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Comparing lodging REITs using DuPont analysis: Evaluating shareholder equity

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COMPARING LODGING REITS USING DUPONT ANALYSIS:

EVALUATING SHAREHOLDER EQUITY

by

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Abstract

Comparing Lodging REITs Using DuPont Analysis:

Evaluating Shareholder Equity

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This research paper compares lodging REITs using DuPont analysis. The study examined United States publicly traded lodging REITs' balance sheets, income statements, and cash flow statements between the quarterly periods of 12/31/1997 to 12/31/2005. Lodging REITs have to adhere to the REIT status guidelines, 90 percent of their taxable income must be distributed as dividends to shareholders and at least 75 percent of their income must come from real estate. Lodging REITs do not have government requirements on how a firm must efficiently manage its operations through financial leverage. The results indicate that there is a disparity between individual lodging REITs and the use of financial leverage. An overview of the use of financial leverage and a lodging REIT shareholder's equity is described in this paper.

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PART ONE

Introduction

The United States Congress passed the Real Estate Investment Trust Act in 1960, the real estate investment trust (REIT) structure was created to provide the public an investment opportunity into commercial real estate. In some cases, this low-risk investment was similar to a mutual fund. Investors receive dividends from the REIT shares and have the option to sell their shares without the risk associated with real estate market values. REITs operate similar to any corporation; REITs are governed by directors or trustees who make policies and decisions. There are two key federal compliances that REITs must follow: a 90% distribution of their taxable income as dividends to shareholders and at least 75% of their income must come from real estate (NAREIT n.d.).

Today, there are over 150 publicly traded REITs in the U.S. totaling $300 billion dollars of equity market capitalization (NAREIT 2008). REITs invest in all types of income producing properties including retail outlets, office buildings, hospitals and lodging/resorts. A REIT has a commitment to its shareholders by making lucrative decisions on the purchase and sale of real estate properties in their portfolio. Some REITs have pursued property type specific strategies for their asset portfolios.

The 1990s marked an era in which certain REITs acquired lodging properties. REITs purchased and sold lodging properties ranging in size, market segment and location. Kim, Mattila, & Gu, (2002) found that lodging REITs had the greatest monthly returns and the greatest standard deviation, which indicates that hotels are a high risk/high return investment. In 2004, Brady and Conlin found that REIT-owned lodging properties performed better than non REIT-owned lodging properties. The assumption of investing directly in lodging properties is risky, but the investor reduces their risk and increases the potential for their return through investment in a lodging REIT.

Purpose

This paper compares lodging REITs through the use of a DuPont analysis and shareholder equity return. The DuPont equation calculates return on equity (ROE) which consists of the product of net profit margin, total asset turnover, and asset-to-equity ratio. By analyzing each component of the ROE equation, insight is gained into whether a company's return is based on high profitability, proficient management of assets, or leverage for risk (Smart, Megginson, & Gitman, 2007). Comparing lodging REITs' individual DuPont components and shareholder's return will provide insight into financial leveraging strategies of lodging REITs.

Justification

The paper provides analysis of lodging REITs balance sheets and income statements as well as providing more knowledge to the lodging REIT investor on how individual lodging REITs perform based on ROE. REITs were introduced to the U.S. public as a means for the individual to invest in large scale real estate properties; lodging property investments have the greatest risk and return compared to other property type investments (Kim et al., 2002). This paper identifies the DuPont analysis components of successful lodging REITs, describes any component trends among lodging REITs, and evaluates component trends based on shareholder returns.

Constraints

The limited sample number of lodging REITs used in this study is a constraint. Specific property characteristics of each lodging REIT portfolio are not controlled for in this study due to the lack of public information. A lodging REIT owning only luxury hotels may perform differently than a lodging REIT that primarily owns economy hotels. The lodging industry's cyclical economic environment also presents a challenge in evaluating lodging REITs' performance over time. A lodging REIT may have a strong balance sheet and income statement, but the market may downgrade the value of their stock due to lodging industry trends.

Definition of Terms

Assets-to-equity (A/E) ratio: A measurement of the proportion of total assets financed by a firm's equity (Smart, Megginson,& Gitman, 2007, p.G2).

DuPont system: An analysis that uses both income and balance sheet information to break the ROA and ROE ratios into component pieces (Smart et al., 2007, p.G5).

Equity: An ownership interest usually in the form of common or preferred stock (Smart et al., 2007, p. G6).

Equity multiplier: A measurement of the proportion of total assets financed by a firm's equity (Smart et al., 2007, p.G6).

Equity REIT: A REIT which owns, or has an "equity interest" in, rental real estate (rather than making loans secured by real estate collateral) (NAREIT n.d., 2).

Financial leverage: Using debt to magnify both the risk and expected return on a firm's investments (Smart et al., 2007, p.G7).

Hybrid REIT: A REIT that combines the investment strategies of both equity REITs and mortgage REITs (NAREIT n.d., 2).

Mortgage REIT: A REIT that makes or owns loans and other obligations that are secured by real estate collateral (NAREIT n.d., 2).

Real Estate Investment Act of 1960: The federal law that authorized REITs. Its purpose was to allow small investors to pool their investments in real estate in order to get the same benefits as might be obtained by direct ownership, while also diversifying their risks and obtaining professional management (NAREIT n.d., 2).

Definition of Terms

Real Estate Investment Trust: A REIT is a company dedicated to owning, and in most cases, operating income-producing real estate, such as apartments, shopping centers, offices, hotels and warehouses (NAREIT n.d., 2).

REIT Modernization Act of 1999: Federal tax law change that allows a REIT to own up to 100% of stock of a taxable REIT subsidiary that can provide services to REIT tenants and others. The law also changed the minimum distribution requirement from 95 percent to 90 percent of a REIT's taxable income -- consistent with the rules for REITs from 1960 to 1980 (NAREIT n.d., 2).

Return on common equity (ROE): A measurement that captures the return earned on the common stockholders' (owners') investment in a firm (Smart et al., 2007, p. G14).

Return on investment (ROI): A firm's earnings available for common stockholders divided by its total assets. Alternatively called return on total assets (ROA) (Smart et al., 2007, p. G14).

Return on total assets (ROA): A measurement of the overall effectiveness of management in generating returns to common stockholders with its available assets (Smart et al., 2007, p. G14).

Total asset turnover: A measurement of the efficiency with which a firm uses all its assets to generate sales; calculated by dividing the dollar of sales a firm generates by the dollars of asset investment (Smart et al., 2007, p. G16).

PART TWO

LITERATURE REVIEW

Introduction

There have been several empirical studies on REITs throughout the last decade. This literature review begins with an overview of the REIT industry and the development of lodging REITs. Following the REIT industry overview, a description of previous REIT performance studies is listed and the relevance of the DuPont analysis as an interpretative measure of a firm's financial performance.

REIT Industry Overview

The REIT industry has experienced its share of ups and downs. From the creation of the REIT by the U.S. Congress in 1960, the REIT industry quickly generated a total asset base of $300 million over the first couple of years. However, in 1962, the stock market plunged devaluing the REIT industry by approximately 20 percent and shaking investor confidence in the REIT structure (Mullaney, 1998). The late 1960s offered recovery for the REIT industry through mortgage REITs. Mortgage REITs contributed to the $1.3 billion dollar REIT industry in 1970 through the financing of new construction and acquisition of existing properties (Mullaney, 1998).

In 1973, coupled with high interest rates, an oil embargo, U.S. recession and mortgage REITs' overextension of loans, the REIT industry faced another decline and lost thirty REITs to acquisitions or dissolution, eroding the REIT market capitalization value from $20 billion to $10 billion dollars (Mullaney, 1998). It was not until the 1990s when the REIT industry experienced a surge in growth based on firm-specific investment and financing through equity and long-term debt to purchase distressed assets from private owners (Ott, Riddiough, & Yi, 2005).

2008 was a challenging year for the REIT industry and the U.S. economy overall. The 2008 REIT industry totaled an annual equity market capitalization of $191.7 billion dollars; this reflects a 38.5% annual decline from 2007's market capitalization of $265.5 billion dollars (NAREIT, 2008). A setback for REIT investors is a forthcoming shortfall of $4.76 billion dollars of dividend payments; REITs are required to distribute 90% of their taxable income as quarterly dividends, but some of today's REITs have suspended dividend payments or issued stock to investors in lieu of dividends as an effort to save cash and strengthen their balance sheets (Pruitt, 2009). To alleviate some of the losses the REIT industry has suffered, the 2008 Housing and Economic Recovery Act listed provisions for the REIT industry changing the tax base holding period from four years to two years and allowing the option of a fair market value assessment or using the previous tax base method to value asset sales; these newly enacted provisions allow REITs to efficiently manage the sale of assets in their portfolios (Edwards & Bernstein, 2008).

Lodging REITs Overview

Lodging REITs were introduced in 1993 and grew significantly during the 1990s to a total of 19 lodging REITs with a combined market capitalization rate of $8.8 billion (Kim, Mattila, & Gu, 2002). Lodging REITs emerged during a recovery period for the hotel industry and provided initial investors with significant returns up to 49.2% (Mullaney, 1998). There are three basic types of lodging REITs: equity, mortgage, and hybrid. An equity REIT has an equity interest in the ownership of its assets, a mortgage REIT holds or issues a loan on a real estate asset, and a hybrid REIT combines the two strategies (NAREIT n.d., 2).

A noteworthy example of a formation of a lodging REIT occurred with the merger between Starwood Capital and Hotel Investors Trust in 1994. The newly formed paired-share REIT Starwood Lodging gave investors annual returns of 77.9% (1995) and 93.2% (1996) and increased the asset base for Starwood Capital (Mullaney 1998). Paired-share lodging REITs are REITs with the tax benefits of a REIT status, but can operate its hotels without the traditional lease requirement agreements with third parties. The paired-share status was deemed illegal by U.S. Congress in 1984, but allowed the existing paired-share REITs to maintain their status (Beals & Arabia, 1998).

The number of publicly traded lodging REITs has fluctuated over the years. Today, there are eight publicly traded lodging REITs which collectively posted a -59.67% market annual return for 2008 and one private lodging REIT (NAREIT, 2009).

Previous REIT Performance studies

Mueller and Laposa (1996) studied the quarterly returns for REITs by different NAREIT property types: apartment, retail, hotel, self-storage, office, industrial, healthcare, and manufactured housing. The results of their studies indicated that self-storage and hotel REITs had the highest returns. The study also indicated that hotel REITs consistently had the highest returns and highest risks throughout each time period study and suggested REITs should diversify their property type holdings for optimal market performance. Danielson and Harrison (2007) found that a REIT focused on a single property type has greater liquidity and ease of market valuation than a REIT that diversifies its property type holding which contrasts the Mueller and Laposa (1996) REIT portfolio diversification proposal,

Kim et al. (2002) and Jackson (2007) examined the monthly returns of REITs, differentiated by the NAREIT property sector classifications. The Kim et al. (2002) REIT study indicated that hotel REITs had the highest monthly return (1.83%) and the greatest standard deviation (7.8%); retail REITs had the lowest monthly return (.08%) and lowest standard deviation (3.2%). Kim et al. (2002) explain that potential causes for the inferiority of individual hotel REITs return performance is due to the cyclical supply and demand nature of the hotel industry.

Mooradian and Yang (2001) explored the differences between financial measurements of lodging REITs and non-REIT lodging companies. The study's *t*-test for the means revealed that lodging REITs had a greater ROA, less total debt, and greater distribution of dividends on average than non-REIT lodging companies. There was no significance in the difference of ROE means between lodging REITs and non-REIT lodging companies. However, non-REIT lodging companies had greater means of net sales, acquisition/assets ratio, and capital expenditure/assets ratio than lodging REITs.

Brady and Conlin (2004) investigated the market performance of REIT-owned lodging properties versus non-REIT owned lodging properties. The study based market performance on revenue growth, REVPAR growth, occupancy growth, and price growth. The results indicated that REIT hotels have higher performance measures than non-REIT hotels overall, but when the hotel market segments (mid-scale, high-end, etc.) are controlled for in the regression analysis there is no significant performance difference between a REIT-owned lodging property and a non-REIT owned lodging property. Brady and Conlin (2004) suggest that REITs tend to acquire properties that perform well in the mid-scale and high-end market segments. A Quan, Li, and Sehgal (2002) study confirms that upscale and mid-price property market segments are desirable in an investment portfolio and on average generate a greater return than common stocks.

DuPont Analysis Summary

The DuPont analysis computes variables from the income statement and balance sheet to determine a firm's return on equity (ROE); the ROE formula is as follows:

ROE= Profit Margin (Net Profit/Sales) X Asset Turnover (Sales/Total Assets) X

Equity Mulitplier (Total Assets/Total Equity)

ROE describes the size of return an owner receives from investing capital into the firm. New investment into a firm is discouraged if a firm's ROE is less than the required rate of return of an investor (Eisemann, 1997). Firms can be compared within an industry utilizing the DuPont analysis's financial ratios through a cross sectional analysis or a time series basis (Ou & Penman, 1989; Eisemann, 1997; Abarbanell & Bushee 1997; Fairfield & Yohn, 2001; Milbourn & Haight, 2005; Soliman, 2008).

Financial Ratio Studies

Ou and Penman (1989) created a model derived from a sample of publicly traded firms that traded on the NYSE or AMEX, without controlling for industry, to predict stock returns based on financial ratios; significant predictor variables included change in sales, change in opening equity, change in asset turnover, and gross margin. Their findings summarize how fundamental financial measurements of a firm can reveal more information on strategy to value stock prices and future returns.

Fairfield and Yohn (2001) developed a model that examined the changes in asset turnover to forecast a firm's future profitability. This study found significance in the annual change of asset turnover as a predictor for future profitability, but there was no significance found in the annual change of profit margin as a future profitability predictor.

Conclusion

Lodging REITs are facing a difficult period, but the downturn reflects the cyclical historical trend of the lodging industry. This literature review presented a brief timeline of the REIT industry and the current state of the industry. Researchers have been comparing the performances of REITs based on property holdings for years. Lodging REITs have been compared against other REIT property classifications, various financial indexes, and publicly traded non-REIT hotel companies (Mueller & Laposa, 1996; Mooradian & Yang, 2001; Kim et al., 2002; Jackson, 2007). There has not been research published comparing lodging REIT performance on an introspective scale. The financial ratios of the DuPont analysis is an effective means of comparing firm performance and has been used by researchers throughout the years (Ou & Penman, 1989; Eisemann, 1997; Abarbanell & Bushee 1997; Fairfield & Yohn, 2001; Milbourn & Haight, 2005; Soliman, 2008). Utilizing the financial ratios of the DuPont analysis to compare lodging REITs' performance will provide further insight into the investor's return on investment.

PART THREE

Introduction

The United States REIT requirements have income distribution guidelines and resource allocation guidelines for lodging REITs, but there are no specific requirements on how lodging REIT managers operate their property portfolios. Lodging REIT managers make decisions to acquire or divest real estate holdings, hire third party property management companies, select brand affiliation for their lodging properties, and choose a corporate capital structure. DuPont analysis's financial ratios provide insight into how a firm operates relative to its balance sheet and income statement. The financial ratios comparison between lodging REITs investigated how lodging REITs differ in their operating activities. Also included in this section is the comparison of lodging REITs' shareholder returns and the observation of different investor average returns from publicly traded lodging REITs.

Data and Methodology

The lodging REIT sample was obtained from the NAREIT database. A NAREIT lodging REIT must have at least 75% of their real estate assets consist of lodging properties (Kim et al., 2002). Table 1 lists the New York Stock Exchange (NYSE) and American Stock Exchange (AMEX) traded lodging REITs examined in this study. Lodging REITs' quarterly balance sheets, income statements, and cash flow statements were examined between the dates of 12/31/97-12/31/05. The sample period was selected because it contained the most active publicly traded lodging REITs compared to other time periods. Some lodging REITs became inactive on public trade markets due to mergers, private acquisitions or switching to a C-corporation status.

The quarterly balance sheets, income statements, and cash flow statements data to compute the lodging REITs' financial ratios were taken from the COMPUSTAT database through Wharton Research Data Services. Two different quarterly periods for Jameson Inns, Inc. (3/31/99) and Supertel Hospitality, Inc. (3/31/98) were not included in the COMPUSTAT financial statement query, so the missing information was retrieved from 10-Q statements queried through the U.S. Securities and Exchange Commission EDGAR archive search. Table 2 lists the financial ratios examined in this study. A basic income statement, balance sheet, and cash flow statement's typical line items for a lodging REIT are listed in Figure 1.

Monthly stock returns of each lodging REIT, returns calculated with dividends, were extracted from the Center for Research in Security Prices (CRSP) of the Wharton Research Data Services. The sample period excludes the stock market volatility after 12/31/05. Current market volatility is reflected in the Dow Jones Industrial Average Index closings at 10,717.50 (12/30/05) and 8,776.39 (12/31/08), (an 18% total decrease in value); the S&P 500 Index closed at 1,248.29 (12/30/05) and 903.25 (12/31/08), (a 28% total decrease in value).

The sample size of 12 lodging REITs limits the use of robust statistical tests to interpret significance between the lodging REITs' quarterly financial ratio averages. For the purposes of this study, descriptive statistics of each lodging REIT's financial ratio means were analyzed and general observations of lodging REIT's financial management are discussed.

Discussion of Results

Tables 3 and 4 provide a ranking of each lodging REIT based on the quarterly financial ratios' averages. Descriptive statistics of each quarterly financial ratio are listed in Tables 5 and 6. Supertel Hospitality, Inc. (SPPR) had the highest quarterly ROE average, (2.71%), within the sample. An average ROE of 2.71% translates into every dollar invested per quarter into SPPR will yield 2.71% return on average for an investor. SPPR's average ROE examined by each component reveals the highest average asset turnover rate, (.115), the second highest average equity multiplier, (3.35), and the seventh highest average profit margin, (6.82%). This indicates that SPPR is efficiently managing the turnover of its balance sheet assets while exposing investors to greater risk than the other lodging REITs in the sample. The low average profit margin of SPPR, (6.82%), indicates that this lodging REIT has difficulties of controlling costs, compared to the lodging REIT average profit margin of (13.2%). SPPR's strategy may focus more on acquiring and divesting hotels relative to the other lodging REITs. As a result of SPPR's acquisition activity, interest expenses may have increased thus decreasing SPPR's overall profit margin; based on Figure 1 income statement's line item expenses. However, SPPR's average monthly stock return was (.80%) which is above the sample's average monthly stock return of (.58%); the sample's average monthly stock return is lower than the Kim et al. (2002) results of 1.83%, but their study included a larger lodging REIT sample of 19 over a different time period, 1993-1999.

PMC Commercial Trust (PCC) had the highest average profit margin, (53.14%), compared to the lodging REIT average profit margin per quarter of 13.22%. PCC's high average profit margin indicates the firm does well controlling costs and contributed to the second highest average ROE, (2.39%). PCC's remaining financial ratios have the lowest average asset turnover, (.025), and the second lowest average equity multiplier, (1.74). These ratios may indicate that PCC owns a smaller portfolio of hotels and does not risk much of the investor's money on acquiring and divesting hotels compared to the sample.

Host Hotels & Resorts, Inc. (HST) had the highest average equity multiplier, (5.12), highest average cash return on assets, (6.1%), and the highest average cash flow to equity, (.301). Based on these financial ratios it is reasonable to assume HST acquires hotels through a lot of leverage. However, HST had the lowest average profit margin of negative 1.53%, possibly indicating higher quarterly average interest expenses from acquiring upscale and mid-price property segments described on their company's website (http://www.hostmarriott.com). Historical profit margins of a firm cannot predict a firm's future profitability (Fairfield and Yohn 2001). HST's monthly average stock return, (.85%), exceeds the average stock return sample mean, (.58%), and average stock return sample median, (.77%); another possible signal HST generates a higher stock return than other heavily leveraged lodging REITs in the sample, maybe due to the acquisition of upscale and mid-price property segments which generate greater returns in an investment portfolio than common stock (Quan et al., 2002).

Hospitality Properties Trust (HPT) had the highest average monthly stock return, (1.08%), second highest average profit margin, (38.13%), and the lowest average equity multiplier, (1.53). HPT's strategy on average uses less leverage and lower asset turnover indicating better management of operating expenses among the sample. HPT also had a high average ROE, (2.18%), compared to the sample mean of .09%.

The bottom four performing lodging REITs' had the lowest average monthly stock returns and the lowest average ROE in the sample: Jameson Inns (-.55%), Felcor Lodging, Inc. (.21%), Boykin Lodging (.30%), Meristar Hospitality Corp. (.33%). Average equity multiplier, average cash ROA, and average cash flow to equity measured similarly among the bottom four performing lodging REITs. It is interesting to note there is only one remaining active trading status lodging REIT among the bottom performing lodging REITs which is Felcor Lodging, Inc.

Conclusion

Comparing lodging REITs based on financial ratios and stock returns over a seven year period revealed lodging REITs have different approaches to the management of their income statements, balance sheets, and cash flow statements. HPT has operated by minimizing its exposure to risk and efficiently managing it costs resulting in the highest monthly average stock return and a third highest average ROE among other lodging REITs in the sample. HST had a different approach to the management of their financial statement; this included heavily leveraging the firm. Despite this heavy leveraging strategy, HST still had a modest average ROE and average monthly stock returns for the investor. The market must perceive HST as an efficient lodging REIT firm due to its close affiliation with Marriot Corporation. However, exposing the lodging REIT to more than average risk compared to the sample was not an effective strategy for an investor's return as seen in the results for JAMS, FCH, BOY, and MHX.

Every investor wants a return on their investment. Real estate has always been an attractive investment, but large amounts of capital are needed to diversify and increase a real estate portfolio. The U.S. government enacted the real estate investment trust to provide investment opportunities for a greater number of investors. REIT investors have the option to base their investments specific to a property-type. Kim et al. (2002) found that lodging REITs had greater returns than other property-type REITs, but were also the investment with the most risk.

The hotel industry is cyclical in nature. An investor interested in the potential for greater returns in the hotel industry may choose a lodging REIT. Lodging REITs are not immune to the cyclical nature of the hotel industry, but they have expertise in the acquisition of hotels and selection of operators which outperformed non-lodging REITs in a comparative study (Brady & Conlin 2004). After deciding to purchase shares in a lodging REIT, an investor must decide which lodging REIT choose. Based on the DuPont analysis of lodging REITs a stable investment maybe choosing the lodging REIT which has the least amount of exposure to risk calculated from the lodging REIT's balance sheets, income statements, and cash flow statements. An investor willing to expose their capital to the associated risks of the lodging industry through a REIT, must not compromise their investment to a lodging REIT firm which disproportionately leverages debt and equity in acquisitions.

Recommendations for Future Research

Further research into the study of acquisition and divesting activities of REITs or lodging REITs may provide investors with further knowledge of high performing REITs. The acquisition and divesting activities are listed in the cash flow statement of REITs. Also, the Securities Exchange Commission requires publicly traded companies and REITs to submit 10-Q quarterly statements. 10-Q statements provide further detailed information about the company's direction and activities which includes information about real estate transactions. Another possible research study is the comparison of property type REITs based on common stock valuation. Examining the differences between REIT property types and book values, liquidation values, or price multiples may provide further information for the investor. Additional research could be conducted investigating the difference between lodging property type characteristics in a lodging REIT's portfolio and an investor's return. Since the overall REIT structure is designed to encourage multiple investors to enter the real estate industry, further information on the most desirable property-type characteristic in a lodging REIT portfolio would be beneficial. There have been research studies on the financial performances of various hotel property-type characteristics including operating brand, regional location, market segment type, but not specific to lodging REITs.

Table 1. Lodging REITs sample

Lodging REIT name	Ticker Symbol	Current Trading Status*
Boykin Lodging Company	BOY	Inactive
Equity Inns, Inc.	ENN	Inactive
Felcor Lodging, Inc.	FCH	Active
Hospitality Properties Trust	HPT	Active
Host Hotels & Resorts, Inc.	HST	Active
Innkeepers USA Trust	KPA	Inactive
Jameson Inns Inc.	JAMS	Inactive
LaSalle Hotel Properties	LHO	Active
Meristar Hospitality Corp.	MHX	Inactive
PMC Commercial Trust	PCC	Active
Supertel Hospitality, Inc.	SPPR	Active
Winston Hotels, Inc.	WXH	Inactive

*Current public trading status as of April 2, 2009.

Table 2. Financial ratios calculation for lodging REIT sample

Financial ratio	Calculation	Measures
Profit Margin	Pre-Tax Income ÷ Net Sales	Firm's ability to control costs. The higher value the better.
Total Asset Turnover	Net Sales ÷ Total Assets	Firm's efficient management of assets. The higher value the better.
Equity Multiplier	Total Assets ÷ Total Shareholder Equity	Firm's management of risk. The higher value the more risk.
Return on Equity (ROE)	Profit Margin x Total Asset Turnover x Equity Multiplier	Owner's earning returns on their investment. The higher the value the better.
Cash Return on Assets	Total Cash and Short-Term Investments ÷ Total Assets	Firm's cash return from assets. The higher the value the better.
Cash Flow to Equity	Total Cash and Short-Term Investments ÷ Total Shareholder Equity	The proportion of cash to total equity. The higher the value the more cash is on hand for activities.

Table 3. Lodging REIT sample (listed by ticker symbol) and ranked according to average quarterly financial ratios between 12/31/97 and 12/31/05.

Lodging REIT	Average Profit Margin	Lodging REIT	Average Total Asset Turnover
PCC	53.14%	SPPR	0.114878988
HPT	38.13%	HST	0.092088501
KPA	19.58%	LHO	0.069690407
WXH	11.33%	BOY	0.069343005
ENN	9.09%	MHX	0.066339349
JAMS	7.57%	ENN	0.060102737
SPPR	6.82%	FCH	0.057746017
LHO	6.41%	WXH	0.056336303
FCH	5.42%	KPA	0.04339493
BOY	4.01%	JAMS	0.041898892
MHX	-1.23%	HPT	0.04091966
HST	-1.53%	PCC	0.02589228

Lodging REIT	Average Equity Multiplier	Lodging REIT	Average ROE
HST	5.126131393	SPPR	2.71%
SPPR	3.355951551	PCC	2.39%
MHX	3.11265352	HPT	2.18%
JAMS	2.798228734	KPA	1.68%
FCH	2.278032109	WXH	1.46%
BOY	2.271223007	HST	1.09%
LHO	2.205690117	ENN	0.88%
ENN	2.082158026	LHO	0.71%
WXH	1.88327287	JAMS	0.25%
KPA	1.752144898	BOY	0.14%
PCC	1.749591334	FCH	-0.41%
HPT	1.532198281	MHX	-1.43%

Table 4. Lodging REIT sample (listed by ticker symbol) and ranked according to average quarterly financial ratios between 12/31/97 and 12/31/05.

Lodging REIT	Average Cash Return on Assets	Lodging REIT	Average Cash Flow to Equity
HST	6.13%	HST	0.30069165
MHX	3.37%	MHX	0.11347787
FCH	3.22%	FCH	0.07954659
BOY	2.73%	BOY	0.06145988
KPA	2.04%	JAMS	0.04953634
JAMS	1.59%	LHO	0.03582849
PCC	1.54%	KPA	0.03559992
LHO	1.51%	PCC	0.02468666
HPT	1.30%	SPPR	0.02253344
WXH	0.09%	HPT	0.01920078
SPPR	0.07%	WXH	0.01662257
ENN	0.07%	ENN	0.0144032

Lodging REIT	Average Monthly Stock Return*
HPT	1.08%
ENN	1.00%
KPA	0.96%
HST	0.85%
SPPR	0.80%
WXH	0.77%
PCC	0.69%
MHX	0.32%
BOY	0.30%
FCH	0.21%
JAMS	-0.55%

* LaSalle Hotel Properties (LHO) is not listed in this table because this lodging REIT began publicly trading on April 24, 1998.

Table 5. Descriptive statistics of lodging REITs' average quarterly financial ratios using Microsoft Excel 2007.

Lodging REITs Average Profit Margin	
Mean	0.132270003
Standard Error	0.047403494
Median	0.071923678
Mode	#N/A
Standard Deviation	0.164210519
Sample Variance	0.026965094
Kurtosis	2.53329916
Skewness	1.747403813
Range	0.546686347
Minimum	-0.01532537
Maximum	0.531360977
Sum	1.587240034
Count	12
Confidence Level (95.0%)	0.104334386

Lodging REITs Avg. Cash ROA	
Mean	0.021427
Standard Error	0.004482
Median	0.015651
Mode	#N/A
Standard Deviation	0.015525
Sample Variance	0.000241
Kurtosis	3.279359
Skewness	1.677555
Range	0.054537
Minimum	0.006795
Maximum	0.061332
Sum	0.257119
Count	12
Confidence Level (95.0%)	0.009864

Lodging REITs Avg. Asset Turnover	
Mean	0.061553
Standard Error	0.006954
Median	0.058924
Mode	#N/A
Standard Deviation	0.024089
Sample Variance	0.00058
Kurtosis	1.124479
Skewness	0.884442
Range	0.088987
Minimum	0.025892
Maximum	0.114879
Sum	0.738631
Count	12
Confidence Level (95.0%)	0.015305

Lodging REITs Avg. Equity Multiplier	
Mean	2.512273
Standard Error	0.28728
Median	2.238457
Mode	#N/A
Standard Deviation	0.995166
Sample Variance	0.990355
Kurtosis	3.858891
Skewness	1.825309
Range	3.593933
Minimum	1.532198
Maximum	5.126131
Sum	30.14728
Count	12
Confidence Level (95.0%)	0.632298

Table 6. Descriptive statistics of lodging REITs' average quarterly financial ratios using Microsoft Excel 2007

Lodging REITs Avg. ROE	
Mean	0.009718
Standard Error	0.003501
Median	0.00988
Mode	#N/A
Standard Deviation	0.012126
Sample Variance	0.000147
Kurtosis	-0.15758
Skewness	-0.43616
Range	0.041406
Minimum	-0.0143
Maximum	0.027106
Sum	0.11662
Count	12
Confidence Level (95.0%)	0.007705

Lodging REITs Avg. Cash Flow to Equity	
Mean	0.064466
Standard Error	0.023111
Median	0.035714
Mode	#N/A
Standard Deviation	0.080058
Sample Variance	0.006409
Kurtosis	8.020973
Skewness	2.71877
Range	0.286288
Minimum	0.014403
Maximum	0.300692
Sum	0.773587
Count	12
Confidence Level (95.0%)	0.050867

Lodging REITs Avg. Monthly Stock Return	
Mean	0.58%
Standard Error	0.14%
Median	0.77%
Mode	#N/A
Standard Deviation	0.48%
Sample Variance	2.2999E-05
Kurtosis	2.09421106
Skewness	-1.4095092
Range	0.0163
Minimum	-0.55%
Maximum	1.08%
Sum	6.43%
Count	11
Confidence Level (95.0%)	0.32%

Balance sheet example

Assets	Liabilities	Shareholder's Equity
Real Estate Properties	Senior Notes, Net of Discount	Common Shares
Accumulated Depreciation	Revolving Debt	Additional Paid-in Capital
Cash and Cash Equivalents	Mortgage Debt	Cumulative net income
Restricted Cash (FF&E Reserve)	Security and Other Deposits	Dividends

Income statement example

Revenues	Expenses
Rental Income	Interest
Furniture Fixtures & Equipment Reserve Income	Depreciation and Amortization
Interest Income	General and Administrative

Cash flow statement example

Cash Flows from Operating Activities	Cash Flows from Investing Activities	Cash Flows from Financing Activities
Net Income	Real Estate Acquisitions	Proceeds from issuing of common shares
Depreciation and amortization of real estate assets	Increase in Security or other deposits	Repayments of Credit Facility or other Debt
FF&E reserve income	Purchase of FF&E Reserve	Dividends Paid
Cash provided by operating activities	Cash used in investing activities	Cash provided by financing activities

Figure 1. Balance sheet, income statement, and cash flow statement typical REIT line items.

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