Rushmore on Hotel Valuations

How to Value a Hotel

A Complete Guide to the Hotel Valuation Methodology
by Steve Rushmore, MAI, CHA

Hotel owners, lenders, and operators frequently require appraisals to determine the value of properties in which they have an interest. Appraisals are used to establish prices for sales and transfers, to estimate the security for mortgage debt, to verify assessed value for property taxes, and many other reasons.

This article provides an overview of the process for valuing hotels. The article starts with a detailed description of how most hotel appraisers typically value hotels. This process requires an in-depth analysis of all the factors that affect a hotel's value. In addition, the article will cover several rules of thumb that can provide a rough "quick and dirty" estimate of value.

The In-Depth Hotel Valuation Process
Professional appraisers (such as those who hold the Certified Hotel Appraiser (CHA) certification from the International Association of Hotel Appraisers) use a

combination of three approaches in appraising hotels for market value:

- Cost Approach
- Sales Comparison Approach
- Income Approach

Usually, all three approaches are employed in an appraisal, and the appraiser considers the inherent strengths of each, as well as the nature of the subject property when making the final estimate of market value.

The cost approach is based on a determination of the cost of replacing a property, with adjustments for various forms of depreciation and obsolescence.

The sales comparison approach compares the known sales prices of hotels that are similar to the subject hotel.

The income approach either capitalizes or discounts the anticipated earnings of the property in order to estimate its total value.

In theory, all three approaches result in the same value estimate. In practice, however, the value indicated by the income capitalization approach most closely reflects the type of analysis typically performed by most hotel buyers and sellers. The results from the cost and sales comparison approaches are generally used to support and verify the results of the income approach. This article will focus on the income approach that is used by most hotel buyers and sellers.

Income Approach

The income approach used in valuing hotels consists of three primary steps:

Step #1- Perform a Hotel Market Analysis which is basically a supply and demand study. The supply consists of the competitive hotels in the market including existing hotels, those under construction, and any proposed properties. The demand are the visitors to the area requiring hotel accommodations. By analyzing all the factors related to the hotel supply and demand in the market, the appraiser projects the subject property's occupancy and average daily rate.

Step #2- Using the projected occupancy and average daily rate from Step #1, the appraiser develops a forecast of revenues and expenses over a 5 to 10-year projection period. The forecast utilizes the Uniform System of Accounts for Hotels which details all the revenue and expense items found in a hotel's financial statement.

Step #3- Using the forecast of revenues and expenses from Step #2, the appraiser applies the proper discounting procedure to discount the annual cash flows plus the residual value to the present value resulting in the value of the hotel. In addition, the appraiser will sometimes utilize a capitalization process in place of discounting.

Hotel Market Analysis

A hotel market analysis forms the basis for all hotel valuations. It consists of all the factors impacting how the subject property competes in the market and results in a projection of the subject property's occupancy and average daily rate. Much of the analysis is performed using sophisticated computer models that reflect the dynamics of the local market. The following is an overview of what a hotel market analysis considers.

Most appraisers start a hotel market analysis by analyzing the site. The suitability of the site for hotel operations is one of the most important determinants of a hotel's success. The site analysis involves such factors as the physical suitability of the land, access, and visibility, the availability of utilities and other services, and location relative to the competitive supply and the generators of hotel demand.

The appraiser then evaluates the area in which the site is located. Generally, this evaluation includes both the immediate neighborhood of the site and its market area. The extent of the relevant neighborhood can usually be determined by simple observation of the surrounding area, including roads and land-use patterns. The market area, on the other hand, is often harder to identify because it involves a larger area and depends on more abstract factors (e.g., competition and travel patterns).

An important part of performing any hotel market study is the examination of the supply of competitive lodging facilities. The appraiser must first determine the degree to which other hotels in the area would compete with the subject property.

This includes existing competitive hotel supply, hotels under construction, and proposed hotels.

After the supply of hotels has been evaluated, the existing demand must be quantified to determine its ability to support the existing and future lodging facilities. The unit of hotel demand used to analyze hotel markets is the Room Night representing one room occupied for one night by one or more people.

The demand analysis is generally performed using the build-up approach based on lodging activity which quantifies the room night hotel demand by determining the amount of hotel demand currently being accommodated by the competitive supply after considering the market's latent demand consisting of unaccommodated and induced demand.

By combining the competitive supply of hotel rooms with demand analysis the appraiser (assisted by hotel market analysis computer models) is able to project the subject's future occupancy.

The projection of the average daily rate is accomplished by using competitive pricing models that consider the rates currently being charged by the competitive hotels in the market.

Forecast of Hotel Revenues and Expenses

The next step in the appraisal is to forecast the revenues and expenses of the subject hotel. Using the projected occupancy and average daily rate, the income projection focuses on a hotel's main categories of revenue, such as rooms, food and beverage, and other income. The expense projection examines a hotel's main items of expense, such as rooms, food and beverage, administrative, management, energy, marketing costs, property taxes, insurance, and a reserve for replacement. The result of this forecast of income and expenses is the Net Operating Income (NOI) which essentially is EBITIDA less replacement reserve. For the purpose of this article, we will utilize the term- Net Operating Income or NOI.

Capitalization or Discounting the NOI into an Estimate of Value

The final step in the appraisal is the conversion of the forecasted net operating

income into an estimate of value through an income capitalization or discounting process that reflects the rate of return required by market participants. One of the benefits of real estate ownership is the ability to leverage the hotel with debt- i.e., the buyer may finance a major portion of the purchase price and therefore significantly increase the yield on the equity invested in the project. Both the capitalization and discounting process typically incorporates the impact of leverage.

Hotel appraisers have two methods to convert the NOI into an estimate of value- capitalizing one stabilized year's of NOI or performing a 5 or 10-year discounted cash flow where the yearly NOIs plus the residual value of an assumed sale at the end of the holding period are discounted to the present value.

Capitalizing the NOI for One Historic or Stabilized Year Valuation Method

Most hotel brokers value a hotel by capitalizing the subject property's actual NOI from the prior year by a capitalization rate derived from sales of comparable hotels. The capitalization rate is calculated by dividing the historical NOI of a hotel that has recently been sold by its sales price. The following illustrates this process.

Example:
A 67-room hotel last year had an NOI of $1,000,000

A similar hotel in the market had an NOI last year of $1,500,000. It recently sold for $20,400,000. The derived capitalization rate from this sale is:

$$\$1,500,000/\$20,400,000 = 7.35\%$$

Using this capitalization rate, the value of the subject property would be:

$$\$1,000,000/7.35\% = \$13,600,000$$

While this method seems easy to apply it is rarely reliable because of the numerous conditions affecting NOI and transaction prices.

The second capitalization method uses a stabilized NOI representing the anticipated operating results of the property over its remaining economic life, including the normal stages of buildup, plateau, and decline, by a capitalization rate derived from the mortgage-equity approach. The mortgage-equity approach utilizes the band of investment technique, which calculates the weighted average cost of the capital of the debt and equity components.

Example:
Using the previously described market analysis along with the projection of future stabilized revenues and expenses the appraiser derived a stabilized net operating income for the subject property of $1,400,000.

The capitalization rate derived by the band of investment technique uses the following return requirements:

Mortgage Component
Interest Rate: 9%
Amortization: 20 Years
Debt Service Constant: .1079
Loan to Value Percentage: 65%

Equity Component
Equity Dividend: 9%
Equity Percentage: 35%

Weighted Cost of Capital:

	Percentages		Returns		
Mortgage	0.65	x	0.1079	=	0.0701
Equity	0.35	x	0.0900	=	0.0315
Capitalization Rate					0.102 (Rounded)

The valuation takes the stabilized net operating income and divides it by the capitalization rate:

$$\$1,400,000/.102 = \$13,725,000$$

5-10 Year Discounted Cash Flow Mortgage-Equity Valuation Method

Hotels are typically in some form of transition. Buyers generally look to enhance the value of the hotel they are acquiring by physically improving or changing the management of the property. Hotel markets are also often in flux because of additions to supply and changes in the make-up of existing supply. For these reasons, a multi-year forecast of income and expense is generally preferred to reflect future fluctuations of a hotel's occupancy, average rate, and net operating income. The forecast of net income can be converted into an estimate of market value through a discounted cash flow analysis whereby the net operating income forecasted for the ten-year holding period plus the net sales proceeds at the end of the holding period is discounted back to the date of value by an appropriate discount rate.

Traditionally most real estate appraisers will employ one overall discount rate that considers the varying costs of capital used in the market derived through surveys of market participants or through an analysis of actual sales.

A much better and more accurate discounted cash flow model used by many hotel appraisers is the mortgage-equity technique which considers the different costs of capital required by the debt and equity components.

The benefits to the equity position include equity dividends from the net income remaining after debt service during the 10-year projection period and the gain or loss realized from the property's assumed resale. The resale or reversionary benefits include the gain or loss caused by value appreciation or depreciation plus any mortgage amortization. The benefits to the mortgage position are interest and amortization plus repayment of the remaining mortgage balance at the end of 10 years.

The mortgage-equity technique takes the projected NOI and divides it between the equity and debt components. The cash flow to equity and the equity reversion are discounted to the present value at the equity yield rate, and the income to the mortgagee (lender) is discounted at a mortgage interest rate. The sum of the equity and mortgage values is the total property value.

The process of estimating the value of the mortgage and equity components is as follows:

1. The terms of typical hotel financing are set forth, including interest rate, amortization term, and the loan-to-value ratio.

2. An equity yield rate of return and the terminal capitalization rate are established. The equity yield rate is also known as the internal rate of return on equity.

3. The value of the equity component is calculated by first deducting the annual debt service from the forecasted net income before debt service, leaving the net income to equity for each projection year (equity dividend). The net income as of the eleventh year is capitalized into a reversionary value. After deducting the mortgage balance at the end of the tenth year and the typical brokerage and legal costs, the equity residual along with the equity dividends are discounted back to the date of value at the equity yield rate. Adding the value of the equity component to the initial mortgage amount produces the overall property value.

4. The value estimate is allocated between the mortgage and equity components and verifying that the rates of return set forth in steps 1 and 2 can be met from the forecasted net income.

The Mortgage-Equity Valuation Formula

For those appraisers interested in the algebra behind the mortgage-equity valuation formula- the following is an overview of the calculations.

The mortgage-equity valuation formula can be expressed in two algebraic equations, which set forth the mathematical relationships between known and unknown variables. The symbols used to represent these variables are listed below:

NI   Net income available for debt service
V   Value
M   Loan-to-value ratio
i   Mortgage interest rate
f   Annual debt service constant
n   Number of years in the projection period
de   Annual cash available to equity
dr   Residual equity value
b   Brokerage and legal cost percentage
P*   Fraction of loan paid off in projection period
fp   Annual constant required to amortize the entire loan during the projection period
Rr   Overall terminal capitalization rate applied to net income to calculate total property reversion (sale price at end of the projection period)
1/Sn   Current worth of $1 (discount factor) at the equity yield rate

*$P = (f - i) \div (fp - i)$ where i = the interest rate of the mortgage

Using these symbols, a series of formulas can be derived to express the components making up this mortgage-equity valuation process.

Debt Service
To calculate a property's debt service, the appraiser first determines the amount of the mortgage, which is the total property value (V) multiplied by the loan-to-value ratio (M). Then the amount of the mortgage is multiplied by the annual debt service constant (f) using the following formula:

$$f \times M \times V = \text{debt service}$$

Net Income to Equity (Equity Dividend)
The net income to equity (de) is the property's net income before debt service (NI) minus the debt service. The following formula represents net income to equity:

$$NI - (f \times M \times V) = de$$

Reversionary Value
The value of the hotel at the end of Year 10 is calculated by dividing the net income in Year 11 before debt service (NI11) by the terminal capitalization rate (Rr). The following formula calculates the property's reversionary value in Year 10:

$$NI11/Rr = \text{reversionary value}$$

Broker, Legal, and Other Closing Costs
When a hotel is sold (at the end of Year 10) costs associated with the transaction normally include a broker's commission and attorneys' fees. For a hotel transaction, broker and legal costs typically range from 1% to 4% of the sale price. Because these expenses reduce the proceeds to the seller, they are usually deducted from the reversionary value in mortgage-equity analysis. Broker and legal costs (b) expressed as a percentage of the reversionary value (NI11/Rr) can be calculated with the following formula:

$$(b\,(NI11/Rr)) = \text{broker and legal costs}$$

Ending Mortgage Balance
The balance of the mortgage at the end of Year 10 must be deducted from the total reversionary value (debt and equity) to isolate the equity residual. A financial formula is used to calculate the fraction of the loan paid off, which is expressed as a percentage of the original loan balance at a particular point in time. The mortgage interest rate (i) is deducted from the annual debt service constant of the loan over the entire amortization period (f), and the result is divided by the annual constant required to amortize the entire loan over the projection period (sub p) minus the mortgage interest rate. The formula is:

$$(f - i)/(fp - i) = P$$

If the fraction of the loan paid off expressed as a percentage of the initial loan balance is P, then the percentage of the loan remaining can be expressed as 1 - P. Thus, the ending mortgage balance is the fraction of the loan remaining (1 - P) multiplied by the amount of the initial loan (M × V). The formula is:

$$(I - P) \times M \times V = \text{ending mortgage balance}$$

Equity Residual Value

The value of the equity when the property is sold at the end of the projection period (d) is the reversionary value minus broker and legal costs and the ending mortgage balance. The following formula represents the equity residual value:

$$(NI11/Rr) - (b(NI11/Rr)) - ((1 - P) \times M \times V)) = dr$$

Annual Cash Flow to Equity

The annual cash flow to equity consists of the equity dividend for each of the 10 projection years plus the equity residual at the end of Year 10. The following formulas represent the annual cash flow to equity:

$$NI1 - (F \times M \times V) = de1$$
$$NI2 - (F \times M \times V) = de2 ....$$
$$NI10 - (F \times M \times V) = de10$$
$$(NI11/Rr) - (b(NI11/Rr)) - ((1 - P) \times M \times V)) \, dr$$

Value of the Equity

If the initial amount of the mortgage is calculated by multiplying the loan-to-value ratio (M) by the value of the property (V), then the equity value will be 1 minus the loan-to-value ratio times the property value. The formula is:

$$(1 - M)V$$

Discounting the Cash Flow to Equity to Present Value

The cash flow to equity for each of the projection years is discounted to present value at the equity yield rate (1/Sn). The sum of all these cash flows is the value of the equity (1 - M)V. The following formula calculates equity as the sum of the discounted cash flows:

$$(de1 \times 1/S1) + (de2 \times 1/S2) + ... + (de10 \times 1/S) + (dr \times 1/S10) = (1 - M)V$$

Combining Equations: Annual Cash Flow to Equity and Cash Flow to Equity Discounted to Present Value

The final step in the process is to make one overall equation that shows that the annual cash flow to equity plus the yearly cash flows discounted to present value equals the value of the equity.

$$((NI_1 - (f \times M \times V))\, 1/S_1) + ((NI_2 - (f \times M \times V))\, 1/S_2) + \ldots$$
$$+ ((NI_{10} - (f \times M \times V))\, 1/S_{10}) + (NI_{11}/R_r) - (b(NI_{11}/R_r)) - ((1 - P) \times M \times V)\, 1/S_{10}) =$$
$$(1 - M)V$$

Since the only unknown is the property value (V), this equation is easy to solve.

For more information on the Mortgage-Equity Valuation Formula and the software that will quickly perform these calculations and show the proof that the mortgage and equity components are obtaining their prescribed rates of return- click on the following button.

> **For More Information on
> the Mortgage-Equity Valuation Formula
> and Software
> Click Here**

Putting Everything Together

At this point, the hotel market analysis is complete yielding the projection of the subject hotel's occupancy and average daily rate. The forecast of revenues and expenses is also complete resulting in an 11-year projection of net operating income. The mortgage-equity valuation formula has just been described. The next step is to determine the structure and return requirements of the mortgage and equity components that can be imputed into the valuation formula.

Mortgage Component

Data for the mortgage component is generally developed from statistics pertaining to actual hotel mortgages made by long-term permanent lenders. The American Council of Life Insurance publishes quarterly information on the terms of the hotel mortgages issued by its member companies.

However, the disadvantage of using information published by the American Council of Life Insurance is that the data are generally four to six months old by the time they are accumulated and distributed. As a result, appraisers need to find a way to update the data continuously. Ideally, appraisers could use as an indicator some type of money market instrument with a rate of return (yield) that could be obtained on a daily basis. If the movement of this rate shows a high correlation with hotel mortgage interest rates, then a regression equation could be developed to estimate current hotel mortgage interest rates using the known money market instrument.

Steve Rushmore developed such a procedure by running a series of regression analyses. Quarterly mortgage interest rate data supplied by the American Council of Life Insurance were compared with numerous, widely reported money market instruments. Included in this analysis were the prime rate, the federal funds rate, several stock market rates, different types of bond yields, and a variety of similar indexes. As a result of this research, a close mathematical relationship was found between the average interest rate of a hotel mortgage and the concurrent yield of an Average A Corporate Bond, as reported daily in Moody's Bond Record. The following table shows the relationship between the average interest rate of a hotel mortgage and the yield of an Average A Corporate Bond.

Typical Hotel and Motel Mortgage Rates

Source: American Council of Life Insurance; Moody's Bond Record

Mortgage Interest	Average A Corporate Bond Yield
8.94	7.77
9.50	8.22
9.13	7.44
9.73	8.55
10.42	9.09
10.53	9.65
10.11	9.56
10.27	10.31
9.94	9.77
9.83	9.30

Using the regression command from a computer-based spreadsheet, the following regression output was obtained:

$$Y = 2.9040 + 0.77650X$$

Y = Estimated hotel/motel mortgage interest rate

X = Current average AA utility bond yield (coefficient of correlation is 95.5%).

If, for example, the current yield on Average A Corporate Bond, as reported by Moody's Bond Record is 7.68 percent, the equation produces an estimated hotel/motel interest rate (Y) of 8.9 percent.

In addition to the mortgage interest rate estimate derived from this regression analysis, the terms of hotel mortgage loans made by institutional lending clients are constantly monitored.

For this example, a 9% interest, twenty-year amortization mortgage with a 0.1079 constant, and a 65% loan-to-value ratio were assumed to be appropriate

Equity Component

Additional capital required for a hotel investment is generally supplied by an equity investor. The rate of return that an equity investor expects over a ten-year holding period is known as equity yield.

Unlike the equity dividend, which is a short-term rate of return, an equity yield specifically considers a long-term holding period (generally ten years), annual inflation-adjusted cash flows, property appreciation, mortgage amortization, and proceeds from a sale at the end of the holding period.

It is difficult to quantify the rate of return required by equity investors seeking to purchase hotel properties. To establish an appropriate equity yield rate, two important sources of data are past appraisals and investor interviews.

Past Appraisals

Appraisers can derive equity yield rates from the market when they appraise hotels that sell on or about the time at which they are appraised. It is possible to determine an appropriate equity yield rate by inserting the projection into a valuation model and adjusting the appraised value to reflect the actual sales price by modifying the return assumptions. The following table shows a representative sample of hotels that were sold shortly after they were appraised, along with the imputed equity dividend and equity yield returns based on the valuation approach.

,

Summary of Derived Rates and Yields

Hotel	City and State	Overall Rate (%)	Total Property Yield (%)	Equity Yield (%)
Marriott	Woodland Hills, CA	9.1	11.7	14.8
Westin Bonaventure	Los Angeles, CA	1.9	17.8	24.2
Hilton at the Club	Pleasanton, CA	10.5	13.4	17.0
The Plaza	New York, NY	7.0	11.0	14.0
Residence Inn	Baton Rouge, LA	12.7	14.8	21,2
Residence Inn	Overland Park, KS	8.9	14.7	20.8
Residence Inn	Des Moines, IA	9.8	14.1	19.6
Residence Inn	Hunt Valley, MD	12.3	13.6	18.3
Residence Inn	Kansas City, MO	10.4	13.2	19.8
Residence Inn	Lincoln, NE	10.0	13.7	18.5
Fullerton Suites	Fullerton, CA	12.9	18.7	28.5
Savoy Hotel	San Francisco, CA	5.8	14.4	19.6

Note: "Date of" appears above "Hotel" in the first column header.

Investor Interviews

Institutional and individual hotel investors, as sources of equity funds, have definite return requirements that can be expressed as an equity yield rate based on a ten-year projection of net operating income before incentive management fees but after debt service. Based on surveys and investor interviews the following table illustrates the equity yield requirements of a cross-section of hotel investors.

Source of Equity	Equity Yield Requirements
Private Placement	20% to 24%
Institutional	18% to 22%

Upward adjustments to an equity yield estimated are indicated where expense and/or revenue projections substantially deviate from historical data, proposed properties, properties located in seasonal markets (which increase cash flow volatility), leasehold interests, properties located in very small markets, older hotels, properties that rely on only a few demand generators or cyclical demand generators, properties in areas that lack economic diversification, properties or markets that are particularly dependent on one demand segment, and properties located in areas characterized by a declining population and employment base. An upward adjustment is also indicated when a property has the potential to lose its franchise, when rooms revenue constitutes a small portion of total revenue, and when the penetration rate is high, to reflect its vulnerability.

A downward adjustment of the yield rate is indicated in primary market areas or hotels located in markets that have strong barriers to entry (making new supply unlikely beyond the stabilized year). Factors considered indicative of new competition include strong areawide occupancy and average rate levels and the availability of vacant land with favorable zoning and pricing.

In this example given an assumed 65 percent loan-to-value ratio, which is the risk inherent in achieving the projected income stream and anticipated market position of the subject property, it is likely that an equity investor would require an equity yield rate of 20 percent before payment of incentive management fees. This estimate is well supported by the equity yield requirements presented previously.

Terminal Capitalization Rate

Inherent in the valuation process is the assumption of a sale at the end of the assumed ten-year holding period. The estimated reversionary sales price at that time is calculated by capitalizing the projected eleventh year's net income by an overall terminal capitalization rate. From this sales price, a percentage is deducted for the seller's brokerage and legal fees. The net proceeds to the equity interest (also known as the equity residual) are calculated by deducting the outstanding mortgage balance from the reversion.

The terminal capitalization rate can be derived through a mortgage equity band of investment technique, which calculates the weighted average cost of the capital used in a hotel investment.

The following table illustrates the previously derived mortgage financing terms (a 65 percent loan-to-value ratio and a 0.1079 debt service constant) with a cash-on-cash equity dividend rate of 9% to calculate an overall capitalization rate.

	Percentage	Returns	
Mortgage	0.65 x	0.1079	= 0.0701
Equity	0.35 x	0.0900	= 0.0315
Capitalization Rate			0.102 (Rounded)

Because the overall rate will be used to capitalize net income ten years from the date of value, an upward adjustment is appropriate to reflect the uncertainty inherent in this extended time period. For the purpose of this valuation, an 11 percent terminal capitalization rate will be used.

As a point of reference, the terminal capitalization rate may be compared with the going-in rate implied by the value estimated for the subject property. The going-in rate reflects the capitalization rate that would be applicable if a hotel were operating at a stabilized level as of the date of value. This rate is calculated by dividing the stabilized net income, expressed in current dollars as of the date of value, by the value indicated by the income capitalization approach. Generally, the terminal capitalization rate is approximately 100 to 200 basis points above the going-in rate.

Valuation of Mortgage and Equity Components

Up to this point in the analysis, a number of objective decisions and some subjective evaluations of market data have been made; the remainder of the valuation analysis is purely mathematical. Using the Mortgage-Equity Valuation Formula, the 10-year projection of net operating income along with the specific return requirements of the mortgage lender (interest, amortization, and loan-to-value ratio) and the equity investor (equity yield and terminal capitalization rate) are imputed into the formula resulting in a total value of $13,698,000.

Based on the 65% loan-to-value ratio, the total value is allocated as follows:

Mortgage Component (65%) $8,904,000
Equity Component (35%) $4,794,000
Total $13,698,000

The value is proven by calculating the yields to the mortgage and equity components during the projection period. If the mortgage achieves its 9% yield and the equity yield is 20%, then $13,698,000 is the correct value by the income capitalization approach.

The following tables demonstrate that each of the components- Mortgage and Equity actually receive their anticipated yields- by showing how the mortgage payments are discounted at 9% and equaling the amount of the mortgage ($8,904,000) and the cash flow to equity (projected net income before debt service less the debt service) plus the equity residual are discounted at 20% equaling the amount of the equity ($4,794,000).

Note the debt service is calculated:
Mortgage Component ($8,904,000) x Mortgage Constant (0.1079) = $961,000

Cash Flow to Equity Calculation

Net Income Available for Debt Service		Total Annual Debt Service		Net Income to Equity
$1,124,000	−	$961,000	=	$163,000
1,418,000	−	961,000	=	457,000
1,663,000	−	961,000	=	692,000
1,709,000	−	961,000	=	748,000
1,769,000	−	961,000	=	808,000
1,833,000	−	961,000	=	872,000
1,898,000	−	961,000	=	937,000
1,962,000	−	961,000	=	1,001,000
2,032,000	−	961,000	=	1,071,000
2,103,000	−	961,000	=	1,142,000

Mortgage Component

Total Annual Debt Service		Present Worth of $1 Factor @ 9%		Discounted Cash Flow
$961,000	x	0.918465	=	$883,000
961,000	x	0.843578	=	811,000
961,000	x	0.774798	=	745,000
961,000	x	0.711625	=	684,000
961,000	x	0.653603	=	628,000
961,000	x	0.600311	=	577,000
961,000	x	0.551365	=	530,000
961,000	x	0.506410	=	487,000
961,000	x	0.465120	=	447,000
7,284,000*	x	0.427196	=	3,112,000
Value of Mortgage Component				$8,904,000

*10th year debt service of $961,000 plus outstanding mortgage balance of $6,323,000

Equity Component

Net Income to Equity		Present Worth of $1 Factor @ 20.0%		Discounted Cash Flow
$163,000	x	0.833322	=	$136,000
457,000	x	0.694426	=	317,000
692,000	x	0.578681	=	400,000
748,000	x	0.482227	=	361,000
808,000	x	0.401851	=	325,000
872,000	x	0.334871	=	292,000
937,000	x	0.279056	=	261,000
1,001,000	x	0.232543	=	233,000
1,071,000	x	0.193784	=	208,000
13,999,000*	x	0.161484	=	2,261,000
Value of Equity Component				$4,794,000

*10th year net income to equity of $1,142,000 plus sales proceeds of 12,857,000

The Equity Residual at the end of the tenth year is calculated as follows:
Reversionary Value ($2,175,000/0.11) = $19,773,000 - (Brokerage and Legal Fees ($593,000) - Ending Mortgage Balance ($6,323,000) = $12,857,000

Mortgage-Equity Valuation Model

To obtain a FREE copy of the Mortgage-Equity Valuation Model ($125 value) click on the box below and enter the coupon code: free

Click Here to order a FREE copy of the Mortgage-Equity Valuation Model

Hotel Valuation Rules of Thumb for Quick and Dirty Hotel Valuations

The following are some of the rules of thumb that will provide a quick indication of a hotel's value. Note- they are no substitute for a thorough valuation made by a qualified hotel appraiser who holds the Certified Hotel Appraiser (CHA) certification from the International Association of Hotel Appraisers.

Average Daily Rate Multiplier

The Average Daily Rate Multiplier values a hotel by taking a hotel's ADR and multiplying it by 1,000 which produces a value per room. That result can then be multiplied by the hotel's room count producing an estimate of its total value. A 68-room hotel has an ADR of $200 its value would be:

$200 x 1,000 = $200,000/room x 70 rooms = $13,600,000

Room Revenue Multiplier

The room revenue for a hotel can be measured using a factor known as REVPAR which is Room Revenue Per Available Room. It is calculated by multiplying a hotel's ADR by its occupancy. Unlike the Average Daily Rate Multiplier- the Room Revenue Multiplier factors in a hotel's occupancy. The typical range for the Room Revenue Multiplier is 3 to 5 times.

Using the example above- assume the hotel's occupancy is 70% and the Room Revenue Multiplier is 4 times:

$200 x 70% x 365 x 68 rooms x 4 times = $13,899,000

Soda Can/Bottle Multiplier

The Soda Can/Bottle Multiplier takes the cost of a can or bottle of soda sold in the hotel's vending machine or room service and multiplies it by 100,000 times to produce a value per room.

In the above example- a can of soda at this hotel sells for $2.00 in the vending machine- the value of the hotel would therefore be:

$2.00 x 100,000 = $200,000/room x 68 rooms = $13,600,000

Important Websites for Performing Hotel Valuations

www.howtovalueahotel.com

www.howtovalueahotel.com -Over 350 downloadable articles, books, software, and courses related to hotel analysis, valuations, investing, and finance- most are free.

www.certifiedhotelappraiser.org - If you appraise hotels consider becoming a Certified Hotel Appraiser- The world's only certification for hotel appraisers. Set yourself apart from all other appraisers with this professional certification.

www.iaha.org - International Association of Hotel Appraisers- Where the world's leading hotel appraisers come together to exchange ideas and enhance the hotel valuation methodology and procedures.

www.hotellearningonline.com - Hotel Learning Online- Learn how to perform a hotel market analysis, make financial projections, and value a hotel using the latest version of Hotel Market Analysis & Valuation Software.

www.hotelvaluationsoftware.com - The most widely used software for performing a hotel market analysis, financial projections, and valuations.

Who is Steve Rushmore?

Steve Rushmore, MAI, CHA, Founder of HVS, has provided consultation services for more than 15,000 hotels during his 50-year career and specializes in complex issues involving hotel valuation, feasibility, and financing.

As a leading authority and prolific author on the topic of hotel valuations, Steve has written all five hotel valuation textbooks and two seminars for the Appraisal Institute and is known as the "Creator of the Modern Hotel Valuation Methodology." He has also authored three reference books on hotel investing and has published more than 300 articles. Steve developed the Hotel Market Analysis & Valuation Software used by HVS and thousands of hotel appraisers/consultants, owners, and lenders throughout the world.

Steve lectures extensively on hotel valuations and has taught hundreds of classes and seminars to more than 20,000 industry professionals. He is also a frequent lecturer at major hotel schools and universities including Cornell, Glion, Hong Kong Polytechnic, EHL, Florida International University, IMHI, Michigan State, Penn State, Houston, NYU, and the Harvard Business School.

Steve's most recent contribution to hotel valuation education is his online course- "How to Value a Hotel." Designed for experienced appraisers looking to specialize in valuing hotels or new valuers starting their careers, the course provides all the knowledge and tools needed to evaluate hotel markets, forecast income and expense, and value all types of hotels. For the final project, students value an actual hotel. Upon successfully completing Steve's course- students receive the Certified Hotel Appraiser (CHA) or Certified Hotel Valuer (CHV) certification recognizing their unique knowledge and skills used to value hotels.

Steve has a BS degree from the Cornell Hotel School, an MBA from the University of Buffalo, and attended the OPM program at the Harvard Business School. He held the MAI and FRICS appraisal designations and is a CHA (certified hotel administrator).

In his free time, Steve enjoys tennis, skiing, hiking, diving, sailing, and cooking with his wife (who is a trained Chef). He holds a commercial pilot's license with instrument, multi-engine, and seaplane ratings.

For more information as to what Steve is up to these days- www.steverushmore.com

Hotel Valuation Software- For Performing Hotel Market Analyses, Financial Projections and Valuations

Hotel Market Analysis & Valuation Software was developed by **Steve Rushmore** for his firm- HVS. It was then enhanced by Professor Jan deRoos of the Cornell Hotel School. This software has been the most downloaded product on the Cornell website and is used by thousands of hotel professionals around the world. It consists of three models:

- **Hotel Market Analysis and ADR Forecasting Model**
- **Hotel Revenue and Expense Forecasting Model**
- **Hotel Mortgage Equity Valuation Model.**

This software package also provides answers to a wide range of key hotel investment questions such as How much is my hotel worth? What can I do to maximize value? What is the likely impact of new competition? How much value will a refurbishment add? Is my market strong enough to support adding more hotel rooms? What is the impact of my brand adding another hotel to the market?

If your role includes responsibility for performing hotel valuations and associated financial analyses- you need to include this software in your business toolbox.

Hotel Market Analysis & Valuation Software v. 6.0 is written as Microsoft Excel files (which runs on both Windows and Apple OS X operating systems) and comes with a detailed users' guide and case study. Version 6.0 contains significant enhancements over Version 5.0 which is no longer distributed.

HOTEL VALUATION SOFTWARE

www.howtovalueahotel.com

A website providing everything you need to value a hotel

Books, Articles, Software, and Courses From the Creator of the Hotel Valuation Methodology- Steve Rushmore

www.howtovalueahotel.com