758
Starwood Hotels &Resorts Worldwide Inc.	2.278
Morgans Hotel Group Co.	2.350
Diamondrock Hospitality Company	2.194
Las Vegas Sands Corporation	3.308
Sunstone Hotel Investors Inc. New	2.755
Strategic Hotels & Resorts Inc.	2.455
Ashford Hospitality Trust Inc.	2.366
InterContinental Hotels Group PLC	1.449
Wynn Resorts Ltd.	2.492
Orient-Express Hotels Ltd.	1.740
Hersha Hospitality Trust	1.510
Lasalle Hotel Properties	1.570
Red Lion Hotels Corporation	0.550
Marriott International Inc. New	1.200
Choice Hotels International Inc.	1.290
Vail Resorts Inc.	0.950
Hospitality Properties Trust	1.500
Supertel Hospitality Inc. VA	0.900
Felcor Lodging Trust Incorporated	3.684
Penn National Gaming Inc.	1.160
Century Casinos Inc.	0.089
Empire Resorts Inc.	1.427
Boyd Gaming Corporation	2.550

The second part of the study is to possibly identify certain ratios that could be used in order to try to predict the excess returns. Six ratios are used in this study. A regression of certain ratios is used to determine if they can predict the excess return (see Table 4).

The first ratio is the current ratio. It is calculated by dividing the total current assets by the total current liabilities. It is a measure of a firm's short-term liquidity. It is used by creditors to determine the creditworthiness of a company. In general, the higher the ratio, the more liquid and less risky the company is. The ratio is expected to be positively correlated with the excess return. It had been used in previous studies.

The second ratio is the total asset turnover. It is calculated by dividing the sales revenue by the total assets of the company. It is a measure of the company's efficiency, or how well managed the assets of the company are. It is used by investors to measure the efficiency of management. The higher the number, the more efficient the company is. It is expected that the relationship between the total asset turnover and excess return would be positive.

The third ratio used is the debt ratio. It is computed by dividing the total liabilities by the total assets. It is a measure of risk. Investors use this ratio to look at the risk of the company. The higher the number, the higher the risk is. It is expected that the relationship between the debt ratio and excess returns would be negative.

The fourth ratio is the operational return on assets. It is computed by dividing the operating income by the total assets. It is very similar to the return on assets except that it uses operating income. Operating income is a measure of the overall operations of the business. It excludes the costs of financing and tax issues. The higher the number, the more profitable the operations are. A positive relationship is expected for this variable.

The fifth ratio is the cash flow from operations per share. It is computed by dividing the cash flow from operations by the number of shares outstanding. Many valuation models use cash flow. Therefore, a firm that generates more cash flow per share should have a valuation. The higher the cash flow, the more investors prefer a company. The relationship between these two variables is expected to be positive.

The sixth ratio is net cash flow per share and is also the last ratio used. It is computed by combining the cash flow from operations and the cash flow from investing and then dividing it by the number of shares outstanding. A firm that generates positive net cash flow can use the money to pay a dividend, to reduce debt, and/or to buy back stock. Investors prefer a positive number. The relationship is expected to be positive.

Table 4

Regression with Excess Returns as a Dependent Variable (Concurrent Years of 2009-2013)

Variable	Coefficient	*t*-value	Sig.
Intercept	0.10807	0.948717	0.344
Current ratio	0.01282	0.500533	0.617
Asset turnover	-0.00016	-0.10655	0.915
Debt ratio	-0.07254	-0.52247	0.602
Operating return on assets	-0.28741	-0.74669	0.456
Cash flow from operations per share	-0.00992	-0.92228	0.358
Net cash flow per share	0.01693	1.914692*	0.057

Note. *: Significant at the 0.9 level.

Two regressions are computed. The first regression uses the ratios for each year to predict the corresponding excess returns that were computed in the first part of the study. The reason for this is to see if investors react to the new financial information being announced. The second regression looks at the excess returns being lagged by a year. It would examine whether investors react after the annual financials are reported.

Regression analysis, where ratios represent an independent variable and excess returns represent dependent variables, was conducted for six and five ratios respectively. There were some high positive correlations between variable five and six. Table 5 does not utilize the operational cash flow per share.

Table 5

Regression with Excess Returns as a Dependent Variable (No Cash Flow from Operations Used)

Variable	Coefficient	*t*-value	Sig.
Intercept	0.08021	0.730605	0.466
Current ratio	0.013366	0.522323	0.602
Asset turnover	-0.00072	-0.54078	0.589
Debt ratio	-0.06713	-0.48419	0.629
Operating return on assets	-0.29558	-0.76848	0.443
Net cash flow per share	0.010961	1.820421*	0.070

Note.*: Significant at the 0.9 level.

Only the net cash flow per share variable was found to be significant among six and five ratios at 90% significance level, accordingly.

Conclusions and Implications

The study examined the stock price performance of hospitality related stocks. Excess returns were computed for these stocks for a five-year period. Overall, the excess returns were found to be positive. However, no significance was found with the exception of one year.

The next part of the study used certain financial statistics from basic financial statements to predict these excess returns. One variable, net cash flow per share, was found to have significant predictive power for excess returns.

For the managers of these companies, it means that they need to consider ways to improve their net cash flow. This can be done by either increasing the cash flow from operations or reducing its investments. Cash flow from operations can be increased if a business is trying to collect accounts receivable as soon as possible and delay accounts payable as long as possible without paying financial penalty and negatively affect relationship with creditors.

Working capital may be additional area to analyze. Another option is trying to collect accounts receivable as soon as possible. However, most of these businesses are cash businesses so receivables are not a significant portion of the assets. Another option would be to try to control inventory better. This is particularly true of operations that include food service. This might include delaying accounts payable for as long as possible without paying financial penalty and negatively affecting relationships with creditors. The above-mentioned alternatives all relate to the cash flow from operations.

It may include slowing down capital expenditure by either reducing the openings of new hotels or cutting back on renovations. If the openings of new hotels are slowed, this could cut the amount spent on new building. However, growth in sales could suffer. Cutting back renovations could reduce investing cash flow. The drawback is that the facilities may become outdated. Managers should identify the options that benefit the company more than its costs.

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