# Lecture Series 6 - 11
# Corporate Valuations in the Hospitality Business

**4th Edition**

**Prof. Chris Droussiotis, M.B.A, C.H.E**
**Fairleigh Dickinson University**
**International School of Hospitality Management**

# CORPORATE VALUATIONS

## CORPORATE VALUATIONS OVERVIEW

### The Importance of Corporate Valuations:

The most important objective of management is to increase the value of the company. Many different constituencies are interested in shareholder value.

- Shareholders
- Employees
- Management
- Future Investors
- Future Acquirers
- Creditors (Banks, Subordinated Debt Holders, Trade Creditors)
- The Community

### How do you Measure "Corporate Valuation"?

The measurement of value will change depending on the method used to evaluate a particular company – balance sheet value today, historical earnings from yesterday, or future earnings from tomorrow.

The objective of every measurement, however, remains the same

**WHAT IS VALUE OF THE FIRM TODAY?**

***Different Measurements of Valuation***

There are number of ways to value a company. These will differ in their appropriateness depending on who is interested in the valuation. These approaches include:

Net Book Value
Liquidation Value
Replacement Value
Market Value

## Net Book Value

The main features, of net book value, include:

- Net book value equals the total equity shown on the balance sheet derived from total assets minus total liabilities.
- It reflects total issued equity adjusted for the effect of historical retained earnings, divided payments, and repurchase of stock.
- It is based on accounting conventions – generally accepted accounting principals (GAAP) which reflect the valuation of individual groups of assets, and, more influentially over time, the measurement of retained earnings derived from recording of individual revenues and expenses from income statement.

The main advantages and disadvantages of net book value as an analytical measurement is:

- Net book value is a historical accounting measurement, reflecting all of the weakness endemic in accrual accounting as a measurement of historical cash flows. Further, it does not measure the impact of value future cash flows.
- Net book value is nevertheless used extensively as a measurement of valuation. For example, certain types of companies are valued and analyzed by comparing market value to book value (e.g. banks and other financial institutions). This reflects the importance, which the market places on underlying value (primarily liquidation value) of the assets of the firm.
- Net book value, sometimes referred to as net worth or equity, is also an important measurement since it is the basis for most loan agreement financial covenants, and provides lenders with the requisite trigger in their agreements in the event of deterioration in book value below a certain point. For lenders, therefore, net book value is an important measurement of value.

## Liquidation Value

Financial institutions such as the banks, creditors, mainly are interested in the Liquidation Value of the hotel or restaurant property. It has the following principal characteristics:

- Liquidation value can be defined in a number of settings including orderly liquidation on-site, forced liquidation on-site, orderly liquidation off-site, and forced liquidation off-site.
- Liquidation values will include, in addition to the expected proceeds of the assets themselves, the cost of selling the assets. As a result the on-site/off-site issue is very important, and will be reflected in valuations given by valuation experts.
- In coming up with such liquidation values, valuation experts will use a highly professional, comparative approach, which reflects sales of similar assets in similar locations.
- This approach is used frequently by asset-based lenders where the uncertainty or volatility of projected cash flows demands a detailed understanding of "backdoor" sources or repayment – most important the assets themselves i.e. the sale of the building.
- Lenders will also implicitly include liquidation values in lending criteria through the conservatism of advance rates against individual sets of assets (e.g. 75% against eligible receivables, 50% against eligible inventory, or 50% against eligible PP&E).
- For the shareholder, this valuation approach has limited benefits in maximizing potential shareholder value (unless, of course, the company is already in distress). The approach involves a discounting of book values- and is therefore even more conservative than the net book value approach – and does not reflect any future cash flows discounted back to present value today.

## Replacement Value

Replacement value is exactly what it says: the amount a potential acquirer would have to pay to replace the assets at today's market prices. Though rarely used for hotel assets, it has the following characteristics:

- It is most commonly applied when valuing an entire business process or system compared to just individual assets.
- It includes not just the original cost, but also the soft costs of engineering, installation, maintenance, and add-ons.
- It will also reflect the benefits of marketing and distribution arrangements with other parts of the business.
- It is rarely used as a stand alone valuation technique, but more usually in conjunction with earnings multiples in order to derive a median price
- It is particularly pertinent for long-term sale/leaseback transactions where the lessor values assets for the purposes of determining his/her effective economic life in conjunction with his/her cash flow generating ability.
- As a result, replacement value will almost always yield a higher valuation for a firm or a business than that of either net book value or liquidation value. Bankers rarely use it unless they are participating in both the equity and debt components of a leveraged lease of existing system assets.

## Market Value

Market Value has the advantage over other methods we have seen because it starts to reflect not just historical earnings, but future earnings discounted back to value today.

Many factors contribute to the market value of a hotel and restaurant and different types of buyers may use different formulas for determining the price they are willing to pay for a hotel or a restaurant property. Whatever formula one may use, almost everyone takes into account in some way other factors which may or may not be quantified, such as the specific location, the market conditions (ADR, Occupancy Rates, Restaurant Turnover Ratio and Average Check) in which the property operates, the current franchise or future franchise possibilities, age and condition, cost of renovations, the reputation of the current or past management, future hotel or restaurant development in the area, future room night and food and beverage demand generators, barriers to entry, financing options, functional obsolescence, value of the land, and more. Each of these factors must be weighed for every property and in some cases one factor may weigh more heavily than all of the others combined.

There are a lot of methods of calculating the Market Value of a hospitality corporation, depending on if the firm is privately or publicly owned. This chapter will focus on four of the methods that are used today by bankers, Wall Street analysts, Mergers and Acquisitions specialists and Private Equity Firms. These methods are:

1. Using the Stock Market
2. Using EBITDA Multiples of comparable companies
3. Using Comparative Transactions
4. Using Discount Cash Flow Method

## Method #1: Using the Stock Market

Every day from 9:30am - 4:00pm, every hour and every minute the companies that are listed on the stock market (NYSE, Nasdaq, ASE) are trading at their market value of the equity.

See a sample stock report of various hotel companies

**STOCK REPORT**

| # | Companies | 1/24 | 1/31 | 2/7 | 2/14 | 2/22 | 2/28 | 3/7 | 3/14 | 3/21 | 3/28 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **Choice Hotels International ("CHH")** | 58.38 | 57.95 | 59.54 | 59.64 | 58.13 | 59.13 | 59.92 | 60.49 | 61.23 | 60.83 |
| 2 | **Fairmont Hotels & Resorts. ("FHR")** | 31.73 | 31.21 | 30.98 | 30.80 | 30.90 | 32.14 | 33.43 | 33.10 | 32.65 | 32.29 |
| 3 | **Felcor Lodging LP ("FCH")** | 14.15 | 13.98 | 14.29 | 13.77 | 12.85 | 12.54 | 13.38 | 13.16 | 13.04 | 12.56 |
| 4 | **Gaylord Entertainment ("GET")** | 39.69 | 39.29 | 40.13 | 40.77 | 42.50 | 42.80 | 43.83 | 42.84 | 41.45 | 40.99 |
| 5 | **Hilton Hotels ("HLT")** | 22.29 | 22.25 | 22.16 | 22.10 | 21.04 | 21.06 | 23.26 | 22.65 | 22.36 | 21.92 |
| 6 | **Host Marriot LP ("HMT")** | 16.44 | 15.95 | 16.14 | 16.04 | 15.49 | 15.98 | 17.05 | 17.11 | 16.50 | 16.36 |
| 7 | **John Q. Hammons Hotels ("JQH")** | 20.25 | 20.10 | 23.38 | 23.29 | 22.89 | 22.17 | 21.72 | 22.27 | 22.10 | 21.58 |
| 8 | **La-Quinta Corp ("LQI")** | 8.85 | 8.68 | 8.91 | 8.84 | 8.60 | 9.25 | 9.14 | 8.95 | 8.85 | 8.51 |
| 9 | **Marcus Corporation ("MCS")** | 23.15 | 24.99 | 25.36 | 24.68 | 23.31 | 23.32 | 23.50 | 23.26 | 23.37 | 20.85 |
| 10 | **Meristar Hospitality (("MHX")** | 8.00 | 7.78 | 7.80 | 7.60 | 7.31 | 7.34 | 7.70 | 7.56 | 7.39 | 6.88 |
| 11 | **Marriott International ("MAR")** | 62.30 | 63.05 | 66.50 | 65.00 | 62.67 | 64.10 | 67.77 | 66.91 | 64.96 | 65.25 |
| 12 | **Orient Express Hotels Ltd ("OEH")** | 20.15 | 20.51 | 21.69 | 23.28 | 23.96 | 25.74 | 24.86 | 25.16 | 25.51 | 25.72 |
| 13 | **Starwood Hotels & Resorts ("HOT")** | 56.86 | 57.89 | 60.80 | 59.34 | 56.64 | 57.24 | 59.43 | 57.17 | 58.69 | 58.33 |
| 14 | **Wyndham International ("WBR")** | 1.07 | 0.96 | 0.94 | 0.90 | 0.86 | 0.84 | 0.90 | 0.89 | 0.84 | 0.84 |

The price per share represents the company's market value of the equity (ownership). If you take the stock price of a publicly traded company and multiply by the shares outstanding, the result is the value of the Equity. If you add that Equity Value and the Debt from the balance sheet (last reported date) (E+D=A), this results to the Enterprise Value. The Enterprise value represents what would someone pay to buy the Company. Most conventional calculations of Enterprise value look at Net Debt which is the Debt minus Cash.

**EV = MV of Equity + Debt- Cash**

A collection of data was gathered for 7 hotel corporations including the stock price at a given date, stock outstanding and debt amounts from the last reported period. Using these data, the table below calculates the Enterprise Value for each public company:

| Company | Symbol | Stock Price | Stocks Outstanding (000) | Equity Value (000) | Debt (000) | Cash (000) | Enterprise Value (000) |
|---|---|---|---|---|---|---|---|
| Choice Hotels International | CHH | $ 38.59 | 65,700 | 2,535,363 | 199,150 | 50,670 | **2,683,843** |
| Hilton Hotels | HLT | $ 47.36 | 390,400 | 18,489,344 | 6,180,000 | 170,000 | **24,499,344** |
| Intercontinental Hotel | IHG | $ 20.87 | 299,000 | 6,240,130 | 1,870,000 | 108,650 | **8,001,480** |
| Marcus Corporation | MCS | $ 19.27 | 30,380 | 585,423 | 241,750 | 12,630 | **814,543** |
| Marriott International | MAR | $ 40.59 | 367,760 | 14,927,378 | 2,950,000 | 208,000 | **17,669,378** |
| Orient Express Hotels Ltd | OEH | $ 64.00 | 42,440 | 2,716,160 | 775,940 | 86,810 | **3,405,290** |
| Starwood Hotels & Resorts | HOT | $ 58.99 | 209,810 | 12,376,692 | 3,032,000 | 508,000 | **14,900,692** |

For example, to find the Enterprise for Starwood Hotel & Resorts you must multiply the Stock Price ($58.99) times the stock outstanding (209.8 million), plus the Debt ($3,032 million) less Cash ($508 million):

| Company | Symbol | Stock Price | Stocks Outstanding (000) | Equity Value (000) | Plus Debt (000) | Less Cash (000) | Enterprise Value (000) |
|---|---|---|---|---|---|---|---|
| Starwood Hotels & Resorts | HOT | $ 58.99 | 209,810 | 12,376,692 | 3,032,000 | 508,000 | **14,900,692** |

## Method #2: Using EBITDA Multiples Method

This is one of the most popular methods in the Mergers and Acquisition (M&A) world of finance. This method is used for public (see above table) or for private companies. The ratio is used for comparison purposes. A company that is trading 28.92x EBITDA (i.e. Orient Express Hotel) is seen as an expensive stock to buy compared to that of other hotel companies trading at an average multiple of 15.45x. The reason that could be trading that high, it could be that there is a higher value gain expectation from Wall Street investors than the other hotel companies. Using the EBITDA Multiple method (method #2), you could derive to a ratio that you could use to compare to the company's piers. To get a better mean (average) you need to adjust out the outliers (i.e Orient Express 26.92x multiple). This results ot a 13.54x average multiple. See below:

| Company | Symbol | Stock Price | Stocks Outstanding (000) | Equity Value (000) | Debt (000) | Cash (000) | Enterprise Value (000) | EBITDA (000) | EBITDA Multiple |
|---|---|---|---|---|---|---|---|---|---|
| Choice Hotels International | CHH | $ 38.59 | 65,700 | 2,535,363 | 199,150 | 50,670 | **2,683,843** | 181,850 | **14.76x** |
| Hilton Hotels | HLT | $ 47.36 | 390,400 | 18,489,344 | 6,180,000 | 170,000 | **24,499,344** | 1,680,000 | **14.58x** |
| Intercontinental Hotel | IHG | $ 20.87 | 299,000 | 6,240,130 | 1,870,000 | 108,650 | **8,001,480** | 557,610 | **14.35x** |
| Marcus Corporation | MCS | $ 19.27 | 30,380 | 585,423 | 241,750 | 12,630 | **814,543** | 72,020 | **11.31x** |
| Marriott International | MAR | $ 40.59 | 367,760 | 14,927,378 | 2,950,000 | 208,000 | **17,669,378** | 1,190,000 | **14.85x** |
| Orient Express Hotels Ltd | OEH | $ 64.00 | 42,440 | 2,716,160 | 775,940 | 86,810 | **3,405,290** | 126,480 | **26.92x** |
| Starwood Hotels & Resorts | HOT | $ 58.99 | 209,810 | 12,376,692 | 3,032,000 | 508,000 | **14,900,692** | 1,351,000 | **11.03x** |
| | | | | | | | | **Average** | **15.40x** |
| | | | | | | | | **Adj Avg** | **13.48x** |

To calculate Starwood Hotel & Resorts Enterprise Value using the EBITDA Multiple method (Method #2) you use Starwood's last reported EBITDA and multiplied by the industry average:

| Method #2 - Using Average EBITDA Multiple | Average EBITDA Multiple | EBITDA (000) | Enterprise Value (000) |
|---|---|---|---|
| **Starwood Hotels & Resorts** | **13.48x** | 1,351,000 | **18,211,174** |

A well known valuation method on Wall Street is PE multiple method. It uses a company's price-earnings (P-E) ratio to capitalize earnings. For example, if a company in the Hotel industry sells typically at 25x earnings, and earnings per share are now $1, the accounting model will provide a $25 share price, thus:

| Share Price | = | EPS | x | P-E Ratio |
|---|---|---|---|---|
| $25 | = | $1 | x | 25 |

Please note the EPS could be calculated by Dividing Net Income by Stocks outstanding.

The table below shows the EBITDA Multiples for the Restaurant Industry:

**RESTAURANT COMPANIES**

| Calculations → | | SP | SO | SP * SO = EQ | D | | EQ + D = EV | E | EV / E | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Company** | **Symbol** | **Stock Price** | **Stocks Outstanding (000)** | **Equity Value (000)** | **Debt (000)** | **Cash (000)** | **Enterprise Value (000)** | **EBITDA (000)** | **EBITDA Multiple** | **Beta** |
| Applebee's Intl, Inc. | APPB | $ 25.21 | 74,950 | 1,889,490 | 144,670 | 7,960 | **2,026,200** | 205,760 | **9.85x** | 1.63x |
| BJ's Restaurant Inc | BJRI | $ 18.99 | 26,100 | 495,639 | - | 64,100 | **431,539** | 25,860 | **16.69x** | 0.17x |
| Brinker Intl (Chili's, Romano's | EAT | $ 27.03 | 105,150 | 2,842,205 | 828,680 | 85,240 | **3,585,645** | 524,030 | **6.84x** | 1.19x |
| Darden Rest. (Red Lobster, Olive Garden) | DRI | $ 43.28 | 141,890 | 6,140,999 | 67,050 | 47,300 | **6,160,749** | 786,300 | **7.84x** | 0.79x |
| Starbucks Corp. | SBUX | $ 26.07 | 732,110 | 19,086,108 | 882,100 | 330,020 | **19,638,188** | 1,380,000 | **14.23x** | 1.20x |
| Texas Roadhouse | TXRH | $ 11.40 | 74,750 | 915,920 | 79,930 | 57,790 | **938,060** | 86,260 | **10.87x** | 1.18x |
| Yum Brands (Pizza Hut, KFC) | YUM | $ 37.95 | 508,610 | 19,301,750 | 2,420,000 | 507,000 | **21,214,750** | 1,840,000 | **11.53x** | 1.42x |
| | | | | | | | | **Average** | **10.26x** | **1.16x** |

The table below shows the EBITDA Multiples for the Casino Industry:

**CASINO COMPANIES**

| Calculations → | | SP | SO | SP * SO = EQ | D | | EQ + D = EV | E | EV / E | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Company** | **Symbol** | **Stock Price** | **Stocks Outstanding (000)** | **Equity Value (000)** | **Debt (000)** | **Cash** | **Enterprise Value (000)** | **EBITDA (000)** | **EBITDA Multiple** | **Beta** |
| Pinnacle Entert. | PNK | $ 27.18 | 59,770 | 1,624,549 | 791,240 | 413,390 | **2,002,399** | 124,510 | **16.08x** | 1.95x |
| MGM Mirage | MGM | $ 91.73 | 284,340 | 26,082,508 | 13,560,000 | 294,610 | **39,347,898** | 2,140,000 | **18.39x** | 2.61x |
| Harrah's Entert. | HET | $ 88.40 | 187,240 | 16,552,016 | 12,200,000 | 721,000 | **28,031,016** | 2,480,000 | **11.30x** | 1.77x |
| Las Vegas Sands | LVS | $ 133.65 | 354,870 | 47,428,376 | 7,110,000 | 1,790,000 | **52,748,376** | 656,780 | **80.31x** | 2.58x |
| Station Casinos | STN | $ 89.85 | 57,260 | 5,144,811 | 3,430,000 | 105,150 | **8,469,661** | 505,510 | **16.75x** | 0.67x |
| Boyd Gaming | BYD | $ 40.40 | 87,710 | 3,543,484 | 2,140,000 | 169,400 | **5,514,084** | 642,910 | **8.58x** | 1.92x |
| | | | | | | | **Average** | | **29.24x** | **1.74x** |
| | | | | | | | **Average (less outlier)** | | **15.63x** | |

# Method #3: Using Comparative Transactions

This method is probably the most effective method. When valuing a specific company, you have better understanding of the current value if any of its competitors/piers that are in the same business have been bought/sold. The acquisition price for these transactions could be used as a benchmark for valuing the specific company. In the residential market, Real Estate Brokers or Mortgage Companies use this method of valuing the property.

***HOTEL COMPARABLES***

| Calculations → | | | AP | SO | AP * SO = EQ | D | EQ + D = EV | E | EV / E |
|---|---|---|---|---|---|---|---|---|---|
| **Date Anouncement** | **Target** | **Acquirer** | **Acquisition Price /Share** | **Shares Outstanding** | **Equity Value ($mm)** | **Total Debt ($mm)** | **Enterpised Value (EV)** | **EBITDA (last reported)** | **EBITDA Multiple** |
| 7/4/2007 | Hilton Hotels | Blackstone Group | $ 47.50 | 390,400,000 | $ 18,544.00 | $ 6,180.00 | $ 24,724.00 | $ 1,680.00 | 14.72x |
| 11/6/2006 | Four Seasons* | Kingtom Hotels Int'l / Gates' Cascade Invstments | $ 82.00 | 33,078,000 | $ 3,300.00 | $ 278.68 | $ 3,578.68 | $ 112.18 | 31.90x |
| 5/11/2006 | Fairmont/Rafles | Kingtom Hotels Int'l | $ 45.00 | 73,333,333 | $ 3,300.00 | $ 123.50 | $ 3,423.50 | $ 187.20 | 18.29x |
| 1/10/2006 | Hilton International | Hilton Hotels Corp. | | | $ 5,578.00 | $ - | $ 5,578.00 | $ 504.00 | 11.07x |
| 11/14/2005 | Starwood Hotels | Host Marriott | | | | | $ 4,096.00 | $ 315.08 | 13.00x |
| 10/24/2005 | La-Quinta Corp | | $ 12.22 | 203 | $ 2,474.00 | $ 925.71 | $ 3,400.00 | $ 229.70 | 14.80x |
| 8/16/2005 | Wynham Int'l | Blackstone Group | $ 1.15 | 172,053,000 | $ 197.86 | $ 2,681.96 | $ 2,879.82 | $ 275.18 | 10.47x |
| 8/8/2005 | John Q. Hammons Hotels | JQH Acquisition LLC | $ 24.00 | 19,583 | $ 470.00 | $ 765.20 | $ 1,235.00 | $ 123.07 | 10.00x |
| 07/22/2005 | Societe du Louvre | Starwood Capital | | | | | $ 1,028.90 | $ 91.05 | 11.30x |
| 3/10/2005 | Intercontinental Hotels | LRG | | | | | $ 981.00 | $ 106.63 | 9.20x |
| 12/10/2004 | Boca Resorts | Blackstone Group | $ 24.00 | 40,284,000 | $ 966.82 | $ 217.29 | $ 1,184.11 | $ 90.07 | 13.15x |
| 8/18/2004 | Prime Hospitality | Blackstone Group | $ 12.25 | 44,808,000 | $ 548.90 | $ 243.60 | $ 792.50 | $ 55.12 | 14.38x |
| 3/8/2004 | Extended Stay | Blackstone Group | $ 19.93 | 95,077,000 | $ 1,894.88 | $ 1,231.50 | $ 3,126.38 | $ 224.85 | 13.90x |

* Four Seasons' $112.18 million represents 2007 EBITDA (2005 EBITDA was $11.4 negative)

**Average** **14.32x**

**Average (adjusting out the outliers)** **13.19x**

Other methods of calculating comparative valuations include per square foot, per room, etc. See below for single property purchases:

***HOTEL COMPARABLES (using other methods)***

***Other Methods of Private Companies or single property sales (Per Room Analysis)***

| Date Anouncement | Target | Acquirer | Acquisition Price/ Room | Number of Rooms | Equity Value ($mm) | Total Debt ($mm) | Enterpised Value (EV) | |
|---|---|---|---|---|---|---|---|---|
| 9/14/2005 | Hyatt Regency-DC | Host Marriott | $ 328,537.17 | 834 | $ 274.00 | Incl. | $ 274.00 | Per Room Analysis |
| 9/9/2005 | Paris Intercontinental | GIC RE (Singapore) | $ 863,013.70 | 438 | $ 378.00 | Incl. | $ 378.00 | Per Room Analysis - Luxury |
| 8/26/2005 | Century Plaza, CA ** | Hyatt / Sunstone | $ 432,692.31 | 728 | $ 315.00 | Incl. | $ 315.00 | |
| 4/14/2005 | The Plaza Hotel-NY* | Elad Properties LLC | $ 838,509.32 | 805 | $ 675.00 | Incl. | $ 675.00 | Per Room Analysis - Luxury |
| 11/12/2003 | Hyatt Regency-Maui | Blackstone Group | $ 398,000.00 | 806 | $ 320.79 | Incl. | $ 320.79 | Per Room Analysis |
| 9/29/2003 | Marriot Grosvenor Square - London | Blackstone Group | $ 354,000.00 | 221 | $ 78.23 | Incl. | $ 78.23 | Per Room Analysis |

Average Per Room $ 535,792.08

Taking out the outlier (Paris Interc. & NY Plaza) $ 360,179.06

*** The Plaza Hotel Investment Strategy:**

The 805-room Midtown hotel with views of Central Park will shut its doors April 30 and reopen late next year with about 350 hotel rooms, 200 condominiums and new retail space

***** Centrury Plaza Hotel & Spa Investment Strategy:**

Purchase price $293 million ($402,472 per rooom) + $22 million renovation for total investment $315 million ($432,692 per room) - rename to Hyatt Regency Plaza

Major investment banking firms use the Method #3 to calculate enterprise values. The exhibit below shows recent list of acquisitions in the Casino market:

***GAMING COMPARABLES***

| Calculations → | | | AP | SO | AP * SO = EQ | Ca | EQ + D + Ca = E | E | EV / E | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Date Anouncement** | **Target** | **Acquirer** | **Acquisition Price /Share** | **Shares Outstanding** | **Equity Value ($mm)** | **Cash ($mm)** | **Total Debt ($mm)** | **Enterpised Value (EV)** | **EBITDA (last reported)** | **EBITDA Multiple** |
| 3/15/2007 | Harrah's | Texas Pacific Group/Apollo | $ 90.00 | 187,240,000 | $ 16,851.60 | $ 721.00 | $ 12,200.00 | $ 28,330.60 | $ 2,480.00 | 11.42x |
| 6/20/2005 | Argosy Baton Rouge | Columbia Sussex | | | | | | $ 150.00 | $ 20.27 | 7.40x |
| 5/11/2005 | Reno Hilton (Ceasars) | Grand Siera Resort | | | | | | $ 150.00 | $ 11.03 | 13.60x |
| 3/23/2005 | MotorCity (Mandalay) | Marion | | | | | | $ 525.00 | $ 67.31 | 7.80x |
| 02/04/2005 | Golden Nuggett | Landry's | | | | | | $ 295.00 | $ 22.69 | 13.00x |
| 11/03/2004 | Argosy Gaming | Penn National | | | | | | $ 2,200.00 | $ 258.82 | 8.50x |
| 10/25/2004 | Mandalay Resort | MGM Mirage | $ 68.00 | 71,323,529 | $ 4,850.00 | $ - | $ 2,800.00 | $ 7,650.00 | $ 584.79 | 13.08x |
| 07/15/2004 | Caesars | Harrah's | $ 61.27 | 55,300 | $ 3,388.00 | $ 1,792.00 | $ 4,260.00 | $ 9,440.00 | $ 1,180.00 | 8.00x |
| | | | | | | | | | | |
| | Average | | | | | | | | | 10.35x |

Major investment banking firms use the Method #3 to calculate enterprise values. The exhibit below shows recent list of acquisitions in the Restaurant market:

***RESTAURANT COMPARABLES***

| Date | Target | Acquirer | Value ($mm) | EBITDA ($mm) | EBITDA Multiple |
|---|---|---|---|---|---|
| 7/5/2007 | Applebees | IHOP | 2,040.0 | 205.8 | 9.91x |
| 10/19/2005 | Garden Fresh Holdings | Sun Capital Partners | 250.0 | 21.0 | 11.90x |
| 7/25/2005 | RTM Restaurants | Triarc Cos | 780.0 | 180.7 | 4.32x |
| 7/1/2005 | EACC Corp | Banner Buffets LLC | 30.0 | 4.5 | 6.67x |
| 1/11/2005 | Chevy's Fresh Mex | Real Mex Restaurant | 77.9 | 6.5 | 11.98x |
| 10/5/2004 | Bear Creek Corp. | Wasserstein & Co. | 260.0 | 30.0 | 8.67x |
| 9/14/2004 | Caribbean Restaurants | Castle Harlan | 340.0 | 25.0 | 13.60x |
| 6/25/2004 | House of Blues | Ares Corporate - Venture | 110.0 | 8.0 | 13.75x |
| | Average | | | | 10.10x |

Examples of other comparable transactions in the wine industry that was gathered by Constellation Brands, a large Beverage Manufacturer is as follows:

**Recent acquisitions**

| Date | Target | Acquired | Purchase Price | Adjusted EBITDA Multiple |
|---|---|---|---|---|
| April 2003 | BRL Hardy Limited | Acquired all the outstanding capital stock | $1,444.5 | 10.1x |
| July 2001 | Ravenswood Winery, Inc | Acquired all the outstanding capital stock | $152.5 | 12.3x |
| March 2001 | Corus Assets | Acquired certain wine brands, wineries, working capital and other related assets | $52.3[1] | 9.5x |
| March 2001 | Turner Road Vinters Assets | Acquired several well-known premium wine brands, including Vendange, Nathanson Creek, Heritage and Talus, working capital, two wineries in California and other related assets | $289.8 | 9.1x |
| June 1999 | Franciscan Estates | Acquired all the outstanding capital stock. In related transactions, vineyards, equipment and other vineyard related assets were also purchased | $243.2 | 12.2x |
| June 1999 | Simi | Acquired all the outstanding capital stock | $57.5 | 11.5x |
| April 1999 | Black Velvet Assets | Acquired several whisky brands, production facilities, inventories and other related assets | $183.6 | 5.2x |

[1] Purchase price includes a performance-based component

To Calculate Starwood Hotel & Resort's Enterprise Value using the Comparative Analysis method (Method#3) you use Starwood's last reported EBITDA times the Average Comparable EBITDA Multiple:

***HOTEL COMPARABLES***

| Calculations → | | | AP | SO | AP * SO = EQ | D | EQ + D = EV | E | EV / E |
|---|---|---|---|---|---|---|---|---|---|
| **Date Anouncement** | **Target** | **Acquirer** | **Acquisition Price /Share** | **Shares Outstanding** | **Equity Value ($mm)** | **Total Debt ($mm)** | **Enterpised Value (EV)** | **EBITDA (last reported)** | **EBITDA Multiple** |
| 7/4/2007 | Hilton Hotels | Blackstone Group | $ 47.50 | 390,400,000 | $ 18,544.00 | $ 6,180.00 | $ 24,724.00 | $ 1,680.00 | 14.72x |
| 11/6/2006 | Four Seasons* | Kingtom Hotels Int'l / Gates' Cascade Invstments | $ 82.00 | 33,078,000 | $ 3,300.00 | $ 278.68 | $ 3,578.68 | $ 112.18 | 31.90x |
| 5/11/2006 | Fairmont/Rafles | Kingtom Hotels Int'l | $ 45.00 | 73,333,333 | $ 3,300.00 | $ 123.50 | $ 3,423.50 | $ 187.20 | 18.29x |
| 1/10/2006 | Hilton International | Hilton Hotels Corp. | | | $ 5,578.00 | $ - | $ 5,578.00 | $ 504.00 | 11.07x |
| 11/14/2005 | Starwood Hotels | Host Marriott | | | | | $ 4,096.00 | $ 315.08 | 13.00x |
| 10/24/2005 | La-Quinta Corp | | $ 12.22 | 203 | $ 2,474.00 | $ 925.71 | $ 3,400.00 | $ 229.70 | 14.80x |
| 8/16/2005 | Wynham Int'l | Blackstone Group | $ 1.15 | 172,053,000 | $ 197.86 | $ 2,681.96 | $ 2,879.82 | $ 275.18 | 10.47x |
| 8/8/2005 | John Q. Hammons Hotels | JQH Acquisition LLC | $ 24.00 | 19,583 | $ 470.00 | $ 765.20 | $ 1,235.00 | $ 123.07 | 10.00x |
| 07/22/2005 | Societe du Louvre | Starwood Capital | | | | | $ 1,028.90 | $ 91.05 | 11.30x |
| 3/10/2005 | Intercontinental Hotels | LRG | | | | | $ 981.00 | $ 106.63 | 9.20x |
| 12/10/2004 | Boca Resorts | Blackstone Group | $ 24.00 | 40,284,000 | $ 966.82 | $ 217.29 | $ 1,184.11 | $ 90.07 | 13.15x |
| 8/18/2004 | Prime Hospitality | Blackstone Group | $ 12.25 | 44,808,000 | $ 548.90 | $ 243.60 | $ 792.50 | $ 55.12 | 14.38x |
| 3/8/2004 | Extended Stay | Blackstone Group | $ 19.93 | 95,077,000 | $ 1,894.88 | $ 1,231.50 | $ 3,126.38 | $ 224.85 | 13.90x |

* Four Seasons' $112.18 million represents 2007 EBITDA (2005 EBITDA was $11.4 negative)

**Average** **14.32x**

**Average (adjusting out the outliers)** **13.19x**

| **Method #2 - Using Average Comparable Transaction - EBITDA Multiple** | **Average EBITDA Multiple** | **EBITDA (000)** | | **Enterprise Value (000)** | |
|---|---|---|---|---|---|
| **Starwood Hotels & Resorts** | **13.19x** | 1,351,000 | | **17,816,716** | |

## Method #4: Discount Cash Flow (DCF) Method

This method is used to measure the value of the company based on the company's future cash flows. We will use this method to calculate the Enterprise Value for both private company (Alexandria Hotel Property) and public company (Starwood).

The projections to calculate DCF are often built from the top down using various assumptions. To calculate DCF you need four factors:

1. The stream of Future Cash Flow
2. The Exit Year (usually 5-7 years)
3. The Terminal Value
4. Discount Rate

***1. Stream of Future Cash Flows:***
See at both public and private company examples we need to calculate the bottom line stream of future cash flows. The results are based on Revenue and Expense assumptions.

***2. The Exit Year***
Every investor chooses an exit year or the end of his/her investment. The DCD model needs this info in order to estimate the Present Value of the Enterprise for both public and private companies, as well as to calculate the realized return on the investor's initial capital for the private company. Most investors use years 5-7 as Exit years.

***3. The Terminal Value***
At the Exit year, the investor assumes a value that the company will be sold at that date in the future based various methods similar to the method we described above. This value is called Terminal Value. The two most popular are (though you could use all four of the above):

- **EBITDA Multiple** (using future EBITDA (Exit Year) and multiply by the current industry average) to calculate the Enterprise Value.
- **Perpetuity Method:** Exit Year Cash Flow divided by the Discount Rate

***4. Discount Rate***

Most often the Discount Rate used for primarily private companies is the Weighted Average Cost of Capital (WACC). The cost of a company's capital is the combined cost of its debt and equity – an important guideline because it is the rate, which helps management decide whether or not to invest in either a project, piece of equipment, or acquisition. If such a project, piece of equipment, or acquisition can generate cash flows, which result in returns, which exceed the cost of the firm's capital, then an investment is attractive. If it does not produce a rate of return equal to the firm's cost of capital, then it should be rejected.

The cost of Capital is the combined cost of both debt and equity. However, these components represent different portions of the capital structure of the balance sheet, and enjoy different treatment. Debt, for example, enjoys the benefit of a tax deduction on the interest that is paid. No such benefit for the company when returning capital – or paying dividends – to the equity holders.

Consequently, in computing the cost of capital, we have to "weigh", or blend the respective components of debt and equity in order to derive the Weighted Average

Cost of Capital – see below calculation of Alexandria's WACC:
Once we have computed costs of individual components of the capital structure, we may weigh them according to some standard and calculate a weight-average cost of capital.

***Transaction Sources & Uses***

| ***Sources:*** | **Amount** | **% Capital** | **Expected Return** | **WACC** | **EBITDA Multiple** |
|---|---|---|---|---|---|
| Bank Loan | 60,000,000 | 57.7% | 5.00% | 2.885% | 3.0x |
| Corporate Bonds | 24,000,000 | 23.1% | 10.00% | 2.308% | 1.2x |
| Equity | 20,000,000 | 19.2% | 18.10% | 3.482% | 1.0x |
| Total Sources | 104,000,000 | 100.0% | | 8.674% | 5.1x |
| | | | | | |
| ***Uses:*** | | | | | |
| Cost of Property (Land&Build) | 100,000,000 | | | | |
| Furniture and Equipment | 4,000,000 | | | | |
| Fees | | | | | |
| Total Uses | 104,000,000 | | | | |

In determining WACC, we calculate the Company's ability to raise equity (i.e. 25%), and it costs to borrow debt.

The aforementioned WACC is calculated at 10.0%%. This rate will be used as the expected rate on any corporate valuations to determine the present value of the firm. In other words, the blended cost of capital (borrowing and investing) is priced at 10.0%.

**Cost of Equity:**
The example uses a simple way of calculating the Cost of Equity, which at a 25% fixed-rate could represent the expected return of an individual investor.

An expanded version of calculating the right Cost of Equity is to factor few market parameters. Whether the investor is buying a hotel corporation, a utility company or a telecom company, the expected return (or Cost of Equity) will vary based on the risk volatility of the each industry. Another important factor is whether the company you

are purchasing is large or small cap (cap is referred to the capitalization amount which in the case of Alexandria is $104 million.

For Calculating Cost of Equity you need the following data:

1. Alpha (Riskless Rate) ("α")
2. Beta (Stock market volatility based on Industry) ("β")
3. Equity Premium (Based on Market Cap) ("Ep")

The formula for calculating the Cost of Equity is:

$$\alpha + \beta * (Ep)$$

**Alpha** ("α")

Alpha is the riskless rate or the guarantee investment rate on investing one's money, such as government bonds or AAA rated instruments. The example below used the 10-year Treasury Rate of 4.75%, which is the rate the US Government guarantees as long as one keeps his/her investment locked for 10 years.

**Beta** ("β")
The Beta measures the volatility of the stock. The Beta is the Standard Deviation of the movement of the specific stock against the stock market. For example, the stock price of a company with a 1.0x Beta moves along the same trajectory as does the market. However, the stock price of a company with 1.2x Beta is more volatile than the market and is said to have higher risk. The Beta for hotels or restaurants used is the average of the underlying stocks within the industry:

**HOTEL COMPANIES**

Calculations →

| Company | Beta |
|---|---|
| Choice Hotels International | 0.35x |
| Hilton Hotels | 1.04x |
| Marcus Corporation | 1.20x |
| Orient Express Hotels Ltd | 1.38x |
| Starwood Hotels & Resorts | 0.99x |
| | **0.99x** |

**RESTAURANT COMPANIES**

Calculations →

| Company | Beta |
|---|---|
| Applebee's Intl, Inc. | 0.81x |
| BJ's Restaurant Inc | 0.92x |
| Brinker Intl (Chili's, Romano's | 0.82x |
| Darden Rest. (Red Lobster, Olive Garden) | 1.07x |
| Outback Steakhouse | 0.69x |
| Starbucks Corp. | 0.97x |
| Texas Roadhouse | 0.84x |
| Yum Brands (Pizza Hut, KFC) | 0.80x |
| | **0.87x** |

**Equity Premium ("Ep")**
Over the last 75 years, all the Equity Premiums were calculated for the stock market based on market capitalization. See table below.

**Calculating Equity Expected Return**

| Alpha (Risk Less Rate) | Beta (Industry Volatility) | Equity Premium (Hist. Table) | Equity Expected Return |
|---|---|---|---|
| 4.75% | 1.208571429 | 11.05% | 18.10% |
| Given | | Given | |

from Table - Method#2

**COST OF EQUITY CALCULATION**

**Equity Risk Premiums (1926-2001)**

| Decile | Mkt Cap $MM | Risk Prem. |
|---|---|---|
| 1 | 524,351 | 7.03% |
| 2 | 10,344 | 8.05% |
| 3 | 4,144 | 8.47% |
| 4 | 2,177 | 8.75% |
| 5 | 1,328 | 9.03% |
| 6 | 840 | 9.18% |
| 7 | 538 | 9.58% |
| 8 | 333 | 9.91% |
| 9 | 193 | 10.43% |
| 10 | 85 | 11.05% |

## Valuing Private Companies using the Discount Cash Flow Method:

**Alexandria Hotel Company**
***Transaction Sources & Uses***

| | ***Sources:*** | Amount | % Capital | Expected Return | WACC | EBITDA Multiple |
|---|---|---|---|---|---|---|
| 5 | Bank Loan | 60,000,000 | 57.7% | 5.00% | 2.885% | 3.0x |
| 6 | Corporate Bonds | 24,000,000 | 23.1% | 10.00% | 2.308% | 1.2x |
| 7 | Equity | 20,000,000 | 19.2% | 18.10% | 3.482% | 1.0x |
| 8 | Total Sources | 104,000,000 | 100.0% | | 8.674% | 5.1x |
| 9 | | | | | | |
| 10 | ***Uses:*** | | | | | |
| 11 | Cost of Property (Land&Build) | 100,000,000 | | | | |
| 12 | Furniture and Equipment | 4,000,000 | | | | |
| 13 | Fees | | | | | |
| 14 | Total Uses | 104,000,000 | | | | |
| 15 | | | | | | |

| | | | | | | | | Exit Year | |
|---|---|---|---|---|---|---|---|---|---|
| 17 | ***Bank Loan Information*** | | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
| 18 | Amount | **60,000,000** | | | | | | | |
| 19 | Interest Rate | **5.00%** | | | | | | | |
| 20 | Maturity | **2014** | | | | | | | |
| 21 | Term (Years) | **7** | | | | | | | |
| 22 | | | | | | | | | |
| 23 | Amount Outstanding | 60,000,000 | 60,000,000 | 56,000,000 | 50,000,000 | 42,000,000 | 34,000,000 | 24,000,000 | - |
| 24 | Interest Payment | | 3,000,000 | 3,000,000 | 2,800,000 | 2,500,000 | 2,100,000 | 1,700,000 | 1,200,000 |
| 25 | Schedule Payments | | - | 4,000,000 | 6,000,000 | 8,000,000 | 8,000,000 | 10,000,000 | 24,000,000 |
| 26 | Total Financing Payment | | 3,000,000 | 7,000,000 | 8,800,000 | 10,500,000 | 10,100,000 | 11,700,000 | 25,200,000 |
| 27 | | | | | | | | | |
| 28 | ***Corporate Bond Information*** | | | | | | | | |
| 29 | Amount | **24,000,000** | | | | | | | |
| 30 | Interest Rate | **10.00%** | | | | | | | |
| 31 | Maturity | **2017** | | | | | | | |
| 32 | Term (Years) | **10** | | | | | | | |
| 33 | | | | | | | | | |
| 34 | Amount Outstanding | 24,000,000 | 24,000,000 | 24,000,000 | 24,000,000 | 24,000,000 | 24,000,000 | 24,000,000 | 24,000,000 |
| 35 | Interest rate | | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 |
| 36 | Schedule Payments | | - | - | - | - | - | - | - |
| 37 | Total Financing Payment | | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 |
| 38 | | | | | | | | | |
| 39 | Total Financing | | 5,400,000 | 9,400,000 | 11,200,000 | 12,900,000 | 12,500,000 | 14,100,000 | 27,600,000 |
| 40 | Total Debt Outstanding | | 84,000,000 | 80,000,000 | 74,000,000 | 66,000,000 | 58,000,000 | 48,000,000 | 24,000,000 |

Exhibit I.

### Initial Transaction Structure / Debt Capacity

In structuring a transaction (purchase of a hotel or building one), the maximum Bank Debt raised is based on two factors: a) Valuation (Appraisal of the property, Corporate Valuation); and b) the Cash Flows of the Company as of last reported and/or projected going forward. The Maximum Bank Debt raised, often call Bank Debt Capacity, for the example above (Ithaca) – see exhibit I – shows that $60 million is all the bank could give given the Ithaca's EBITDA. The Ratio of Debt to EBITDA as exhibited above is 2.7x. The rule of thumb (depending on the market), the Senior Debt to EBITDA ratio will not exceed 3.0x. The rule of thumb for Total Debt to EBITDA ratio is often less than 5.5x for hotel transactions. The above ratio is well under that ratio calculated at 3.8x ([$60mm + $25mm] / $21.8).

### Projections:

As main part of the DCF valuation process, as stated above, includes 5-10 years of cash flow projections. The cash flow projections are built on revenue and expense assumptions based industry averages or historical information (Exhibit II).

## METHOD #4 - Discount Cash Flow Valuation Analysis

***Investment Cash Flow Assumptions***

| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | **Exit Year** |
|---|---|---|---|---|---|---|---|
| | | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** |
| ***Revenue Assumptions*** | | | | | | | |
| Average Daily Rate (ADR) | | $ 355.00 | $ 372.75 | $ 391.39 | $ 410.96 | $ 431.50 | $ 453.08 |
| Available Rooms | | 300 | 300 | 300 | 300 | 300 | 300 |
| Assumed Occupancy Rate (OR) | | 80.0% | 80.0% | 80.0% | 80.0% | 80.0% | 80.0% |
| Price Increase | | | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| Available Rooms per Year | | 109,500 | 109,500 | 109,500 | 109,500 | 109,500 | 109,500 |
| REVPAR (OR*ADR) | | $ 284.00 | $ 298.20 | $ 313.11 | $ 328.77 | $ 345.20 | $ 362.46 |
| Total Rooms Revenues | | 31,098,000 | 32,652,900 | 34,285,545 | 35,999,822 | 37,799,813 | 39,689,804 |
| Room Revenue Growth | | | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| ***Cost of Room Assumptions*** | | | | | | | |
| % as of Revenue | | 25% | 25% | 25% | 25% | 25% | 25% |
| Cost of Room | | 7,774,500 | 8,163,225 | 8,571,386 | 8,999,956 | 9,449,953 | 9,922,451 |
| ***Operating Expense Assumptions*** | | | | | | | |
| % as of Revenue | | 10% | 10% | 10% | 10% | 10% | 10% |
| Operating Expenses | | 3,109,800 | 3,265,290 | 3,428,555 | 3,599,982 | 3,779,981 | 3,968,980 |
| **EBITDA** | | 20,213,700 | 21,224,385 | 22,285,604 | 23,399,884 | 24,569,879 | 25,798,373 |
| **Less Depreciation** | | (1,733,333) | (1,820,000) | (1,911,000) | (2,006,550) | (2,106,878) | (2,212,221) |
| **EBIT** | | 18,480,367 | 19,404,385 | 20,374,604 | 21,393,334 | 22,463,001 | 23,586,151 |
| Less Taxes (Adjusted for Depreciation) | 40% | (7,392,147) | (7,761,754) | (8,149,842) | (8,557,334) | (8,985,200) | (9,434,460) |
| Plus Depreciation | | 1,733,333 | 1,820,000 | 1,911,000 | 2,006,550 | 2,106,878 | 2,212,221 |
| Less Working Capital | | - | - | - | - | - | - |
| Less Capital Expenditures | 5% | (1,554,900) | (1,632,645) | (1,714,277) | (1,799,991) | (1,889,991) | (1,984,490) |
| Free Cash Flow before financing | | 11,266,653 | 11,829,986 | 12,421,485 | 13,042,560 | 13,694,688 | 14,379,422 |
| ***Financing Expenses*** | | | | | | | |
| Interest | | 5,400,000 | 5,400,000 | 5,200,000 | 4,900,000 | 4,500,000 | 4,100,000 |
| Principal Payments | | - | 4,000,000 | 6,000,000 | 8,000,000 | 8,000,000 | 10,000,000 |
| Net Cash Flow | | 5,866,653 | 2,429,986 | 1,221,485 | 142,560 | 1,194,688 | 279,422 |

Exhibit II

**Calculating the Equity Cash Flows of a Private Company:**
The bottom line cash flow projections that the equity would be receiving while the hotel is operating over the next 6 years plus the assumed selling price of the hotel would be discounted back – using WACC as a discount rate – to calculate the present value of the equity, as well as the Enterprise Value of the hotel – see below Exhibit III for calculations.

Exhibit III

Discout Cash Flow Valuation Analysis

| | Entry Year | 1 | 2 | 3 | 4 | 5 | Exit Year 6 |
|---|---|---|---|---|---|---|---|
| Revenues | | 31,098,000 | 32,652,900 | 34,285,545 | 35,999,822 | 37,799,813 | 39,689,804 |
| Cost of Rooms | | (7,774,500) | (8,163,225) | (8,571,386) | (8,999,956) | (9,449,953) | (9,922,451) |
| Operating Costs | | (3,109,800) | (3,265,290) | (3,428,555) | (3,599,982) | (3,779,981) | (3,968,980) |
| EBITDA | | 20,213,700 | 21,224,385 | 22,285,604 | 23,399,884 | 24,569,879 | 25,798,373 |
| Less Taxes | | (7,392,147) | (7,761,754) | (8,149,842) | (8,557,334) | (8,985,200) | (9,434,460) |
| Less Capex | | (1,554,900) | (1,632,645) | (1,714,277) | (1,799,991) | (1,889,991) | (1,984,490) |
| Cash Flow | | 11,266,653 | 11,829,986 | 12,421,485 | 13,042,560 | 13,694,688 | 14,379,422 |
| Less Financing | | 5,400,000 | 9,400,000 | 11,200,000 | 12,900,000 | 12,500,000 | 14,100,000 |
| Equity Cash Flows | | 5,866,653 | 2,429,986 | 1,221,485 | 142,560 | 1,194,688 | 279,422 |
| ***Terminal Value*** | | | | | | | |
| EBITDA Multiple Method | 5.1x | | | | | | 132,733,283 |
| Perpetuity Method (using WACC) | 8.674% | | | | | | 165,776,450 |
| Average | | | | | | | 149,254,866 |
| Debt Outstanding | 84,000,000 | | | | | | 48,000,000 |
| Equity Cash Flows | **(20,000,000)** | **5,866,653** | **2,429,986** | **1,221,485** | **142,560** | **1,194,688** | **101,534,288** |
| | | x | x | x | x | x | x |
| **PV Table →** | | **0.9201834** | **0.8467376** | **0.7791539** | **0.7169645** | **0.6597389** | **0.6070808** |
| | | = | = | = | = | = | = |

**PV (1) = $5,398,397**
**PV (2) = $2,057,560**
**PV (3) = $951,725**
**PV (4) = $102,210**
**PV (5) = $788,182**
**PV (6) = $61,639,514**
**NPV= $70,937,589**

**IRR= 39.4%**
**NPV= ($0.00)** at IRR
**NPV= $21,553,674** at Expected Equity Return

**Enteprise Value = PV of Equity + PV of Debt**
PV of Equity = **$70,937,589**
+ PV of Debt = **84,000,000**
**EV = $154,937,589**

## Using Method #4 to calculate the EV for Public Companies

The methodology for valuing public hotel companies is slightly different from valuing private companies using the Discount Cash Flow Method (Method #4). The difference is that valuing public companies does not require the use of initial assumptions as does the private company, such as WACC and equity investment. The valuation analysis is based your own operating assumptions going forward (Revenue Growth, Expenses as percentage of Revenues, Tax Rates, Capital Expenditures and Discount Rate used for calculating Enterprise value).

For example (see below), the projected operating results are based on actual data reported by the Company. As you input the 2005 data for Starwood you make few assumptions such as Revenue Growth (i.e 10.0%), Cost of Revenues and Operating Expenses as percentage of Revenues, Depreciation and Capital Expenditures as percentage of Revenues and the Debt Levels used are the levels reported in 2005 for the calculation of Terminal Value and Present Value of the Enterprise.

**STARWOOD HOTELS & RESORTS**

Discount Cash Flow Valuation Analysis

| | Assumptions | Input Actual LTM 6/30/07 | 12/31/2007 | 12/30/2008 | 12/31/2009 | 12/31/2010 | 12/31/2011 | EXIT YEAR 12/30/2012 |
|---|---|---|---|---|---|---|---|---|
| Revenues | | 7,467,000 | 8,213,700 | 9,035,070 | 9,938,577 | 10,932,435 | 12,025,678 | 13,228,246 |
| Revenue Growth | 10.0% | | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% |
| Cost of Revenues (CoGS) | | (5,403,000) | (5,943,300) | (6,537,630) | (7,191,393) | (7,910,532) | (8,701,586) | (9,571,744) |
| CoGS as % of Revenues) | 72.4% | 72.4% | 72.4% | 72.4% | 72.4% | 72.4% | 72.4% | 72.4% |
| Operating Costs (SG&A and Other) | | (1,034,000) | (1,137,400) | (1,251,140) | (1,376,254) | (1,513,879) | (1,665,267) | (1,831,794) |
| Op. Costs as % of Revenues | 13.8% | 13.8% | 13.8% | 13.8% | 13.8% | 13.8% | 13.8% | 13.8% |
| EBIT | | 1,030,000 | 1,133,000 | 1,246,300 | 1,370,930 | 1,508,023 | 1,658,825 | 1,824,708 |
| Less Taxes | 40% | (412,000) | (453,200) | (498,520) | (548,372) | (603,209) | (663,530) | (729,883) |
| EAT (After Taxes) | | 618,000 | 679,800 | 747,780 | 822,558 | 904,814 | 995,295 | 1,094,825 |
| Plus Depreciation | 4.3% | 321,000 | 353,100 | 388,410 | 427,251 | 469,976 | 516,974 | 568,671 |
| Less Capex | 5.1% | (383,000) | (421,300) | (463,430) | (509,773) | (560,750) | (616,825) | (678,508) |
| Cash Flow | | **556,000** | **611,600** | **672,760** | **740,036** | **814,040** | **895,444** | **984,988** |
| **Other Info:** | | | | | | | | |
| EBITDA | | **1,351,000** | **1,486,100** | **1,634,710** | **1,798,181** | **1,977,999** | **2,175,799** | **2,393,379** |
| Debt Oustanding | | **3,032,000** | **2,880,400** | **2,728,800** | **2,577,200** | **2,425,600** | **2,274,000** | **2,122,400** |
| Debt amortized at 5% per year | | | **151,600** | **151,600** | **151,600** | **151,600** | **151,600** | **151,600** |

| ***Terminal Value*** | **Assumptions** | | |
|---|---|---|---|
| EBITDA Multiple Method | 13.48x | (2012 EBITDA x EBITDA Multiple) | 32,262,206 |
| Perpetuity Method | 10.00% | (2012 Cash Flow / Discount Rate) | 9,849,879 |
| Average Selling Price | | | 21,056,043 |
| Less Debt Outstanding (Estimated 2012) | | 5% reduction per year for the next 6 years (30% reduction) | (2,122,400) |
| Plus Cash | | Assume $0 at exit year | - |
| Net Equity Value (Terminal Value) | | | 18,933,643 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Equity Cash Flows + Terminal Value | | **611,600** | **672,760** | **740,036** | **814,040** | **895,444** | **19,918,631** |
| | | x | x | x | x | x | x |
| | **PV Table** → | **0.9090909** | **0.8264463** | **0.7513148** | **0.6830135** | **0.6209213** | **0.5644739** |
| | | = | = | = | = | = | = |

| | |
|---|---|
| **PV (1) =** | **$556,000** |
| **PV (2) =** | **$556,000** |
| **PV (3) =** | **$556,000** |
| **PV (4) =** | **$556,000** |
| **PV (5) =** | **$556,000** |
| **PV (6) =** | **$11,243,548** |
| **PV Equity=** | **$14,023,548** |

| **Enteprise Value =** | |
|---|---|
| PV of Equity = | **$14,023,548** |
| + PV of Debt = | **3,032,000** |
| - PV of Cash | **(508,000)** |
| **Starwood's Enteprise Value** | **16,547,548** |

**Conclusion:**

As you could see from the table below, the Enterprise Values for Starwood yield different results than from the various methods. These methods are only used for reference points before the investor decides to bid for Starwood. Even though Starwood's stock is trading at a $12.4 billion enterprise value (method #1) or $58.99, few similar companies were bought at multiples above Starwood's trading levels that put Starwood's Enterprise Value at $17.8 billion or $72.89 (Method #3). The DCF method (Method #4) also shows that the Present Value (EV) of the future cash flows would be $16.5 billion or $66.84, if Starwood's operating results were to grow on an average of 5% per year, which is lower than the current stock price as Wall Street investors are expecting a higher than 5% growth.

| | Enterprise Value ($millions) | Less Current Debt ($millions) | Plus Current Cash ($millions) | Equity Value ($millions) | Stocks Outstanding (millions) | Stock Price |
|---|---|---|---|---|---|---|
| Method #1 - Current Value | 14,900.69 | 3,032.00 | 508.00 | 12,376.69 | 209.810 | $ 58.99 |
| | | | | | | |
| Method #2 | 18,211.17 | 3,032.00 | 508.00 | 15,687.17 | 209.810 | $ 74.77 |
| Method #3 | 17,816.72 | 3,032.00 | 508.00 | 15,292.72 | 209.810 | $ 72.89 |
| Method #4 | 16,547.55 | 3,032.00 | 508.00 | 14,023.55 | 209.810 | $ 66.84 |
| **Average (Other Methods)** | **16,869.03** | | | | | **$ 71.50** |

The table above demonstrates that the average of Methods #2, #3 and #4, the stock price is calculated higher than the current value, thus, we say that Starwood's current stock level is undervalued ($58.99 vs. $71.50).

## OTHER MARKET VALUE METHODS USED IN THE HOSPITALITY INDUSTRY

### Gross Room Revenue Multiplier

This is a popular formula for buyers of motels and hotels generally under $7,000,000. Varies from region to region. The range of gross room revenue multiplier from less than 2 times the gross room revenue to over 5 times the gross room revenue makes using the national or regional average multiplier a very imprecise measure of value. If used, it should be considered as one of a number of measures of value. Best used for owner operator limited service properties.

### Capitalization Rate

R=I/V or Rate = Income (usually accepted as the Net Operating Income) divided by the Value; or to determine Value (V) = Income (I or NOI) divided by Rate. A good measure of value for a consistently performing investment property, which the purchaser plans to maintain in the same manner Price Per Room. This is both a cost of replacement comparison and a sales comparable approach. If a new hotel or motel with the same construction and amenities would cost $45,000./room and one can purchase an existing property for $25,000./room plus a renovation cost of $5,000./room and end up with a motel almost equivalent to a new property, the savings of $15,000./room makes the existing property more attractive. Knowing the price per room at which similar hotels or motels in the same or similar market have sold, one can judge the current properties offered for sale. As markets change over time, this is accurate only if the comparables are recent and similar.

# VALUATION METHODS ON PROJECT INVESTMENT DECISIONS

## Capital Budgeting Decisions

Making the Capital Expense based on project valuations.

The net present value of a project can be represented as:

NPV(project) = PV(with project) - PV(without project)

Let's consider an example of this type of calculation.

## Example

A large hotel corporation that controls more than 200 hotel properties nationwide is considering improving its computer network for cost efficiencies. The corporation currently has a computer, which can be upgraded at a cost of $200,000. The upgraded computer will be useful for 5 years and will provide cost savings of $75,000 per year. The current market value of the computer is $100,000. The cost of capital is 15%. Should the computer be upgraded?

### Solution

The alternatives available to the corporation are: (1) do not upgrade the computer or (2) upgrade the computer. The NPV of upgrading is:

$$NPV = -200{,}000 + \sum_{t=1}^{5} \frac{75{,}000}{(1.15)^t} = \$51{,}410 \quad \longleftarrow$$

The net present value is positive. This means that the corporation should go ahead with acquisition. Notice that the market value of the computer is not included. It is irrelevant for the upgrading decision. Further note that a number of simplifying assumptions have been made such as a constant discount rate and zero tax rate. Let's be more precise about the capital budgeting decision. First, we need to introduce some notation.

$R\_t$ = $ cash revenue in time $t$
$E\_t$ = $ cash expenses in time $t$
$TAX\_t$ = $ taxes in time $t$
$D\_t$ = $ depreciation in time $t$
$T$ = $ average and marginal tax rate

$I\_t$ = $ Investment in time $t$
$S\_t$ = $ Salvage value in time $t$
The net cash flow in period $t$ is:

$$X\_t = R\_t - E\_t - TAX\_t - I\_t + S\_t$$

Taxes are defined to be:

$$Tax\_t = T \times (R\_t - E\_t - D\_t)$$

Substituting the expression for taxes into the first equation yields:

$$X\_t = (1-T) \times (R\_t - E\_t) + (T \times D\_t) - I\_t + S\_t$$

Note that we are making a number of simplifying assumptions about the taxation. In a real world application, one would want to consider (1) carry forward and carry back rules, (2) investment tax credits, (3) sufficiency of taxable income, and (4) special tax circumstances (e.g. mining and petroleum).

## USING THE PRESENT VALUE TABLES

### Present Value of $1 to Be Paid in the Future

This table shows how much $1, to be paid at the end of various periods in the future, is currently worth, with interest at different rates, compounded annually.

To use the table, find the vertical column under your interest rate (or cost of capital). Then find the horizontal row corresponding to the number of years it will take to receive the payment. The point at which the column and the row intersect is your present value of $1. You can multiply this value by the number of dollars you expect to receive, in order to find the present value of the amount you expect.

**Example:** As an example of how the table can be used to compute the net present value of a major project, consider the following:

Agonas Hotel Corporation is considering expanding its property by building a new wing that will include additional rooms. After all the factors are considered (including initial costs, tax savings from depreciation, revenue from additional sales, and taxes on additional revenues)- this case would be $10 million. Agonas projects the following cash flows from the new added rooms:

Year 1: ($10,000,000)
Year 2: $ 3,000,000
Year 3: $ 3,500,000
Year 4: $ 3,500,000
Year 5: $ 3,000,000

Assume that Agona's cost of capital is 9%, using the net present value table shows whether the new added rooms would at least cover its financial costs:

| ***Year*** | ***Cash Flow*** | ***Table Factor*** | ***Present Value*** |
|---|---|---|---|
| 1 | ($10,000,000) x | 1.000000 = | ($10,000,000) |
| 2 | $ 3,000,000 x | 0.917431 = | $2,752,290 |
| 3 | $ 3,500,000 x | 0.841680 = | $2,945,880 |
| 4 | $ 3,500,000 x | 0.772183 = | $2,702,640 |
| 5 | $ 3,000,000 x | 0.708425 = | $2,125,280 |
| | | | --- |
| | | NPV = | $ 526,090 |

Since the net present value of the cash flow is positive, the expansion of the existing building would be at least slightly profitable for Agonas.

.

## Present Value of $1 to be paid in Future

| Years | 3.0% | 3.5% | 4.0% | 4.5% |
|---|---|---|---|---|
| 1 | $0.970874 | $0.966184 | $0.961538 | $0.956938 |
| 2 | $0.942596 | $0.933511 | $0.924556 | $0.915730 |
| 3 | $0.915142 | $0.901943 | $0.888996 | $0.876297 |
| 4 | $0.888487 | $0.871442 | $0.854804 | $0.838561 |
| 5 | $0.862609 | $0.841973 | $0.821927 | $0.802451 |
| 6 | $0.837484 | $0.813501 | $0.790315 | $0.767896 |
| 7 | $0.813092 | $0.785991 | $0.759918 | $0.734828 |
| 8 | $0.789409 | $0.759412 | $0.730690 | $0.703185 |
| 9 | $0.766417 | $0.733731 | $0.702587 | $0.672904 |
| 10 | $0.744094 | $0.708919 | $0.675564 | $0.643928 |
| 11 | $0.722421 | $0.684946 | $0.649581 | $0.616199 |
| 12 | $0.701380 | $0.661783 | $0.624597 | $0.589664 |
| 13 | $0.680951 | $0.639404 | $0.600574 | $0.564272 |
| 14 | $0.661118 | $0.617782 | $0.577475 | $0.539973 |
| 15 | $0.641862 | $0.596891 | $0.555265 | $0.516720 |

| Years | 5.0% | 5.5% | 6.0% | 6.5% |
|---|---|---|---|---|
| 1 | $0.952381 | $0.947867 | $0.943396 | $0.938967 |
| 2 | $0.907029 | $0.898452 | $0.889996 | $0.881659 |
| 3 | $0.863838 | $0.851614 | $0.839619 | $0.827849 |
| 4 | $0.822702 | $0.807217 | $0.792094 | $0.777323 |
| 5 | $0.783526 | $0.765134 | $0.747258 | $0.729881 |
| 6 | $0.746215 | $0.725246 | $0.704961 | $0.685334 |
| 7 | $0.710681 | $0.687437 | $0.665057 | $0.643506 |
| 8 | $0.676839 | $0.651599 | $0.627412 | $0.604231 |
| 9 | $0.644609 | $0.617629 | $0.591898 | $0.567353 |
| 10 | $0.613913 | $0.585431 | $0.558395 | $0.532726 |
| 11 | $0.584679 | $0.554911 | $0.526788 | $0.500212 |
| 12 | $0.556837 | $0.525982 | $0.496969 | $0.469683 |
| 13 | $0.530321 | $0.498561 | $0.468839 | $0.441017 |
| 14 | $0.505068 | $0.472569 | $0.442301 | $0.414100 |
| 15 | $0.481017 | $0.447933 | $0.417265 | $0.388827 |

| Years | 7.0% | 7.5% | 8.0% | 8.5% |
|---|---|---|---|---|
| 1 | $0.934579 | $0.930233 | $0.925926 | $0.921659 |
| 2 | $0.873439 | $0.865333 | $0.857339 | $0.849455 |
| 3 | $0.816298 | $0.804961 | $0.793832 | $0.782908 |
| 4 | $0.762895 | $0.748801 | $0.735030 | $0.721574 |
| 5 | $0.712986 | $0.696559 | $0.680583 | $0.665045 |
| 6 | $0.666342 | $0.647962 | $0.630170 | $0.612945 |
| 7 | $0.622750 | $0.602755 | $0.583490 | $0.564926 |
| 8 | $0.582009 | $0.560702 | $0.540269 | $0.520669 |
| 9 | $0.543934 | $0.521583 | $0.500249 | $0.479880 |
| 10 | $0.508349 | $0.485194 | $0.463193 | $0.442285 |
| 11 | $0.475093 | $0.451343 | $0.428883 | $0.407636 |
| 12 | $0.444012 | $0.419854 | $0.397114 | $0.375702 |
| 13 | $0.414964 | $0.390562 | $0.367698 | $0.346269 |
| 14 | $0.387817 | $0.363313 | $0.340461 | $0.319142 |
| 15 | $0.362446 | $0.337966 | $0.315242 | $0.294140 |

| Years | 9.0% | 9.5% | 10.0% | 10.5% |
|---|---|---|---|---|
| 1 | $0.917431 | $0.913242 | $0.909091 | $0.904977 |
| 2 | $0.841680 | $0.834011 | $0.826446 | $0.818984 |
| 3 | $0.772183 | $0.761654 | $0.751315 | $0.741162 |
| 4 | $0.708425 | $0.695574 | $0.683013 | $0.670735 |
| 5 | $0.649931 | $0.635228 | $0.620921 | $0.607000 |
| 6 | $0.596267 | $0.580117 | $0.564474 | $0.549321 |
| 7 | $0.547034 | $0.529787 | $0.513158 | $0.497123 |
| 8 | $0.501866 | $0.483824 | $0.466507 | $0.449885 |
| 9 | $0.460428 | $0.441848 | $0.424098 | $0.407136 |
| 10 | $0.422411 | $0.403514 | $0.385543 | $0.368449 |
| 11 | $0.387533 | $0.368506 | $0.350494 | $0.333438 |
| 12 | $0.355535 | $0.336535 | $0.318631 | $0.301754 |
| 13 | $0.326179 | $0.307338 | $0.289664 | $0.273080 |
| 14 | $0.299246 | $0.280674 | $0.263331 | $0.247132 |
| 15 | $0.274538 | $0.256323 | $0.239392 | $0.223648 |

| Years | 11.0% | 11.5% | 12.0% | 12.5% |
|---|---|---|---|---|
| 1 | $0.900901 | $0.896861 | $0.892857 | $0.888889 |
| 2 | $0.811622 | $0.804360 | $0.797194 | $0.790123 |
| 3 | $0.731191 | $0.721399 | $0.711780 | $0.702332 |
| 4 | $0.658731 | $0.646994 | $0.635518 | $0.624295 |
| 5 | $0.593451 | $0.580264 | $0.567427 | $0.554929 |
| 6 | $0.534641 | $0.520416 | $0.506631 | $0.493270 |
| 7 | $0.481658 | $0.466741 | $0.452349 | $0.438462 |
| 8 | $0.433926 | $0.418602 | $0.403883 | $0.389744 |
| 9 | $0.390925 | $0.375428 | $0.360610 | $0.346439 |
| 10 | $0.352184 | $0.336706 | $0.321973 | $0.307946 |
| 11 | $0.317283 | $0.301979 | $0.287476 | $0.273730 |
| 12 | $0.285841 | $0.270833 | $0.256675 | $0.243315 |
| 13 | $0.257514 | $0.242900 | $0.229174 | $0.216280 |
| 14 | $0.231995 | $0.217847 | $0.204620 | $0.192249 |
| 15 | $0.209004 | $0.195379 | $0.182696 | $0.170888 |

| Years | 13.0% | 13.5% | 14.0% | 14.5% |
|---|---|---|---|---|
| 1 | $0.884956 | $0.881057 | $0.877193 | $0.873362 |
| 2 | $0.783147 | $0.776262 | $0.769468 | $0.762762 |
| 3 | $0.693050 | $0.683931 | $0.674972 | $0.666168 |
| 4 | $0.613319 | $0.602583 | $0.592080 | $0.581806 |
| 5 | $0.542760 | $0.530910 | $0.519369 | $0.508127 |
| 6 | $0.480319 | $0.467762 | $0.455587 | $0.443779 |
| 7 | $0.425061 | $0.412125 | $0.399637 | $0.387580 |
| 8 | $0.376160 | $0.363106 | $0.350559 | $0.338498 |
| 9 | $0.332885 | $0.319917 | $0.307508 | $0.295631 |
| 10 | $0.294588 | $0.281865 | $0.269744 | $0.258193 |
| 11 | $0.260698 | $0.248339 | $0.236617 | $0.225496 |
| 12 | $0.230706 | $0.218801 | $0.207559 | $0.196940 |
| 13 | $0.204165 | $0.192776 | $0.182069 | $0.172000 |
| 14 | $0.180677 | $0.169847 | $0.159710 | $0.150218 |
| 15 | $0.159891 | $0.149645 | $0.140096 | $0.131195 |

| Years | 15.0% |
|---|---|
| 1 | $0.869565 |
| 2 | $0.756144 |
| 3 | $0.657516 |
| 4 | $0.571753 |
| 5 | $0.497177 |
| 6 | $0.432328 |
| 7 | $0.375937 |
| 8 | $0.326902 |
| 9 | $0.284262 |
| 10 | $0.247185 |
| 11 | $0.214943 |
| 12 | $0.186907 |
| 13 | $0.162528 |
| 14 | $0.141329 |
| 15 | $0.122894 |

***Present Value of a Series of $1 Payments to Be Paid in the Future***

This table shows how much a series of $1 payments, to be paid at the end of each period for a specified number of periods into the future, is currently worth, with interest at different rates, compounded annually. In other words, the table shows what you should be willing to pay, today, in order to receive a certain series of payments of $1 each.

To use the table, find the vertical column under your interest rate (or cost of capital). Then find the horizontal row corresponding to the number of the last year you will receive the payment. The point at which the column and the row intersect is your present value of a series of $1 payments. You can multiply this value by the number of dollars you expect to receive in each payment, in order to find the present value of the series.

**Example:** As an example of how the table can be used to compute the Internal Rate of Return of a major project, consider the following:

Niki's Beach Hotel is considering the purchase of a new computer system that will cost $7,500, but will allow it to save about $2,000 a year in desktop publishing expenses.

If you want to use the annuity tables to calculate the IRR of Niki's project, you must first compute the number to look up in the tables. You can do this by dividing the expected net cash outflow (costs) for the project by the expected average annual net cash inflow (savings). In this case, the cost of the project (net cash outflow) is $7,500, and the average annual net cash inflow is $2,000.

$$\$7,500 \div \$2,000 = 3.75$$

Then, look at the row corresponding to the number of years the project or equipment will be in use (in this case, 5). Look across the rows until you find the number that is closest to the result you found (3.75). Then look at the top of the column in which the closest number was found, to see the interest rate that is Niki's IRR (in this case, 10% - 10.5%).

## PRESENT WORTH OF ONE-DOLLAR PER PERIOD
## PAYABLE AT END OF EACH PERIOD

| Years | 3% | 3.5% | 4% | 4.5% |
|---|---|---|---|---|
| 1 | $0.970874 | $0.966184 | $0.961538 | $0.956938 |
| 2 | $1.913470 | $1.899694 | $1.886095 | $1.872668 |
| 3 | $2.828611 | $2.801637 | $2.775091 | $2.748964 |
| 4 | $3.717098 | $3.673079 | $3.629895 | $3.587526 |
| 5 | $4.579707 | $4.515052 | $4.451822 | $4.389977 |
| 6 | $5.417191 | $5.328553 | $5.242137 | $5.157872 |
| 7 | $6.230283 | $6.114544 | $6.002055 | $5.892701 |
| 8 | $7.019692 | $6.873956 | $6.732745 | $6.595886 |
| 9 | $7.786109 | $7.607687 | $7.435332 | $7.268790 |
| 10 | $8.530203 | $8.316605 | $8.110896 | $7.912718 |
| 11 | $9.252624 | $9.001551 | $8.760477 | $8.528917 |
| 12 | $9.954004 | $9.663334 | $9.385074 | $9.118581 |
| 13 | $10.634955 | $10.302738 | $9.985648 | $9.682852 |
| 14 | $11.296073 | $10.920520 | $10.563123 | $10.222825 |
| 15 | $11.937935 | $11.517411 | $11.118387 | $10.739546 |

| Years | 5% | 5.5% | 6% | 6.5% |
|---|---|---|---|---|
| 1 | $0.952381 | $0.947867 | $0.943396 | $0.938967 |
| 2 | $1.859410 | $1.846320 | $1.833393 | $1.820626 |
| 3 | $2.723248 | $2.697933 | $2.673012 | $2.648476 |
| 4 | $3.545951 | $3.505150 | $3.465106 | $3.425799 |
| 5 | $4.329477 | $4.270284 | $4.212364 | $4.155679 |
| 6 | $5.075692 | $4.995530 | $4.917324 | $4.841014 |
| 7 | $5.786373 | $5.682967 | $5.582381 | $5.484520 |
| 8 | $6.463213 | $6.334566 | $6.209794 | $6.088751 |
| 9 | $7.107822 | $6.952195 | $6.801692 | $6.656104 |
| 10 | $7.721735 | $7.537626 | $7.360087 | $7.188830 |
| 11 | $8.306414 | $8.092536 | $7.886875 | $7.689042 |
| 12 | $8.863252 | $8.618518 | $8.383844 | $8.158725 |
| 13 | $9.393573 | $9.117079 | $8.852683 | $8.599742 |
| 14 | $9.898641 | $9.589648 | $9.294984 | $9.013842 |
| 15 | $10.379658 | $10.037581 | $9.712249 | $9.402669 |

| Years | 7% | 7.5% | 8% | 8.5% |
|---|---|---|---|---|
| 1 | $0.934579 | $0.930233 | $0.925926 | $0.921659 |
| 2 | $1.808018 | $1.795565 | $1.783265 | $1.771114 |
| 3 | $2.624316 | $2.600526 | $2.577097 | $2.554022 |
| 4 | $3.387211 | $3.349326 | $3.312127 | $3.275597 |
| 5 | $4.100197 | $4.045885 | $3.992710 | $3.940642 |
| 6 | $4.766540 | $4.693846 | $4.622880 | $4.553587 |
| 7 | $5.389289 | $5.296601 | $5.206370 | $5.118514 |
| 8 | $5.971299 | $5.857304 | $5.746639 | $5.639183 |
| 9 | $6.515232 | $6.378887 | $6.246888 | $6.119063 |
| 10 | $7.023582 | $6.864081 | $6.710081 | $6.561348 |
| 11 | $7.498674 | $7.315424 | $7.138964 | $6.968984 |
| 12 | $7.942686 | $7.735278 | $7.536078 | $7.344686 |
| 13 | $8.357651 | $8.125840 | $7.903776 | $7.690955 |
| 14 | $8.745468 | $8.489154 | $8.244237 | $8.010097 |
| 15 | $9.107914 | $8.827120 | $8.559479 | $8.304237 |

| Years | 9% | 9.5% | 10% | 10.5% |
|---|---|---|---|---|
| 1 | $0.917431 | $0.913242 | $0.909091 | $0.904977 |
| 2 | $1.759111 | $1.747253 | $1.735537 | $1.723961 |
| 3 | $2.531295 | $2.508907 | $2.486852 | $2.465123 |
| 4 | $3.239720 | $3.204481 | $3.169865 | $3.135858 |
| 5 | $3.889651 | $3.839709 | $3.790787 | $3.742858 |
| 6 | $4.485919 | $4.419825 | $4.355261 | $4.292179 |
| 7 | $5.032953 | $4.949612 | $4.868419 | $4.789303 |
| 8 | $5.534819 | $5.433436 | $5.334926 | $5.239188 |
| 9 | $5.995247 | $5.875284 | $5.759024 | $5.646324 |
| 10 | $6.417658 | $6.278798 | $6.144567 | $6.014773 |
| 11 | $6.805191 | $6.647304 | $6.495061 | $6.348211 |
| 12 | $7.160725 | $6.983839 | $6.813692 | $6.649964 |
| 13 | $7.486904 | $7.291178 | $7.103356 | $6.923045 |
| 14 | $7.786150 | $7.571852 | $7.366687 | $7.170176 |
| 15 | $8.060688 | $7.828175 | $7.606080 | $7.393825 |

| Years | 11% | 11.5% | 12% | 12.5% |
|---|---|---|---|---|
| 1 | $0.900901 | $0.896861 | $0.892857 | $0.888889 |
| 2 | $1.712523 | $1.701221 | $1.690051 | $1.679012 |
| 3 | $2.443715 | $2.422619 | $2.401831 | $2.381344 |
| 4 | $3.102446 | $3.069614 | $3.037349 | $3.005639 |
| 5 | $3.695897 | $3.649878 | $3.604776 | $3.560568 |
| 6 | $4.230538 | $4.170294 | $4.111407 | $4.053839 |
| 7 | $4.712196 | $4.637035 | $4.563757 | $4.492301 |
| 8 | $5.146123 | $5.055637 | $4.967640 | $4.882045 |
| 9 | $5.537048 | $5.431064 | $5.328250 | $5.228485 |
| 10 | $5.889232 | $5.767771 | $5.650223 | $5.536431 |
| 11 | $6.206515 | $6.069750 | $5.937699 | $5.810161 |
| 12 | $6.492356 | $6.340583 | $6.194374 | $6.053476 |
| 13 | $6.749870 | $6.583482 | $6.423548 | $6.269757 |
| 14 | $6.981865 | $6.801329 | $6.628168 | $6.462006 |
| 15 | $7.190870 | $6.996708 | $6.810864 | $6.632894 |

| Years | 13% | 13.5% | 14% | 14.5% |
|---|---|---|---|---|
| 1 | $0.884956 | $0.881057 | $0.877193 | $0.873362 |
| 2 | $1.668102 | $1.657319 | $1.646661 | $1.636124 |
| 3 | $2.361153 | $2.341250 | $2.321632 | $2.302292 |
| 4 | $2.974471 | $2.943833 | $2.913712 | $2.884098 |
| 5 | $3.517231 | $3.474743 | $3.433081 | $3.392225 |
| 6 | $3.997550 | $3.942505 | $3.888668 | $3.836005 |
| 7 | $4.422610 | $4.354630 | $4.288305 | $4.223585 |
| 8 | $4.798770 | $4.717735 | $4.638864 | $4.562083 |
| 9 | $5.131655 | $5.037652 | $4.946372 | $4.857714 |
| 10 | $5.426243 | $5.319517 | $5.216116 | $5.115908 |
| 11 | $5.686941 | $5.567857 | $5.452733 | $5.341404 |
| 12 | $5.917647 | $5.786658 | $5.660292 | $5.538344 |
| 13 | $6.121812 | $5.979434 | $5.842362 | $5.710344 |
| 14 | $6.302488 | $6.149281 | $6.002072 | $5.860563 |
| 15 | $6.462379 | $6.298926 | $6.142168 | $5.991758 |

| Years | 15% |
|---|---|
| 1 | $0.869565 |
| 2 | $1.625709 |
| 3 | $2.283225 |
| 4 | $2.854978 |
| 5 | $3.352155 |
| 6 | $3.784483 |
| 7 | $4.160420 |
| 8 | $4.487322 |
| 9 | $4.771584 |
| 10 | $5.018769 |
| 11 | $5.233712 |
| 12 | $5.420619 |
| 13 | $5.583147 |
| 14 | $5.724476 |
| 15 | $5.847370 |

**EXHIBIT**

**OTHER VALUATION METHODS**
**BY WALL STREET ANALYSTS**

## *CIBC World Markets on Valuation of MGM Mirage*

**Exhibit 13. Company Valuation**

Current price
$37.75

| Existing Properties | 2005E EBITDA | 2005E Fair Multiple | 2005E Enterprise Value | 2006E EBITDA | 2006E Fair Multiple | 2006E Enterprise Value | 2007E EBITDA | 2007E Fair Multiple | 2007E Enterprise Value | |
|---|---|---|---|---|---|---|---|---|---|---|
| Bellagio | $386.4 | 11.0X | $4,250.0 | $376.6 | 11.0X | $4,142.3 | $394.2 | 11.0X | $4,335.7 | |
| MGM Grand | 338.7 | 10.0X | 3,386.7 | 348.0 | 10.0X | 3,480.1 | 353.0 | 10.0X | 3,529.7 | |
| Mandalay Bay | 271.4 | 11.0X | 2,985.5 | 310.6 | 11.0X | 3,416.4 | 327.2 | 11.0X | 3,598.8 | |
| Luxor | 163.3 | 9.0X | 1,470.0 | 169.6 | 9.0X | 1,526.3 | 170.4 | 9.0X | 1,533.5 | |
| Detroit | 146.7 | 8.0X | 1,173.4 | 144.4 | 8.0X | 1,155.5 | 148.1 | 8.0X | 1,184.6 | |
| Mirage | 174.1 | 10.0X | 1,741.3 | 189.6 | 10.0X | 1,895.5 | 198.7 | 10.0X | 1,987.0 | |
| New York, New York | 142.3 | 10.0X | 1,423.2 | 147.1 | 10.0X | 1,471.1 | 154.6 | 10.0X | 1,545.7 | |
| Treasure Island | 112.5 | 10.0X | 1,125.4 | 130.5 | 10.0X | 1,304.9 | 138.1 | 10.0X | 1,381.3 | |
| Monte Carlo | 116.3 | 9.0X | 1,046.8 | 119.0 | 9.0X | 1,071.4 | 128.2 | 9.0X | 1,153.9 | |
| Excalibur | 114.0 | 8.5X | 968.9 | 107.6 | 8.5X | 914.8 | 107.8 | 8.5X | 916.7 | |
| CCLV | 73.5 | 8.0X | 587.7 | 83.9 | 8.0X | 671.0 | 84.6 | 8.0X | 676.8 | |
| Beau Rivage | 76.9 | 8.0X | 615.5 | 83.3 | 8.0X | 666.6 | 87.9 | 8.0X | 702.9 | |
| Tunica | 25.9 | 7.0X | 181.0 | 28.1 | 7.0X | 197.0 | 28.9 | 7.0X | 202.2 | |
| Primm Properties | 33.4 | 7.0X | 234.0 | 38.7 | 7.0X | 271.1 | 35.5 | 7.0X | 248.2 | |
| Circus Circus, Reno | 14.2 | 7.0X | 99.2 | 14.6 | 7.0X | 102.3 | 15.1 | 7.0X | 105.5 | |
| Gold Strike Properties | 18.7 | 7.0X | 130.9 | 17.8 | 7.0X | 124.7 | 17.0 | 7.0X | 118.7 | |
| Laughlin Properties | 8.6 | 7.0X | 60.0 | 5.0 | 7.0X | 34.8 | 1.6 | 7.0X | 11.3 | |
| Pro-Rata Share of Borgata | 118.4 | 11.0X | 1,302.8 | 151.0 | 11.0X | 1,661.1 | 151.0 | 11.0X | 1,661.1 | |
| Corporate | (121.7) | 8.0X | (973.3) | (30.1) | 8.0X | (240.9) | (29.1) | 8.0X | (232.9) | |
| Enterprise Value | | | $22,025.4 | | | $23,865.9 | | | $24,660.6 | |
| Net debt | | | 11,674.7 | | | 10,656.6 | | | 9,966.6 | |
| Equity Value | | | $10,350.7 | | | $13,209.3 | | | $14,694.0 | |
| Shares | | | 297.3 | | | 297.5 | | | 297.7 | |
| | | | | | | | | | | 3-YR CAGR |
| **Corporate EBITDA** | | | **$1,971.7** | | | **$2,331.8** | | | **$2,536.5** | **22.6%** |
| **EPS** | | | **$1.57** | | | **$1.97** | | | **$2.39** | **23.8%** |
| **FCF/Share (before project capex)** | | | **$2.74** | | | **$2.80** | | | **$3.21** | **14.8%** |
| **Current multiple** | | | | | | | | | | |
| EV/EBITDA | | | 11.6X | | | 9.4X | | | 8.4X | |
| P/E | | | 24.0X | | | 19.2X | | | 15.8X | |
| P/FCF | | | 13.8X | | | 13.5X | | | 11.8X | |
| **Target multiple** | | | | | | | | | | |
| EV/EBITDA | | | 11.2X | | | 10.2X | | | 9.7X | |
| P/E | | | 17.5X | | | 17.5X | | | 17.5X | |
| P/FCF | | | 12.0X | | | 12.0X | | | 12.0X | |
| **Target price based on multiple** | | | | | | | | | | |
| **EV/EBITDA** | | | **$34.81** | | | **$44.40** | | | **$49.36** | |
| **P/E** | | | **$27.48** | | | **$34.48** | | | **$41.83** | |
| **P/FCF** | | | **$32.93** | | | **$33.56** | | | **$38.48** | Average of '06 & '07 |
| **DCF** | | | **$51.77** | | | **$51.77** | | | **$51.77** | |
| **Average** | | | **$37** | | | **$41** | | | **$45** | **$43** |
| **Future Opportunities** | | | **2** | | | **2** | | | **2** | **$2** |
| **Price Target** | | | **$39** | | | **$43** | | | **$47** | **$45** |
| **Appreciation potential** | | | **4.4%** | | | **15.0%** | | | **25.6%** | **20.3%** |

## Exhibit 16. EBITDA Comparative Valuation Table

| Rtg | Company | Tkr | FYE | Price as of 10/28/2005 | Shares | Market Cap ($ in MM) | Calendar EBITDA 2004A | 2005E | 2006E | '03-'04 | % Chg. '04-'05 | '05-'06 | EV/EBITDA Multiple 2004A | 2005E | 2006E | 3-Yr EBITDA CAGR (A) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Large-Cap Gaming** | | | | | | | | | | | | | | | |
| SO | Boyd Gaming | BYD | Dec. | $40.24 | 90.5 | $3,641.7 | $448.8 | $640.7 | $748.1 | 66.0% | 42.8% | 16.5% | 12.0X | 8.5X | 7.9X | 40.3% |
| SO | Harrah's Entertainment | HET | Dec. | $58.80 | 181.4 | 10,666.3 | 1,183.0 | 1,954.8 | 2,748.8 | 9.4% | 65.1% | 39.8% | 9.8X | 6.0X | 5.8X | 36.4% |
| SP | MGM MIRAGE | MGM | Dec. | $37.75 | 297.5 | 11,230.6 | 1,378.0 | 1,971.7 | 2,331.8 | 20.2% | 43.1% | 18.3% | 11.8X | 11.8X | 9.4X | 26.7% |
| SP | Station Casinos [1] | STN | Dec. | $83.75 | 70.3 | 4,481.6 | 303.4 | 388.8 | 481.3 | 18.9% | 28.1% | 23.8% | 16.7X | 13.8X | 12.3X | 23.6% |
| SO | Wynn Resorts, Limited | WYNN | Dec. | $45.00 | 98.2 | 4,419.0 | (1.5) | 205.3 | 387.5 | N/A | N/A | 88.7% | N/A | 29.4X | 17.1X | N/A |
| | **Large-cap average** | | | | | **$6,887.9** | | | | **21.7%** | **49.0%** | **34.5%** | **11.8X** | **12.1X** | **9.8X** | **31.3%** |
| | **Large-cap average (excluding WYNN)** | | | | | **$7,505.1** | | | | **21.7%** | **49.0%** | **26.5%** | **11.8X** | **9.6X** | **8.7X** | **31.3%** |
| | **Small-Cap Gaming** | | | | | | | | | | | | | | | |
| SU | Ameristar Casinos | ASCA | Dec. | $20.39 | 57.2 | $1,166.3 | $232.7 | $247.7 | $271.7 | 12.7% | 6.4% | 9.7% | 5.0X | 6.6X | 5.8X | 9.6% |
| SU | Aztar Corp. | AZR | Dec. | $29.56 | 38.0 | 1,123.3 | 163.0 | 208.6 | 230.0 | (7.3%) | 28.0% | 10.3% | 9.6X | 8.6X | 7.7X | 9.4% |
| SP | Churchill Downs | CHDN | Dec. | $32.20 | 14.2 | 457.2 | 50.7 | 45.5 | 54.4 | (22.8%) | (10.3%) | 41.5% | 12.8X | 8.8X | 6.3X | -0.7% |
| SP | Isle of Capri Casinos | ISLE | Apr. | $20.91 | 31.8 | 664.9 | 228.0 | 232.3 | 284.5 | (12.0%) | 1.9% | 22.5% | 6.8X | 6.5X | 5.9X | 3.2% |
| SO | Kerzner International | KZL | Dec. | $57.01 | 37.9 | 2,160.7 | 168.7 | 206.9 | 220.8 | 14.4% | 22.6% | 6.7% | 13.2X | 12.3X | 11.0X | 14.4% |
| SP | MTR Gaming | MNTG | Dec. | $8.93 | 29.0 | 201.0 | 57.8 | 51.0 | 54.4 | 7.4% | (11.8%) | 6.7% | 5.7X | 6.4X | 5.8X | 0.4% |
| SP | Penn National Gaming | PENN | Dec. | $26.30 | 85.8 | 2,256.5 | 283.0 | 345.2 | 512.5 | 14.9% | 22.0% | 48.5% | 10.6X | 11.8X | 8.5X | 27.6% |
| SP | Pinnacle Entertainment | PNK | Dec. | $18.54 | 40.5 | 750.9 | 101.6 | 137.5 | 166.8 | 19.1% | 35.3% | 21.3% | 9.4X | 8.4X | 7.5X | 25.0% |
| | **Small-cap average** | | | | | **$1,097.6** | | | | **7.8%** | **18.0%** | **22.5%** | **10.4X** | **9.8X** | **8.2X** | **15.5%** |
| | **Gaming Equipment** | | | | | | | | | | | | | | | |
| SO | Alliance Gaming | AGI | Jun. | $10.38 | 51.8 | $537.7 | $88.8 | $81.8 | $124.1 | (24.6%) | (7.9%) | 51.7% | 9.9X | 10.5X | 6.8X | 1.8% |
| SP | GTECH Holdings | GTK | Feb. | $31.00 | 129.7 | 4,020.7 | 483.3 | 535.4 | 571.0 | 13.2% | 15.8% | 6.6% | 9.5X | 8.2X | 7.3X | 11.7% |
| SU | International Game Tech. | IGT | Sep. | $26.50 | 350.8 | 9,296.2 | 980.7 | 908.5 | 956.3 | 11.0% | (5.4%) | 5.3% | 10.1X | 9.7X | 9.0X | 3.4% |
| SP | Multimedia Games | MGAM | Sep. | $9.44 | 29.1 | 274.7 | 89.2 | 87.0 | 78.2 | 18.8% | (2.5%) | (10.0%) | 2.7X | 2.7X | 3.5X | 1.4% |
| SO | WMS Gaming | WMS | Jun. | $25.40 | 38.9 | 988.1 | 40.3 | 106.4 | 125.6 | 186.9% | 164.0% | 18.0% | 24.7X | 9.4X | 8.8X | 102.8% |
| | **Gaming equip. average** | | | | | **$3,023.5** | | | | **20.6%** | **11.2%** | **7.9%** | **10.7X** | **9.2X** | **8.3X** | **12.0%** |
| | **Large-Cap Lodging** | | | | | | | | | | | | | | | |
| SO | Hilton Hotels | HLT | Dec. | $19.81 | 411.1 | $8,143.9 | $1,020.5 | $1,169.0 | $1,330.9 | 17.4% | 14.6% | 13.8% | 11.3X | 9.3X | 7.8X | 15.2% |
| SP | Marriott International [2] | MAR | Dec. | $59.82 | 225.3 | 13,477.4 | 987.9 | 1,015.6 | 1,234.3 | 4.2% | 2.8% | 21.5% | 14.7X | 14.7X | 11.5X | 9.2% |
| SO | Starwood Hotels & Resorts | HOT | Dec. | $57.76 | 221.1 | 12,770.7 | 1,150.0 | 1,409.1 | 1,592.2 | 25.4% | 22.5% | 13.0% | 13.4X | 10.9X | 9.3X | 20.2% |
| | **Large-cap average** | | | | | **$11,464.0** | | | | **15.2%** | **12.9%** | **16.5%** | **13.4X** | **12.0X** | **9.8X** | **14.7%** |
| | **Small/Mid-Cap Lodging** | | | | | | | | | | | | | | | |
| SP | Choice Hotels International | CHH | Dec. | $33.04 | 33.3 | $1,100.2 | $134.9 | $153.7 | $170.3 | 7.7% | 13.9% | 10.8% | 10.7X | 9.1X | 7.9X | 10.8% |
| SP | Fairmont Hotels | FHR | Dec. | $31.72 | 70.0 | 2,220.4 | 179.1 | 170.5 | 182.0 | 25.8% | (4.8%) | 6.7% | 15.8X | 16.8X | 14.3X | 8.5% |
| SO | Four Seasons | FS | Dec. | $62.97 | 38.1 | 2,018.2 | 66.3 | 84.1 | 116.2 | 34.1% | 26.8% | 38.2% | 27.0X | 21.5X | 15.2X | 32.9% |
| SO | Gaylord Entertainment | GET | Dec. | $43.45 | 40.0 | 1,738.0 | 89.5 | 137.3 | 179.3 | 111.6% | 53.4% | 30.6% | 25.0X | 15.8X | 12.2X | 61.8% |
| SO | Kerzner International | KZL | Dec. | $57.01 | 37.9 | 2,160.7 | 168.7 | 206.9 | 220.8 | 14.4% | 22.6% | 6.7% | 13.2X | 12.3X | 11.0X | 14.4% |
| SO | La Quinta Hotels | LQI | Dec. | $8.00 | 189.7 | 1,517.6 | 160.2 | 236.5 | 260.1 | 15.4% | 31.2% | 10.0% | 11.6X | 10.2X | 9.2X | 18.6% |
| | **Small/Mid-Cap average** | | | | | **$1,792.5** | | | | **35.6%** | **23.1%** | **17.4%** | **17.8X** | **14.8X** | **12.1X** | **24.5%** |
| SO | Carnival Corporation | CCL | Nov. | $49.44 | 850.8 | $42,063.8 | $2,983.0 | $3,538.0 | $4,060.0 | 43.6% | 18.6% | 14.8% | 15.6X | 13.5X | 11.6X | 25.0% |
| SP | Royal Caribbean Cruises, Ltd. | RCL | Dec. | $41.26 | 237.0 | 9,778.6 | 1,147.7 | 1,235.3 | 1,492.2 | 29.1% | 7.6% | 20.8% | 13.6X | 12.2X | 9.9X | 18.8% |
| | **Leisure average** | | | | | **$25,921.1** | | | | **40.9%** | **16.5%** | **15.9%** | **15.2X** | **13.2X** | **11.3X** | **23.9%** |

(1) Station EV/EBITDA multiple is calculated based on corporate EBITDA less management fees from Thunder Valley less NPV of Thunder Valley applied to current stock price, plus the company's pro rata share of earnings from Green Valley Ranch.

(2) Marriott International's EBITDA and EPS exclude synthetic fuel operations for valuation purposes.

(A) Represents 3-Year CAGR over 2004 through 2006.

## Exhibit 17. EPS Comparative Valuation Table

| Rtg | Company | Tkr | FYE | Price as of 10/28/2005 | Shares | Market Cap ($ in MM) | Calendar EPS 2004A | 2005E | 2006E | '03-'04 | % Chg. '04-'05 | '05-'06 | P/E 2004A | 2005E | 2006E | 3-Yr EPS CAGR (A) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Large-Cap Gaming** | | | | | | | | | | | | | | | |
| SO | Boyd Gaming | BYD | Dec. | $40.24 | 90.5 | $3,641.7 | $1.44 | $2.28 | $2.72 | 71.4% | 58.9% | 20.4% | 27.9X | 17.6X | 14.8X | 47.9% |
| SO | Harrah's Entertainment | HET | Dec. | $58.80 | 181.4 | 10,666.3 | $3.26 | $3.62 | $4.68 | 13.2% | 11.0% | 29.7% | 18.0X | 16.2X | 12.6X | 17.4% |
| SP | MGM MIRAGE | MGM | Dec. | $37.75 | 297.5 | 11,230.6 | $1.26 | $1.57 | $1.97 | 71.4% | 24.6% | 25.5% | 30.0X | 24.0X | 19.2X | 38.9% |
| SP | Station Casinos | STN | Dec. | $83.75 | 70.3 | 4,481.6 | $2.07 | $2.59 | $2.84 | 68.3% | 25.1% | 9.7% | 30.8X | 24.6X | 22.4X | 32.2% |
| SO | Wynn Resorts, Limited | WYNN | Dec. | $45.00 | 98.2 | 4,419.0 | ($1.10) | $0.52 | $1.31 | N/A | N/A | 151.9% | N/A | 86.5X | 34.4X | N/A |
| | **Large-cap average** | | | | | **$6,887.9** | | | | **50.3%** | **25.8%** | **40.1%** | **26.6X** | **20.1X** | **16.0X** | **31.4%** |
| | **Large-cap average (excluding WYNN)** | | | | | **$7,505.1** | | | | **50.3%** | **25.8%** | **23.8%** | **26.6X** | **20.6X** | **16.8X** | **31.4%** |
| | **Small-Cap Gaming** | | | | | | | | | | | | | | | |
| SU | Ameristar Casinos | ASCA | Dec. | $20.39 | 57.2 | $1,166.3 | $1.12 | $1.11 | $1.32 | 24.4% | (0.9%) | 18.9% | 18.2X | 18.4X | 15.4X | 13.6% |
| SU | Aztar Corp. | AZR | Dec. | $29.56 | 38.0 | 1,123.3 | $1.21 | $1.49 | $1.87 | (17.1%) | 23.1% | 25.5% | 24.4X | 19.8X | 15.8X | 8.6% |
| SP | Churchill Downs | CHDN | Dec. | $32.20 | 14.2 | 457.2 | $0.82 | $0.67 | $1.58 | (54.4%) | (18.3%) | 135.8% | 39.3X | 48.1X | 20.4X | -4.3% |
| SP | Isle of Capri Casinos | ISLE | Apr. | $20.91 | 31.8 | 664.9 | $0.84 | $0.87 | $1.24 | (50.0%) | 3.6% | 42.5% | 24.9X | 24.0X | 16.9X | -9.6% |
| SO | Kerzner International | KZL | Dec. | $57.01 | 37.9 | 2,160.7 | $2.55 | $2.91 | $3.21 | 7.1% | 14.1% | 10.3% | 22.4X | 19.6X | 17.8X | 10.5% |
| SP | MTR Gaming | MNTG | Dec. | $8.93 | 29.0 | 201.0 | $0.50 | $0.33 | $0.38 | (5.7%) | (34.0%) | 15.2% | 13.9X | 21.0X | 18.2X | -10.5% |
| SP | Penn National Gaming | PENN | Dec. | $26.30 | 85.8 | 2,256.5 | $1.05 | $1.38 | $1.73 | 30.4% | 31.4% | 25.4% | 25.0X | 19.1X | 15.2X | 29.0% |
| SP | Pinnacle Entertainment | PNK | Dec. | $18.54 | 40.5 | 750.9 | $0.04 | $0.52 | $0.70 | (125.0%) | 1200.0% | 34.6% | 463.5X | 35.7X | 26.5X | NM |
| | **Small-cap average** | | | | | **$1,097.6** | | | | **(6.8%)** | **115.5%** | **29.4%** | **61.4X** | **32.5X** | **17.4X** | **12.9%** |
| | **Small-cap average (excluding CHDN and PNK)** | | | | | **$1,262.1** | | | | **7.8%** | **16.1%** | **21.3%** | **22.8X** | **19.7X** | **16.3X** | **13.9%** |
| | **Gaming Equipment** | | | | | | | | | | | | | | | |
| SO | Alliance Gaming | AGI | Jun. | $10.38 | 51.8 | $537.7 | $0.21 | $0.10 | $0.58 | (79.6%) | (52.4%) | 460.0% | 49.4X | 103.8X | 18.5X | -18.4% |
| SP | GTECH Holdings | GTK | Feb. | $31.00 | 129.7 | 4,020.7 | $1.44 | $1.67 | $1.77 | 3.6% | 16.0% | 6.0% | 21.5X | 18.6X | 17.5X | 8.4% |
| SU | International Game Tech. | IGT | Sep. | $26.50 | 350.8 | 9,296.2 | $1.35 | $1.23 | $1.32 | 15.4% | (8.9%) | 7.3% | 19.6X | 21.5X | 20.1X | 4.1% |
| SP | Multimedia Games | MGAM | Sep. | $9.44 | 29.1 | 274.7 | $0.96 | $0.57 | $0.41 | (10.1%) | (40.4%) | (28.9%) | 9.8X | 16.5X | 23.2X | -27.5% |
| SO | WMS Gaming | WMS | Jun. | $25.40 | 38.9 | 988.1 | $0.25 | $1.06 | $1.20 | (308.3%) | 324.0% | 13.2% | 101.6X | 24.0X | 21.2X | NM |
| | **Gaming equip. average** | | | | | **$3,023.5** | | | | **(12.8%)** | **17.4%** | **22.8%** | **26.4X** | **23.7X** | **19.5X** | **3.6%** |
| | **Large-Cap Lodging** | | | | | | | | | | | | | | | |
| SO | Hilton Hotels | HLT | Dec. | $19.81 | 411.1 | $8,143.9 | $0.60 | $0.82 | $1.05 | 39.5% | 36.7% | 28.0% | 33.0X | 24.2X | 18.9X | 34.7% |
| SP | Marriott International [1] | MAR | Dec. | $59.82 | 225.3 | 13,477.4 | $2.48 | $3.09 | $3.04 | 27.6% | 24.6% | (1.6%) | 24.1X | 19.4X | 19.7X | 16.1% |
| SO | Starwood Hotels & Resorts | HOT | Dec. | $57.76 | 221.1 | 12,770.7 | $1.72 | $2.29 | $2.72 | 101.7% | 33.1% | 18.8% | 33.6X | 25.2X | 21.2X | 47.2% |
| | **Large-cap average** | | | | | **$11,464.0** | | | | **67.9%** | **30.6%** | **13.0%** | **29.7X** | **22.7X** | **20.1X** | **32.0%** |
| | **Small/Mid-Cap Lodging** | | | | | | | | | | | | | | | |
| SP | Choice Hotels International | CHH | Dec. | $33.04 | 33.3 | $1,100.2 | $2.15 | $2.49 | $2.84 | 9.9% | 15.8% | 14.1% | 15.4X | 13.3X | 11.6X | 13.2% |
| SP | Fairmont Hotels | FHR | Dec. | $31.72 | 70.0 | 2,220.4 | $0.65 | $0.73 | $0.98 | 3.2% | 12.3% | 34.2% | 48.8X | 43.5X | 32.4X | 15.9% |
| SO | Four Seasons | FS | Dec. | $62.97 | 38.1 | 2,018.2 | $0.76 | $1.57 | $2.28 | 1.3% | 106.6% | 43.9% | 69.7X | 33.7X | 23.4X | 44.4% |
| SO | Gaylord Entertainment | GET | Dec. | $43.45 | 40.0 | 1,738.0 | ($0.66) | ($0.30) | $0.17 | 32.0% | 54.5% | 156.7% | N/A | N/A | 255.6X | N/A |
| SO | Kerzner International | KZL | Dec. | $57.01 | 37.9 | 2,160.7 | $2.55 | $2.91 | $3.21 | 7.1% | 14.1% | 10.3% | 22.4X | 19.6X | 17.8X | 10.5% |
| SO | La Quinta Hotels | LQI | Dec. | $8.00 | 189.7 | 1,517.6 | ($0.18) | ($0.00) | $0.12 | 21.7% | 97.6% | N/A | N/A | N/A | 64.3X | N/A |
| | **Small/Mid-Cap average** | | | | | **$1,792.5** | | | | **11.6%** | **49.6%** | **51.4%** | **41.9X** | **28.5X** | **22.7X** | **21.6%** |
| SO | Carnival Corporation | CCL | Nov. | $49.44 | 850.8 | $42,063.8 | $2.23 | $2.72 | $3.21 | 48.7% | 22.0% | 18.0% | 22.2X | 18.2X | 15.4X | 28.9% |
| SP | Royal Caribbean Cruises, Ltd. | RCL | Dec. | $41.26 | 237.0 | 9,778.6 | $2.25 | $2.78 | $3.21 | 58.5% | 22.7% | 16.3% | 18.3X | 14.9X | 12.9X | 31.2% |
| | **Leisure average** | | | | | **$25,921.1** | | | | **60.5%** | **22.1%** | **17.7%** | **21.4X** | **17.6X** | **14.6X** | **29.3%** |
| | S&P 500 | SPX | NA | 1,191.4 | | | $85.79 | $70.32 | $74.78 | 20.3% | 6.9% | 6.3% | 18.1X | 16.9X | 15.9X | 11.0% |
| | **Broad market** | | | | | | | | | | | | | | | |

(1) Marriott International's EBITDA and EPS exclude synthetic fuel operations for valuation purposes.

(A) Represents 3-Year CAGR over 2004 through 2006.

## Merrill Lynch Corporate Valuations – Boyd Gaming



Table 9: Merrill Lynch Gaming and Lodging Summary Valuation Table

| Company | Rating | Price 12/14/2005 | Shares Out. (mil) | Mkt. Cap. (bil) | Avg. Vol. (thsd) | Div. Yield | Ytd. Chg. | EPS 2005E | EPS 2006E | EPS Growth 2004A | EPS Growth 2005E | EPS Growth 2006E | P/E 2005E | P/E 2006E | EV/EBITDA Multiple 2005E | EV/EBITDA Multiple 2006E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S & P 500 | | $1,272.74 | | | | 1.7% | 5% | $74.44 | $79.68 | 19% | 13% | 7% | 17.1x | 16.0x | | |
| **LODGING COMPANIES** | | | | | | | | | | | | | | | | |
| Owner/Operators | | | | | | | | | | | | | | | | |
| Fairmont/FHR | B-2-7 | $40.70 | 76.9 | $3.1 | 896 | 0.3% | 17% | $0.70 | $0.90 | 40% | 5% | 29% | 58.2x | 45.2x | 21.0x | 18.4x |
| Hilton/HLT | B-1-7 | $22.91 | 415.0 | $9.5 | 3,044 | 0.7% | 1% | $0.85 | $1.02 | 39% | 42% | 20% | 26.9x | 22.4x | 9.9x | 9.4x |
| LaQuinta/LQI[1] | Rstr | $11.04 | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr |
| Lodgian/LGN | C-2-9 | $10.75 | 24.6 | $0.3 | 70 | 0.0% | -13% | -$0.45 | $0.10 | NM | NM | NM | NM | NM | 14.5x | 11.5x |
| Orient Express/OEH | C-1-7 | $31.83 | 38.2 | $1.2 | 345 | 0.3% | 55% | $1.12 | $1.57 | 28% | 36% | 40% | 28.5x | 20.3x | 15.8x | 11.9x |
| Starwood/HOT* | B-1-7 | $64.79 | 223.0 | $14.4 | 1,738 | 1.3% | 11% | $2.27 | $2.17 | 89% | 40% | -5% | 28.5x | 24.7x | 13.3x | 11.5x |
| Average | | | | | | | 14% | | | 49% | 31% | 21% | 35.5x | 28.1x | 14.9x | 12.5x |
| Manager/Franchisors | | | | | | | | | | | | | | | | |
| Four Seasons/FS | B-2-7 | $48.40 | 36.6 | $1.8 | 376 | 0.2% | -41% | $1.05 | $1.50 | 83% | 2% | 43% | 46.1x | 32.2x | 31.9x | 22.3x |
| Marriott/MAR | B-1-7 | $67.67 | 229.3 | $15.5 | 1,231 | 0.6% | 7% | $3.08 | $2.96 | 27% | 25% | -4% | 22.0x | 22.9x | 17.2x | 14.2x |
| Average | | | | | | | -17% | | | 55% | 13% | 20% | 34.1x | 27.6x | 24.5x | 18.3x |
| U.S. Lodging REITs | | | | | | | | | | FFO Growth | | | | | | |
| Equity Inns/ENN | B-1-7 | $13.80 | 54.9 | $0.8 | 215 | 4.9% | 18% | $1.11 | $1.31 | 13% | 31% | 18% | 12.5x | 10.6x | 13.4x | 11.5x |
| Sunstone/SHO | Rstr | $25.92 | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr | Rstr |
| FelCor/FCH | B-2-7 | $17.16 | 62.7 | $1.1 | 345 | 3.5% | 17% | $1.30 | $1.70 | 68% | 29% | 31% | 13.2x | 10.1x | 12.7x | 11.5x |
| Host Marriott/HMT | B-1-7 | $18.71 | 403.1 | $7.5 | 1,913 | 2.4% | 8% | $1.19 | $1.46 | 44% | 27% | 23% | 15.7x | 12.8x | 14.0x | 12.4x |
| Average | | | | | | | 13% | | | 56% | 28% | 27% | 14.5x | 11.5x | 13.4x | 12.0x |
| **GAMING COMPANIES** | | | | | | | | | | | | | | | | |
| Large-Cap Operators | | | | | | | | | | | | | | | | |
| Harrah's Ent/HET | B-1-7 | $67.36 | 185.1 | $12.5 | 1,678 | 2.2% | 1% | $3.32 | $3.38 | 14% | 0% | 2% | 20.3x | 19.9x | 11.2x | 9.0x |
| MGM MIRAGE/MGM | B-3-9 | $36.97 | 296.7 | $11.0 | 2,022 | 0.0% | 2% | $1.57 | $1.76 | 68% | 25% | 12% | 23.6x | 21.0x | 11.5x | 9.7x |
| Wynn Resorts/WYNN | C-3-9 | $55.04 | 109.0 | $6.0 | 1,182 | 0.0% | -18% | -$0.26 | $0.90 | NM | NM | NM | NM | 61.4x | 44.0x | 21.9x |
| Las Vegas Sands/LVS | C-2-9 | $39.56 | 354.7 | $14.0 | 1,320 | 0.0% | -18% | $1.09 | $1.23 | NM | 108% | 13% | 36.3x | 32.0x | 26.5x | 24.7x |
| Boyd Gaming/BYD | C-2-7 | $46.17 | 89.9 | $4.2 | 734 | 1.1% | 11% | $2.28 | $2.65 | NM | 70% | 16% | 20.2x | 17.4x | 10.3x | 8.7x |
| Station Casinos/STN | B-1-7 | $64.53 | 70.0 | $4.5 | 499 | 1.5% | 18% | $2.62 | $2.96 | 70% | 26% | 13% | 24.7x | 21.9x | 13.2x | 11.4x |
| Average | | | | | | | -1% | | | 48% | 46% | 11% | 25.0x | 28.9x | 19.4x | 14.2x |
| Small-Cap Operators | | | | | | | | | | | | | | | | |
| Ameristar/ASCA | C-2-7 | $23.23 | 57.2 | $1.3 | 203 | 1.3% | 8% | $1.15 | $1.20 | -36% | 2% | 5% | 20.2x | 19.3x | 8.0x | 8.0x |
| Aztar/AZR | C-2-9 | $29.28 | 37.4 | $1.1 | 295 | 0.0% | -16% | $1.44 | $1.61 | -16% | 14% | 12% | 20.4x | 18.2x | 8.1x | 7.5x |
| Pinnacle/PNK[2] | C-1-9 | $24.03 | 43.4 | $1.0 | 521 | 0.0% | 21% | $0.35 | $0.61 | NM | NM | 75% | 68.6x | 39.2x | 12.7x | 9.8x |
| Penn National/PENN | C-1-9 | $32.63 | 86.4 | $2.8 | 571 | 0.0% | 8% | $1.46 | $2.01 | 39% | 36% | 37% | 22.3x | 16.3x | 14.9x | 9.0x |
| Average | | | | | | | 5% | | | -4% | 17% | 32% | 32.9x | 23.2x | 10.9x | 8.6x |
| Gaming Equipment Suppliers | | | | | | | | | | | | | | | | |
| GTECH/GTK | B-2-7 | $31.45 | 130.0 | $4.1 | 885 | 1.1% | 21% | $1.66 | $1.72 | 7% | 11% | 4% | 19.0x | 18.3x | 7.8x | 7.2x |
| IGT/IGT | B-2-7 | $30.00 | 361.4 | $10.8 | 2,315 | 1.7% | -13% | $1.20 | $1.18 | 20% | -10% | -2% | 25.0x | 25.4x | 12.1x | 12.4x |
| Average | | | | | | | 4% | | | 13% | 0% | 1% | 22.0x | 21.8x | 9.9x | 9.8x |
| **LEISURE COMPANIES** | | | | | | | | | | | | | | | | |
| Cruise Lines | | | | | | | | | | | | | | | | |
| Carnival/CCL | B-1-7 | $55.41 | 854.0 | $47.3 | 2,178 | 1.4% | -4% | $2.70 | $3.10 | 49% | 20% | 15% | 20.5x | 17.9x | 14.6x | 13.1x |
| Royal Caribbean/RCL | B-1-7 | $47.01 | 236.0 | $11.1 | 1,066 | 1.3% | -14% | $2.80 | $2.87 | 59% | 24% | 3% | 16.8x | 16.4x | 11.5x | 10.7x |
| Average | | | | | | | -9% | | | 54% | 22% | 9% | 18.7x | 17.1x | 13.1x | 11.9x |
| Leisure Vehicles | | | | | | | | | | | | | | | | |
| Brunswick/BC[3] | B-2-7 | $41.20 | 99.3 | $4.1 | 758 | 1.5% | -17% | $3.38 | $3.80 | 69% | 22% | 12% | 12.2x | 10.9x | 6.8x | 5.7x |
| Harley-Davidson/HDI | B-2-7 | $53.08 | 275.5 | $14.6 | 1,920 | 1.4% | -13% | $3.42 | $3.75 | 20% | 14% | 10% | 15.5x | 14.1x | 8.8x | 7.9x |
| MarineMax/HZO[3] | C-1-9 | $30.92 | 18.7 | $0.6 | 228 | 0.0% | 4% | $1.88 | $1.95 | 26% | 19% | 4% | 16.5x | 15.9x | 10.2x | 9.4x |
| Polaris Industries/PII | B-1-7 | $50.58 | 43.7 | $2.2 | 393 | 2.2% | -26% | $3.28 | $3.45 | 14% | 8% | 5% | 15.4x | 14.7x | 7.8x | 7.2x |
| Average | | | | | | | -13% | | | 32% | 16% | 8% | 14.9x | 13.9x | 8.4x | 7.6x |

Notes

[1]LQI is covered by Amanda Bryant; [2]PNK is covered by Vincent Agro; [3]BC and HZO are covered by Hakan Ipekci

* Starwood's 2006E P/E multiple, cash flow and EV calculations have been modified to account for sale of properties to HMT in 2Q06.