

Boca Resorts Inc. Valuation Report

Corporate Valuation 4112

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Group12

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Please Note: The following three main exhibits have been attached to the end of this report:

- Historical Income Statements
- Historical Balance Sheets
- Computation of Value of Equity

Executive Summary

This paper presents the valuation of Boca Resorts Inc. a luxury recreational lodging business based in the United States. The McKinsey model was implemented in order to conduct this valuation. The final equity value obtained in this valuation is lower than the market value of the firm and this discrepancy reflects several alternative explanations. The value of the firm was found to be quite sensitive to several factors and thus different scenarios which reflect changes in these assumptions have been tested. The paper concludes with possible explanations for the firm's market value.

1. Introduction

Boca Resorts Inc.¹ was founded in Florida in 1996 and later reincorporated in Delaware in 1997. The company focuses on the luxury and upscale segment and operates five distinctive recreational resorts located in the state of Florida, consisting of hotels, conference facilities, golf courses, spas, marinas and private clubs.

The five individual resorts go by the names of The Boca Raton Resort and Club, The Registry Resort at Pelican Bay, The Hyatt Regency Pier 66 Hotel and Marina, The Edgewater Beach Hotel, and the Radisson Bahia Mar Resort and Yachting Center. In addition to this, connection with two of their golf courses, Boca Resorts owns and runs an exclusive social club known as the Premier Club.

Through their diversity and number of additional amenities and services provided, Boca Resorts is also able to generate substantial non-room related revenue. For instance, for the year ends 2002 through 2004, approximately 60% of the resort's revenue was created from non-room sources.

The resort and hotel industry in which Boca Resorts is located is highly competitive. The company's main competitors comprise of large national and international chains that similarly operate or manage hotels. Major competing factors include room rate, service level, locations, quality of accommodations, booking system, name recognition and availability of alternative operations in local markets.

¹ For the remainder of the paper Boca Resorts Inc. will be referred to simply as Boca Resorts.

Boca Resorts believe that their key competitive strengths in the industry lie in their desirable waterfront locations as well as their strong name recognition and positioning. The company has several registered trademarks and service marks, the most important being those related to their Boca Resorts name and Registry name. In addition to this, the company licenses the Radisson Hotels International Inc. brand name, as well as possessing an agreement with the Hyatt franchise Corporation.

The main target segment of the company consists of corporate groups and affluent leisure customers and it is the goal of the company to maintain and expand their market share in these segments. In order to facilitate this goal, Boca Resorts is continually expanding and developing additional guestrooms and other resort amenities. They also believe that in focusing on the luxury and upscale resort segment, the company is able to outperform other more broadly focused lodging businesses; an advantage particularly relevant in times of economic downturn.

The company places an emphasis on four main business strategies:

1. The continuation of internal growth through capital improvements within the resorts.

Since 1997, the firm has already invested over \$350 million in their resort portfolio with a goal to enhance the properties' facilities, character and market position. Boca Resorts believes that these expenditures will continue to facilitate an increase in room and non-room revenue, while at the same time increasing total revenue per available room, due to their continual targeting of higher spending corporate and other upscale customers. Examples of projects up until now have included comprehensive guestroom renovations, as well as capital enhancements such as the development of a new yacht club, spa complex, golf clubhouse, tennis and fitness centre, and conference center.

2. The continuous focus on corporate groups and affluent leisure customers as the primary target segment.

Managers at Boca Resorts claim that it is the upscale leisure and corporate customers that are more likely to use the additional fee-for-use amenities and facilities provided and that this will in-turn positively impact revenues. They further assert that group business is able to partly off-set the relative downturn during off-peak periods. In addition, they believe that the

common corporate group bookings made from 1 up to 3 years in advance, enable the firm to better estimate future revenue streams and their corresponding expenses.

3. Continuing to capitalize on integration and cost - saving opportunities

Boca Resorts aims to capitalize on these opportunities by making a constant effort towards the integration of the different properties' operations such as reservations, training, information services, insurance, benefits and marketing. They believe that doing so will enable them to achieve enhanced operating efficiencies, profit margins, economics of scale as well as improved internal advancement opportunities for employees.

4. The continuous enhancement of Premier Club value

The Premier Club was first introduced in 1991 and since that time several expansions and enhancements have been made to the various facilities and amenities provided to its members. The firm believes that the Premier Club serves to generate significant additional revenues by leveraging off existing facilities and services offered at the resorts.

2. Historical Performance and Financial Statements

2.1 Overview of Historical Performance

Historically, Boca Resorts have increased their revenues and cash flows in a large part due to development of additional guest rooms and resort amenities at their five existing properties.

Their *leisure and recreation revenues* have been increasing steadily over the past three years, totaling \$273.0 million, \$290.2 million and \$313.3 million for the years ended June 30, 2002, 2003 and 2004 respectively (see Appendix 2). This increase is explained by a rising occupancy rate at the resorts as well as an increase in revenue derived from non-room sources, such as food and beverages, yachting and marina facilities, and spa complexes. As much as 60 % of revenues are generated by such non-room sources. Increases in Boca Resorts' occupancy rates are as a result of an improving economic landscape, property enhancements, and a high quality of assets and customer services. In turn, the company has gained a stronger guest loyalty and a favorable marketing mix that combines corporate groups with high-end leisure travelers. The drop in revenues in 2002 as compared to 2001 was partly an effect of September 11th and partly due to the fact that serious renovations were conducted at two of the resorts. It can also be noted that the increase in *depreciation* in the years 2002 to 2004 was on account of the completion of room renovations.

Leisure and recreation *operating income* has been increasing in the years 2002 to 2004. The increase visible from June 2004 to June 2003 has been explained by higher revenue and improved profit margins. The increase visible from June 2002 to 2003 however, was primarily due to the adverse impacts of the September 11th terrorist attacks and the subsequent economic recession which occurred during 2002.

The firm's *Capital resources* are provided from both internal and external sources. The primary capital resources from internal sources include (1) room rentals, food and beverage sales, retail sales, spa revenue, golf revenue, tennis revenue, marina revenue and conference service revenue at and (2) Premier Club membership revenue, net of related costs. The primary external sources of liquidity have been the issuance of debt securities, borrowing under term loans and credit lines, the issuance of stock for property acquisitions and the exercising of non-qualified stock options by employees.

In 2002, Boca Resorts sold two of their land parcels for a net loss of approximately \$0.1 million. Furthermore, in 2001 an entertainment and sport business was also sold and realized a gain, net of income taxes, of approximately \$26.2 million for the year ended June 30, 2002. These losses and gains have been accounted for in the balance sheet as *Gain (Loss) on disposition of discontinued operations, net of income taxes*, however, this account will not be included in the valuation of this company, as will be discussed later.

Capital expenditures totaled \$28.3 million, \$50.1 million and \$67.0 million for the years ended June 30, 2004, 2003 and 2002, respectively. These expenditures mainly went towards renovations of their rooms and marinas as well as the enhancement of their amenity base.

On November 1996 the Boca Resorts A class shares began trading on NASDAQ (“PUCK”), and on Jul 1997 it began trading on the NYSE (“PAW”, since Sept 1999 “RST. It is interesting to note however that Boca Resorts have not paid any *dividends* to either their Stock A or their Stock B shareholders as the firm’s ability to pay dividends has been limited by their senior debt². The graph below illustrates that Boca Resorts’ share price on the NYSE has seen an increasing trend since mid 2000, which can be explained by the firm’s steadily increasing in revenues which were evidently higher than those anticipated by the market.

Figure 1. Boca Resorts: Stock price quotes (Shares A), volume traded.



² The senior secured credit facility requires the maintenance of specific financial ratios and the satisfaction of certain financial tests that can limit a firm’s ability to borrow money, pay out dividends on stocks.

2.2 Reconstructed Financial Statements, Free Cash Flow and Historical Ratios

Historical input data used to form the Historical Financial Statements in Table 1 are the Income Statements and Balance Sheets taken from Boca Resorts' Annual Reports for the years 1998 to year 2004. Subsequently, historical Free Cash Flows have then been computed for the years 1999 to 2004 and using this data several relevant historical ratios have been determined for each of the corresponding years. Several changes, additions and/or notable points as regards the presentation and/or calculation of this data are explained below.

2.2.1 Income Statement Items

For the purpose of more accurate future forecasting, Total *Leisure and Recreation Revenue* given in Boca Resorts' income statement has been divided into its four constituent revenue sources of Room; Food, Beverage and banquets; Yachting and marina; and Retail and other revenue. The corresponding revenues for each of these segments have been provided in the notes of Boca Resort's annual report. As mentioned earlier, the company generates significant non-room revenue by predominantly leveraging off of its existing resort guests. As a result the different revenue sources are expected to grow at different rates into the future, making this division of total revenue necessary for the valuation phase of this paper.

In connection to operating expenses, *Cost of leisure and recreational expenses* has been subdivided into two categories so as to separate the costs associated with lease, license and franchise agreements from the other more general costs of leisure and recreation. This is due to the fact that future payments and fees associated with the various lease and license agreements have already been determined while the other costs associated with business operation will have to be based on several forecast assumptions.

Amortization and depreciation has also been subdivided in order to distinguish between depreciation attributable to the three main items of Property, Plant and Equipment (PPE) of *Building and improvements*, *Land improvements*, and, *Furniture, fixtures and equipment*. The separation between these three PPE categories is given in Boca Resorts' annual reports; however the corresponding depreciation associated with each category has not been provided. Therefore a separate calculation was made in order to determine these amounts.

The estimated economic life corresponding to each of the three PPE items was given in the annual reports, and thus the economic life used has been determined from the average of this estimated range. The company uses the straight-line method to calculate depreciation and thus the gross rather than net value of the PPE item has been used to calculate the annual depreciation amount. This annual amount for each of the PPE items has been computed using the following equation:

$$\text{Annual depreciation payment} = \frac{\text{Gross value of PPE item}}{\text{Economic life of PPE item}}$$

These annual amounts can be seen as the individual proportion of total depreciation associated with each of the three PPE items. Subsequently, in order to determine the proportion of the depreciation amount provided in the income statement which has been allocated to each of the PPE items, the following computation was performed:

$$\frac{\text{Proportion for depreciation}}{\text{Total of proportion for depreciation}} \times \text{Total depreciation}$$

2.2.2 Balance Sheet Items

The cash item of Boca Resorts' balance sheet includes the two accounts of *Cash and cash equivalents* and *Restricted cash*. In forming the historical Balance Sheet these two items have been combined and this amount has then been sub-divided so as to distinguish between operating cash and excess marketable securities. In order to estimate the amount of excess marketable securities available within the firm, required operating cash has been assumed to be approximately 2 % of total revenue for each year. Thus, any surplus cash above this 2 % amount has been treated as *excess marketable securities*.

In calculating the fixed assets of the company, again *Property, Plant and Equipment* has been separated into the three main PPE items using the same proportions calculated from gross value used in the previous section.

Construction in progress, the fourth item mentioned as part of Property, Plant and Equipment, is assumed to involve no depreciation. Thus, the forecasted value will be made using an

average of the figures provided. Likewise intangible assets, such as trademarks and goodwill are not depreciated. This is due to the fact that the depreciation amount given in Boca Resort's Income Statement is solely attributable to the three main tangible assets of PPE mentioned earlier.

Long term portion of Premier notes receivable is treated as a financial fixed asset and thus appears as a separate asset account that is not a part of operating assets nor is tax deductible.

With regard to the liabilities side of the balance sheet, *Deferred income taxes* takes into account timing differences that arise due to differences in the economic and tax life of the three main PPE items. In computing this amount, the first step is to determine the difference in the annual payments under the tax and economic life of the item. This difference has been labeled *Proportion for deferred taxes* in Table 4 and was computed using the following formula:

$$\frac{\text{Gross value of item}}{\text{Tax life}} - \frac{\text{Gross value of item}}{\text{Economic life}}$$

In order to determine the proportion of each PPE item to total income taxes, this difference was then divided by the sum of the three differences and multiplied by the total income tax amount given in the company's original balance sheets as follows:

$$\frac{\text{Proportion for deferred income tax}}{\text{Total of proportions for income tax}} \times \text{Total income tax amount given}$$

The final point concerning the liabilities that appear in the historical balance sheet is that a *minority share* liability is recorded for the years 1998 and 1999 of the firm's operation. In the years following 1999 however, this liability was valued at 0 indicating that the minority share was probably bought out by the firm's majority owners and thus, minority share liabilities have not been forecasted into the future.

In regard to shareholders equity, the company issues dual classes of shares, however due to the fact that these shares are still associated with the same cash flow rights, their values have been combined into the one account of *common equity*. In addition to this, the company's own

balance sheets included a third category of shareholders equity labeled *contributed capital*. This account has been assumed to represent excess capital paid in by shareholders over and above the par value of the shares, and thus is directly associated with the issuance of new shares. It is therefore not believed that the capital associated with this account should be valued differently from the other share-related equity of the firm and as a result, contributed capital has also been included in the *common equity* account for valuation and future forecasting.’

2.2.3 Extraordinary Items

Several accounts appearing on Boca Resorts’ own financial statements have been treated as extraordinary items and thus do not appear in the reconstructed historical statements. First of all, all items concerning the firm’s discontinued operations have not been included in the valuation of Boca Resorts as the company is not expected to further divest any of its current operations.

Furthermore, *Early retirement of debt* is believed to have occurred in incidences where there is has been a substantial fall in interest rates and thus the company has wished to retire their debt early take out a new loan at the lower interest rate. This is a rather unpredictable and unusual event however, and thus its potential future occurrence will not be included in the valuation of Boca Resorts.

2.2.4 Calculation of Free Cash Flow

A historical free cash flow for the years -5 to 0 has been calculated using the income statement in table 1 and the present and previous year’s balance sheets presented in table 2. *Taxes on EBIT* have been computed by multiplying the average tax rate by EBIT, where the average tax rate was determined by the following division:

$$\text{Average tax rate} = \frac{\text{Provision for Income Taxes}}{\text{Income from continuing operations}}$$

Working capital can be defined as current assets minus current liabilities and hence, *Change in working capital* represents this year’s working capital minus last year’s working capital. It is important to note however, that excess marketable securities have been excluded from the

computation of working capital as this excess cash is not considered to be included in cash needed for the operations of the firm.

Thus Free Cash Flow has been computed as that cash that is available for distribution to the company's debt and equity holders as well as investment in additional excess marketable securities. This distribution can be seen as the deployment of free cash for financial purposes and hence it is logical that *Free Cash Flows* are exactly equal to the *Financial Cash Flow* of the firm as has been shown in Table 3.

Capital expenditures on Property, Plant and Equipment are defined as this year's net PPE minus last year's net PPE.

2.2.5 Historical Ratios

The data presented in Tables 1, 2 and 3 have then been used to calculate several important historical ratios that can be used to form a deeper understanding into the financial performance and operations of Boca Resorts' business.

In regard to room revenue, the growth rate in available room nights has been calculated by dividing this year's available room nights by last year's available room nights minus one. Both the occupancy and average daily rate were given in the company's annual reports.

The ratios relating to Property, Plant and Equipment have been calculated separately for the three PPE items used earlier in the financial statements. For the ratio of *Retirements/Last year's net PPE*, Retirements can be defined as this year's accumulated depreciation (from the balance sheet) Minus last year's accumulated depreciation minus this year's depreciation amount (from the income statement).

For the ratio of *Timing differences/net PPE*, timing differences can be defined as deferred income tax divided by the average tax rate. This ratio has again been calculated for each of the three main PPE items.

3. Assumptions and Computation of Value of Equity

3.1 Inflation

The inflation for US for the last year was 1.43%. We have, hence, assumed the inflation rate to be 1.5% throughout the forecast period.

3.2 Income Statement Items

As described in the section above, the *Leisure and Recreation Revenue* of the company has been historically divided into four segments which are Room; Food, Beverage and Banquets; Yachting and marina; Retail and others. We have kept the same division of revenues while forecasting the revenues as follows:

1. Room Revenues

Three parameters are used to determine the room revenues – Available nights, Occupancy rate and Average daily rate. Growth in Available nights is taken as the average of the historical growth rates and assumed to stay at the same level throughout the forecast period. For the Occupancy rate also, we take an average of the historical years and keep the same rate for all the years. Finally, for the average daily rate, we find that the historical rate has been around 1.8%. We assume a real growth rate of 1% throughout and find the nominal growth using the estimate of inflation. Using these three parameters, we get the room revenues as:

$$\text{Available nights} * \text{Occupancy Rate} * \text{Average Daily Rate}$$

2. Food, Beverage and Banquets

We find that while the revenues from food and beverage were falling initially in the historical years, they have grown by a healthy 7.3% and 10.6% in the last two years. We have therefore, assumed the real growth rate to be 7%. The food and beverage segment has been the largest component of the non-room revenues in all the historical years and we believe this reflects partly the nature of the business and partly the focus of the company. Hence, such a high growth rate can be taken as reasonable. However, after the first 25 years of the forecast period, the growth rate is assumed to go down to 5% and gradually fall to 2% in the last 10 years. Thus, we are assuming a growth of 2% in perpetuity.

3. Yachting and marina

The yachting and marina revenues have grown substantially in the year 2004 by 32%. This is because of some new facilities developed by the company in this area. We believe that

henceforth the revenues will grow although not so substantially. Hence, we assume a real growth rate of 5.5% for the first 25 years and then reduce it gradually to 2% over the next 25 years. The rate remains the same for the post horizon period at 2%.

4. *Retail and others*

This has been the second largest segment in the non-room revenues for the company. Given the growth rates of 4.8% and 4.7% in the last two years, we have assumed the real growth rate to be 3.5% for the initial years which goes down to 2% gradually over the last 10 years.

At this point it may be mentioned that we also compute the real and nominal growth rate for the revenues as a whole. This is done to assist in the computation of figures related to Property, Plant and Equipment. However, as one may notice the growth rates are not the same in the last year of the explicit forecast period and first year of the post horizon period. This is not a deviation from steady state but a computational problem and the steady state is implied by the constant growth rates in different components of the revenues in the 50th and 51st year of the forecast period.

The *operating expenses* of the company are divided into two components – *Cost of leisure and recreation services* and *Selling, general and administrative services*. For both the categories, we have kept the historical averages of the ratio of the expenses to revenues. This is because we wanted to value the company in the situation it is operating in currently. The average for the Cost of leisure and recreation services is approximately 44% while the average for Selling, general and administrative services is 29%.

Amortization and Depreciation is linked to the Property, Plant and Equipment and is hence, discussed later together with other items related to the PPE items.

Interest income is assumed to arise only from the *Excess marketable securities* held by the company. The average rate earned in the historical years is quite high and hence we have assumed a rate of 4.5% which is 1% above the risk free rate.

Interest expense is taken as the nominal borrowing rate of the company times the Long term Debt. The company has been borrowing at a nominal rate of around 8% in the historical years but given the low risk free rate of 3.5%, we have assumed a real interest rate of 4.5%.

In regards to *Provision for taxes*, the tax rate of the company has varied substantially over the historical years but it has been constant at 38.5% in the last two years. This could be the result of capital gains taxes on assets sold by the company in the initial years. Since we are assuming no sale of businesses by the company in the future, we have kept the tax rate at 38.5%.

For the purpose of the valuation we have assumed that the intangible assets appearing in the last balance sheet will be written off over the next 10 years on a straight line basis. However, this expenditure is not tax deductible. Hence, we include it in the extraordinary items not affecting tax.

With these figures we arrive at the *Net Income* for each year in the forecast period. This is added to last year's *Retained earnings* to get the Retained Earnings for each year in the forecast period in the Statement of Retained Earnings. However, these retained earnings are without considering dividends which are included in the Statement of Shareholders' Equity.

3.3 Balance Sheet Items

In calculating the *Working Capital* of the firm, all current assets and liabilities are forecasted using their ratio to revenues. We use the average of the historical years to get the value for the first year in the forecast period and then keep the ratios the same throughout.

The three categories of Property, Plant and Equipment, namely *Land and improvements*, *Buildings and improvements* and *Furniture, fixtures and equipment* - have been forecasted in the same way. We use forecasts of three ratios for determining the value of these tangible assets. These are the ratio of *Net PPE to Revenues*, *Depreciation to Last year's Net PPE* and *Retirements to Last year's Net PPE*. To compute these ratios at the horizon point we need estimates of the economic life of the assets (n), real growth rate in revenues (g), inflation rate (i) and the required ratio of real gross PPE to real revenues (K).

The economic life of the assets is kept the same as in the historical years (taken from the Annual Report of the company). Real growth rate in total revenues has already been calculated for each year in the forecast period. Inflation is assumed to be 1.5% as above. For

the ratio K, we have taken the value as given in “A Tutorial on the McKinsey Model for Valuation of Companies” by L.Peter Jennergren (Appendix 1 Table C) and adjusted it slightly upwards. This is because the ratios given are for Swedish companies while Boca Resorts is an American company. We believe that the property prices would be higher in America and also that Sweden might not have many large resorts and hotels, thus leading to an underestimate of the value of K. The ratio given for Hotel and Restaurant companies in Sweden is 0.52 and thus we take a value of 0.6 for the purpose of our valuation. The ratio is for total gross PPE to revenues and so we need to divide it between the three asset classes. This is done using the ratio of average gross PPE for each asset class in the historical years to the total average gross PPE in the historical years.

Using these values, we arrive at the three ratios for the last year of the explicit forecast period and the post horizon period as follows:

$$\frac{\text{NetPPE}}{\text{Revenues}} = M \cdot (1 - H)$$

$$\frac{\text{Depreciation}}{\text{Lastyear's NetPPE}} = \frac{1}{n} * \frac{1}{1 - H}$$

$$\frac{\text{Retirements}}{\text{Lastyear's NetPPE}} = \frac{1}{F_c (1 + c)^{(n-1)}} * \frac{1}{1 - H}$$

Where,

$$M = (F_c / F_g) \cdot K.$$

$$H = \frac{1}{cn} - \frac{1}{(1+c)^n - 1} \text{ if } c > 0; \quad H = \frac{n-1}{2n} \text{ if } c = 0.$$

$$F_c = \sum_{v=0}^{n-1} \left(\frac{1}{1+c} \right)^v = \frac{1+c - (1+c)^{-(n-1)}}{c} \text{ if } c > 0; \quad F_c = n \text{ if } c = 0.$$

$$F_g = \sum_{v=0}^{n-1} \left(\frac{1}{1+g} \right)^v = \frac{1+g - (1+g)^{-(n-1)}}{g} \text{ if } g > 0; \quad F_g = n \text{ if } g = 0.$$

And c is the nominal growth rate in total revenues

To determine the ratio for the first year in the forecast period, we keep the ratio for Net PPE to Revenues the same as in the last historical year. This is because we find a gradual decrease in the ratio over the historical years and therefore, an average would overestimate the ratio. For the other two ratios we use an average of historical years since no clear trend is observable. Thereafter, the ratios are determined for the remaining years using linear interpolation. The method for PPE is borrowed from the tutorial mentioned above.

Once the three ratios are determined for all the years, the Net PPE for each category of assets is calculated as:

$$\text{Net PPE} = \text{Revenues} * [\text{Net PPE}/\text{Revenues}]$$

Similarly, depreciation and accumulated depreciation for the year are computed as:

$$\text{Depreciation} = \text{Last year's Net PPE} * [\text{Depreciation}/ \text{Last year's Net PPE}]$$

$$\text{Accumulated Depreciation} = \text{Last year's Accumulated Depreciation} + \text{This year's Depreciation} - \text{This year's Retirements}$$

Where,

$$\text{Retirements} = \text{Last year's Net PPE} * [\text{Retirements}/ \text{Last year's Net PPE}]$$

Finally, the value of Gross PPE is computed as the sum of Accumulated Depreciation and Net Property, Plant and Equipment.

For the last item in the Property, Plant and Equipment – Construction in progress, we have assumed a ratio of 0.03 to revenues which is slightly lower than the average as the trend has been falling.

Referring now to *other assets*, *Intangible assets* have been written off over 10 years as explained above. For the head *Other Assets*, we use the ratio of assets to revenues for forecasting. We again see a falling trend in the ratio and have therefore taken the ratio as 0.02 for the forecast period. *Long term portion of Premier Notes Receivable* is a financial asset and is estimated using the historical average for its ratio to revenues.

In terms of *long term debt*, we estimate the total long term debt as a whole instead of estimating for each of the three categories. Given the book value target for financial strength, we get the value of Long term debt as $(1 - \text{Financial Strength Target}) * \text{Invested Capital}$. Invested capital is given after the balance sheet in Table 6. It is calculated as follows:

$$\text{Invested Capital} = \text{Operating Assets} + \text{Working Capital}$$

$$= \text{Total Assets} - \text{Financial Assets (Long term portion of Premier Notes Receivable)} - \text{Excess Marketable Securities} - \text{Current Liabilities}$$

In order to estimate *deferred taxes*, we need the tax life of each asset class. This is taken as 10 years for Land and improvements; 20 years for Building and improvements and 3 years for Furniture, fixtures and equipment. This is based on the US effective life estimates as given by the tax authorities. While nothing specific was available for resort companies, these estimates are based on effective lives of similar assets for other companies.

We use the ratio Timing Differences to Net PPE to estimate Deferred taxes as:

$$\text{Deferred taxes} = \text{Net PPE} * \text{Tax Rate} * [\text{Timing Differences/Net PPE}]$$

For the first year of the forecast period, the ratio is taken as an average of the historical years. For the last year of the explicit forecast period, the ratio is computed as follows:

$$\frac{J}{F_c(1-H)}$$

where,

$$J = \frac{1+c - (qc+1)(1+c)^{-(q-1)}}{c^2q} + \frac{1+c - (1+c)^{-(n-q-1)}}{c} \cdot \frac{1}{(1+c)^q} - \frac{1+c - (nc+1)(1+c)^{-(n-1)}}{c^2n}$$

And q is the tax life of the asset

Following from this, using the values of the ratio for the first and last year of the explicit forecast period, the ratio is estimated for the remaining years by linear interpolation. This is done separately for all the three asset classes.

The total value of *Shareholders' Equity* is computed as the residual value in the Balance Sheet. This figure is transferred to the Statement of Shareholders' Equity where the issue of new stock / dividends paid is computed as the residual value. This is done by deducting the value of opening Shareholders' Equity and Retained Earnings from the value of total Shareholders' Equity.

3.4 Valuation of Boca Resort's Equity

With this information we are able to construct the forecasted balance sheets and income statements for each of the years in the forecast period. We then compute the free and financial cash flows in the same way as we did for the historical years.

In order to compute *WACC*, we need to decide on the financial structure for the company. This is done by choosing a target rate of *Market value of Equity to the Value of the Company* in the last year of the explicit forecast period. From this, we can compute the book value target for financial strength and get the weights for *WACC*. However, in our case, we found that using such an approach would mean having negative values for book value target of financial strength which is not a realistic scenario. Hence, we have used a target average ratio of Equity to Firm value instead of using a target ratio for the last year of the explicit forecast period. We have kept the target as 85% since the company has been reducing its debt over the historical years and debt stood at around 25% in book value terms in the last historical year. We also computed the value of Beta for the company using the last one year's returns data and regressing it against the returns on the S&P 500. This gives us a beta value of 0.93.

Cost of equity is then computed as follows:

Risk free rate = 3.5%

Risk Premium = 5%

Beta = 0.93

Cost of Equity = Risk free rate + Beta * Risk Premium
= 3.5% + 0.93 * 5%

$$= 8.18\%$$

This is then adjusted for inflation to arrive at the *Cost of Equity* for the firm. The nominal borrowing rate is already assumed to be 6.06%. WACC is therefore, equal to

$$r_E \frac{E}{D+E} + r_D(1-\tau) \frac{D}{D+E}$$

Or,

$$9.8\% * 0.85 + 6.06\% * 0.615 * 0.15 = 8.9\%$$

The value of the cash flows in the post horizon period is derived using Gordon's formula as

$$\frac{\text{Free Cash Flow in year 51}}{\text{WACC} - \text{Nominal Growth Rate}}$$

Thereafter, the cash flows in each year are discounted one year at a time to arrive at the value of the company at the end of year 0 which comes out to be \$877,665,780. From this value we deduct the value of debt and add the value of excess marketable securities to arrive at the *Value of equity* which is \$654,288,918. Given the number of shares (40174579) we get a share price of \$16.28 for the company.

4. Sensitivity Analysis

4.1 Valuation under Different Scenarios

In conducting our base case valuation we found that the value of the firm's equity is very sensitive to small changes in certain assumptions. In particular, changes in the discount rates corresponding to the cost of equity and debt as well as decreases in the firm's ratio of expenses to revenues had the largest impact on Boca Resorts value. The potential impact on Boca Resorts' share price to small changes in the ratio of Expenses to Total Revenues is shown in Table 1.

Table1. Scenario with Different Operating Expenses

		Cost of leisure and recreation services								
		44,50%	44,00%	43,97%	43,50%	43,00%	42,50%	42,00%	41,50%	41,00%
Selling, general and administrative expenses	30,00%	13,97	14,74	14,79	15,52	16,29	17,06	17,84	18,61	19,38
	29,50%	14,74	15,52	15,56	16,29	17,06	17,84	18,61	19,38	20,16
	29,03%	15,47	16,24	16,29	17,01	17,79	18,56	19,33	20,11	20,88
	29,00%	15,52	16,29	16,33	17,06	17,84	18,61	19,38	20,16	20,93
	28,50%	16,29	17,06	17,11	17,84	18,61	19,38	20,16	20,93	21,70
	28,00%	17,06	17,84	17,88	18,61	19,38	20,16	20,93	21,70	22,48
	27,50%	17,84	18,61	18,66	19,38	20,16	20,93	21,70	22,48	23,25
	27,00%	18,61	19,38	19,43	20,16	20,93	21,70	22,48	23,25	24,02
	26,50%	19,38	20,16	20,20	20,93	21,70	22,48	23,25	24,02	24,80
	26,00%	20,16	20,93	20,98	21,70	22,48	23,25	24,02	24,80	25,57
	25,50%	20,93	21,70	21,75	22,48	23,25	24,02	24,80	25,57	26,34
25,00%	21,70	22,48	22,52	23,25	24,02	24,80	25,57	26,34	27,12	

Changes in the values of the first category of expenses *Cost of leisure and recreation services* appear in the top row of the table, while changes in the values of *Selling, general and administrative expenses* appear in the first column of the table. The base case scenario is highlighted in bold, and shows the initial share price value of 16.286 (0.439, 0.286). A small increase in the proportion of expenses corresponding to 0.445 and 0.3 leads to quite a substantial decrease in the share value to 13.968. Similarly, a small decrease in expenses leads to a large increase in share price value.

The impacts of changes in the firm's discount rate are shown in Table 2.

Table 2. Scenario with Different Borrowing and Equity Costs

		Real Borrowing Rate						
		6,50%	6,00%	5,50%	5,00%	4,50%	4,00%	3,50%
Real Cost of Equity	10,00%	7,57	7,73	7,89	8,05	8,21	8,38	8,55
	9,50%	9,13	9,31	9,50	9,70	9,90	10,10	10,30
	9,00%	11,00	11,22	11,45	11,69	11,93	12,17	12,42
	8,50%	13,27	13,54	13,82	14,11	14,41	14,71	15,02
	8,18%	14,98	15,30	15,62	15,95	16,29	16,63	16,99
	8,00%	16,06	16,39	16,74	17,10	17,46	17,84	18,22
	7,50%	19,52	19,94	20,38	20,83	21,29	21,76	22,24
	7,00%	23,89	24,43	24,98	25,56	26,14	26,75	27,37

Different values for the firm's real cost of debt appear in the top row of the table while the alternative values for the real cost of equity appear in the first column of the table and again the number in bold represents that base case scenario. As can be expected, changes in the cost of equity are seen to have a much higher impact on the share price than do changes in the cost of debt.

Valuation results for several other scenarios whereby changes in the assumptions related to the forecasted growth rate, inflation rate, tax rates and the value of K are presented in Table 3.

Table 3. Other Alternative Scenarios

		Value of Firm	Value of Equity	Share Price	Change in Share Price
1	Base Case Valuation	877665,78	654288,92	16,29	
2	+1% growth rate in all components of revenues	1290029,52	1067063,83	26,56	63,09%
3	-1% growth rate in all components of revenues	708934,79	485149,04	12,08	-25,85%
4	+1% inflation rate	802155,60	579079,49	14,41	-11,49%
5	-0.5% inflation rate	915528,85	692001,61	17,22	5,76%
6	K = 0.52	902469,35	679092,49	16,90	3,79%
7	K = 0.75	831159,09	607782,23	15,13	-7,11%
8	Tax Rate = 42%	831692,08	608315,22	15,14	-7,03%
9	Tax Rate = 35%	922692,85	699315,98	17,41	6,88%

Scenario one represents the base case scenario. Scenario two presents the situation where all the growth rate of all components of revenue are increased by 1%, while scenario three situations where the growth rate in all components of revenue are decreased by 1%. As could

be expected, movements in revenue growth rates lead to substantial changes in the value of the firm's stocks. The increased growth rate has a relatively larger effect (+63.09%) than the decreased growth rate (-25.85%) on the stock price. Scenario four shows the influence of an increase of the inflation rate by 1% on the stock prices while scenario five shows a decrease of inflation by 0.5%. Increases in inflation rates lead to a decrease in stock value, while a drop in inflation leads to an increase in stock value. Scenario six and seven consider the effects of changes in capital intensity factor K. The decrease in K leads to an increase in the stock price, whereas an increase in K results in a decrease in stock price value. Scenarios eight and nine present the impact of the change in average tax rate on the stock price. The tax increase leads to a decrease of the stock price, while the tax decrease to an increase in stock price; the changes seem to be symmetrical. Overall, while a change in the growth factor leads to a fairly substantial change in Boca Resorts' stock price, the remaining six scenarios (4 to 9) have a relatively unsubstantial impact on the firm's stock price.

4.2 Market Value Scenario

In order to obtain a value of equity corresponding to the current stock price as of June 30, 2004 (\$19.82), several of the assumptions which made up the base case scenario have been adjusted. Table 4 and Table 5 present two possible alternatives which lead to a stock price equal to that valued by the market.

Table 4. Market Value Scenario

	Current	Changed
Operating Expenses		
- Cost of leisure and recreation services	43,97%	42,00%
- Selling, general and administrative expenses	29,03%	27,00%
Risk Premium	5,00%	5,50%
Value of K	0,6	0,51
Tax Rate	38,50%	38,60%

In the above scenario, we have assumed that Boca Resorts' have been able to reduce both components of their operating expenses. This costs-cutting situation seems to be quite a reasonable prediction seeing as the capitalization on integration and cost - saving opportunities is one of the firm's main strategies as outlined previously in the introduction. In

In addition to this, the risk premium of the firm has been slightly increased, which could reflect the market's belief that the firm is riskier than was assumed in the base case scenario. The value of K has also been decreased from 6 to 5.1 indicating a drop in the level of capital expenditures by the firm. Finally, a minor adjustment to the tax rate has enabled the exact market value of the firm to be obtained.

An alternative scenario has also been proposed which reflects the situation whereby again operational expenses are reduced by the same amount but the risk premium and tax rate have remained the same as in the base case scenario. Instead, current assets have gradually increased over a period of ten years, while current liabilities have gradually decreased. In the firm's current state, their current liabilities are actually larger than their current assets and we believe that this situation is quite unsustainable in the long term. At present, Boca Resorts' working capital is -19.89% of Total revenues. In the alternative market scenario therefore, this proportion has been gradually decreased over ten years so as to level out at + 1.5% in the 11th year and thereafter. In addition, the value of K has again been decreased reflecting a reduction in capital expenditures made by the firm. These changes have also enabled the market value of the firm's equity to be obtained and are represented in Table 5 below.

Table 5. Alternative Market Scenario

	Current	Changed
Operating Expenses		
- Cost of leisure and recreation services	43,97%	42,00%
- Selling, general and administrative expenses	29,03%	27,00%
Value of K	0,6	0,46
Working Capital	- 19,89% of Revenues	+ 1,5% of revenues in the 11th year and thereafter

Finally, it is also quite likely that the firm is unable to substantially reduce its expenses in the future, but however is still able to make the changes to working capital whereby current assets are gradually increased over current liabilities. In this case, all other factors remaining equal to the base case scenario, Boca Resorts' share price would be equal to \$12.56.

5. Concluding Remarks

Upon the initial base case valuation of Boca Resorts an equity value of \$654,288,918 was obtained which corresponds to a share price of \$16.28 as of June 30, 2004. This value is evidently lower than the market share price and this discrepancy could be as a result of several factors. First of all, in the case where our valuation is correct, the market price could reflect an overvaluation by the market. Alternatively, if the market value is the correct value of the firm, this could imply that the market believes that the firm will be successful in achieving its goal of greater efficiency and cost reduction in the future. On the other, the valuation model used has proven to be very sensitive to several of the assumption used, in particular to those relating to operating expenses, discount rates and future growth rates. Therefore, perhaps the market has taken different variations of these assumptions into account when forming their valuation of Boca Resorts Inc.