AN EMPIRICAL STUDY OF THE CORRELATION BETWEEN ECONOMIC VALUE ADDED AND STOCK PRICE IN THE HOSPITALITY INDUSTRY

By

SIYONG LEE

Bachelor of Science

Kyunggi University

Suwon, Korea

1997

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
The Degree of
MASTER OF SCIENCE
May, 2002

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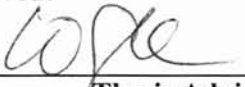

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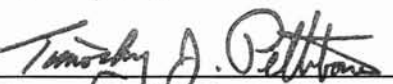

Dean of the Graduate College

ACKNOWLEGEMENTS

I wish to express my sincere appreciation to my major advisor, Dr Woody Kim for his constructive guidance, inspiration, intelligent supervision, and friendship. My sincere appreciation extends to my other committee members Dr. Jerold Leong, and Dr. William Warde, whose guidance, encouragement, and assistance are also invaluable.

Moreover, I wish to express my sincere gratitude to those who provided suggestions and assistance for this study: Changyung and Dongjin. And I would like to thank the School of Hotel and Restaurant for supporting during these two years of study. I would also like to give my special appreciation to Brown John for editing all my writing word by word through a year, without moment of hesitation

Finally, I want to thank each member of my family. My mom and dad, their special love from far away Korea kept me in faith always. My brother Doyong, and my close friends Chunwoo, Seokjin, Donghun, and Jeahuck without your support and love, I couldn't even study in America. Thank you so much with all my heart.

TABLE OF CONTENTS

Chapter Page

LIST OF TABLES

Table Page

CHAPTER 1

INTRODUCITON

Management's most important mission is to maximize shareholder wealth. In the quest for value, the firm's scarce resources are directed to their most promising uses and most productive users. The more effectively resources can be deployed and managed, the more robust will be our economic growth and the rate of improvement in our standard of living. However, despite the best of intentions, many companies fail to create shareholder wealth. There has been much debate over what is the most accurate performance measurement metric for the industry. According to Pettit, there are two reasons. First, there are too many performance measures, often with conflicting signals and no clear tie or prioritizing to focus efforts to cut through the complexity. Second, performance measures employed are not systematically tied to value and often seem to drive the wrong performance or send the wrong signals (Pettit, 1998).

Stewart stated "Companies are increasingly recognizing that the success of business today depends not on having a well-thought-out, far reaching strategy, but rather on re-engineering a company's business systems to respond more effectively to the new business environment on continuous change" (Stewart, 1995). In recent years, corporate managers and the business media have shown great interest in the use of Economic Value Added, or EVA, as a measure of business performance. EVA, or the period dollar profit above the cost of capital, has gained substantial acceptance and creditability not only as an operational performance metric, but also as a means to measure an organization's value and as a way to determine how management's decisions contribute value to an

organization. A growing number of companies have EVA or related measures of economic profits as metrics for corporate planning and executive compensation. These companies include Coca-Cola, Eli Lilly, and Quaker Oats. Unlike traditional accounting measures of performance, EVA attempts to measure the value that firms create or destroy by subtracting a capital charge from the returns they generate on invested capital (Lehn and Makhija, 1997). However, EVA is a more complicated measure of performance compared to traditional metrics such as Return on Equity (ROE), Return on Investment (ROI), and Return on Asset (ROA) because it incorporates all costs of running the business.

EVA, although not a new concept, is becoming increasingly more accepted by corporations in America. EVA principles were discussed almost 100 years ago by economist Alfred Marshall. Recent interest has been spurred by the consulting firm Stewart & Co., which has trademarked and popularized EVA (Milunovich & Tsuei, 1996).

Actually, EVA was created by Stewart for consulting services to firms that wished to determine a fair compensation level for their managers. There are two broad uses for EVA. One is an internal use and the other is an external use. For internal use, the objective of EVA is to make managers act as if they are owners of the firms. The EVA framework has helped employees at various levels of management to appreciate their contribution to corporate wealth maximization. A company can use EVA for a compensation plan in which managers will be rewarded by their EVA achievement. For firms that reward managers based on performance, EVA can offer advantages over traditional profit based plans. First, by tying compensation to a better performance

metrics, the company can achieve a better matching of its own objectives with those of the manager. Second, EVA can help reduce some conflicts of interest often associated with managers and profitability measurements. Because an objective of EVA is to eliminate the impact of accounting distortions on profitability and the influence of management in its calculation, EVA is a better representation upon which to reward executives.

For external use, investors can closely look at the EVA of the company in which they want to invest. EVA has received attention in this regard from the popular press as well as more academic sources and recognized financial professionals and specialists. A well known 1993 Fortune article declares EVA as "today's hottest financial idea and getting hotter". It also states that, "One of EVA's most powerful properties is its strong link to stock price" (Tully, 1993). Also there are many academic sources that discuss EVA's use as an investor tool. For instance, Burkett and Timothy stated in The CPA journal that many investors have adopted economic profit analysis and use it to evaluate a company's potential for long-term stock price appreciation (Burkette and Timothy, 1997). The main focus of EVA in this study is external use, especially stock price with EVA relation.

EVA is essentially a measure of corporation profits. Unlike net income, which is a measure of shareholder profits, EVA measures a firm's economic or net operating profits after taxes. Soter (2000) indicated that after-tax-profits take into account the fact that profits can only be generated through the investment of working capital. That is why EVA is such an accurate measure (Soter, 2000). Ballow & Perrson (2001) mentioned in their study that EVA is a more complete measure of performance than other metrics such

as earnings, operating profit, or return on capital (ROC) because it incorporates all costs of running the business. EVA is an extension of other familiar metrics that are used to measure the performance of business (Ballow & Perrson, 2001). In other word, EVA is a profit measure based on the concept of true economic income that includes the cost of capital for all types of financing. Thus EVA provides more comprehensive measures of profitability than traditional measures because it indicates how well a firm has performed in relation to the amount of capital employed.

EVA is especially valuable for investors in assessing the important issues of capital efficiency and competitive advantage over a longer time horizon. It has additional advantages for corporate management, such as providing greater managerial accountability for investor capital, and encouraging managers to change behavior by improving operating profits without using more capital (Jackson, 1996).

EVA is relatively new measure of managerial performance, but it is getting more popular these days. Despite of popularity of EVA in business world, there are few studies performed in the hospitality industry.

In this study, the researcher will perform the empirical test to demonstrate if the EVA is a better indicator or a better tool than any other traditional financial instruments to explain stock price change in the hospitality industry. It is critical for investors as well as for management staffs to understand which financial performance measure employed by companies can efficiently explain about stock price fluctuation and be helpful to predict future price change.

Problem Statement

Despite wide interest in EVA, little is known empirically about the efficacy of this measure versus other measures of firm performance. The relevance and importance of this alternative performance measurement to traditional accounting measurement has not been fully explored. Some studies attempt to evaluate different performance measures, including accounting earnings and residual income measures such as EVA, by examining their degree of correlation with stock returns (Biddle, et al., 1997). Other studies directly examine the relation between EVA and either market value or MVA, so called market value added (Milunovich & Tsuei, 1996). The evidence from these studies is mixed, however, and it has not resolved the debate over performance measures.

The results of the correlation are different depending on the researchers and the industries. Stewart (1994) cites that "EVA stands well out from the crowd as the single best measure of wealth creation on a contemporaneous basis" and "EVA is almost 50% better than its closest accounting-based competitor in explaining changes in shareholder wealth" (Stewart, 1994). He insisted that EVA is a better tool than any other measurements for internal and external use for financial purposes. In contrast to his assertion, some researchers such as Biddle, Bowen, and Wallace argued that EVA's correlation to stock is not meaningful (Biddle, et al., 1997). The results of these prior studies are inconsistent with each other in terms of the conclusions drawn by the authors of the studies and industries.

Even if EVA is proven to be an important tool, studies for EVA was not fully investigated in the hospitality industry. Thus it is important to test the predictive ability of

EVA to forecast the stock price, compare to traditional measures such as ROA, ROE, ROI, and EPS. Furthermore, the relation between EVA and MVA will be studied to explain the performance of EVA in stock price.

Objectives of Study

The objective of this study is to investigate the relationship between EVA and stock price. Since it is acknowledged that there is not much empirical evidence about EVA's use as an investment tool in the hospitality industry, and the previous studies have inconsistent conclusions. Therefore, it is necessary to determine if EVA is a better measurement explaining stock price movement than other traditional measurement.

The primary objectives of this study are fourfold.

(1) To investigate if EVA is a better tool than other traditional accounting measurements in associations with hospitality firm's stock price;

(2) To determine the relationship between EVA and traditional accounting measurements in hospitality industry;

(3) To examine the correlation between EVA and MVA; and

(4) To investigate which components of EVA contribute more influence to stock price.

Research Questions

The current study examines the correlation between stock price, important accounting, and valued-added measures. The research questions asked are:

(1) Do EVA and MVA dominate traditional accounting measures in explaining annual stock price?

(2) What is the relationship between EVA and each traditional accounting measures?

(3) Is EVA highly correlated with MVA?

(4) Which components of EVA best explain stock price?

Hypothesis

The major hypothesis for the first research question is to examine the correlation between stock price and accounting measures including EVA and MVA. The second and third hypotheses test the relationship between EVA and accounting measure, and EVA and MVA, respectively. The last two hypotheses are made to examine the relationship between stock price and EVA along with its components and the effects of EVA and accounting measures to stock price. The hypotheses are made as follows:

Hypothesis 1: Adjusted EVA and adjusted MVA are highly correlated with stock price versus other traditional accounting measures from 1997 to 2000.

Hypothesis 2: Adjusted EVA is significantly correlated with traditional accounting measures.

Hypothesis 3: There is a significant correlation between adjusted EVA and adjusted MVA.

Hypothesis 4: Adjusted EVA and its components significantly affects stock price.

Hypothesis 5: Adjusted EVA and traditional accounting measures contribute significantly to stock price.

To examine the hypotheses one through three, the coefficient of correlation, r, will be measured with alpha level at 0.05. For hypothesis four and five, regression model will be used to test the significant linear relationship between the variables X and Y, and if the true slop is equal to zero. In using models to measure significant relationships between variables X and Y, it is tested whether slope is equal to zero.

The P-value procedure can be used for hypothesis testing. The P-value is the probability of obtaining a test statistic equal to or more extreme than the result observed. If the P-value is greater than or equal to 0.05, the null hypothesis is not rejected. The researcher will show the P-value in results and finding part with Pearson coefficients among variables for one through three hypotheses and r-square for hypothesis four and five.

Definition of Terms

The following are terms and definitions used in this study:

EVA: Economic Value added. A profit measure based on the concept of true economic income which include the cost of capital (Prober, 2000).

MVA: Market value added. The difference between firms market capitalization and the capital invested in the business (Milunovich & Tsuei, 1996).

CFO: Cash flow from operations obtained from subtracting accruals from EBEI (Biddle, et al., 1997).

EBEI: Net income before extraordinary items (Biddle, et al., 1997).

RI: Residual Income equals earnings plus after-tax interest expense less a charge on all capital (Biddle, et al. 1997).

ROA: Return on Asset. Net income plus interest expense divide by total assets

ROE: Return on Equity. Net income divides by shareholders equity

ROI: Return on Investment. Net income divides by liability plus equity

EPS: Earning Per Share. Net income subtracted by dividends divides by average outstanding shares.

CHAPETER 2

REVIEW OF THE LITERATURE

Basis of EVA

Backgrounds and Concept of EVA

In the 1980s, shareholder activism reached unprecedented levels and led to increasingly high pressure on firms to maximize shareholder wealth consistently (Bacidore, Boquist, Millbourn, & Thakor, 1997). The basic concept is that if managers are offered compensation based on shareholder wealth changes, their incentives will be better aligned with those of shareholders than is the case for the other type of contracts. In providing such contracts, however, the critical issue is which measure of shareholder performance to adopt in designing the contract. The obvious metric for evaluating firm performance is the stock price (Bacidore, et al., 1997). Stock price, however, may not be efficient because it is driven by many other factors that cannot be controlled by the firm's managers. Thus, any financial performance measure used in compensation must be highly correlated with changes in shareholder wealth. That is a fundamental tension that a good performance measure must resolve. A recent example of a performance measure that pursues to resolve this tension is Economic Value Added (EVA). This measure, proposed by Stern Steward Management Services, creatively connected the firm's accounting data to its stock performance (Bacidore, et al., 1997).

Economic Value Added (EVA) is the financial performance measure that comes closer than any other to capturing the true economic profit of an enterprise. EVA

developed by the consulting firm of Stern Stewart & Co. is corporate financial measurement and management system which has grown in popularity both within and outside the United States in the 1990s (Cordeiro & Kent, 2001). EVA is a measure of economic wealth creation that was devised in 1989 and an increasing number of companies are deciding to adopt EVA as a guiding principle for their corporate policy. The objective of EVA is to understand which business units best leverage their assets to generate returns and maximize shareholder value (Shand, 2000). The principle feature of EVA measure and its income is that, unlike traditional accounting measures, it reduces income by a charge for the cost of capital that includes the cost of the equity capital provided by owners. This charge has long been included in certain measures of income used by economists (McIntye, 1999).

When the term EVA appeared first time in 1989, it received little attention until a September, 1993 article in Fortune magazine provided a detailed description of the EVA concept and successful EVA adoptions by major corporations in the United States (Chen & Dodd, 2001). According to Stern Stewart Co. (2001), more than 300 corporations worldwide have been working with EVA (www.sternstewart.com, 2001).

The Basic concept of EVA is that the successful firm should earn at least its cost of capital. Firms that earn higher returns than financing costs benefit shareholders and account for increased shareholder value. In its simplest form, EVA can be expressed and calculated as the following formula:

EVA = Net Operating Profits after Taxes (NOPAT) – WACC × Invested Capital

Where:

WACC is weighted average cost of capital

An alternative EVA definition is the "spread" approach, which is defined as:

EVA = (Return on Invested Capital – WACC) × Invested Capital

Capital includes fixed assets and working capital. The weighted average cost of capital is a weighted average of the cost of debt and equity capital, where the weights are the market value of debt and equity. Thus, EVA measures the excess of a firm's operating income over the cost of the cost of the capital employed in producing those earnings. It relates operating income over the cost of the capital in an addictive operation. This is in contrast to return on assets (ROA), which compares operating income to the capital employed in a multiplicative operation (McIntye, 1999).

Advantage of EVA

An advantage using EVA as financial performance measure is that it takes into account the company's total cost of capital. Another advantage of EVA is that it eliminates the confusion and conflicts that arise when a firm uses multiple performance measures, such as earning per share, return on investment, return on equity and net profit margin. EVA also can be used to increase operational efficiency by restructuring operations, focusing on capital employed and identifying process improvements (Kudla & Arendt, 2000).

NOPAT is calculated as net operating income after depreciation, adjusted for items that move the profit measure closer to an economic measure of profitability. Adjustments include such items as : additions for interest expense after-taxes (including any implied interest expense on operating leases); increases in the net capitalized R&D expenses; increases in the LIFO reserve; and goodwill amortization. Adjustments made to

operating earnings for these items reflect the investments made by the firm or capital employed to achieve those profits. Stern Stewart has identified as many as 164 items for potential adjustments, but often only a few adjustments are necessary to provide a good measure of EVA (Prober, 2000).

Criticism about EVA

EVA has achieved tremendous success in business world for a decade, however, there are growing number of researchers who criticize the effectiveness of EVA compare to traditional accounting measures and the ability to predict the stock price. Keys, Azamhuzjaev, and Mackey (1999) argued that there are several weaknesses of EVA: First, EVA does not measure economic value or economic profits as stated by Stern Stewart. Although economic value and economic profits are conceptually sound, they have serious practical problems. Economic value of an organization is its expected future cash flows discounted at the cost of capital. Economic profit is the difference in the economic value at two points in time, adjusted for investment decisions (Keys, Azamhuzjaev, & Mackey, 1999).

Second, there are no consistent definitions of EVA, NOPAT (Net Operating Profits After Taxes), or capital. EVA does not measure cash flow from operations, which is easily defined, nor does it measure economic income. Capital is inconsistent with market value of assets and economic value of assets. To define NOPAT, GAAP net income would have to be first defined and then over 160 adjustments would have to be defined. To define capital, GAAP, Generally Accepted Principles, assets and short-term

debt would have to be defined, and then more than 160 adjustments would also have to be defined (Keys, et al., 1999).

Third, EVA is too complex. Business people have enough trouble trying to understand GAAP, let alone over 160 accounting adjustments to GAAP. However, not all of the 160 adjustments have to be used according to Stem Stewart. Fourth, EVA is inadequate as a single measure for any decision. EVA only measures short-term profitability (Keys, et al., 1999).

In addition, support for EVA is based on the assumption that positive values reported for residual income and EVA indicate increases in firm value, and negative values indicate decreases. However residual income and EVA are numbers derived from a firm's accounting system; like other such numbers, they can be affected by the accounting methods used in determining operating income and reported asset values. As a result, a firm can be report positive residual income or EVA when firm value actually is decreasing, and negative residual income or EVA when firm value is decreasing. Moreover, the relative portion of residual income or EVA that is due to accounting method choice(in contrast to economic events) can be quite large (McIntye, 1999).

According to Pettit, earning-based measures have several failings. First, earning-based measures understate the cost of capital by completely ignoring the opportunity cost of equity capital. While the cost of debt is explicitly borne through an interest expense, implicitly the cost of equity under earnings per share is free. Second, earning-based measures mix and muddle the operating and financing sides of the business, making it more difficult to make comparisons across time periods, between companies, or even within a business. Third, earning-based measures confuse accounting anomalies with the

underlying economics of business, often leading to dysfunctional behavior among managers and top executives alike. Fourth, the incomplete nature of earnings makes it entirely inappropriate to handle the many business decisions that trade-off between profit margin and capital utilization such as pricing/terms and produce-to-order versus produce-to-demand (Pettit, 1998).

Market Value Added

Market value added (MVA) is another measure often used in conjunction with EVA. MVA provides a measure of the wealth created for investors and represents the difference between the market value of the firm and the investments of its owners. . Because MVA is the total amount of capital left in the business after adjustments for items such as R&D, it is a measure of the market's assessment of past success and the likelihood of the future EVA (Prober, 2000).

MVA is equal to the present value of the firm's expected future EVA. Additionally, since MVA is equal to the market value of the firm less the total "book capital" employed in the business, it appears that EVA is related to the essential value of the firm and its outstanding debt and equity securities (Grant, 1997). The expression between the firm's MVA and its EVA can be followed by:

MVA = Firm Value – Total Capital

MVA = (Debt plus Equity Value) – Total Capital

MVA = Present Value of expected future EVA

The calculation of MVA is relatively easier than EVA. In this study, MVA would be estimated by the first method which is total capital subtracts from firm value (market value). This study was also designed to examine the correlation between MVA and EVA to prove the relation between two significant value-added metrics.

Calculation of EVA

Net Operating Profit After Tax (NOPAT)

As showed simply above, the calculation of EVA can be explained by following equation: EVA = NOPAT – WACC × Invested Capital

The first step to calculate EVA begins with the Net Operation Profit After Tax (NOPAT). NOPAT is calculated as net operating income after depreciation, adjusted for items that move the profit measure closer to an economic measure of profitability. There are as many as 164 items for potential adjustment for NOPAT but only a few adjustments are necessary to provide a good measure of EVA (Prober, 2000). In this study, the researcher chooses interest expense and deferred tax difference as adjustment items cause these items are typical in the calculation of EVA. Net operating income will be added with net interest expense which can be achieved by subtracting tax saving from interest expense. The equation is:

EVA NOPAT = Net Income + Net Interest Expense + Deferred Tax Difference

Net Interest Expense = Interest Expense – Tax Savings on Interest

Tax Savings on Interest = Interest Expense ×Tax Rate

NOPAT is derived by deducting cash operating expenses from the sales. Interest expense is excluded because it is considered as a financing charge. Adjustments are designed to reflect economic reality and move income and capital to a more economically-based value. These adjustments are considered with cash taxes deducted to arrive at NOPAT. NOPAT is obtained by adding interest expense after tax back to net income after-taxes, because interest is considered a capital charge for EVA. Interest expense will be included as part of capital charges in the after-tax cost of debt calculation. Then, EVA is measured by deducting the company's cost of capital from the NOPAT value.

Cost of Capital (COC)

The second essential ingredient in the production of the firm's EVA estimate is the dollar cost of capital. In order to calculate the company's capital cost, one needs to know something about (1) EVA Capital, (2) the company's after-tax cost of debt financing, (3) the required return on equity (cost of equity), and (4) weighted average cost of capital (WACC).

(1) EVA Capital

The EVA capital can be estimated according to the equity capital after the adjustment. In this calculation of equity capital, the deferred tax will be added to the shareholder's equity of the firm. EVA capital then will be estimated by combine EVA

debt which includes note payable and long-term debt with equity capital after adjustment. The formula is:

EVA Capital : Equity Capital after Adjustment + Total EVA Debt

Equity Capital after Adjustment : Shareholder's Equity + Deferred Tax

EVA Debt : Note Payable + Long-term Debt

(2) Cost of Debt

The pretax debt cost is required to estimate the cost of debt. The pretax debt can be estimated with knowledge of the interest expense item on the income statement, and the total EVA debt figure on the balance sheet. The cost of debt then can be obtained by tax adjusting the pretax debt cost by the assumed corporate tax rate. The formula is:

Pretax Debt Cost : Interest Expense / Total EVA debt

Cost of Debt : Pretax Debt Cost × (1-tax rate)

(3) Required Return on Equity

Next, the cost of capital formula requires an estimate of the required return on equity (cost of equity). This major and important component of the firm's weighted average cost of capital can be calculated in many ways. In this paper, Capital Asset Pricing Model (CAPM), which is developed by William F. Sharpe (and others) during the mid-1960s and is now the most popular approach, will be used (Grant, 1997). In this asset pricing model, the company's equity cost is calculated by adding a business and financial

risk premium to the risk free rate (Rf) of interest. The total equity risk premium is determined in a CAPM context by multiplying an estimate of the economy-wide "Market Risk Premium (MRP)" by expected relative risk (beta) of the company's stock.

The required return on equity formula is:

Required Return on Equity (Cost of Equity): Rf + (MRP ×Beta)

Market Risk Premium (MRP): Market Return – Rf

Normally, US Treasury Bond is used as risk free rate and S&P 500 return rate is adopted as market return (Grant, 1997). The beta is obtained easily through the financial newspapers or financial software such as Compstat.

(4) Weighted Average Cost of Capital

Once those rates, cost of debt and cost of equity, are determined, these are combined with the relative proportions of capital to calculate the weighted average cost of capital (WACC). It is that overall rate, when combined with all capital that produces the total capital charge used in EVA (Prober, 2000). The following shows the formula of WACC:

WACC = (Debt Weight × Cost of Debt) + (Equity Weight × Cost of Equity)

Debt Weighted = EVA Debt / (EVA Debt + Market Value)

Equity Weighted = Market Value / (EVA Debt + Market Value)

After WACC is estimated, EVA cost of capital can be produced by EVA capital multiplying by WACC. This EVA cost of capital will be deducted from NOPAT for full extent of EVA.

Cost of Capital = EVA Capital ×WACC

EVA = NOPAT – Cost of Capital

The basic income statement and balance sheet provided some necessary, yet incomplete information for EVA calculation. These traditional accounting statements are helpful in estimating firm's NOPAT and the firm's after-tax cost of debt. However, the income statement and balance sheet fail to provide any information regarding the shareholder's required rate of return for assuming the firm's operating and financial risk. Discovering the wealth implications of this accounting omission is the heart of the EVA uniqueness (Grant, 1997).

Previous Empirical Studies on EVA

There are many studies performed so far after Stern Stewart introduced EVA metric in 1989. Most of researches were designed and conducted to figure out whether EVA is more correlated with stock return or stock price than other traditional accounting measurement such as ROI, ROE, and ROA or not. However, the results are totally different depend on the researchers.

Milunovich and Tsuei (1996)

Steven and Albert (1996) applied the EVA measure to computer industry. They believe that EVA is superior to earnings and other financial measures because it takes into account the capital used to create profits. They argued that EVA is useful to investors in analyzing results as well as to managements in running their companies to maximize shareholder value.

In this study, they found that the trend, rather than the level of EVA is what drives stock prices. They brought IBM as example of how stock prices fluctuate when EVA become less negative. They showed that even EVA stayed in negative value, the stock price went to up as EVA became less negative.

The main purpose of this research was to determine which variable is best correlated with stock price, the primary determinant of change in MVA. For this study, they established the correlation between MVA and other financial measures, such as ROE, EPS growth, EPS, free cash flow, free cash growth, and EVA in computer companies from 1990 to 1995.

They found that EVA is the most correlated variable than other financial tools with MVA. EPS growth comes second, and free cash flow is the last variable. Table I shows the MVA correlation with financial metrics.

Table I. Server MVA correlation with financial metrics

Metrics	R Square
EVA	0.42
EPS Growth	0.34
ROE	0.29
EPS	0.29
Free Cash Growth	0.25
Free Cash Flow	0.18

They found that EVA has a higher correlation with MVA than other measures, and the most important determinant of MVA is stock price, so successfully predicting MVA helps project the stock price. Their regression analysis showed changes in EVA explaining 42% of changes in MVA, not spectacular but the most of the six metrics they tested.

Lehn and Makhija (1997)

Lehn and Makhija (1997) performed study with sample of 452 large U.S. companies for which they were able to collect the necessary performance data for each year during the period 1985 to 1994. They choose EVA and MVA as well as ROA (Return on Asset), ROE (Return on Equity), and ROS (Return on Sale) as accounting measures to study the correlation with stock return. They performed cross-sectional analysis to study the correlation coefficients between those variables and stock return.

Each performance is calculated as a ten-year average over the same period. Table II shows the results of this analysis.

Table II. Cross-sectional correlation coefficients for 10-year average yearly rates

	EVA	MVA	ROA	ROE	ROS	RETURN
EVA	1.000					
MVA	0.759	1.000				
ROA	0.731	0.739	1.000			
ROE	0.736	0.623	0.725	1.000		
ROS	0.537	0.459	0.647	0.521	1.000	
RETURN	0.590	0.580	0.455	0.455	0.388	1.000

This table reveals that EVA and MVA are more highly correlated with stock returns than are the three accounting profit rates. The correlation coefficients between stock returns and EVA and MVA are 0.59 and 0.58, respectively. The corresponding correlation coefficients between stock returns and the three accounting measures are 0.46 for both ROE and ROA, and 0.39 for ROS. Based on this criterion, EVA and MVA appear to be somewhat better long-run performance measures than conventional accounting profit rates.

Clinton and Chen (1998)

Clinton and Chen (1998) designed this study based on the question why performance evaluation metrics have been so important to companies in the '90s. In attempting to answer that question, they analyze the relationship of various performance measures to stock price and stock returns. In addition to EVA, they examined Cash Flow Return on Investment (CFROI), and Residual Cash Flow (RCF) as another new measure

worth considering. They measured stock prices and stock returns in association with each of these tools and compared results to those for more traditionally reported and used operating measures and for the age-old standard ROI-type measures.

They selected 325 companies from Standard & Poor's 500 and the Stern Stewart 1996 Performance 1,000 databases and studied the five years from 1991 to 1995. They conducted correlation analysis to examine the association of various performance measures to both stock prices and stock returns for each of the five years. The results of this study shows in Table III and VI.

Table III. Correlations of performance measures with stock price (Stock prices are annual closing prices)

	1995	1994	1993	1992	1991
Operating income after tax per share (OIAT)	.163	.518	.477	.119	.046*
Stern Stewart adjusted OIAT	.504	.596	.580	.557	.481
Operating cash flow per share	.490	.587	.639	.605	.473
Residual income per share	.065*	.029*	-.023*	-.057*	-.074*
EVA per share	.106	-.057*	-.145	-.097	-.076*
Residual cash flow per share(RCF)	.397	.393	.394	.336	.265
ROI	.058*	.007	.083*	.104	.046*
Stern Steward adjusted ROI	.175	.103	.054*	.167	.217
Cash flow return on investment (CFROI)	.196	.079*	.065*	.093	.112

*These correlations are not significant at a level of 5%

Table IV. Correlations of performance measures with stock return

	1995	1994	1993	1992	1991
Operating income after tax per share(OIAT)	.189	.233	.300	.226	.054*
Stern Stewart adjusted OIAT	.271	.155	.264	.351	.287
Operating cash flow per share	.239	.182	.219	.562	.187
Residual income per share	.142	.150	.164	.070*	.005*
EVA per share	-.098	.057*	.078*	-.078*	-.051*
Residual cash flow per share(RCF)	.215	.147	.139	.496	.130
ROI	.096	.156	.131	.074*	.156
Stern Steward adjusted ROI	.144	.214	.027*	-.026*	-.360
Cash flow return on investment(CFROI)	.144	.131	.049*	.143	.282

*These correlations are not significant at a level of 5%

Aside from the popular claim that deducting cost of capital would provide a more useful result, all three residual-based measure showed a lower association with stock values than their traditionally reported counterparts, according to either Table III or VI. In fact, most of the RI and EVA correlations with stock prices or stock returns were either insignificant or of unexpected negative signs. This may be because the market is not as efficient as one might assume and is not adequately considering the cost of capital in valuing stock.

While residual-based measures have been heavily promoted as better choice than ROI-based measures, their empirical results were mixed in this regard. Although the two new cash-based measures provided different results (i.e., RCF was more highly associated with stock value than CFROI), the same cannot be said about RI versus ROI or

EVA versus adjusted ROI. These produced either insignificant or inconsistent correlations with stock values and were therefore indistinguishable in their relative lack of contribution to assessing firm value. This would suggest that if a firm is interest in using a performance measure to link profit to capital, the RCF measure may be the best choice. Clearly, the superiority of RCF is apparent over either EVA or CFROI, the recently popular measures produced by consulting firm.

EVA was the only measure that did not reveal a consistently significant association with either stock price or stock return. The significance of the conclusion regarding the lack of significant correlation for EVA with either of the stock measure is important in the light of Stern Stewart's claim for the measure.

Biddle, Brown, and Wallace (1997)

Biddle, Brown, and Wallace (1997) tests the assertions that EVA is more highly associated with stock returns and firm values than accrual earnings, and evaluates which component of EVA, if any, contribute to these associations. In this study, the researchers provide empirical evidence on whether current period realizations of residual income (RI) and EVA are more closely associated with stock returns than are traditional accounting measures such as earnings and cash from operations (CFO).

The first and main empirical question they address is: Do EVA and/or RI dominate currently mandated performance measures, earnings and operating cash flow, in explaining contemporaneous annual stock returns?

This relative information content question examines which variable (EVA, RI, CFO or earnings) have a greater association with contemporaneous stock returns and

provides a direct test of one of Stern Stewart' claims about the superiority of EVA. Using a sample of 6,174 firm-years representing both adopters and non-adopters of EVA over the period 1984-1993, the results of the test indicate that earnings (R square = 12.8%) is significantly more highly associated with market-adjusted annual returns than are RI (R square = 7.3%) or EVA (R square = 6.5%) and that all three of these measures dominate CFO (R square = 2.8%). Table V shows correlations among these measures.

Table V. Descriptive statistics on the dependent and independent variable in relative information content tests

	Dependent	Independent			
	MktAdjRet	EBEI	EVA	RI	CFO
MktAdjRet	1				
EBEI	0.247	1			
EVA	0.153	0.592	1		
RI	0.155	0.652	0.900	0.900	
CFO	0.138	0.307	-0.125	-0.122	1

Correlations between the independent variables are all positive and significant except that EVA and RI are negatively correlated with CFO. EBEI (Earning Before Extraordinary Items) has the highest correlation with market adjusted return.

In summary, there is little evidence to support the Stern Stewart claim that EVA is superior to earnings in its association with stock returns or firm values. In no case does EVA significantly outperform EBEI in tests of relative information content. On the contrary, in most cases the evidence suggests that earnings outperform EVA.

Application of EVA in the Hospitality Industry

Even though EVA has been gaining the popularity in the 1990', not many studies have performed so far in the hospitality industry. Ganchev adopted EVA measurement when he explained the strategy in pursuit of an acquisition or development of hotel real estate (Ganchev, 2000). The article reviews a method of forecasting cash flow during an explicit forecast period and calculating the investment reversion by applying a value-driver formula. In this study, he provided EVA as a tool to analyze the project's profitability and to understand how return on investment changes with shifts in strategy. He also stated that EVA helps the investor evaluate the asset performance in any single year, while the DCF (Discounting the Cash Flow) shows the investment returns over the entire life of the projects.

However so far, there is no study performed in the hospitality industry to investigate if EVA is better indicator than accounting measures in terms of explaining stock price.

CAPTER 3

METHODOLOGY

This chapter contains five sections: the research design, measurement of variables, sampling plan, data collection procedure, and analytical procedures. The financial data of the hospitality firms during the period of 1997 through 2000 will be used. The research results will aid in the decision making of the investors and firm's managers because the findings of this study will provide helpful information about which measurement is better to predict or analyze future stock price and shareholder's wealth of the company.

Research Design

This study used secondary data, which were primarily collected from Standard & Poor's Compustat database, to calculate EVA and MVA. The research in this study was carried out through the calculation of EVA and MVA. The researcher attempted to collect EVA data from Stern Stewart 1,000 EVA top ranking list. However, most hospitality firms failed to be ranked in this list except top hotel and restaurant companies because of their sizes. Thus, for the purpose of this study, EVA for all hospitality firms in our sample based on the Stern's recommended method. The calculated process was explained in the literature review section. The main objective of this study was to determine which

measurement, EVA and traditional accounting measurements, is more efficient to determine stock price.

Measurement of Variables

There are ten variables selected to perform the empirical test of this study. These variables are derived based on previous empirical studies that were used to test the prediction ability of EVA on future stock price or shareholder's wealth.

Stock Price: Stock price was selected as variable to estimate the efficiency of EVA, MVA, and accounting measures for corporations' performance and shareholder's wealth creation. Stock price change is well known as the most important and relevant factors that should be considered. Besides stock price, following variables are selected to study the correlation with stock price.

Value Added Metrics

EVA (Economic Value Added): Net Operating Profits After Taxes – Weighted Average Cost of Capital (WACC) * Invested Capital

MVA (Market Value Added): Debt plus Equity Value – Total Capital

Traditional Accounting Measures

ROA (Return on Asset): (Net Income + Interest Expense) / Total Assets

ROE (Return on Equity): Net Income / Shareholders Euqity

ROI (Return on Investment): Net Income / (Liability + Equity)

EPS (Earning per Share): $\frac{\text{Net Income} - \text{Dividends on Preferred Stock}}{\text{Average Outstanding Shares}}$

EVA Components

CFO (Cash Flow Operation): EBEI – Deferred Tax Difference

EBEI (Earning Before Extraordinary Items): NOPAT – Net Interest Expense

RI (Residual Income): NOPAT – (WACC *Capital) or, EVA – Accounting Measures of Operating Profits.

Sampling Plan

The researcher placed all 53 publicly traded hospitality related firms from Compustat within category of hotels and motels, and eating and drinking places which have SIC codes 7000 and 5800, respectively. Eighteen companies were eliminated then due to inadequate performance information for calculation of the EVA and MVA. Thus, the sample for this study is 35 (N=35) hospitality companies, which include hotels and restaurants. The entire company list with ticker code is shown in Appendix A. All company lists that were excluded from analysis of this study were included in Appendix A.

Data Collection

The data required for this research includes EVA and MVA, as well as ROA, ROI, ROE, and EPS as traditional accounting measure. Also, year ending stock price is

necessary as a variable of the research model. Traditional accounting measures were selected based on the findings from previous studies which test the relationship between EVA and accounting measures.

The data necessary for this research was the year end performance for four years from 1997 to 2000. Balance sheets and income statements for each company were used to collect the relative information for estimating EVA, MVA, and accounting measures along with stock price were collected from Compustat. The Compustat database contains fundamental financial and market data for U.S. and Canadian corporations. It provides extensive coverage of annual and quarterly income statement, balance sheet, statement of cash flows, and supplemental data items on publicly held companies (Standard & Poor's Compustat, 1995). Data collected from Compustat database is shown in the Appendix B with mnemonic code and item number.

Analytical Procedure

Selections of appropriate analytical procedures were based on several considerations. Procedures were chosen to test the hypothesis most effectively. The type of variables and its scale was considered. The data calculated from Microsoft Excel 2000 and obtained from Compustat were entered into a computer using SPSS 6.1 for windows (SPSS, 2000). SPSS software was used for statistical tests.

Correlation Analysis

Correlation measures the degree of association between two variables. A Pearson product correlation was run between the stock price and each variable to calculate the correlation. Then, a Pearson product correlation was run between EVA and MVA, as well as EVA and traditional accounting measurements. The strength of a relationship between two variables in a population is usually measured by the coefficient of correlation, r, whose value ranges from negative 1 for perfect negative correlation to positive 1 for perfect positive correlation. All tests were two tailed since the values of each variable show both positive and negative numbers. Research questions from one to three will be answered based on correlation tests.

Regression Analysis

A regression analysis was used to examine the linear relationship between two variables (X and Y). One of the objectives of regression analysis is to develop an equation that will allow the investigator to predict the response for given values of the predictor variables. To investigate cause and effects relationship, stock price would be picked as dependent (Y) variable and EVA and its components as independent variables (X) of each simple regression for hypothesis four and EVA and ROA, ROE, and EPS as independent variables with multiple regression for hypothesis five. The coefficient of determination (R square) is defined as the percentage of the total variation in the dependent variable that is explained by the regression equation. The higher the coefficient of determination, the greater the explanatory power of the regression equation,

and the better the prediction power. Question four and five will be answered with results of these regression models

Multicollinearity

Multicollinearity is said to be present in a multiple regression analysis when the predictor variables are correlated. A Multicollinear condition within a data set reduces the efficiency of the estimates for the regression parameters.

A formal method of detecting the presence of Multicollinearity that is widely used is by means of variance inflation factors (VIF). These factors measure how much the variances of the estimated regression coefficients are inflated as compared to when the independent variables are not linearly related. A maximum VIF value in excess of 10 is often taken as an indication that Multicollinearity may be unduly influencing the lease squares estimates. Since the largest VIF value of all multiple regression model is less than 10, it indicates that serious Multicollinearity problems does not exist.

CHAPTER 4

FINDINGS AND RESULTS

The previous chapters have provided the basis for the statistical model of the study as well as the provided theoretical foundation behind the specification. In this chapter, the summary results and findings of the calculation of MVA as well as EVA, and of correlation and regression model will be presented.

The main purpose of this study was to determine which variable is most correlated with stock price. Variables included EVA, MVA and traditional accounting measures, such as ROA, ROE, ROI, and EPS were selected based on the past studies performed similar test. Traditional accounting measures were obtained from Compustat, and EVA as well as MVA was calculated as described in the literature review section using Microsoft Execl 2000.

Results from Calculation of EVA and MVA

Chapter two explained the calculation of EVA and MVA. Based on this calculation, EVA and MVA values over the period from 1997 to 2000 could be achieved by sampling 35 hospitality firms. The main calculation steps were attached in the Appendix C and D. Table 6 and 7 reports the best and worst 10 companies for NOPAT in each year, respectively.

Table VI. Best 10 NOPAT companies in each year ($ Millions)

Rank	1997		1998		1999		2000	
	Company	NOPAT	Company	NOPAT	Company	NOPAT	Company	NOPAT
1	McDonald's	1,978	Starwood	2,344	McDonald's	2,307	McDonald's	2,272
2	Hilton	355	McDonald's	1,846	Hilton	1,126	MGM	2,003
3	Marriott	337	Cendent	668	Harrahs	486	Starwood	693
4	Wendy's	165	Marriott	408	Marriott	438	Hilton	558
5	Cendant	162	Hilton	378	Starwood	420	Marriott	542
6	Harrahs	148	Harrahs	229	Cendent	321	Cendant	453
7	MGM	143	Wendy's	141	Wendy's	181	Wendy's	182
8	Sun Int.	105	Outback	96	MGM	156	Outback	150
9	Lone star	70	Hospitality	94	Hospitality	149	Hospitality	149
10	Hospitality	68	Prime	85	Outback	128	Extend.Stay	148

Table VII. Worst 10 NOPAT companies in each year ($ Millions)

Rank	1997		1998		1999		2000	
	Company	NOPAT	Company	NOPAT	Company	NOPAT	Company	NOPAT
1	Starwood	-230	Fresh Choice	-6.3	Chart house	-2.3	Sun Int	-91
2	Chart House	-28	Grill Con.	-1.2	Santa Rest.	-2.0	Chart House	-8.6
3	Rare hosp.	-11	Furr Rest.	-1.1	Grill Con.	-0.2	Santa Rest.	-0.8
4	J.Alexander	-5.3	J.Alexander	-0.3	Eateries	0.1	Grill Con.	0.3
5	Furr. Rest.	-5.2	Landrys	0.4	Fresh Choice	0.5	Scholotzsky	0.4
6	Grill Con.	-0.4	Chart House	1.1	J.Alexander	0.6	J.Alexander	1.3
7	Fresh Choice	0.4	Ilx Resort	1.4	Scholotzsky	1.9	Eateries	1.7
8	Santa Rest.	0.8	Eateries	1.5	Ilx Resort	2.4	Fresh Choice	1.9
9	Eateries	1.6	Santa Rest.	1.8	Mainst&Main	2.5	Ilx.Resort	4.7
10	Ilx Resort	3.1	Mainst&Main	5.5	Lone Star	5.4	Main st&Main	7.1

Table VI and VII provide summary results of NOPAT. Table VI reveals the fact that McDonald's made first place from 1997 to 2000 except 1998 in which Starwood placed first position. This can be interpreted that in terms of NOPAT, McDonald's performed as the best business among hospitality firms and Hilton and Marriott followed next. Even if Starwood records best NOPAT in 1998, this firms ranked worst in 1997 because of huge negative net incomes during this year. The worst ten NOPAT companies

have negative or small amount of NOPAT which would be caused by negative or small amount of profit generated during this period.

In Table VIII and IX researcher lists highest and lowest companies cost of capital. Table VIII expresses the hospitality firms which spent highest cost of capital, and Table IX the lowest.

Table VIII. Companies highest cost of capital (COC) in each year ($ Millions)

Rank	1997		1998		1999		2000	
	Company	COC	Company	COC	Company	COC	Company	COC
1	McDonald's	1,077	McDonald's	1,223	McDonald's	1,195	McDonald's	1,809
2	Cendant	535	Cendant	914	Cendant	676	Cendant	1,069
3	Hilton	423	Starwood	702	Hilton	340	Starwood	722
4	Marriott	199	Marriott	229	Marriott	273	Hilton	578
5	Starwood	141	Hilton	179	Harrahs	257	MGM	563
6	Harrahs	116	Harrahs	165	Hospitality	129	Marriott	452
7	Wendy's	109	Extend. Stay	99	MGM	120	Harrahs	258
8	Aztar	98	MGM	96	Extend. Stay	114	Sun Int.	143
9	MGM	86	Wendy's	94	Sun Int.	113	Hospitality	130
10	Sun Int.	80	Hospitality	86	Wendy's	84	Wendy's	118

Table IX. Companies lowest cost of capital (COC) in each year ($ Millions)

Rank	1997		1998		1999		2000	
	Company	COC	Company	COC	Company	COC	Company	COC
1	Sant.Bar Rest.	0.3	Grill Con.	0.5	Grill Con.	0.5	Grill Con.	0.5
2	Furrs Rest.	0.5	Furrs Rest.	0.7	Eateries	0.6	Eateries	1.5
3	Grill Con.	0.5	Eateries	0.9	Furrs Rest.	1.3	Furrs Rest.	2.6
4	Eateries	1.1	Fresh Choice	1.7	Fresh Choice	2.0	Fresh Choice	2.9
5	Fresh Choice	1.9	Ilx Resort	3.5	Ilx Resort	3.7	J.Alexander	3.5
6	J.Alexander	2.6	Sant.Bar Rest.	3.7	J.Alexander	4.1	Ilx Resort	3.9
7	Ilx Resort	2.7	Main St.&Ma.	4.2	Main St.&Ma.	4.4	Sant.Bar Rest.	5.4
8	Main St.&Ma.	3.2	J.Alexander	4.3	Sant.Bar Rest.	4.5	Main St.&Ma.	7.1
9	Schlotzsky	4.3	Chart House	5.2	Chart House	6.3	Chart House	7.9
10	Chart House	6.4	Schlotzsky	5.5	Schlotzsky	6.9	Schlotzsky	9.5

Table VIII and IX provide the list of companies which spent cost of capital in each year from 1997 to 2000. Similar to table 6 and 7, most of companies listed in these

tables are appeared again in Table VIII and IX. According to Table, McDonald's records first place in each year in Table VIII, and Grill Concepts in Table IX except 1997 in which Santa Babara Restaurant Group ranked first.

Table X and XI show the top 10 best and worst EVA companies, respectively. McDonald's ranked first position in year 1997 and 1999, and second ranked in both 1998 and 2000. According to this table 10, McDonald's has created more company value than any other hospitality firm in terms of EVA. However, Cendant Corporation showed huge negative EVA value during 1997 to 2000, and ranks top worst EVA performances in hospitality firms.

Table X. Best 10 EVA companies in each year ($ Millions)

Rank	1997		1998		1999		2000	
	Company	EVA	Company	EVA	Company	EVA	Company	EVA
1	McDonald's	901	Starwood	1,655	McDonald's	1,111	MGM	1,439
2	Marriott	137	McDonald's	623	Hilton	786	McDonald's	462
3	Wendy's	56	Hilton	199	Harrahs	229	Marriott	89
4	MGM	56	Marriott	179	Starwood	217	Wendy's	64
5	Harrahs	32	Harrahs	64	Marriott	164	Applebees	47
6	Lone Star	25	Outback	48	Wendy's	96	Outback	41
7	Ryans Stkhs	25	Wendy's	46	Outback	72	Hospitality	35
8	Outback	24	Applebees	25	Applebees	38	Furrs Rest.	29
9	Applebees	23	Ryans Stkhs	24	MGM	35	Cec Ent.	26
10	Sun Int.	23	MGM	21	Furrs Rest.	30	Ryans Stkhs	25

Table XI. Worst 10 EVA companies in each year ($ Millions)

Rank	1997		1998		1999		2000	
	Company	EVA	Company	EVA	Company	EVA	Company	EVA
1	Cendant	-373	Cendant	-246	Cendant	-354	Cendant	-616
2	Starwood	-371	Landrys	-35	Lone Star	-33	Harrahs	-240
3	Hilton	-68	Lone Star	-19	Aztar	-25	Sun Int.	-215
4	Extend.Stay	-52	Extend.Stay	-18	Landrys	-18	Extend.Stay	-40
5	Chart House	-35	Aztar	-18	Prime Hosp.	-15	Starwood	-29
6	Aztar	-26	Sun Int.	-13	Chart House	-8	Lone Star	-27
7	Rare House	-20	Fresh Choice	-8	Sant.Bar Rest.	-7	Landrys	-21
8	Prime Hosp.	-12	Chart House	-4	Schlotzsky	-5	Hilton	-20
9	J.Alexander	-8	J.Alexander	-4	J.Alexander	-3	Chart House	-15
10	Furr Rest.	-6	Ilx Resort	-2	Hammons	-2	Prime Hosp.	-15

Table XII and XIII provide the information on best and worst MVA companies. It provides almost same results from Table X which provided top EVA creators. McDonald's ranked first place from 1998 to 2000. Starwood, however, placed worst MVA ranking in 1998 and 1999.

Table XII. Best 10 MVA companies in each year ($ Millions)

Rank	1997		1998		1999		2000	
	Company	MVA	Company	MVA	Company	MVA	Company	MVA
1	Cendant	24,304	McDonald's	41,362	McDonald's	43,045	McDonald's	33,595
2	McDonald's	22,746	Cendant	11,221	Cendant	15,957	Marriott	6,872
3	Marriott	7,248	Hilton	4,735	Marriott	4,828	Cendant	3,763
4	Hilton	3,421	Marriott	4,470	MGM	1,719	Wendy's	1,780
5	Starwood	1,950	Wendy's	1,585	Harrahs	1,684	Harrahs	1,723
6	Wendy's	1,521	Outback	1,412	Wendy's	1,353	Starwood	1,416
7	Harrahs	1,149	Papa John	1,035	Outback	1,247	Hilton	1,326
8	Outback	960	Harrahs	664	Hilton	1,232	Outback	1,193
9	MGM	934	Sun Int	621	Applebees	546	Cec Ent.	632
10	Papa John	797	MGM	369	Cec Ent.	542	Applebees	507

Table XIII. Worst 10 MVA companies in each year ($ Millions)

Rank	1997		1998		1999		2000	
	Company	MVA	Company	MVA	Company	MVA	Company	MVA
1	Aztar	-162	Starwood	-1,009	Starwood	-869	Hospitality	-205
2	J.Alexander	-8.2	Aztar	-237	Hospitality	-443	Lone Star	-197
3	Furrs Rest.	-7.8	Lone Star	-204	Extend.Stay	-265	Sun Int.	-165
4	Rare Rest.	-4.1	Landrys	-181	Prime Hosp.	-201	Landrys	-150
5	Ilx Resort	-2.4	Hospitality	-140	Lone Star	-189	Prime Hosp	-143
6	Main St.&Ma.	5.8	Prime Hosp.	-73	Landrys	-161	Sholodge	-68
7	Eateries	7.8	Sholodge	-52	Sholodge	-68	Schlotzsky	-53
8	Grill Con.	11	Ilx Resort	-17	Santa Rest.	-26	Furrs Rest.	-32
9	Chart House	15	J.Alexander	-12	Schlotzsky	-25	Santa Rest.	-31
10	Sholodge	34	Fresh Choice	-11	Ilx Resort	-19	J.Alexander	-22

Presentation and Discussion of Summary Results

Findings from Correlation Analysis

In chapter 3 methodology, the researcher described a number of variables. To reduce the heteroscedasticity in the data, the researcher deflated all EVA and MVA data including components of EVA such as CFO, EBEI, and RI, by the EVA capital (Biddle, et al. 1997; Lefkowitz, 1999). The variable definitions, means, and standard deviations for these variables appear in Table XIV.

One of the objectives of this research is to obtain a better understanding of the characteristics of EVA. The main question is how EVA can contribute to create owner's value and can be used to predict the stock price. In this sense, it is important to review of the correlation coefficients between stock price and EVA along with traditional accounting measurements. This may provide crucial insights.

Table XIV. Variable Definitions, Means, and Standard Deviations

Variable	Definition	Mean	Standard Deviation
Stock Price	Year Ending Stock Price	15.9983	13.9332
Adj. EVA	Capital Adjusted Economic Value Added	13.2E-04	0.1048
Adj. MVA	Capital Adjusted Market Value Added	0.6385	1.5906
ROA	Year Ending Return On Assets	3.7692	6.9323
ROE	Year Ending Return On Equity	4.8708	32.7160
ROI	Year Ending Return On Investment	4.5849	10.2173
EPS	Year Ending Earning Per Share	0.6574	1.0203
Adj. CFO	Capital Adjusted Cash Flow Operation	4.5E-02	0.1034
Adj. EBEI	Capital Adjusted Earning Before Extraordinary Items	5.2E-02	0.1044
Adj. RI	Capital Adjusted Residual Income	5.1E-04	0.1051

The researcher conducted correlation analysis to examine the association of various performance measures in relation to stock price for a four year period. The results are summarized in Table XV. This table illustrates that EPS shows highest association as 0.386% correlation coefficients with stock price. ROA and ROI follow the next. Adjusted MVA shows a higher correlation than ROE, however, it is still less than other traditional accounting measures. Adjusted EVA recorded the lowest correlation coefficients (0.186) with stock price among variables. Accordingly, the first research hypothesis that states EVA is highly correlated with stock price than other traditional accounting measures, is rejected. This suggests that EVA may not necessarily affect stock price in the hospitality industry.

Table XV. Correlation coefficients for 4-year average yearly rates

	Stock Price	Adj. EVA	Adj. MVA	ROA	ROE	ROI	EPS
Stock Price							
Adj. EVA	0.190*						
Adj. MVA	0.224**	0.177*					
ROA	0.312**	0.909**	0.308**				
ROE	0.213*	-0.242**	0.087	-0.53			
ROI	0.269**	0.941**	0.229**	0.977**	0.21*		
EPS	0.386**	0.693**	0.089	0.758**	0.048	0.728**	

*. Correlation is significant at the 0.05 level (two-tailed)
**. Correlation is significant at the 0.01 level (two-tailed)

The correlation coefficients between adjusted EVA and traditional measurements reveal that adjusted EVA is highly correlated with ROI (0.941) and ROA (0.909). Adjusted EVA also shows a close correlation with EPS (0.693). However, the coefficient between adjusted EVA and ROE is negative -0.242, indicating a negative relationship. All the relationships are statistically significant at the 0.01 level. The second research hypothesis that EVA is significantly correlated with traditional accounting measures failed to reject.

Adjusted EVA and adjusted MVA turned out to be significant at the 0.05 level with a coefficient of 0.177. The third hypothesis, adjusted EVA is significantly correlated with adjusted MVA, is supported.

Findings from Regression Analysis

Simple regression analysis was performed to examine which components of EVA, if any, contribute to association with stock return. Table XVI provides simple regression results for each of four independent variables.

Table XVI. Simple Regression Results of EVA and Components

Models	Variables					Number of
	Dependent	R Square	F-Value	t-Value	p-Value	Observations
1	Adj. EVA	0.036	5.141	2.267	0.025	140
2	Adj. CFO	0.040	5.811	2.411	0.017	140
3	Adj. EBEI	0.049	7.043	2.654	0.009	140
4	Adj. RI	0.038	5.409	2.326	0.021	140

Dependent variable with each model: Stock price

The R square terms range from 3.6 to 4.9 percent in simple regression models. It is important to note that this indicate that 95.1 to 96.4 percent of variation is left unexplained in model one to four. If R square is above 10 percent, it is usually accepted in many academic journals of social science. However, it is not uncommon to find that R square is less than 5 percent in finance literature. The results are still within an acceptable range.

Among four models, model three with adjusted EBEI as dependent variable is most significant variable. Adjusted CFO and adjusted RI follow next, respectively. Adjusted EVA shows the least significant among variable. This can be interpreted that EVA components, especially EBEI, explain stock price better than EVA itself. So that all the models are significant at 5 percent level, the hypothesis four that Adjusted EVA affects significantly on stock price, is accepted.

Table XVII provides the results of multiple regression model. The most significant variable is found to be ROA. However, EVA turned out to be not significant at 5% level. The hypothesis five that Adjusted EVA and traditional accounting measures contribute significantly to stock price is rejected.

Table. XVII. Multiple Regression Results of EVA and Accounting Measures

Models	Variables Independent	Beta	t-Value	p-Value	Number of Observations
5	Intercept	9.68	5.985	0.000	140
	Adj. EVA	-0.282	-1.375	0.171	
	ROA	0.384	1.859	0.065	
	ROE	0.171	1.981	0.050	
	EPS	0.343	2.938	0.004	

R Square: 0.262
Dependent variable: Stock price

CHAPTER 5

CONCLUSIONS

Conclusions

Motivated by increased use in practice and increased interest in the media and among academics, the researcher examined the relationship between EVA and stock price in the hospitality industry. This study was designed to answer the question; what is the best metric for measuring hospitality industry performance in terms of stock price? To investigate if EVA is superior to traditional accounting measures in association with stock movement in the hospitality industry, correlation and regression analyses were used. This study also investigated which component of EVA, if any, has higher prediction ability on stock price.

Several researchers performed empirical analysis to investigate the assertion of Stern Steward that EVA is better performance measure in prediction of stock price or stock return. Lehn and Makhija (1997) indicated in their study that EVA and MVA are more highly correlated with stock return than ROA, ROE, and ROS. However, Clinton and Chen (1998), and Biddle, Brown and Wallace (1997) found that there is no clear evidence that EVA outperformed other measures. The results of each study are quite contradictory depending on the researchers. Therefore, it would be difficult to generalize their findings in the hospitality industry.

The following major objectives were established: (1) to investigate if EVA is a better tool than other traditional accounting measurements in association with stock price,

(2) to determine the relationship between EVA and traditional accounting measurements, (3) to examine the correlation between EVA and MVA, and (4) to investigate which components of EVA contribute more to stock price. To answer the first three objectives, correlation analysis was used. To answer the fourth objective, regression analysis was used with stock price as a dependent variable. EVA and its components, Cash Flow, Earning Before Tax, and Residual Income, are included as independent variables.

The following Table XVIII shows the summary of the previous five hypotheses and presents the acceptance or rejection of the null hypotheses.

Table XVIII. Hypotheses and Results

Hypotheses	**Acceptance or Rejection of Null Hypothesis**
1. Adjusted EVA is highly correlated with stock price than other traditional accounting measures	Reject
2. Adjusted EVA is significantly correlated with traditional accounting measures.	Fail to Reject
3.There is a significant correlation between adjusted EVA and adjusted MVA.	Fail to Reject
4.Adjusted EVA significantly affects stock price.	Fail to Reject
5.Adjusted EVA and traditional accounting measures contribute significantly to stock price.	Reject

EVA was found to be significantly correlated (0.190) with stock price at 5 percent level. However, traditional accounting measures, EPS (0.386), ROA (0.312), and ROI (0.269) revealed higher correlation than EVA at the 1 percent level. Also, MVA showed a higher correlation (0.224) at the 1 percent level. This analysis provided the answer to the first question: Do EVA and MVA dominate traditional accounting measures in explaining annual stock price? Three accounting measures, such as, EPS, ROA, and ROI

recorded higher correlation than both EVA and MVA, while ROE (0.213) had a higher correlation than EVA but lower than MVA.

The second question of this study was: What is the relationship between EVA and each traditional accounting measures? EVA was found to be positively correlated with ROI (0.941), ROA (0.909), and EPS (0.693), however, negatively correlated with ROE (-0.242) at the 1 percent level. EVA was significantly correlated with all of the accounting measures.

The third question was: Is EVA highly correlated with MVA? According to the findings from correlation analysis, EVA showed a positive correlation (0.177) with MVA at the significant level of 5 percent level.

The last question concerned EVA and its components: Which components of EVA best explain about stock price? All of the variables, EVA, and its components, Cash Flow of Operation, Earning before Tax, and Residual Income were found to be significant at the 5 percent level. Among variables, EBEI showed the highest prediction ability with R square (0.049) and, CFO (0.04), RI (0.038), and EVA (0.036) followed the next. Thus, between EVA and its component, EBEI best explains stock price.

There is no clear evidence to support Stern Steward's claim that EVA is a better financial tool than traditional accounting measurements in association with stock price in the hospitality. In no case does EVA significantly outperform accounting measures in tests of relative information content. On the contrary, EPS and ROI were more highly correlated with stock price rather than EVA and MVA also. The findings of this study showed similar results with Biddle, Brown, and Wallace (1997) and Clinton and Chen

(1998) that EVA is not superior to earnings and accounting measures in its association with stock price or firm values.

However, there are possible reasons why the researcher does not detect a stronger relationship between EVA and stock price. Because one that the data needed to compute EVA are not easily estimated and the market did not have this data during the test period. Second, the market may have failed to recognize the reporting benefits of EVA through the period the researcher studied. It is clear that stock price is influenced greatly by expectations of the future, and the EVA pertains to the past. As more data become available, future studies will be able to assess whether market participants have come to appreciate EVA.

Since empirical research on the EVA or value added measurements of hospitality industry is still in its infancy, this analysis of factors affecting stock price or firm value of hospitality firms will be useful to both academicians and practitioners in understanding how the stock price movement affected by EVA and traditional measurements.

Limitations

This study is not free of limitations, which may present some potential subjects for further research. The research is limited in scope due to the following factors: The sampling plan used in this study provides no assurance that the sample is representative. There are many adjustment items to be considered in calculation of EVA, thus the value of EVA can be different depending on the researchers and items included in the calculation. Another limitation is the selection of the variables used in this study. The

variables used in this research were arbitrarily chosen among the variables that were used in other research studies and considered important factors that influence the stock price.

Suggestions for Further Researches

Since the hotel and restaurant companies have different financial structures, future research studies would divide both hotel and restaurant companies into independent samples rather than the entire hospitality industry. It would be helpful to analyze and compare EVA efficiency in both industries. Therefore a more meaningful and unique results could be produced. Future research should be undertaken possibly to discover the other factors that influence shareholders wealth. There should be other factors that affects the firm's value than stock price. Thus, future study would be enhanced through identify specific factors related to shareowner's wealth.

BIBLIOGRAPHY

Bacidore, J. M., Boquist, J. A., Millbourn T. T., & Thakor, A. A. (1997). The search for the best financial performance measure. Financial Analysis Journal, 53(3), 11-20.

Ballow, J. & Perrson, H. (2001). EVA and the chemical industry : How do companies rank? Chemical Market Reporter, 260(9), 27-30.

Burkette, G. & Timothy, P. H. (1997). The truth about economic value added. The CPA Journal 67(7), 46-50.

Biddle, G. C., Bowen, R. M., & Wallace, J. S. (1997). Does EVA beat earnings? Evidence on associations with stock returns and firm values. Journal of Accounting and Economics, 24(3), 301-336.

Chen, S., & Dodd, J. L. (2001). Operating Income, Residual Income And EVA™ : Which Metric Is More Value Relevant? Journal of Managerial Issues, 13(1), 22-65.

Chen, S., & James, D. (1997). Economic Value Added. Arkansas Business and Economic Review, 30(4), 4-6.

Clinton, B. D., & Chen, S. (1998). Do New Performance measures Measure Up? Management Accounting, October, 38-43.

Cordeiro, J. J., & Kent, D. D. (2001). Do EVA™ adopters outperform their industry peers? Evidence from security analyst earnings forecasts. American Business Review, 19(2), 57-63.

Ganchev, O. (2000). Applying Value Drivers to Hotel Valuation. Cornell Hotel and Restaurant Administration Quarterly, 41(5), 78-89.

Grant, J. L. (1997). Foundations of Economic Value Added. New Hope: Frank J. Fabozzi Associates.

Jackson, A. (1996). How and why of EVA at CS First Boston. Journal of Applied Corporate Finance, 9(1), 96-103.

Keys, D., Azamhuzjaev, M., & Mackey, J. (1999). EVA. CMA Management, 73(7), 30-34.

Kudla, R. J., & Arendt, D. A. (2000). Making EVA Work. AFT Exchange, 20(4), 98-102.

Lefkowitz, S. D. (1999). The correlation between economic value added and the market value of companies. Unpublished master dissertation, California State University, Fresno.

Lehn, K., & Makhija, A. K. (1997). EVA, Accounting Profits, and CEO Turnover : An empirical examination, 1985-1994. Journal of Applied Corporate Finance, 10(2), 90-97.

McIntye, E. V. (1999). Accounting choice and EVA. Business Horizons, 42(1), 66-72.

Milunovich, S., & Tsuei, A. (1996). EVA IN THE COMPUTER INDUSTRY. Journal of Applied Corporate Finance, 9(1), 104-115.

Pettit, J. (1998). Governing for Value. Ivy Business Quarterly, 63(3), 49-53.

Prober, L. M. (2000). EVA: A better financial reporting tool. Pennsylvania CPA Journal, Fall, 2000, 27-33

Shand, D. (2000). Economic Value Added. Computerworld, 34(44), 65-67.

Soter, D. (2000). Implementing an effective financial strategy. Aft Exchange, 20(1), 36-40.

SPSS Inc. (2000). SSPS 6.1 Syntax Reference Guide. Chicago, Illinois: SPSS Inc.

Standard & Poor's Compustat. (1995). Englewood, CO: McGraw-Hill.

Stewart, B. (1994). EVA : fact or fantasy? Journal of Applied Corporate Finance, 7(2), 71-84.

Stewart, B. (1995). Round table. Journal of Applied Corporate Finance, 7(2), 46-70.

Tully, S. (1993) The real key to creating wealth creators. Fortune, 20 September, 40.

*w*w. sternstewart.com. (2001)

APPENDIXES

APPENDIX A

COMPANY LIST

	Company Name	Ticker	Status		Company Name	Ticker	Status
1	Applebees Intl. Inc.	APPB	Included	28	New World Coffee	NWCI	Excluded
2	Aztar Corp.	AZT	Included	29	Main Street & Main	MAIN	Included
3	Buca	BUCA	Excluded	30	Maxican Restaurants Inc.	CASA	Excluded
4	California Pizza Kitchen	CPKI	Excluded	31	Marriott Intl. Inc.	MAR	Included
5	Candlewood Hotel Com.	CNDl	Excluded	32	McDonald Corp.	MCD	Included
6	CEC Entertainment Inc.	CEC	Included	33	MGM Mirage	MGG	Included
7	Cendant Corp.	CD	Included	34	Meristar Hotels & Resorts	MMH	Excluded
8	Chart House Ent. Inc.	CHT	Included	35	O Charleys Inc.	CHUX	Included
9	Chicago Pizza & Brewery	CHGO	Excluded	36	Outback Steakhouse Inc.	OSI	Included
10	Choice Hotels Intl. Inc	CHH	Excluded	37	Papa Johns Int. Inc.	PZZA	Included
11	Crestline Capital Corp.	CLJ	Excluded	38	Prime Hospitality Corp.	PDQ	Included
12	Eateries Inc.	EATS	Included	39	Park Place Entertain. Inc.	PPE	Excluded
13	Extended Stay America	ESA	Included	40	Resortquest Intl. Inc.	RZT	Excluded
14	Famous Daves Amer. Inc.	DAVE	Excluded	41	Rare Hospitality Intl. Inc.	RARE	Included
15	Fresh Choice Inc.	SALD	Included	42	Ryans Family Stk House	RYAN	Included
16	Four Season Hotels	FS	Excluded	43	Santa Babara Rest. Grp.	SBRG	Included
17	Furrs Restaurant Grp.	FRG	Included	44	Schlotzskys Inc.	BUNZ	Included
18	Grill Concepts Inc.	GRIL	Included	45	Sholodge Inc.	LODG	Included
19	Harrahs Entertainment Inc.	HET	Included	46	Suburban Lodges Amer.	SLAM	Excluded
20	Hilton Hotels Corp.	HLT	Included	47	Starwood Hotels&Resorts	HOT	Included
21	Hospitality Properties	HPT	Included	48	Sun Internatioal Hotels	SIH	Included
22	Ihop Corp.	IHP	Included	49	Trendwest Resorts Inc.	TWRI	Excluded
23	Ilx Resorts Inc.	ILX	Included	50	Total Ent. Rest. Corp.	TENT	Excluded
24	J Alexander Corp.	JAX	Included	51	Tricon Global Rest.	YUM	Excluded
25	Hammons John Q Hotels	JQH	Included	52	Westcoast Hospitality	WEH	Excluded
26	Landrys Seafood Rest.	LNY	Included	53	Wendy's Intl. Inc.	WEN	Included
27	Lone Star Steakhouse	STAR	Included	54			

APPENDIX B

Data Collected from Compustat

with Mnemonic and Item Number

DATA ITEM NAME	MNEMONIC CODE	ITEM NUMBER
Net Income	NI	A172
Deferred Tax	TXDB	A74
Interest Expense	XINT	A15
Tax Rate	TR	
Note Payable	NP	A206
Long-term Debt	DLTT	A9
Shareholder's Equity	SEQ	A126
Beta	BETA	
Market Return	MKRTX	
Market Value	MKVAL	
Stock Price	PRCC	A24
ROA	ROA	
ROE	ROE	
ROI	ROI	
EPS	EPSFXR	A139

APPENDIXES C

Net Operating Profit After Tax ($Millions)

From 1997 to 2000

Company 1997	Net Income	Deferred Tax Inc	Int. Exp	Pretax Inc.	Income Tax	Tax Rate	Tax Savings on Int.	Net Int Expense	EVA NOPAT
Applebees inc.	45.091	0.432	1.71	71.80	26.71	0.37	0.634	1.071	46.594
Aztar Corp	4.442	0	62.54	2.26	-2.19	0.40	25.017	37.526	41.968
Cec Entertainment	25.497	0	2.87	42.71	17.21	0.40	1.155	1.711	27.208
Cendant Corp	-217.2	366.6	50.60	257.30	191.00	0.74	37.562	13.038	162.438
Chart House	-31.118	0	3.29	-40.76	-9.64	0.24	0.779	2.513	-28.605
Eateries	1.399	0	0.31	1.97	0.57	0.29	0.090	0.220	1.619
Extended Stay Hotels	2.636	16.031	1.73	8.47	5.84	0.69	1.193	0.538	19.205
Fresh Choice Inc.	0.333	0	0.05	0.33	0.00	0.40	0.021	0.031	0.364
Furrs Restaurant	-5.396	0	0.29	-5.40	0.00	0.40	0.116	0.173	-5.223
Grill Concepts	-0.477	0	0.17	-0.47	0.01	0.40	0.067	0.100	-0.377
Hammons Hotels	2.414	0	45.60	8.79	0.08	0.40	18.242	27.362	29.776
Harrahs Entert.	99.388	0	79.07	183.65	68.75	0.37	29.599	49.472	148.860
Hilton Hotels	250	5	172.00	448.00	187.00	0.42	71.795	100.205	355.205
Hospitality Prp	59.153	0	15.53	59.15	0.00	0.40	6.214	9.320	68.473
IHOP Corp. New	20.914	3.801	14.65	34.29	13.37	0.39	5.713	8.936	33.651
Ilx Resort Inc.	1.668	0	2.30	2.99	1.15	0.38	0.880	1.418	3.086
J.Alexander Cp	-5.991	0	1.03	-2.42	2.69	0.40	0.412	0.618	-5.373
Landrys Sea Food	27.43	0	1.49	42.83	15.40	0.36	0.535	0.952	28.382
Lone Star Steak	68.808	1.312	0.00	109.85	40.08	0.36	0.000	0.000	70.120
Main St & Main	3.166	0	2.47	4.80	0.00	0.40	0.986	1.480	4.646
Marriott Int'l	324	0	22.00	531.00	207.00	0.39	8.576	13.424	337.424
McDonalds	1,642.50	87.6	364.40	2407.30	764.80	0.32	115.770	248.630	1978.730
MGM Mirage	111.018	20.354	18.93	180.30	65.05	0.36	6.830	12.103	143.475
O Charley's Rest.	8.8	1.663	3.46	13.69	4.89	0.36	1.235	2.224	12.687
Outback Steak House	61.452	0	2.49	114.59	33.72	0.29	0.733	1.756	63.208
Papa John Inc.	26.853	0.702	0.00	42.63	15.77	0.37	0.000	0.000	27.555
Prime Hospitality	25.931	0	45.09	50.66	24.81	0.49	22.080	23.013	48.944
Rare Hospitality	-12.232	0	1.25	-16.01	-5.00	0.31	0.389	0.856	-11.376
Ryans Fam Stkhs	39.21	6.537	5.87	61.10	21.89	0.36	2.102	3.765	49.512
Santa Barbara Rest.	0.854	0	0.00	0.86	0.00	0.40	0.000	0.000	0.854
Schlotzsky Inc.	4.449	0	0.30	7.06	2.62	0.37	0.110	0.187	4.636
Sholodge inc.	5.364	0	11.30	8.62	2.26	0.26	2.961	8.337	13.701
Starwood Hotels	-298	0	113.00	-102.00	159.00	0.40	45.200	67.800	-230.200
Sun Internat. Hotels	83.008	0	24.37	92.33	6.37	0.07	1.681	22.689	105.697
Wendy's	130.499	18.061	28.91	219.47	88.97	0.41	11.720	17.189	165.749

Company 1998	Net Income	Deferred Tax Inc	Int. Exp	Pretax Inc.	Income Tax	Tax Rate	Tax Savings on Int.	Net Int Expense	EVA NOPAT
Applebees inc.	50.015	0.807	9.922	80.41	29.75	0.37	3.671	6.251	57.073
Aztar Corp	10.162	5.635	59.588	19.88	8.37	0.42	25.087	34.501	50.298
Cec Entertainment	33.73	0	2.694	55.03	21.30	0.39	1.043	1.651	35.381
Cendant Corp	539.6	51.8	113.9	291.70	95.40	0.33	37.251	76.649	668.049
Chart House	0.571	0	0.79	0.57	0.00	0.40	0.316	0.474	1.045
Eateries	1.183	0	0.41	1.60	0.42	0.26	0.107	0.303	1.486
Extended Stay Hotels	28.038	28.097	41.014	46.73	18.69	0.40	16.406	24.608	80.743
Fresh Choice Inc.	-6.443	0	0.256	-6.44	0.00	0.40	0.102	0.154	-6.289
Furrs Restaurant	-1.229	0	0.25	-1.23	0.00	0.40	0.100	0.150	-1.079
Grill Concepts	-1.306	0	0.231	-1.35	0.01	0.40	0.092	0.139	-1.167
Hammons Hotels	-0.661	0	61.08	0.34	0.12	0.36	21.685	39.395	38.734
Harrahs Entert.	102.024	53.096	117.27	203.31	74.60	0.37	43.030	74.240	229.360
Hilton Hotels	297	0	137	336.00	136.00	0.40	55.452	81.548	378.548
Hospitality Prp	81.341	0	21.751	87.98	0.00	0.40	8.700	13.051	94.392
IHOP Corp. New	26.111	5.846	17.417	42.81	16.69	0.39	6.793	10.624	42.581
Ilx Resort Inc.	0.062	0	2.431	0.10	0.05	0.43	1.052	1.379	1.441
J.Alexander Cp	-1.485	0	1.986	-1.49	0.00	0.40	0.794	1.192	-0.293
Landrys Sea Food	-0.33	0	1.212	4.66	1.61	0.34	0.418	0.794	0.464
Lone Star Steak	25.507	1.81	0	54.25	21.84	0.40	0.000	0.000	27.317
Main St & Main	4.165	0	2.218	4.17	0.00	0.40	0.887	1.331	5.496
Marriott Int'l	390	0	30	632.00	242.00	0.38	11.487	18.513	408.513
McDonalds	1,550.10	18.4	413.80	2307.40	757.30	0.33	135.811	277.989	1846.489
MGM Mirage	68.948	18.334	48.489	109.53	40.58	0.37	17.965	30.524	117.806
O Charley's Rest.	12.9	1.332	2.801	19.85	6.95	0.35	0.980	1.821	16.053
Outback Steak House	96.048	0	1.357	176.48	53.64	0.30	0.412	0.945	96.993
Papa John Inc.	35.165	1.079	0	59.95	22.18	0.37	0.000	0.000	36.244
Prime Hospitality	53.847	0	50.614	86.67	32.82	0.38	19.166	31.448	85.295
Rare Hospitality	8.753	2.893	2.94	14.21	4.12	0.29	0.853	2.087	13.733
Ryans Fam Stkhs	40.32	1.979	6.802	62.99	22.67	0.36	2.448	4.354	46.653
Santa Barbara Rest.	1.376	0.336	0.204	1.43	0.05	0.40	0.082	0.122	1.834
Schlotzsky Inc.	6.206	0	0.248	9.94	3.73	0.38	0.093	0.155	6.361
Sholodge inc.	8.146	0	10.415	16.44	6.58	0.40	4.169	6.246	14.392
Starwood Hotels	1,302.00	609	433	145.00	-89.00	0.40	173.200	259.800	2170.800
Sun Internat. Hotels	57.746	0	4.516	65.76	8.01	0.12	0.550	3.966	61.712
Wendy's	123.358	0	30.009	207.66	84.30	0.41	12.183	17.826	141.184

Company 1999	Net Income	Deferred Tax Inc	Int. Exp	Pretax Inc.	Income Tax	Tax Rate	Tax Savings on Int.	Net Int Expense	EVA NOPAT
Applebees inc.	54.198	1.384	10.814	85.735	31.54	0.37	3.978	6.836	62.418
Aztar Corp	6.389	0.406	52.763	34.351	12.22	0.36	18.773	33.990	40.785
Cec Entertainment	44.372	2.167	2.195	72.326	27.95	0.39	0.848	1.347	47.886
Cendant Corp	-55	304.6	196	-739	-467.00	0.63	123.859	72.141	321.741
Chart House	-3.54	0	2.023	-3.54	0.00	0.40	0.809	1.214	-2.326
Eateries	-0.038	0	0.776	-0.154	-0.12	0.75	0.585	0.191	0.153
Extended Stay Hotels	47.225	30.677	66.957	80.008	32.00	0.40	26.783	40.174	118.076
Fresh Choice Inc.	0.185	0	0.506	0.255	0.00	0.40	0.202	0.304	0.489
Furrs Restaurant	31.262	0	0.349	7.447	-23.82	0.40	0.140	0.209	31.471
Grill Concepts	-0.406	0	0.375	-0.332	0.01	0.40	0.150	0.225	-0.181
Hammons Hotels	-0.995	0	62.209	-0.973	0.15	0.40	24.884	37.325	36.330
Harrahs Entert.	208.47	153.498	193.407	359.583	128.91	0.36	69.338	124.069	486.037
Hilton Hotels	174	814	237	313	130.00	0.42	98.435	138.565	1126.565
Hospitality Prp	111.929	0	37.352	111.929	0.00	0.40	14.941	22.411	134.340
IHOP Corp. New	32.125	5.06	19.391	52.236	20.11	0.39	7.466	11.925	49.110
Ilx Resort Inc.	0.703	0	2.836	1.204	0.47	0.39	1.116	1.720	2.423
J.Alexander Cp	-0.332	0	1.57	-0.299	0.03	0.40	0.628	0.942	0.610
Landrys Sea Food	15.376	0	3.982	23.456	8.08	0.34	1.372	2.610	17.986
Lone Star Steak	5.401	0	0	8.351	2.95	0.35	0.000	0.000	5.401
Main St & Main	0.97	0	2.604	1.188	0.05	0.40	1.042	1.562	2.532
Marriott Int'l	400	0	61	637	237.00	0.37	22.695	38.305	438.305
McDonalds	1,947.90	91.7	396.30	2,884.10	936.20	0.32	128.642	267.658	2307.258
MGM Mirage	86.058	31.548	60.911	150.153	55.03	0.37	22.323	38.588	156.194
O Charley's Rest.	14.761	1.953	4.174	24.783	8.67	0.35	1.461	2.713	19.427
Outback Steak House	124.323	4.659	0	221.017	66.92	0.30	0.000	0.000	128.982
Papa John Inc.	47.286	0	0.151	75.717	28.43	0.38	0.057	0.094	47.380
Prime Hospitality	34.882	0	54.634	65.897	25.70	0.39	21.307	33.327	68.209
Rare Hospitality	12.837	0	3.866	23.093	7.06	0.31	1.182	2.684	15.521
Ryans Fam Stkhs	41.617	2.115	7.986	66.359	24.74	0.37	2.978	5.008	48.740
Santa Barbara Rest.	-2.502	0	0.704	-3.466	-0.96	0.28	0.196	0.508	-1.994
Schlotzsky Inc.	0.526	0	2.316	6.871	2.53	0.37	0.851	1.465	1.991
Sholodge inc.	4.539	2.089	12.136	5.964	1.91	0.32	3.885	8.251	14.879
Starwood Hotels	-741	861	500	533	1076.00	0.40	200.000	300.000	420.000
Sun Internat. Hotels	69.822	0	50.699	79.146	9.32	0.12	5.973	44.726	114.548
Wendy's	166.585	8.809	10.159	268.686	102.10	0.38	3.860	6.299	181.693

Company 2000	Net Income	Deferred Tax Diff.	Int. Exp	Pretax Inc.	Income Tax	Tax Rate	Tax Savings on Int.	Net Int Expense	EVA NOPAT
Applebees inc.	63.161	1.474	9.304	99.938	36.777	0.37	3.424	5.880	70.515
Aztar Corp	53.117	0	41.913	70.695	17.578	0.25	10.421	31.492	84.609
Cec Entertainment	55.355	5.541	3.546	90.734	35.379	0.39	1.383	2.163	63.059
Cendant Corp	602	-247	145	969	309	0.32	46.238	98.762	453.762
Chart House	-10.426	0	3.049	-10.426	0	0.40	1.220	1.829	-8.597
Eateries	0.911	0	0.974	1.014	0.103	0.10	0.099	0.875	1.786
Extended Stay Hotels	70.017	26.057	87.733	116.695	46.678	0.40	35.093	52.640	148.714
Fresh Choice Inc.	1.675	0	0.461	1.721	0.046	0.40	0.184	0.277	1.952
Furrs Restaurant	31.262	0	0.349	7.447	0	0.40	0.140	0.209	31.471
Grill Concepts	0.034	0	0.478	-0.055	0.014	0.40	0.191	0.287	0.321
Hammons Hotels	-0.836	0	76.631	-2.422	0.15	0.40	30.652	45.979	45.143
Harrahs Entert.	-12.06	0	227.139	17.839	15.415	0.40	90.856	136.283	124.223
Hilton Hotels	272	23	453	479	200	0.42	189.144	263.856	558.856
Hospitality Prp	126.271	0	37.682	126.271	0	0.40	15.073	22.609	148.880
IHOP Corp. New	35.338	6.817	21.751	57.46	22.122	0.38	8.374	13.377	55.532
Ilx Resort Inc.	1.533	1.511	2.779	2.629	1.026	0.39	1.085	1.694	4.738
J.Alexander Cp	0.481	0	1.59	0.891	0.41	0.46	0.732	0.858	1.339
Landrys Sea Food	14.65	0	8.831	21.952	7.302	0.33	2.937	5.894	20.544
Lone Star Steak	16.13	0	16.13	23.72	7.59	0.32	5.161	10.969	27.099
Main St & Main	3.678	0	3.615	3.944	0.25	0.06	0.229	3.386	7.064
Marriott Int'l	479	0	100	757	278	0.37	36.724	63.276	542.276
McDonalds	1,977.30	0	429.9	2,882.30	905	0.31	134.982	294.918	2272.218
MGM Mirage	160.744	1621.445	365.899	275.04	108.88	0.40	144.848	221.051	2003.240
O Charley's Rest.	19.36	2.188	7.398	29.785	10.425	0.35	2.589	4.809	26.357
Outback Steak House	141.13	9.723	0	252.886	77.872	0.31	0.000	0.000	150.853
Papa John Inc.	31.824	0	7.746	51.586	19.762	0.38	2.967	4.779	36.603
Prime Hospitality	62.5	0	43.625	102.973	40.159	0.39	17.014	26.611	89.111
Rare Hospitality	23.26	0	4.159	36.147	11.48	0.32	1.321	2.838	26.098
Ryans Fam Stkhs	41.983	5.893	13.905	65.822	23.839	0.36	5.036	8.869	56.745
Santa Barbara Rest.	-1.418	0	0.992	-1.018	0.4	0.40	0.397	0.595	-0.823
Schlotzsky Inc.	-2.311	0	3.605	-3.055	-0.744	0.24	0.878	2.727	0.416
Sholodge inc.	0.578	2.201	10.485	-5.697	-1.777	0.31	3.270	7.215	9.994
Starwood Hotels	403	0	433	610	201	0.33	142.677	290.323	693.323
Sun Internat. Hotels	-119.1	0	45.678	-112.791	6.313	0.40	18.271	27.407	-91.697
Wendy's	169.648	3.234	15.08	271.437	101.79	0.38	5.655	9.425	182.307

APPENDIXES D

EVA and MVA ($ Millions)

From 1997 to 2000

Company 1997	Note Payable	LT Debt	Total EVA Debt	SH Equity	Defered Tax	Equity Cap. aft. Adjust.	EVA Capital	Market Value	Total Debt&Equ.
Applebees inc.	0.00	22.58	22.58	290.44	0.43	290.88	313.45	568.63	591.21
Aztar Corp	0.00	491.93	491.93	450.63	0.00	450.63	942.56	288.14	780.08
Cec Entertainment	0.00	23.83	23.83	158.15	0.00	158.15	181.98	415.93	439.76
Cendant Corp	2577.50	1246.00	3823.50	3921.40	366.60	4288.00	8111.50	28592.71	32416.21
Chart House	0.00	5.75	5.75	59.01	0.00	59.01	64.75	74.02	79.77
Eateries	0.00	7.64	7.64	10.99	0.00	10.99	18.63	18.89	26.53
Extend.stay Hotels	0.00	135.00	135.00	834.66	18.39	853.05	988.05	1189.03	1324.03
Fresh Choice Inc.	0.00	0.00	0.00	26.32	0.00	26.32	26.32	18.47	18.47
Furrs Restaurant	0.00	66.21	66.21	-40.10	0.00	-40.10	26.11	27.36	93.56
Grill Concepts	0.48	0.70	1.18	5.18	0.00	5.18	6.36	16.64	17.82
Hammons Hotels	0.00	634.27	634.27	18.51	0.00	18.51	652.78	57.02	691.30
Harrahs Entertain.	0.00	924.40	924.40	735.50	22.36	757.86	1682.26	1907.06	2831.45
Hilton Hotels	0.00	2709.00	2709.00	3383.00	603.00	3986.00	6695.00	7407.75	10116.75
Hospitality Prp	0.00	125.00	125.00	1007.89	0.00	1007.89	1132.89	1278.11	1403.11
IHOP Corp. New	0.00	157.53	157.53	156.18	28.86	185.05	342.57	315.54	473.07
Ilx Resort Inc.	1.20	15.74	16.94	16.62	0.00	16.62	33.56	14.16	31.10
J.Alexander Cp	0.00	20.23	20.23	35.00	0.00	35.00	55.23	26.77	47.00
Landrys Sea Food	0.00	50.23	50.23	296.74	0.00	296.74	346.97	624.10	674.33
Lone Star Steak	0.00	0.00	0.00	566.15	8.62	574.77	574.77	720.23	720.23
Main St & Main	1.57	24.31	25.88	22.20	0.00	22.20	48.09	28.04	53.92
Marriott Int'l	0.00	1844.00	1844.00	1463.00	0.00	1463.00	3307.00	8711.65	10555.65
McDonalds	1293.80	4834.10	6127.90	8931.90	1063.50	9995.40	16123.30	32742.18	38870.08
MGM Mirage	0.00	51.69	51.69	1101.62	58.83	1160.45	1212.14	2094.71	2146.40
O Charley's Rest.	0.00	27.72	27.72	95.38	2.96	98.34	126.06	178.10	205.82
Outback Stk. House	0.00	68.28	68.28	434.72	0.00	434.72	502.99	1394.78	1463.05
Papa John Inc.	0.00	0.00	0.00	212.73	3.99	216.72	216.72	1014.55	1014.55
Prime Hospitality	0.00	554.50	554.50	524.41	0.00	524.41	1078.91	960.34	1514.84
Rare Hospitality	0.00	48.05	48.05	111.98	0.00	111.98	160.03	107.81	155.86
Ryans Fam Stkhs	28.30	93.00	121.30	317.06	20.64	337.70	459.00	402.23	523.53
Santa Barbara Rest.	0.00	0.00	0.00	4.32	0.00	4.32	4.32	71.46	71.46
Schlotzsky Inc.	0.00	1.94	1.94	66.99	0.00	66.99	68.93	107.26	109.20
Sholodge inc.	0.00	154.64	154.64	95.35	0.00	95.35	249.99	130.03	284.67
Starwood Hotels	0.00	1566.01	1566.01	1021.62	0.00	1021.62	2587.64	2971.65	4537.66
Sun Internat. Hotels	0.00	412.21	412.21	790.28	46.00	836.28	1248.49	1240.16	1652.37
Wendy's	0.00	449.76	449.76	1184.23	81.02	1265.25	1715.01	2786.79	3236.55

EVA and MVA in 1997 continued

Debt Weigh.	Equity Weigh.	Interest Expense	Tax Rate	Debt Cost	Cost of Debt	Beta	Cost of Equity	WACC	Cost of Capital	NOPAT	EVA	MVA
0.04	0.96	1.71	0.37	0.08	0.05	0.99	0.07	0.07	22.63	46.59	23.96	277.75
0.63	0.37	62.54	0.40	0.13	0.08	0.52	0.07	0.07	68.05	41.97	-26.08	-162.49
0.05	0.95	2.87	0.40	0.12	0.07	0.95	0.07	0.07	13.18	27.21	14.03	257.78
0.12	0.88	50.60	0.74	0.01	0.00	1.06	0.07	0.07	535.52	162.44	-373.08	24304.71
0.07	0.93	3.29	0.24	0.57	0.44	0.99	0.07	0.10	6.44	-28.60	-35.04	15.02
0.29	0.71	0.31	0.29	0.04	0.03	0.70	0.07	0.06	1.06	1.62	0.56	7.90
0.10	0.90	1.73	0.69	0.01	0.00	1.41	0.08	0.07	71.71	19.21	-52.50	335.98
0.00	1.00	0.05	0.40	0.00	0.00	1.02	0.07	0.07	1.94	0.36	-1.58	-7.85
0.71	0.29	0.29	0.40	0.00	0.00	0.21	0.06	0.02	0.51	-5.22	-5.73	67.45
0.07	0.93	0.17	0.40	0.14	0.08	1.67	0.08	0.08	0.54	-0.38	-0.92	11.46
0.92	0.08	45.60	0.40	0.07	0.04	0.04	0.06	0.04	28.90	29.78	0.87	38.52
0.33	0.67	79.07	0.37	0.09	0.05	1.18	0.08	0.07	115.95	148.86	32.91	1149.19
0.27	0.73	172.00	0.42	0.06	0.04	0.98	0.07	0.06	424.13	355.21	-68.92	3421.75
0.09	0.91	15.53	0.40	0.12	0.07	0.27	0.06	0.06	70.44	68.47	-1.97	270.22
0.33	0.67	14.65	0.39	0.09	0.06	0.84	0.07	0.07	22.60	33.65	11.05	130.50
0.54	0.46	2.30	0.38	0.14	0.08	1.16	0.08	0.08	2.69	3.09	0.39	-2.46
0.43	0.57	1.03	0.40	0.05	0.03	0.25	0.06	0.05	2.63	-5.37	-8.01	-8.23
0.07	0.93	1.49	0.36	0.03	0.02	1.39	0.08	0.08	26.21	28.38	2.17	327.36
0.00	1.00	0.00	0.36	0.00	0.00	1.29	0.08	0.08	45.02	70.12	25.10	145.46
0.48	0.52	2.47	0.40	0.10	0.06	1.25	0.08	0.07	3.26	4.65	1.38	5.84
0.17	0.83	22.00	0.39	0.01	0.01	0.90	0.07	0.06	199.63	337.42	137.79	7248.65
0.16	0.84	364.40	0.32	0.06	0.04	0.91	0.07	0.07	1077.95	1978.73	900.78	22746.78
0.02	0.98	18.93	0.36	0.37	0.23	0.65	0.07	0.07	86.56	143.47	56.91	934.26
0.13	0.87	3.46	0.36	0.12	0.08	0.56	0.07	0.07	8.54	12.69	4.15	79.76
0.05	0.95	2.49	0.29	0.04	0.03	1.42	0.08	0.08	39.20	63.21	24.00	960.06
0.00	1.00	0.00	0.37	0.00	0.00	0.77	0.07	0.07	15.04	27.56	12.51	797.83
0.37	0.63	45.09	0.49	0.08	0.04	0.56	0.07	0.06	61.46	48.94	-12.52	435.92
0.31	0.69	1.25	0.31	0.03	0.02	1.15	0.08	0.06	9.28	-11.38	-20.66	-4.17
0.23	0.77	5.87	0.36	0.05	0.03	0.21	0.06	0.05	24.44	49.51	25.07	64.52
0.00	1.00	0.00	0.40	0.00	0.00	0.98	0.07	0.07	0.32	0.85	0.54	67.14
0.02	0.98	0.30	0.37	0.15	0.10	0.36	0.06	0.06	4.34	4.64	0.30	40.27
0.54	0.46	11.30	0.26	0.07	0.05	0.33	0.06	0.06	14.40	13.70	-0.70	34.68
0.35	0.65	113.00	0.40	0.07	0.04	0.26	0.06	0.05	141.69	-230.20	-371.89	1950.03
0.25	0.75	24.37	0.07	0.06	0.06	0.66	0.07	0.06	80.49	105.70	25.21	403.88
0.14	0.86	28.91	0.41	0.06	0.04	0.68	0.07	0.06	109.32	165.75	56.43	1521.54

Company 1998	Note Payable	LT Debt	Total EVA Debt	SH Equity	Defered Tax	Equity Cap. aft. Adjust.	EVA Capital	Market Value	Total Debt&Equ.
Applebees inc.	0.00	145.52	145.52	296.05	1.24	297.29	442.81	619.29	764.81
Aztar Corp	0.00	487.54	487.54	461.25	5.64	466.88	954.43	229.00	716.54
Cec Entertainment	0.00	18.92	18.92	186.26	0.00	186.26	205.18	500.11	519.03
Cendant Corp	2484.40	9074.40	11558.80	4835.60	418.40	5254.00	16812.80	16475.07	28033.87
Chart House	0.00	8.47	8.47	59.75	0.00	59.75	68.22	72.05	80.52
Eateries	0.00	3.41	3.41	12.45	0.00	12.45	15.86	23.22	26.63
Extend.stay Hotels	0.00	653.00	653.00	866.75	46.49	913.24	1566.24	1007.40	1660.40
Fresh Choice Inc.	1.16	1.17	2.33	19.95	0.00	19.95	22.27	8.72	11.05
Furrs Restaurant	0.00	60.71	60.71	-41.61	0.00	-41.61	19.10	63.89	124.60
Grill Concepts	0.59	2.93	3.52	3.87	0.00	3.87	7.39	16.02	19.53
Hammons Hotels	0.00	717.46	717.46	17.85	0.00	17.85	735.31	22.28	739.74
Harrahs Entertain.	0.00	1999.35	1999.35	851.41	75.46	926.86	2926.22	1591.84	3591.20
Hilton Hotels	0.00	3037.00	3037.00	187.00	65.00	252.00	3289.00	4987.27	8024.27
Hospitality Prp	0.00	414.75	414.75	1173.86	0.00	1173.86	1588.61	1033.66	1448.41
IHOP Corp. New	0.00	179.63	179.63	187.87	34.71	222.58	402.20	393.66	573.29
Ilx Resort Inc.	0.00	18.36	18.36	25.76	0.00	25.76	44.12	8.45	26.81
J.Alexander Cp	0.00	21.36	21.36	33.73	0.00	33.73	55.09	21.72	43.09
Landrys Sea Food	0.00	35.15	35.15	408.67	0.00	408.67	443.83	227.59	262.74
Lone Star Steak	0.00	0.00	0.00	553.44	10.43	563.87	563.87	359.17	359.17
Main St & Main	0.08	28.26	28.34	26.37	0.00	26.37	54.71	33.67	62.01
Marriott Int'l	0.00	1267.00	1267.00	2570.00	0.00	2570.00	3837.00	7040.48	8307.48
McDonalds	686.80	6188.60	6875.40	9524.20	1081.90	10606.10	17481.50	51968.19	58843.59
MGM Mirage	0.00	537.66	537.66	964.38	77.17	1041.55	1579.21	1411.40	1949.06
O Charley's Rest.	0.00	51.91	51.91	108.77	4.29	113.06	164.97	217.58	269.49
Outback Stk. House	0.00	37.48	37.48	545.05	0.00	545.05	582.52	1957.26	1994.74
Papa John Inc.	0.00	0.00	0.00	262.71	5.07	267.78	267.78	1303.54	1303.54
Prime Hospitality	0.00	582.03	582.03	641.05	0.00	641.05	1223.08	567.80	1149.83
Rare Hospitality	0.00	57.73	57.73	120.62	2.89	123.51	181.24	169.02	226.75
Ryans Fam Stkhs	72.40	81.37	153.77	280.37	22.62	302.99	456.77	495.63	649.41
Santa Barbara Rest.	0.00	6.24	6.24	49.47	0.34	49.81	56.05	48.44	54.68
Schlotzsky Inc.	0.00	9.22	9.22	73.96	0.00	73.96	83.18	73.00	82.21
Sholodge inc.	0.00	128.95	128.95	98.10	0.00	98.10	227.05	45.54	174.49
Starwood Hotels	657.00	8111.00	8768.00	4383.00	609.00	4992.00	13760.00	3982.16	12750.16
Sun Internat. Hotels	0.00	565.75	565.75	850.62	42.25	892.87	1458.63	1514.39	2080.14
Wendy's	0.00	446.05	446.05	1068.07	60.71	1128.77	1574.82	2714.50	3160.55

EVA and MVA in 1998 continued

Debt Weigh.	Equity Weigh.	Interest Expense	Tax Rate	Debt Cost	Cost of Debt	Beta	Cost of Equity	WACC	Cost of Capital	NOPAT	EVA	MVA
0.19	0.81	9.92	0.37	0.07	0.04	1.21	0.08	0.07	31.65	57.07	25.43	321.99
0.68	0.32	59.59	0.42	0.12	0.07	1.00	0.07	0.07	68.41	50.30	-18.11	-237.89
0.04	0.96	2.69	0.39	0.14	0.09	1.08	0.08	0.08	15.54	35.38	19.84	313.86
0.41	0.59	113.90	0.33	0.01	0.01	1.63	0.09	0.05	914.23	668.05	-246.18	11221.07
0.11	0.89	0.79	0.00	0.09	0.09	1.07	0.07	0.08	5.24	1.05	-4.20	12.29
0.13	0.87	0.41	0.26	0.12	0.09	0.02	0.05	0.06	0.89	1.49	0.60	10.77
0.39	0.61	41.01	0.40	0.06	0.04	1.29	0.08	0.06	99.19	80.74	-18.44	94.16
0.21	0.79	0.26	0.00	0.11	0.11	0.66	0.07	0.08	1.67	-6.29	-7.96	-11.23
0.49	0.51	0.25	0.00	0.00	0.00	0.68	0.07	0.04	0.69	-1.08	-1.76	105.50
0.18	0.82	0.23	0.00	0.07	0.07	1.07	0.07	0.07	0.54	-1.17	-1.71	12.15
0.97	0.03	61.08	0.36	0.09	0.05	0.56	0.06	0.05	40.26	38.73	-1.52	4.43
0.56	0.44	117.27	0.37	0.06	0.04	1.33	0.08	0.06	165.09	229.36	64.27	664.98
0.38	0.62	137.00	0.40	0.05	0.03	0.90	0.07	0.05	179.20	378.55	199.35	4735.27
0.29	0.71	21.75	0.00	0.05	0.05	0.20	0.06	0.05	86.41	94.39	7.99	-140.20
0.31	0.69	17.42	0.39	0.10	0.06	0.62	0.06	0.06	25.34	42.58	17.24	171.09
0.68	0.32	2.43	0.43	0.13	0.08	1.62	0.09	0.08	3.50	1.44	-2.06	-17.31
0.50	0.50	1.99	0.00	0.09	0.09	0.62	0.06	0.08	4.34	-0.29	-4.63	-12.01
0.13	0.87	1.21	0.34	0.03	0.02	1.70	0.09	0.08	35.71	0.46	-35.24	-181.08
0.00	1.00	0.00	0.40	0.00	0.00	1.37	0.08	0.08	46.20	27.32	-18.89	-204.70
0.46	0.54	2.22	0.00	0.08	0.08	1.05	0.07	0.08	4.17	5.50	1.33	7.29
0.15	0.85	30.00	0.38	0.02	0.01	0.76	0.07	0.06	229.40	408.51	179.11	4470.48
0.12	0.88	413.80	0.33	0.06	0.04	1.02	0.07	0.07	1223.36	1846.49	623.13	41362.09
0.28	0.72	48.49	0.37	0.09	0.06	0.54	0.06	0.06	96.67	117.81	21.14	369.85
0.19	0.81	2.80	0.35	0.05	0.04	1.11	0.08	0.07	11.24	16.05	4.82	104.52
0.02	0.98	1.36	0.30	0.04	0.03	1.49	0.08	0.08	48.70	96.99	48.30	1412.22
0.00	1.00	0.00	0.37	0.00	0.00	1.14	0.08	0.08	20.50	36.24	15.74	1035.76
0.51	0.49	50.61	0.38	0.09	0.05	1.36	0.08	0.07	82.68	85.29	2.62	-73.25
0.25	0.75	2.94	0.29	0.05	0.04	1.00	0.07	0.06	11.57	13.73	2.16	45.51
0.24	0.76	6.80	0.36	0.04	0.03	0.24	0.06	0.05	22.58	46.65	24.07	192.64
0.11	0.89	0.20	0.03	0.03	0.03	0.83	0.07	0.07	3.65	1.83	-1.82	-1.37
0.11	0.89	0.25	0.38	0.03	0.02	1.01	0.07	0.07	5.60	6.36	0.77	-0.97
0.74	0.26	10.42	0.40	0.08	0.05	0.91	0.07	0.05	12.36	14.39	2.03	-52.56
0.69	0.31	433.00	0.00	0.05	0.05	0.18	0.05	0.05	702.43	2170.80	1468.37	-1009.85
0.27	0.73	4.52	0.12	0.01	0.01	0.78	0.07	0.05	75.38	61.71	-13.67	621.51
0.14	0.86	30.01	0.41	0.07	0.04	0.56	0.06	0.06	94.47	141.18	46.71	1585.73

Company 1999	Note Payable	LT Debt	Total EVA Debt	SH Equity	Defered Tax	Equity Cap. aft. Adjust.	EVA Capital	Market Value	Total Deb&Equ.
Applebees inc.	0.00	106.29	106.29	253.87	2.62	256.50	362.79	803.32	909.61
Aztar Corp	0.00	497.63	497.63	434.91	6.04	440.95	938.58	475.29	972.92
Cec Entertainment	0.00	51.57	51.57	223.58	2.17	225.74	277.31	768.09	819.66
Cendant Corp	619.00	5618.00	6237.00	2206.00	723.00	2929.00	9166.00	18886.60	25123.60
Chart House	0.00	21.41	21.41	56.29	0.00	56.29	77.70	52.20	73.61
Eateries	0.00	9.09	9.09	7.33	0.00	7.33	16.42	8.62	17.71
Extend.stay Hotels	0.00	853.00	853.00	915.59	77.17	992.76	1845.76	727.48	1580.48
Fresh Choice Inc.	0.00	2.44	2.44	20.21	0.00	20.21	22.65	13.64	16.08
Furrs Restaurant	0.00	55.22	55.22	-9.16	0.00	-9.16	46.06	29.88	85.10
Grill Concepts	0.94	2.03	2.97	3.46	0.00	3.46	6.43	7.51	10.48
Hammons Hotels	0.00	812.27	812.27	13.86	0.00	13.86	826.13	21.69	833.96
Harrahs Entertain.	0.00	2540.27	2540.27	1486.28	228.96	1715.23	4255.50	3399.68	5939.95
Hilton Hotels	0.00	6085.00	6085.00	1415.00	879.00	2294.00	8379.00	3526.78	9611.78
Hospitality Prp	0.00	414.78	414.78	1519.72	0.00	1519.72	1934.50	1076.08	1490.86
IHOP Corp. New	0.00	206.78	206.78	226.48	39.77	266.25	473.02	335.60	542.38
Ilx Resort Inc.	0.00	23.73	23.73	25.24	0.00	25.24	48.96	6.00	29.73
J.Alexander Cp	0.00	18.13	18.13	37.84	0.00	37.84	55.97	21.16	39.29
Landrys Sea Food	0.00	0.06	0.06	377.35	0.00	377.35	377.41	215.66	215.72
Lone Star Steak	0.00	0.00	0.00	484.38	0.00	484.38	484.38	295.25	295.25
Main St & Main	0.00	31.51	31.51	27.38	0.00	27.38	58.90	32.54	64.05
Marriott Int'l	0.00	1676.00	1676.00	2908.00	0.00	2908.00	4584.00	7736.85	9412.85
McDonalds	1073.10	5632.40	6705.50	10364.50	1173.60	11538.10	18243.60	54583.89	61289.39
MGM Mirage	0.00	1323.85	1323.85	1033.85	108.71	1142.56	2466.41	2862.03	4185.88
O Charley's Rest.	0.00	73.46	73.46	122.69	6.24	128.93	202.39	205.26	278.72
Outback Stk. House	0.00	1.52	1.52	692.97	4.66	697.62	699.14	1945.16	1946.68
Papa John Inc.	0.00	0.93	0.93	292.13	2.11	294.24	295.17	793.45	794.37
Prime Hospitality	0.00	543.49	543.49	632.00	0.00	632.00	1175.49	430.62	974.11
Rare Hospitality	0.00	49.73	49.73	137.58	1.10	138.69	188.42	262.39	312.13
Ryans Fam Stkhs	0.00	172.38	172.38	283.39	24.74	308.13	480.50	307.42	479.80
Santa Barbara Rest.	0.00	9.74	9.74	57.94	0.00	57.94	67.68	31.21	40.95
Schlotzsky Inc.	0.00	21.28	21.28	74.74	0.00	74.74	96.01	49.14	70.42
Sholodge inc.	0.00	125.55	125.55	90.88	2.09	92.97	218.52	24.60	150.15
Starwood Hotels	0.00	4643.00	4643.00	3845.00	1470.00	5315.00	9958.00	4445.87	9088.87
Sun Internat. Hotels	0.00	578.03	578.03	899.83	42.22	942.05	1520.09	650.55	1228.59
Wendy's	0.00	449.02	449.02	1065.44	69.52	1134.96	1583.97	2488.55	2937.57

EVA and MVA in 1999 continued

Debt Weigh.	Equity Weigh.	Interest Expense	Tax Rate	Debt Cost	Cost of Debt	Beta	Cost of Equity	WACC	Cost of Capital	NOPAT	EVA	MVA
0.12	0.88	10.81	0.37	0.10	0.06	0.74	0.07	0.07	24.36	62.42	38.06	546.82
0.51	0.49	52.76	0.36	0.11	0.07	1.03	0.07	0.07	66.52	40.79	-25.74	34.34
0.06	0.94	2.20	0.39	0.04	0.03	0.85	0.07	0.07	18.67	47.89	29.22	542.35
0.25	0.75	196.00	0.63	0.03	0.01	1.93	0.09	0.07	676.58	321.74	-354.84	15957.60
0.29	0.71	2.02	0.00	0.09	0.09	1.08	0.08	0.08	6.28	-2.33	-8.61	-4.09
0.51	0.49	0.78	0.75	0.09	0.02	0.29	0.06	0.04	0.64	0.15	-0.48	1.29
0.54	0.46	66.96	0.40	0.08	0.05	1.26	0.08	0.06	114.27	118.08	3.81	-265.28
0.15	0.85	0.51	0.00	0.21	0.21	0.72	0.07	0.09	2.00	0.49	-1.51	-6.58
0.65	0.35	0.35	0.00	0.01	0.01	0.75	0.07	0.03	1.28	31.47	30.19	39.05
0.28	0.72	0.38	0.00	0.13	0.13	0.09	0.05	0.07	0.47	-0.18	-0.65	4.05
0.97	0.03	62.21	0.00	0.08	0.08	0.50	0.06	0.08	62.96	36.33	-26.63	7.83
0.43	0.57	193.41	0.36	0.08	0.05	0.81	0.07	0.06	256.94	486.04	229.10	1684.45
0.63	0.37	237.00	0.42	0.04	0.02	0.93	0.07	0.04	340.56	1126.57	786.00	1232.78
0.28	0.72	37.35	0.00	0.09	0.09	0.34	0.06	0.07	129.97	134.34	4.37	-443.64
0.38	0.62	19.39	0.39	0.09	0.06	0.50	0.06	0.06	28.51	49.11	20.61	69.35
0.80	0.20	2.84	0.39	0.12	0.07	1.58	0.09	0.08	3.70	2.42	-1.28	-19.24
0.46	0.54	1.57	0.00	0.09	0.09	0.45	0.06	0.07	4.07	0.61	-3.46	-16.68
0.00	1.00	3.98	0.34	66.37	43.80	1.45	0.08	0.10	36.15	17.99	-18.17	-161.69
0.00	1.00	0.00	0.35	0.00	0.00	1.33	0.08	0.08	39.21	5.40	-33.81	-189.13
0.49	0.51	2.60	0.04	0.08	0.08	0.82	0.07	0.07	4.37	2.53	-1.84	5.15
0.18	0.82	61.00	0.37	0.04	0.02	0.75	0.07	0.06	273.64	438.30	164.66	4828.85
0.11	0.89	396.30	0.32	0.06	0.04	0.79	0.07	0.07	1195.68	2307.26	1111.58	43045.79
0.32	0.68	60.91	0.37	0.05	0.03	0.32	0.06	0.05	120.36	156.19	35.83	1719.47
0.26	0.74	4.17	0.35	0.06	0.04	1.16	0.08	0.07	13.46	19.43	5.97	76.33
0.00	1.00	0.00	0.30	0.00	0.00	1.34	0.08	0.08	56.63	128.98	72.35	1247.53
0.00	1.00	0.15	0.38	0.16	0.10	0.81	0.07	0.07	20.42	47.38	26.96	499.21
0.56	0.44	54.63	0.39	0.10	0.06	1.43	0.08	0.07	83.40	68.21	-15.19	-201.38
0.16	0.84	3.87	0.31	0.08	0.05	0.93	0.07	0.07	12.99	15.52	2.53	123.71
0.36	0.64	7.99	0.37	0.05	0.03	0.50	0.06	0.05	24.16	48.74	24.58	-0.71
0.24	0.76	0.70	0.28	0.07	0.05	0.89	0.07	0.07	4.49	-1.99	-6.49	-26.73
0.30	0.70	2.32	0.37	0.11	0.07	1.06	0.07	0.07	6.99	1.99	-5.00	-25.59
0.84	0.16	12.14	0.32	0.10	0.07	1.05	0.07	0.07	14.68	14.88	0.20	-68.37
0.51	0.49	500.00	2.02	0.11	-0.11	0.55	0.06	-0.03	-250.89	420.00	670.89	-869.13
0.47	0.53	50.70	0.12	0.09	0.08	0.98	0.07	0.07	113.92	114.55	0.63	-291.50
0.15	0.85	10.16	0.38	0.02	0.01	0.43	0.06	0.05	84.72	181.69	96.97	1353.60

Company 2000	Note Payable	LT Debt	Total EVA Debt	SH Equity	Deferred Tax	Equity Cap. aft. Adjust.	EVA Capital	Market Value	Total Debt&Equ.
Applebees inc.	0.0	90.5	90.5	281.7	4.1	285.8	376.3	793.3	883.8
Aztar Corp	0.0	463.0	463.0	429.1	5.2	434.3	897.3	512.0	975.0
Cec Entertainment	0.0	47.0	47.0	284.7	7.7	292.4	339.4	925.1	972.2
Cendant Corp	1556.0	4490.0	6046.0	2774.0	476.0	3250.0	9296.0	7013.8	13059.8
Chart House	0.0	25.7	25.7	46.0	0.0	46.0	71.6	47.2	72.8
Eateries	0.0	8.4	8.4	8.1	0.0	8.1	16.5	7.6	16.0
Extend.stay Hotels	0.0	947.0	947.0	982.6	103.2	1085.9	2032.9	1225.3	2172.3
Fresh Choice Inc.	0.0	0.6	0.6	22.0	0.0	22.0	22.6	9.7	10.3
Furrs Restaurant	0.0	55.2	55.2	55.2	-9.2	46.1	101.3	13.4	68.6
Grill Concepts	0.1	2.9	3.0	3.5	0.0	3.5	6.5	12.1	15.1
Hammons Hotels	0.0	780.4	780.4	10.2	0.0	10.2	790.7	31.1	811.5
Harrahs Entertain.	215.0	2835.8	3050.8	1269.7	85.7	1355.4	4406.2	3078.8	6129.7
Hilton Hotels	0.0	5693.0	5693.0	1642.0	902.0	2544.0	8237.0	3870.7	9563.7
Hospitality Prp	0.0	464.7	464.7	1482.9	0.0	1482.9	1947.7	1277.7	1742.5
IHOP Corp. New	0.0	204.0	204.0	260.0	46.6	306.6	510 5	433.8	637.7
Ilx Resort Inc.	0.0	29.7	29.7	25.8	1.5	27.3	57.0	6.7	36.4
J.Alexander Cp	0.0	16.8	16.8	38.0	0.0	38.0	54.8	15.8	32.6
Landrys Sea Food	0.0	155.0	155.0	364.6	0.0	364.6	519.6	214.0	369.0
Lone Star Steak	0.0	0.0	0.0	437.8	0.0	437.8	437.8	240.5	240.5
Main St & Main	0.0	44.4	44.4	40.5	0.0	40.5	84.9	30.4	74.8
Marriott Int'l	0.0	2016.0	2016.0	3267.0	0.0	3267.0	5283.0	10139.3	12155.3
McDonalds	275.5	7843.9	8119.4	9904.3	1084.9	10989.2	19108.6	44584.4	52703.8
MGM Mirage	0.0	5355.4	5355.4	2382.4	1730.2	4112.6	9468.0	4484.7	9840.1
O Charley's Rest.	0.0	114.7	114.7	143.5	8.4	151.9	266.6	279.2	393.8
Outback Stk. House	0.0	11.7	11.7	807.6	14.4	822.0	833.7	2015.5	2027.2
Papa John Inc.	0.0	145.7	145.7	171.5	0.0	171.5	317.2	538.5	684.2
Prime Hospitality	0.0	341.0	341.0	668.1	0.0	668.1	1009.1	524.3	865.2
Rare Hospitality	0.0	72.0	72.0	167.3	0.0	167.3	239.2	416.2	488.2
Ryans Fam Stkhs	0.0	192.0	192.0	282.4	30.6	313.1	505.1	301.1	493.1
Santa Barbara Rest.	0.0	5.6	5.6	54.6	0.0	54.6	60.2	23.1	28.8
Schlotzsky Inc.	1.3	26.3	27.6	72.5	0.0	72.5	100.1	18.6	46.2
Sholodge inc.	0.0	94.2	94.2	90.3	4.3	94.6	188.8	26.1	120.3
Starwood Hotels	0.0	4957.0	4957.0	3968.0	1444.0	5412.0	10369.0	6828.8	11785.8
Sun Internat. Hotels	0.0	578.0	578.0	899.8	42.2	942.1	1520.1	776.2	1354.2
Wendy's	0.0	448.4	448.4	1126.1	72.8	1198.9	1647.3	2979.1	3427.5

EVA and MVA in 2000 continued

Debt Weig.	Equity Weig.	Interest Expense	Tax Rate	Debt Cost	Cost of Debt	Beta	Cost of Equity	WACC	Cost of Capital	NOPAT	EVA	MVA
0.10	0.90	9.30	0.37	0.10	0.06	0.48	0.06	0.06	23.1	70.5	47.4	507.5
0.47	0.53	41.91	0.25	0.09	0.07	0.74	0.10	0.09	77.9	84.6	6.7	77.7
0.05	0.95	3.55	0.39	0.08	0.05	0.83	0.11	0.11	36.6	63.1	26.5	632.7
0.46	0.54	145.00	0.32	0.02	0.02	2.05	0.20	0.12	1069.9	453.8	-616.2	3763.8
0.35	0.65	3.05	0.00	0.12	0.12	0.76	0.11	0.11	7.9	-8.6	-16.5	1.2
0.53	0.47	0.97	0.10	0.12	0.10	0.50	0.09	0.10	1.6	1.8	0.2	-0.5
0.44	0.56	87.73	0.40	0.09	0.06	0.99	0.12	0.09	189.7	148.7	-40.9	139.4
0.06	0.94	0.46	0.03	0.77	0.75	0.56	0.09	0.13	2.9	2.0	-1.0	-12.3
0.80	0.20	0.35	0.00	0.01	0.01	0.76	0.11	0.03	2.6	31.5	28.9	-32.6
0.20	0.80	0.48	0.00	0.16	0.16	0.17	0.06	0.08	0.5	0.3	-0.2	8.6
0.96	0.04	76.63	0.00	0.10	0.10	0.43	0.08	0.10	77.1	45.1	-32.0	20.8
0.50	0.50	227.14	0.86	0.07	0.01	0.77	0.11	0.06	258.9	124.2	-134.7	1723.4
0.60	0.40	453.00	0.42	0.08	0.05	0.76	0.11	0.07	578.7	558.9	-19.8	1326.7
0.27	0.73	37.68	0.00	0.08	0.08	0.16	0.06	0.07	130.1	148.9	18.8	-205.2
0.32	0.68	21.75	0.38	0.11	0.07	0.29	0.07	0.07	35.7	55.5	19.9	127.2
0.81	0.19	2.78	0.39	0.09	0.06	0.92	0.12	0.07	3.9	4.7	0.8	-20.6
0.51	0.49	1.59	0.46	0.09	0.05	0.38	0.08	0.06	3.5	1.3	-2.2	-22.2
0.42	0.58	8.83	0.33	0.06	0.04	0.86	0.11	0.08	42.3	20.5	-21.8	-150.5
0.00	1.00	16.13	0.32	0.00	0.00	1.02	0.12	0.12	54.7	27.1	-27.6	-197.3
0.59	0.41	3.62	0.06	0.08	0.08	0.61	0.09	0.08	7.1	7.1	-0.1	-10.1
0.17	0.83	100.00	0.37	0.05	0.03	0.63	0.10	0.09	452.8	542.3	89.5	6872.3
0.15	0.85	429.90	0.31	0.05	0.04	0.75	0.11	0.09	1809.2	2272.2	463.0	33595.2
0.54	0.46	365.90	0.40	0.07	0.04	0.43	0.08	0.06	563.8	2003.2	1439.4	372.1
0.29	0.71	7.40	0.35	0.06	0.04	0.85	0.11	0.09	24.5	26.4	1.9	127.3
0.01	0.99	0.00	0.31	0.00	0.00	1.11	0.13	0.13	109.0	150.9	41.8	1193.5
0.21	0.79	7.75	0.38	0.05	0.03	0.81	0.11	0.09	29.6	36.6	7.0	367.0
0.39	0.61	43.63	0.39	0.13	0.08	0.95	0.12	0.10	104.1	89.1	-15.0	-143.8
0.15	0.85	4.16	0.32	0.06	0.04	0.47	0.08	0.08	18.5	26.1	7.6	249.0
0.39	0.61	13.91	0.36	0.07	0.05	0.29	0.07	0.06	31.2	56.7	25.6	-12.0
0.20	0.80	0.99	0.00	0.18	0.18	0.25	0.07	0.09	5.4	-0.8	-6.2	-31.4
0.60	0.40	3.61	0.24	0.13	0.10	0.53	0.09	0.10	9.5	0.4	-9.1	-53.9
0.78	0.22	10.49	0.31	0.11	0.08	0.99	0.12	0.09	16.4	10.0	-6.4	-68.5
0.42	0.58	433.00	0.33	0.09	0.06	0.38	0.08	0.07	722.3	693.3	-29.0	1416.8
0.43	0.57	45.68	0.00	0.08	0.08	0.76	0.11	0.09	143.5	-91.7	-235.2	-165.9
0.13	0.87	15.08	0.38	0.03	0.02	0.40	0.08	0.07	118.2	182.3	64.1	1780.2

2

VITA

Siyong Lee

Candidate for the Degree of

Master of Science

Thesis: AN EMPIRICAL STUDY OF THE CORRELATION BETWEEN ECONOMIC VALUE ADDED AND STOCK PRICE IN THE HOSPITALITY INDUSTRY

Major Field: Hospitality Administration

Biographical:

Personal Data: Born in Seoul, Korea, On April 27, 1997, the daughter of Heegack Lee and Jungee Hong.

Education: Graduated from Kwangsin High School, Seoul, Korea in Feb, 1990; received Bachelor of Science degree in Hotel and Restaurant from Kyunggi University, Suwon, Korea in Feb, 1997, respectively. Completed the requirements for the Master of Science degree with a major in Hospitality Administration at Oklahoma State University in May, 2002.

Experience: Employed as a tour conductor by Samhong Travel Corp., Seoul, Korea in Nov, 1996; Employed by Shift Intelligent Corp. Translation Division as a translator, 1998 to 1999; employed by Oklahoma State University, the school of Hotel and Restaurant Management as a graduate assistant, spring and fall semester from 2000 to 2002.