

# Hotel Market Analysis and Valuation

## International Issues and Software Applications



by Stephen Rushmore, MAI, John W. O'Neill, MAI, PhD, and  
Stephen Rushmore, Jr., MAI

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**International Issues and Software Applications**

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**Library of Congress Cataloging-in-Publication Data**

Rushmore, Stephen, 1945-

Hotel market analysis and valuation : international issues and software applications / by Stephen Rushmore, John W. O'Neill, Stephen Rushmore, Jr.  
p. cm.

Includes bibliographical references and index.

ISBN 978-1-935328-28-5 (alk. paper)

1. Hotels--Valuation. 2. Hotels--Valuation--Data processing. 3. Hospitality industry--Marketing--Data processing. 4. Marketing research--Data processing. I. O'Neill, John W., 1962- II. Rushmore, Stephen, 1974- III. Title.

TX911.3.V34R856 2012

647.940680285--dc23

2012018188



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# About the Authors



**Steve Rushmore, MAI, FRICS, CHA**, is the chairman and founder of HVS, a global hospitality consulting organization with 30 offices around the world. He is responsible for the firm's global business development and expansion. Steve has provided consultation services for more than 15,000 hotels throughout the world during his 40-year career and specializes in complex issues involving hotel feasibility, valuations, and financing. He was one of the creators of the Microtel concept and was instrumental in its initial public offering. Steve is a partner in HEI Hospitality, LLC, a hotel investment fund.

HVS ([www.hvs.com](http://www.hvs.com)), which Steve founded in 1980, has provided consulting services for thousands of clients in all 50 states and more than 60 foreign countries. Its professional staff of more than 400 industry specialists offers a wide range of services, including market feasibility studies, valuations, strategic analyses, development planning, and litigation support. Through its divisions, HVS supplies unique hotel consulting expertise in the areas of executive search, food and beverage operations, gaming, technology, hotel operations, asset management, marketing, interior design, convention centers, shared ownership services, risk management, property tax, parking, golf, spa, sustainability services, and investment banking. With its global coverage, HVS specializes in the appraisal of entire hotel companies such as Hilton Hotels and Resorts and Extended Stay America.

As a leading authority and prolific author on the topic of hotel feasibility studies and appraisals, Steve has written all six textbooks and two seminars for the Appraisal Institute covering this subject. He has also authored three reference books on hotel investing and has published more than 400 articles. He writes a monthly column for *Lodging Hospitality* magazine and is widely quoted by major business and professional publications. Steve lectures extensively on hotel valuations and investing 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 around the world, including Lausanne, Penn State, Cornell, Houston, and IMHI.

Steve has a BS degree from the Cornell University School of Hotel Administration and an MBA from the University of Buffalo; he also attended the Owner/President Management Program at the Harvard Business School. He holds MAI and FRICS appraisal designations and is a certified hotel administrator (CHA). He is a member of numerous hotel industry committees, including the Industry Real Estate Financing Advisory Council (IREFAC) and the NYU Hotel Investment Conference. In 1999, Steve was recognized by the

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**Dr. John W. O’Neill, MAI, CHE, PhD**, has taught and conducted research in the area of real estate, branding, and strategy in the lodging industry at The Pennsylvania State University School of Hospitality Management since 2001. In 2011, he was also named director of the school. Prior to his professorship at Penn State, he was a professor in the International Hotel School at Johnson & Wales University in Providence, Rhode Island. Previously, he was senior associate in the Hospitality Industry Consulting Group at the international accounting and consulting firm of Coopers & Lybrand in New York and director of market planning for Holiday Inn Worldwide in Boston and held unit-, regional-, and corporate-level management positions with Hyatt and Marriott in Chicago, Kansas City, and Washington, D.C.

John is also a licensed real estate appraiser, holds the MAI designation from the Appraisal Institute and the Certified Hospitality Educator (CHE) designation from the American Hotel and Lodging Association, and is a member of the International Society of Hospitality Consultants (ISHC). He has served as consultant to numerous public, quasi-public, and private organizations and has been admitted as an expert witness pertaining to lodging cases.

John is frequently quoted on a variety of topics related to the hotel industry in *USA Today*, *BusinessWeek*, *Business Travel News*, *Lodging*, and *The New York Times*. In addition, he has written articles for *The Appraisal Journal*, *Cornell Hospitality Quarterly*, the *Journal of Hospitality & Tourism Research*, and the *International Journal of Hospitality Management*. He also writes a column for *Lodging Hospitality* magazine entitled “O’Neill on Valuation.” John holds a BS in hotel administration from Cornell University, an MS in real estate from New York University, and a PhD in business administration from the University of Rhode Island. John O’Neill can be contacted at [jwo3@psu.edu](mailto:jwo3@psu.edu).

**Stephen Rushmore, Jr., MAI** is president and chief executive officer of HVS. Stephen directs the worldwide operations of the firm and is responsible for future office expansion and new product development.

Prior to joining HVS in 2002, Stephen was a senior engineer with Sapient, an enterprise application development firm based in Cambridge, Massachusetts. He traveled throughout the world developing techniques that enabled financial, energy, and telecommunications companies to increase internal efficiencies.

In 2000 Stephen founded Roadfood.com, a website dedicated to finding the most memorable local eateries along the highways and back roads of America. The award-winning website has been recognized by *Forbes* magazine as the best restaurant guide on the Internet and by Yahoo! as “Website of the Year.” More than 500,000 unique visitors visit the site on a monthly basis.

Stephen is a state certified appraiser in New York, New Hampshire, and New Jersey, and he frequently lectures at major hotel schools around the world. Stephen earned his BS degree from the Cornell University School of Hotel Administration. He is a member of the Young Presidents Organization (YPO) and is on the advisory board for the Appalachian Mountain Club (AMC), the nation’s oldest outdoor recreation and conservation organization. Stephen Rushmore, Jr., can be contacted at [srushmorejr@hvs.com](mailto:srushmorejr@hvs.com).



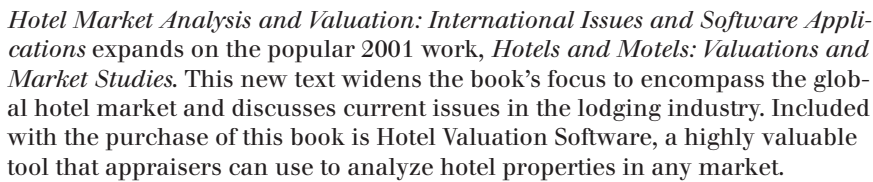
## Acknowledgments



As with any book of this magnitude, many people provided input into its creation. I would like to first thank my coauthors John and Stephen for their efforts, which added a unique academic perspective as well as a significant software enhancement to this book. To give the book a global perspective, a number of my HVS partners from around the world contributed both written material and local methodology. These partners include Rod Clough (Dallas), Russell Kett, Charles Human, and Tim Smith (London), David Ling (China), Manav Thadani and Kaushik Vardharajan (India), and Arturo Rosa and Graciana Garcia Iribarne (Buenos Aires). The HVS Software was greatly enhanced by Jan deRoos and Matthew Green from the Cornell University School of Hotel Administration and Suzanne Mellen, my partner in San Francisco. Some of the material in this book was developed in my previous Appraisal Institute book on hotel valuations, which I coauthored with Erich Baum. Thanks to Anne Lloyd-Jones, Roland de Milleret, and Elaine Sahlins for their contribution to the data and methodology set forth in this book. This book reads much better than our original manuscript thanks to great editing by Emily Ruzich. And it is always good to work with Stephanie Shea-Joyce of the Appraisal Institute. Last but not least, much appreciation and love goes to my wife, Julia, who provided valuable, real-world input based on her tenure as a hotel consultant. She and our poodle Gigi also provided moral support during my many hours on the laptop.

## Steve Rushmore





Major topics covered in this text include the history of the hotel industry, supply and demand issues, hotel market studies, forecasting revenues and expenses, the valuation process, and the current state of the lodging industry. A realistic case study applies the concepts discussed, and step-by-step use of Hotel Valuation Software is explained with data from the case study.

*Hotel Market Analysis and Valuation: International Issues and Software Applications* is unique in that it provides an in-depth, wide-reaching, up-to-date, and technologically advanced discussion of the market analysis and valuation of hotels around the world. This book contains a wealth of information that will prove to be valuable to appraisers who take on valuation assignments involving lodging properties.

**Sara W. Stephens, MAI**  
2012 President  
Appraisal Institute







# Introduction



This is the sixth textbook I have authored on the topic of hotel market studies and valuation for the Appraisal Institute. Each edition has taken the art and science of evaluating hotels to a new level. The significant addition to this text is the inclusion of HVS Hotel Valuation Software, a state-of-the-art software package that enables hotel appraisers, consultants, owners, and lenders to perform highly sophisticated hotel market analyses, financial projections, and valuations. In addition, this book was written with a global perspective as to how hotels are valued in the five major regions of the world: North America, South America, Europe, India, and China.

My coauthors John O'Neill and Stephen Rushmore, Jr., significantly broadened the perspective of this text and enhanced its take-home value. Mr. O'Neill is the only MAI appraiser with a PhD as well as a degree from the Cornell University School of Hotel Administration. His academic research into various aspects of hotel valuation adds credibility and support for my layman's theories developed over the years. Mr. O'Neill has the unusual ability to take complex academic research and describe it in simple terms that even I can understand. Stephen Rushmore, Jr., is the president and chief executive officer of HVS and has developed the global technology platform for the firm. Using the HVS worldwide database of thousands of hotel financial statements, Stephen updated the fixed and variable components in the software's forecasting model, which significantly enhanced the accuracy of the financial projections.

This text is divided into six chapters that lead the reader through the process of performing a hotel market study and valuation:

- Chapter 1 provides a historic overview of the worldwide hotel industry, including discussion of the various economic cycles and trends impacting hotel supply and demand.
- Chapter 2 details the steps for performing a hotel market study and valuation and the types of data required to perform a proper analysis.
- Chapter 3 covers the first step of a hotel market study, which is to identify and quantify the demand for hotel accommodations within the market. The procedure used to quantify hotel demand is the build-up approach based on lodging activity.
- Chapter 4 describes the supply portion of the market analysis. Local competitive supply is identified and the relative competitiveness of each hotel in the market is quantified. The end result of the market study is a forecast of a hotel's occupancy and average room rate.

- Chapter 5 takes the occupancy and average rate forecast and converts it into a projection of income and expense using a fixed and variable forecasting model.
- Chapter 6 encompasses the valuation portion of the study. The three approaches to value are described, and the income capitalization approach is detailed using a discounted cash flow mortgage equity model.

A complete reference library of hotel data and data sources from around the world is also included at the end of the book.

This book also contains a case study involving a proposed hotel; this case study demonstrates the theory and actual techniques for performing a hotel market study and valuation. The case study calculations are set forth in detail so that the reader can fully understand the logic and math behind the accompanying software. Following each step of the case study, the HVS Hotel Valuation Software is demonstrated with data from the case study. By following the detailed software screenshots, the reader will have a full understanding of how the software works.

This is the first textbook published by the Appraisal Institute that comes with a complete software package enabling the user to take the analyses described in the book and apply them to real-world hotel consulting assignments. The Hotel Valuation Software was developed originally by Suzanne Mellen and myself approximately 30 years ago at HVS using an Apple II computer with VisiCalc. Over the years, it has been updated extensively and converted first to Lotus 123 and then to Excel. Contributors to the development of the software over the years include many of the associates at HVS and professor Jan deRoos, the HVS Professor of Finance and Real Estate at the Cornell University School of Hotel Administration. The software provided with this book will produce results that are identical to those reached by HVS associates around the world. In addition, because this is the enhanced “tabbed” version of the Hotel Valuation Software, the user is able to change the calculations occurring within the programs; this is useful for performing complex assignments.

HVS Hotel Valuation Software is the only nonproprietary computer software designed specifically to assist in the preparation of hotel market studies, forecasts of income and expense, and valuations. Using state-of-the-art methodology, the software provides sophisticated models for hospitality and appraisal professionals to forecast a hotel’s occupancy, revenues, and expenses as well as perform hotel valuations. The software consists of the following three models:

1. The Room Night Analysis Program is a supply and demand model for evaluating the complicated dynamics of local hotel markets. This model:
  - Enables the analyst to evaluate many competitive factors, such as occupancy, average room rate, and market segmentation of all hotels in a local market
  - Calculates the area-wide occupancy and average room rate as well as the competitive market mix
  - Measures the relative competitiveness of each existing and proposed hotel using a sophisticated penetration algorithm to determine overall market dynamics

This produces a forecast of occupancy for each existing hotel and proposed hotel in the market. The program incorporates such fac-



tors as competitive occupancies, market segmentation, unaccommodated demand, latent demand, growth of demand, and the relative competitiveness of each property in the local market. The program output is a 10-year projection of occupancy.

- Produces a forecast of average daily rate for a specific existing hotel or a proposed hotel in a local market over a 10-year projection period. The program incorporates factors such as expected inflation, current room rates by segment, and the market mix of the specific existing or proposed hotel.
2. The Fixed and Variable Income and Expense Forecasting Model takes the occupancy and average daily rate developed by the Room Night Analysis Program and creates a detailed 11-year projection of income and expense made in accordance with the Uniform System of Accounts for the Lodging Industry. This model:
    - Enables the analyst to input comparable financial operating data that the software uses as a basis for the projections
    - Works for both existing and proposed hotels and incorporates a highly accurate fixed and variable forecasting routine that is easily adapted to any type of lodging facility

This program is a valuable tool not only for appraisers performing hotel market studies and valuations but also hotel owners and operators who need to do budgeting and forecasting.
  3. The Hotel Mortgage Equity Valuation Model performs a discounted cash flow calculation using a mortgage-equity valuation technique. Values are produced using three different loan underwriting criteria:
    - A loan-to-value ratio in which the size of the mortgage is based on property value
    - A debt coverage ratio (also known as a debt-service coverage ratio) in which the size of the mortgage is based on debt service and the property level cash flow
    - A debt yield in which the size of the mortgage is based on the property level cash flow

By inputting the terms of typical hotel financing along with the forecast of income and expense, the programs determine the value that provides the stated returns to the mortgage and equity components. The software can handle a variety of holding periods and a refinancing of the property during the holding period.

The HVS Hotel Valuation Software can be downloaded from:

[www.hvs.com/hvssoftware](http://www.hvs.com/hvssoftware)

As my appraisal practice became more global, I thought it would be helpful to describe how hotel market studies and appraisals are performed throughout the world. In most regions of the world, the valuation of hotels has gone through a similar evolutionary cycle as it has in the United States. Initially, local appraisers had little experience in valuing hotels and relied primarily on the cost approach. Hotel owners generally owned one or two properties, and there were very few transactions to verify that replacement cost produced a reliable indication of value. As American hotel chains expanded—first in the United States and then in Europe, South America, India, and East Asia—hotel ownership became more sophisticated, transactions started to occur, and replacement cost no longer represented the valuation



benchmark. Most hotel owners were looking for a financial return on their investment and began relying on an income capitalization approach. Global private equity and lenders also insisted on the utilization of an income capitalization approach. Today, most of the world has adopted the market study and valuation procedures pioneered by HVS and set forth in this book. The only holdout is China, which has not seen many transactions and has yet to fully embrace the income capitalization approach. Once the Chinese see the methodology used in other countries, they may adapt the income capitalization approach to valuing hotels. This text demonstrates how the room night analysis, the fixed and variable income and expense forecasting model, and the hotel mortgage-equity valuation model can be adapted to all the major markets throughout the world.

This book does not discuss the issue of separating real property, personal property, and intangible business assets. The reader should not construe any methodology or wording presented here as an approach for separating real property, personal property, and intangible business assets.

I trust that this textbook and software will become a useful resource for all your hotel market studies, valuations, and investment analysis needs.

**Steve Rushmore, MAI, FRICS, CHA**





# Growth and Development of the Hotel Industry



Chapter

1

## Origins of the International Lodging Industry

The hotels and motels we know today evolved from the small, private one-room dwellings that served merchants as early as 1000 BC, and the practice of innkeeping existed even before that. From this modest beginning, the hotel industry has come to play a vital role in the development of trade, commerce, and travel throughout the world.

## Europe

### Early Hotels in Europe

During the rise and fall of imperial Rome, travel for pleasure became possible due to relatively good roads, stable government, economic prosperity, and increased leisure time. Educated, affluent Romans vacationed in Greece. An excellent network of consular roads and post houses was developed to handle this increased travel demand.

After the fall of imperial Rome in AD 476, travel and trade decreased significantly. The Middle Ages was a time of unstable politics and danger on the roads. Religious travelers were common, however, as the church increased its dominance. Religious orders provided accommodations for travelers in monasteries and the hospices, or inns, they operated. Most trips during this period were pilgrimages to holy sites or journeys to fight in the Crusades, which began in AD 1095 and lasted approximately 200 years.

In the thirteenth century, the innkeepers of Florence, Italy, formed the first hotel guild. Guild members interviewed visitors at the city gate, assigning foreigners to certain lodging facilities and local visitors to others. Most guild members did not own their hostelrys; they rented them under three-year leases from the city.

A resurgence in the demand for lodging began in England during the Industrial Revolution (1760), when the British government arranged for mail to be delivered by coach. A nationwide posting system was created, and a network of posting inns was established to accommodate the young postboys and provide a change of horses. Travel by coach became fashionable, and long coach trips gave rise to overnight lodging demand and the development of the English inn. These lodging facilities, forerunners of the modern motel, were located on coach trails to provide shelter for weary travelers and protection from highwaymen. Accommodations in these inns typically consisted of individual, unheated rooms with straw beds for the nobility and common sleeping areas on stone floors for their servants. Travelers and local townspeople alike enjoyed hearty food and drink.

Road improvement was a major factor in encouraging travel and the development of the first hotels. However, the roads were not anything like they are today. Even on major roadways, potholes were so large that horses could practically drown in them. The construction of turnpike roads in Europe, however, led to the introduction of more coach services in the eighteenth century, and their timetable depended on drivers pushing the horses as hard as they could go. When horses reached a stagecoach inn, they were replaced with a new team and the necessary stabling increased in size.

In 1820, the Grand Hotel Europe was built in St. Petersburg, Russia. The first fine Paris hotel was the converted convent that became the Westminster Opera Hotel at around the same time. Over the course of the nineteenth century, every major city saw the creation of its flagship hotel: the Amstel in Amsterdam (1867), the Vesuvio in Naples (1882), the Bristol in Warsaw (1899), and hundreds more. The architects of these hotels were the finest in Europe.

## Modern Hotels in Europe

European hotel development came to a virtual standstill during World Wars I and II, but the post-war years saw the beginnings of major new hotel companies in a number of European countries. In 1949, Gaetano Marzotto of Italy started a company called Jolly Hotels, which provided modern accommodations in parts of the country where such services were badly needed. In 1955, Austria Hotels was formed. In later years, Austria Hotels would take advantage of the many great homes of the old Austro-Hungarian empire that could be converted into hotels. Other great aristocratic homes were converted by the Italian Company of Grand Hotels. This chain was founded earlier in the century and owned some of the great flagship hotels in Rome, Florence, Milan, and Venice.

The European country that made the single largest effort to maximize its hotel industry in the latter half of the twentieth century was Spain. With the benefit of marvelous weather, strong government support, a vast building program, and a willing, inexpensive, and able workforce, the Spanish were able to build up a massive balance of payment surplus with most European countries. One of the greatest international hotel companies was founded in 1956 by 21-year-old Gabriel Escarrer Julia with the Altair Hotel in Palma de Mallorca. His organization, Meliá Hotels, would grow to become the third-largest in Europe and the tenth-largest in the world. The purchase of groups of hotels, such as 32 Hostasia hotels in 1984, made the company a powerful force within the industry. It now owns approximately 350 properties.

The collapse of communism in the 1980s brought a whole new set of locations into mainstream European tourism, as the eastern European countries previously behind the Iron Curtain suddenly became far more attractive to visit. Major hotel chains started to build and buy properties in these areas, and these chains had the capital to refurbish many famous old hotels to meet top-class standards. With the cost of hotel labor so much lower than in western Europe, the value for the money could, in the long term, make the countries of eastern Europe competitive with more traditional locations in western Europe.

## South America

### Early Hotels in South America

As was the case in the rest of the world, hotels in South America emerged as small inns (*posta* or *mesón*) where travelers could stop to rest. Later on, the



expansion of various means of transportation led to the development of vacation hotels for local elites, followed by so-called “social tourism” hotels, and finally leading international hotel chains.

Since there was hardly any immigration in colonial times, there was no need for a great supply of lodging in major port cities such as Buenos Aires, Argentina. During this time, guesthouses went by names such as *hospedaje*, *alojamiento*, *casa de reposo*, *mesón*, or *pensión*. In general, travelers would rent rooms on a monthly basis, as this option afforded them increased comfort for a smaller price. Quite often, well-to-do families down on their luck because of political persecution would resort to hotel-keeping to earn their living, remodeling their houses and adding rental rooms. In contrast, Peru offered scant lodging. Its scarce amenities were located for the most part close to Lima’s historical district and near trade routes and ports.

Between 1853 and 1910, Argentina received three and half million foreign visitors. Accommodations known as *asylums* rather than hotels were built to receive this huge number of people arriving in the country without places to live. Asylums were used by immigrants to the country until they obtained their documents and then scattered throughout the city or headed off to other Argentine regions. The first asylum for immigrants in Buenos Aires opened in 1825.

Immigration changed the way the city of Buenos Aires looked and the character of its inhabitants. The influx of immigrants also influenced the hotel industry. Buenos Aires received a wave of middle-class Spanish immigrants who arrived in the country as small businessmen. These businessmen invested in hotel construction with their capital, which was mainly their labor. The hotels, cafes, and coffee houses (*confiterías*) centering on Avenida de Mayo owed their existence to these immigrants. These hotels were the predecessors of present-day Buenos Aires hotels, and many of them stand to this day under their original names, such as El Gran Hotel España, Palace Hotel, Paris Hotel, and Cecil Hotel.

Railroad expansion led to the emergence of tourist destinations for the local upper class, who were beginning to spend their holidays in spots further away from big cities. The common feature of the hotels built during this period is their luxurious European architecture with spacious ballrooms designed for elite social events.

The extension of the rail tracks to the Argentine city of Mar del Plata in 1886 marked the birth of one of the continent’s main tourist destinations. It was in Mar del Plata that the most luxurious hotels of the time were constructed. Examples of these hotels include the Grand Hotel and Hotel Bristol, which was built in 1888 and was the most prominent symbol of cultural development in Argentina. Slowly, hotel development spread throughout the Atlantic coastline to the cities of Miramar and Necochea as well as Ostende, which housed the Thermas hotel dating back to 1912 and known today as Hotel Ostende. Popular leisure destinations shifted from countryside ranches to the beach and seaside. It was also during this period that the first hotels were built in the Argentine provinces, as was the case with the 1897 construction of the Hotel Eden in La Falda, Córdoba. The Tigre area in Buenos Aires and the Parana Delta emerged as fashionable destinations for the upper classes, also due to railroad expansion. Hotel Quequén, originally opened in 1895 as Hotel Victoria, was Argentina’s first casino hotel. Homes and churches were built in the areas surrounding the hotels, and these new towns started to take shape as tourist destinations.





## Modern Hotels in South America

The railway gave rise to the construction of elegant hotels that drove the development of major tourist centers in South America, specifically in Argentina. The Hoteles Sudamericanos Company, owned by the British railroad companies, fostered tourism in Argentina's province of Mendoza. In 1925, the company developed the Hotel Termal Puente del Inca, South America's first high mountain hotel. The Hotel Casino Termas de Reyes in the province of Jujuy and the Hotel Sosneado in Mendoza were also constructed thanks to the arrival of the railway. The hotel that best illustrated this period was the Club Hotel Sierra de la Ventana (1911), a source of pride and an alluring attraction for the Argentine aristocracy at the turn of the century. This hotel complex was conceived with the support of a British railway company, Ferrocarril del Sud, which considered the project to be an opportunity to increase the number of potential passengers.

With the spread of capitalism intensifying in North America, Europe, and Japan from 1911 to 1930, Latin American countries enjoyed economic growth due to the rising demand for raw materials from the international market. During this prosperous phase, almost all of the capital cities in the region saw twofold and threefold increases in their populations and the beginnings of modernization.

It was during this period that the hotels that deserved to be called "grand hotels," such as the London and Paris Ritz and New York's Plaza, began to be developed in Argentina. During this time, Buenos Aires was becoming South America's most important city and the world's eighth largest city. Buenos Aires's Plaza Hotel, built by Don Ernesto Tornquist and presently known as the Marriott Plaza Hotel, led the way with its opening in 1909.

Following the Plaza's lead were Uruguay's Hotel Carrasco (1921), Brazil's Copacabana Palace (1923), Peru's Country Club Lima Hotel (1927), Buenos Aires's Alvear Palace Hotel (1932), Argentina's Hotel Llao Llao (1938) in Bariloche, and Colombia's Tequendama (1953), formerly known as the InterContinental Tequendama and now called the Crowne Plaza Tequendama. The Copacabana Palace, the Alvear Palace Hotel, and the Hotel Llao Llao, today known as "the Copa," "the Alvear," and "the Llao," have become major players in the world's luxury hospitality industry and region landmarks.

The Hotel Carrasco in Montevideo, Uruguay, opened in 1921 against a backdrop of gardens and marble statues and would later become the place for Uruguay's high society events. A seafront property, the Hotel Carrasco featured ballrooms, gaming rooms, a huge dining room, and indoor and outdoor terraces. Colombia also opened its first luxury hotel, the Hotel Regina in Bogotá, in 1921. Nothing remains of this hotel, which burned down in 1948.

In Peru, the Country Club Lima Hotel opened its doors in 1927 in Lima's San Isidro district. Back then, San Isidro was an agricultural area on the outskirts of Lima. However, the construction of the country club, including the building and polo field, helped this area become a new center of activity.

Modern hotel development in Colombia can be traced to the 1928 opening of the Hotel Alférez Real in Cali. The Hotel El Prado then opened in Barranquilla in 1930. Before the construction of these hotels, there were reportedly no hotels of high enough quality to host foreign visitors in Colombia.

Near the end of this period, Buenos Aires's landmark Alvear Palace Hotel officially opened in 1932. This Louise XVI-style palace, built with materials brought from France, soon became the city's synonym for luxury and still maintains that splendor today. This period also saw the construction of



other major hotels in Buenos Aires, such as the Hotel Castelar (1929) and the Tudor-style Claridge Hotel (1946), which soon became an icon in its own right. In 1924, the Gran Hotel Bolívar was being built in Lima's historical district, opposite Plaza San Martín, as one of the city's first major hotels for hosting the guests of the festivities marking the first centennial of the Ayacucho battle. The same holds true for the Hotel Maury, located at the heart of Lima's historical district, approximately 50 meters away from Plaza Mayor.

Health and wellness tourism emerged in the 1920s. Places such as the Sierras de Córdoba mountain range in Argentina developed as tourist destinations; spending time in this mountain range was believed to be beneficial for people with respiratory diseases. Hot springs tourism also expanded during this time. One popular hot springs destination was Argentina's Villa Turística del Lago Epecuén, which operated until 1985 when it was left underwater by severe flooding, never to be recovered. In the province of Mendoza, the healing properties of hot springs drew visitors to Los Molles, which opened around 1932.

The economic boom in Peru fostered the development of domestic tourism in provincial cities, seaside resorts, and health and wellness centers. Examples include the hotel complexes at Huacachina in Ica and Baños de Boza in Huaral, two of the spots most visited by Ica's and Lima's upper classes until the 1950s. Later on, hot springs centers were also opened in northwestern Uruguay; Santiago del Estero, Neuquén, and Entre Ríos in Argentina; Cajamarca and Churín in Peru; Colina, Flaco, and Puyehue in Chile; and Boyacá, Risaralda, Caldas, and Cauca in Colombia, to name a few.

From 1930 to 1950, the region's governments played a leading role in the promotion of tourism within each country. Tourism was seriously encouraged by the government through such means as incentives, publicity, and the construction of hotels and infrastructure.

In Argentina during the 1930s, the need arose to populate the region of Patagonia to put an end to controversies over national borders. As a result, the Argentine Government created the Directorate of National Parks, giving rise to Argentina's first protected areas. The iconic Llao Llao Hotel opened in 1938. Its Canadian-style architecture, with a stacked-stone base and cypress exteriors made of local materials, was harmonious with the surrounding landscape and highlighted the scenic view. Shortly after opening, this hotel quickly ranked among the best in the country and region. The National Park authorities decided to grant a concession to Hotel Plaza for it to operate the Llao Llao Hotel. The designation of Iguazú National Park (1934) also encouraged the development of Puerto Iguazú as a destination.

In 1947, Banco Hipotecario Nacional started to grant loans under a system known as Argentine Hotel Loans. This was a form of government oversight, since the system called for an evaluation of the proposals prior to authorizing the loans. It was during this period that tourism hotels began to emerge through the development efforts and financial resources provided by the national and provincial governments. Located in main tourist destinations, these hotels included the Llao Llao Hotel, Mar del Plata's Hotel Provincial, and hotels owned by the Argentine Automobile Association (ACA), including Ushuaia's Albatros.

In the 1940s, the Peruvian government sought to support and foster private initiatives for economic growth through its development corporations. These efforts led to the creation of the Tourist Hotels chain, initially in the hands of Compañía Hotelera de Perú S.A. Ownership of this enterprise shifted



from the private sector to the government until 1996, when it was dissolved and the properties passed back to the private sector. This chain was a vital link in the development of the Peruvian hotel industry, as it significantly expanded the supply of hotels throughout Peru. Machu Pichu became Peru's main destination due in part to the construction of a road from the nearest railway station to the ruins in 1948. The first Tourist Hotels were built in Cusco and Machu Pichu in the 1950s. The construction of the Panamericana highway, parallel to the coastline, came to a conclusion during this time. In the 1960s, the government sought to foster tourism through advertising campaigns and financial incentives. Airports were also being built in various provincial cities. The government granted loans and tax exemptions for investments related to tourism. Efforts were made to promote cultural, historical, and archeological tourism. Another example of a landmark hotel constructed by *Compañía Hotelera del Perú* is the Hotel Crillón, which officially opened in Lima in 1947.

In Colombia, *Empresa Colombiana de Turismo S.A. (ECT)* was created in 1957 to advertise Colombia abroad. ECT was a company run both by the government and the private sector. Hotel keepers held a 50% ownership interest through the income tax, and the other 50% ownership interest was in the hands of the government. The Colombian government was also a major shareholder in the Avianca airline company, and 15% of Colombia's hotels belonged to state-run agencies such as the Army Salaries Fund, the railroads, and some departmental charities. A number of hotels were built as a result of these efforts. Tequendama Hotel Bogotá officially opened in 1953. Owned by the Army Salaries Fund, it became Bogotá's most important hotel. In 1963, the El Isleño hotel, owned by *Corporación Nacional de Turismo*, was built in San Andrés.

Colombia's military began the construction of hotels in Melgar, Cúcuta, Villa de Leyva, and San Andrés, to name a few. In the 1970s, the Colombian governments began fostering social tourism, supporting investments in subsidized centers for large masses of workers. Colombia's Prosocial hotel, originally constructed for government employees, was soon replicated through major investments made by the Family Allowances Funds for private sector employees, paving the way for a dozen major vacation centers.

The decades before the emergence of the major hotel chains in South America were marked by different types of milestones. The tourist hotels were financed by the governments, as already discussed. A second wave of hotels was developed by Spanish immigrants and their offspring. These immigrants were initially food-related businessmen who ran grocery stores, mom-and-pop stores, restaurants, and taverns. Eventually, they began to undertake their first construction works. This era also marked the emergence of the three- and four-star hotels that for years played a lead role in the Argentine hotel scene. These hotels, constructed with hard work, intense vocation, and little industry knowledge, resulted in hotels of varying quality. Some of these hotels are still remembered for their high-quality service. These three- and four-star hotels, along with the newly emerging first Argentine hotel chains such as Dorá and Nogaró (1931), set the course for a business model that grew hand in hand with Argentina's development and became a benchmark for the whole region.

The very first InterContinental Hotel opened in South America in 1949 in Belem, Brazil. InterContinental hotels have continued to be developed in Brazil, and there are a total of 13 properties in the country today, with several hotels opening in 2010 and 2011. Accor, Choice Hotels International, and Golden Tulip are also active hotel developers in Brazil. Brazil has the larg-



est gross domestic product (GDP) in the region (over \$2 billion US dollars), representing over 50% of South America's GDP. Furthermore, Brazil's GDP has been growing more than 7% annually in recent years. Brazil is the largest tourist destination in South America and has recently experienced currency appreciation. However, debt financing is generally not available in the country. As a result, most hotel developments in Brazil over the past 25 years have been condo hotels in which each guest room is owned by an individual investor. While these hotels have generally not provided excellent returns to investors, in an inflationary economy making such investments is often preferable to keeping money in banks.

When Argentina hosted the world soccer cup in 1978, the government granted loans at low interest rates. This led to the refurbishment of many hotels and the construction of new ones in Buenos Aires, Rosario, and Mendoza, such as Sheraton Libertador, Las Américas, Bauen, Conquistador, and Elevage. When the Panamerican Games were held in Cali, the InterContinental Hotel was built there to honor the covenants assumed when the city bid to host the games.

Because economic growth in South America during the 1980s was virtually nonexistent, this decade has come to be known as "the lost decade." The drop in tourism in Peru during this time was also due to the unstable political environment and the widespread insecurity caused by armed insurgent movements. Drug trafficking, violence, and insecurity also removed Colombia from international tourism maps. It was not until the first years of the new millennium and heavy advertising by the government that this image started to change and international tourists began to arrive in Colombia again.

By the mid-1990s, South America was exhibiting a growing trend towards the privatization of government-run companies and improved financial and legal conditions for foreign investments. At the beginning of the decade, an influx of multinational company executives arrived in Argentina to take part in the privatization of public utilities. Hotels were developed in response to the increased demand. Hotels focused on targeting the corporate segment during this time.

Owing to the economic conditions prevailing in Argentina, with a US dollar/Argentinean peso exchange rate favorable to investments and certain guarantees given by the government, the 1990s saw the hotel industry grow robustly. Argentine hoteliers turned to international chains to improve the positioning of their products.

In Uruguay, Punta del Este transformed from a vacation destination for the Uruguayan and Argentine rich to South America's top exclusive destination, strengthening its position as the most select seaside resort in the region. Brazilian tourists began to arrive in large numbers, slowly followed by European and North American tourists. Following this trend, Conrad Punta del Este Resort and Casino was constructed in 1997. Soon a number of world-class summer complexes and residential accommodation alternatives were developed to meet the demand posed by the new hip and trendy Punta del Este scene.

By the mid-1990s, hostels and bed and breakfasts saw their popularity rise among low-budget tourists intent on interacting with local residents. Also during this period, hotel management and tourism studies began to take shape, with specialized educational centers being created and mainstream universities incorporating these curriculums into their degree offerings.



## China

### Early Hotels in China

The origin of lodging establishments in China dates back to the mid-Shang Dynasty (1600 BC–1046 BC). An early form of hotel was the “government inn,” which was primarily built to accommodate ambassadors and messengers who travelled throughout the empire to transmit official documents and correspondence among administrative units and institutions. In addition to lodging and subsistence, transportation services could be arranged at these inns to ensure the safe and timely arrival of important messengers and documents.

Driven by growth in commerce and trade, a new type of hotel evolved during the Western Zhou Dynasty (1100 BC–771 BC). This type of lodging was generally referred to as the “folk inn.” The market orientation of this product differed from that of government inns, since it did not cater to envoys or diplomats but instead hosted foreign merchants and commercial delegates.

Another early hotel product was the “guesthouse,” which emerged during the “Spring and Autumn” period (722 BC–481 BC) and the “Warring States” period (403 BC–221 BC). Guesthouses were generally built in urban centers and were larger in scale and equipped with better facilities and higher service standards than government inns or folk inns. As with other types of accommodations, the quality of service in guesthouses was frequently adjusted to reflect the rank and status of the travellers. Translation, transportation, reception, and welcome services were provided in addition to food, beverage, and shelter.

Western-style hotels were first introduced to China by colonial powers during the nineteenth century. After the first Opium War in 1840, the Qing Dynasty government signed a series of treaties with European powers that allowed them to establish self-contained concession territories on Chinese soil. Legislation, travel, and trade were free within these territories, resulting in the introduction of a large number of foreign-administered infrastructure projects and institutions, including churches, public houses, banks, postal services, and hotels. Properties dating back to this time include Tianjin’s famous Astor Hotel (1863) and Shanghai’s Richard’s Hotel (1846), now the Astor House Hotel.

### Modern Hotels in China

In Beijing, the Grand Hôtel des Wagons-Lits was built in 1905 to accommodate travelers from Europe on the Trans-Siberian Express. In 1922, the Hong Kong Hotel Company acquired a majority stake in Shanghai Hotels Limited, which held a substantial share of the capital of the Grand Hôtel des Wagons-Lits. The hotel was sold in 1950. Another famous hotel in Beijing was the 200-room Grand Hôtel de Pékin, which was built in 1917. Offering “fine French cooking,” “wines of the best-known districts of France,” and transportation with porters in uniform to greet guests at the nearby train station, the property was among the most popular hotels for Westerners visiting Beijing.

By 1939, China was home to over 80 Western-style hotels. Some of these properties have been successfully restored to their former glory in recent years and now represent valuable additions to China’s modern hotel industry.

Given its distinctive political and economic systems, tourism and hotel development in China have evolved differently than in other countries. China’s social, economic, and, above all, political advancement have played a crucial role in the evolution of China’s modern-day hotel industry. In the years immediately following 1949, travel for business and leisure was limited and largely restricted to business people and officials who derived image and



status from their travel activities. With travel perceived as a diplomatic rather than an economic activity, lodging establishments were primarily geared toward meeting demand from governmental institutions and local authorities. Regulated by the central government, the country's lodging infrastructure was basic in terms of product variety and scale. Properties such as the state-owned Beijing Friendship Hotel, which first opened for business in 1954, were among the then-few establishments that catered to foreign visitors and official delegates alike. Development progress remained slow, however, as private participation in tourism ventures was limited and no more than 250 hotel establishments were available throughout the country by the end of the 1970s.

This gradually changed after 1978 with the launch of *Gǎigé kāifàng*, a set of macroeconomic reforms aimed at “opening up” and transforming the country's planned economy into a market economy. Private business ownership was permitted and several special economic zones were created to attract international investment and promote market demand. This change in national-level direction marked a turning point for the country's hotel industry. Tourism began to be viewed as a commercial rather than a political activity. As the volume of inbound visitation increased, a growing number of accommodation facilities and hotel establishments were now required to host overseas guests and facilitate foreign exchange. In a vital meeting held in Beidaihe in 1979, the authorities decided that flagship hotel properties were to be built in each of the country's provinces. Soon after, the construction of a handful of guesthouses and tourist hotels was underway. The Beijing Yangjing Hotel, the Guangzhou Baiyun Hotel, and the Harbin Swan Hotel are several well-known domestically invested properties that date back to this era.

As international investment participation was now permitted, it was not long before Chinese-international joint venture developments emerged. The opening of the 528-room Beijing Jianguo Hotel in 1982 and the 843-room Guangzhou White Swan Hotel in 1983 heralded the entry of overseas capital into China's hotel industry. These properties were jointly invested in by local authorities and overseas business entrepreneurs. The Beijing Jianguo Hotel was also among the first domestic properties to employ third-party management, as it was operated under a management agreement with the Hong Kong and Shanghai Hotels Limited during its first five years of operation. In 1984, the State Council called upon the industry to follow the successful example set by the Beijing Jianguo Hotel in terms of management mode. Encouraged by this advice, other hotel owners soon followed suit and partnered with international management firms. The opening of the 583-room Holiday Inn Lido Beijing in 1984 thus marked the arrival of Western management firms. In 1985, US-based Sheraton Hotels and Resorts became the first Western operator to manage a five-star property within the country by assuming management of the state-built Great Wall Beijing Hotel, which had first opened in June 1984. The French Accor Group followed in 1985, while the US-based Hilton Corporation arrived in 1988. Another overseas pioneer was Shangri-La Hotels, which pursued a slightly different expansion strategy by focusing on investing its own equity rather than seeking growth through less risky management contracts.

As China's policy of opening its doors to the international world gained momentum, an influx in foreign arrivals occurred. A countrywide shortage in quality room stock followed. To promote market mechanisms and address imbalances in hotel demand and supply, the State Council proposed a set of construction guidelines in 1980. An independent market-driven tourism department was also organized.





The country's tight inventory supply eased by the mid-1980s as the industry's increasingly positive reputation along with its rate growth potential had sparked a new hotel development boom. A rapid expansion in supply led to a net addition of 143,000 new hotel rooms between 1984 and 1988. Once the problem of insufficient quality room inventory was addressed, the industry became more competitive and operators began to feel the pressure of capital return requirements. Simultaneously, state-owned properties were increasingly required to operate profitably and reorganize into commercial entities. As a result, China's hotel investment landscape gradually changed and was no longer dominated by government agencies and state-owned enterprises. Investor profiles had diversified to include private real estate developers, venture investors, financial institutions, private entities, individuals, and foreign investors.

To standardize and improve the facilities and services of the country's rapidly expanding hotel sector, an official star-rating system was introduced by the China National Tourism Administration (CNTA) in 1988. This system underwent two revisions before being approved as the national star-rating standard in 1993.

Owing to the new rating standard as well as the previously mentioned events, the industry's supply condition and service standards had improved significantly by the mid-1990s. However, because of the influx of new supply, most major markets across the country experienced a period of lower occupancy and room rate levels. The opportunity to grow and develop the country's domestic tourism and travel market was observed and, to that end, a State Council bill "on the positive views of the development of domestic tourism" was issued in November 1993. The document called for social and economic development as a key driver behind domestic tourism. Measures to stimulate domestic demand included the promotion of local goods and services along with a greater emphasis on quality improvement.

Supported by a rise in incomes and living standards, China's hotel industry had evolved from being niche-market oriented to mass-market driven. Strong economic growth and expanding domestic demand during the course of China's ninth five-year planning period (1996–2000) can be cited as key reasons behind this evolution.

A third revision to the country's star-rating system was made in 2003 and adjustments to rating criteria, weighting factors, and implementation standards were made. Two additional industry standards on star-rated hotel evaluation guidelines (LB/T006–2006) and green hotels (LB/T007–2006) were published by CNTA to enhance the market orientation of the country's hotel sector.

Today, China has over 300,000 accommodation facilities, of which only about 5% are classified by the country's star-rating system. However, star-rated properties stand at the forefront of China's modern lodging industry because they benefit from high market awareness and social influence. At present, some 1,900 hotels are affiliated with the four-star category, and more than 500 five-star properties exist. The country's eastern and southern regions are the most economically developed and feature the largest number of star-rated hotels.

A vast range of diverse accommodation products is available to cater to rapidly evolving customer needs and tastes. The product offerings range from state-of-the-art business and convention hotels on one end of the spectrum to more modest accommodations on the other. With gateway cities seeing their hotel landscapes mature, development and investor interest have increas-



ingly turned to less developed secondary and tertiary markets. New beach and mountain resort destinations such as the Guangdong Coast, Lijiang, and Changbaishan have sprung up in response to rapid growth in disposable incomes and national wealth. “Green hotels” such as the Shanghai-based Urban Hotels have surfaced. Another recent trend is the emergence of domestic boutique hotel brand providers such as Swire Hotels, Urban Resort Concepts, and Shanghai Jin Jiang International.

The industry’s strong and rapid development over the past three decades has called for various frameworks and directive texts. At the end of 2009, the State Council issued a landmark publication, *Opinions on Accelerating the Development of Tourism*. This innovative text recognizes tourism as a pillar industry and aims to provide a framework for the industry’s future growth within a national and strategic context. The document envisions China becoming the world’s leading tourism destination by 2020 through the reorganization of state-owned tourism enterprises, improvements in service standards, greater efficiency, and enhancements on an industry-wide scale. To work toward the achievement of this vision, a new star-rating system was devised in 2010. Effective as of 2011, the new rating system places greater emphasis on the evaluation of soft skills and service standards while promoting forward-looking concepts, such as carbon emission reduction and energy and emergency management.

## India

### Early Hotels in India

In India, the hospitality industry saw its beginnings in the form of small inns that provided basic meals and a safe place for travelers to rest at night. These inns were located in villages along the main trade corridors and often adjacent to places of worship. A different form of the hotel industry reached India during the colonial period, with the East India Company and the British Empire spreading their wings throughout the region. The British established several hill station camps to serve as getaways from the hot and dusty plains of India during the summers, which then evolved into high-end resorts and hotels. The first known hotel to appear in Shimla was the Cecil, which opened as a Himalayan hill station in 1884. With views across the valley, the Cecil was a base from which to explore spectacular mountain scenery, cedar forests, and ancient monasteries. The Cecil was within walking distance of the Vice Regal Lodge, the former summer residence of the Viceroy of India, and served as a resort for British royalty during colonial times. The Queen of Hill Stations, a regal resort located in the majestic Himalayas, celebrated the elegance and grace of the colonial era. This regal resort was later acquired by the Oberoi Hotels Group. Another property from this era was the Carlton Hotel, which opened in Shimla in 1898 and later became known as the Clarke’s.

One of the first registered city hotels to open in India was Watson’s Hotel. Watson’s Hotel, currently known as the Esplanade Mansion, is India’s oldest surviving cast iron building and is located in the Kala Ghoda area of Mumbai (Bombay). Named after its original owner, John Watson, the building was fabricated in England and constructed on site between 1860 and 1863. The five-story structure contained 130 guest rooms, a lobby, a restaurant, and a bar. The hotel also featured a 98 ft.-by-30-ft. atrium with a glass skylight that was originally used as a ballroom. At its peak, Watson’s Hotel employed English waitresses in its restaurant and ballroom.





## Modern Hotels in India

In India, the modern hotelier and hospitality industry got its start with Jamsetji Nusserwanji Tata, a Parsi entrepreneur from Gujarat who moved to Mumbai. He was focused on bringing to fruition his key plans for advancing India's development: setting up an iron and steel company, a world-class learning institution, a one-of-a-kind hotel, and a hydroelectric plant. During his lifetime, only one of the ideas became a reality: the Taj Hotel, which opened in 1903. One year before opening his first property, Tata established the first recorded Indian hotel company, The Indian Hotels Company Ltd. He was inspired to open the hotel after a reported incident involving racial discrimination at the Watson's Hotel, where he was refused entry because the hotel did not permit Indians. Hotels that accepted only European guests were common throughout British India. Today, this hotel serves as the flagship property of the Taj group of hotels located across India and around the world.

Joining Tata and the Taj group of hotels was another stalwart of the Indian hotel industry: M.S. Oberoi, the patriarch of East India Hotels. After spending several years working at the Cecil Hotel in Shimla, Oberoi mortgaged all his assets in 1934 and purchased the Clarke's Hotel from Ernest Clarke. Four years later, in the aftermath of a business downturn in Kolkata due to the cholera epidemic, Oberoi was able to negotiate favorable terms in taking over the management of the city's Calcutta Grand Hotel. Two years later he became India's first modern hotel magnate by taking over the controlling interest in the Associated Hotels of India (AIH), which owned the top hotels in the region, including Delhi, Rawalpindi, Peshawar, Lahore, Murree, and Shimla's Hotel Cecil.

The Indian hospitality industry soon saw the entry of several other domestic hotel companies, such as ITDC Hotels and the Clarks Group. With a lack of indigenous hotels that could cater to the increasing trade and tourism industry during the 1970s and with foreign brands staying away from India, many Indian public sector undertakings and entrepreneurs forayed into the hotel industry. One such entity was the India Tourism Development Corporation, which came into existence in 1966 and was tasked with the progressive development, promotion, and expansion of tourism in the country. Presently, ITDC has a network of eight Ashok Group hotels and six joint venture hotels across the country. Air India, India's national airline, chose to enter the hotel industry in 1971 and set up a wholly owned subsidiary called Hotel Corporation of India (HCI). HCI currently operates hotels around the country under the Centaur brand name.

Prior to the 1980s, the Indian hotel industry was growing slowly, consisting primarily of relatively static, single hotel companies. However, the 1982 Asiad (or Asian Games) held in New Delhi and the subsequent partial liberalization of the Indian economy generated tourism interest in India, with significant benefits accruing to the hotel and tourism sector. Growth in hotel demand was particularly high during the early 1990s following the initiatives taken to liberalize the Indian economy in 1991 in accordance with the recommendations of the International Monetary Fund (IMF).

The euphoria of the early 1990s prompted major hotel chains, international chains, and new entrants to chalk out ambitious plans, especially in the metropolitan cities. Foreign brands that entered India cautiously in the beginning of the decade are now well established and very optimistic about India and its robust economy. Marriott, Hyatt, Starwood, Hilton, Four Seasons, Shangri-La, and other iconic companies have announced India as a



major new destination and designed strategies for the aggressive growth of their portfolios in the country.

In recent years, India's government has taken several steps to boost travel and tourism, which have benefited the hotel industry in India. These include the abolishment of the 15% inland air travel tax, the reduction in the tax on aviation turbine fuel, and the removal of a number of restrictions on outbound chartered flights, including those relating to frequency and aircraft size. The government's recent decision to treat convention centers as part of the core infrastructure, allowing the government to provide critical funding for the large capital investment that may be required, has also fueled the demand for hotel rooms.

The opening up of the aviation industry in India created opportunities for the hotel industry because the country relies on airlines to transport 80% of its international arrivals. The arrival of low-cost airlines and the resulting price wars have given domestic and international tourists a host of travel options, dramatically increasing travel to and within the country. India is fast emerging as one of the most enticing destinations for the global leisure traveler. The government's decision to substantially upgrade 28 regional airports in smaller towns and the privatization and expansion of the Delhi and Mumbai airports should further improve the prospects of the hotel industry in India.

## United States

### Early Hotels in the United States

The American counterpart to the English inn was the colonial inn and tavern. In addition to providing travelers with overnight accommodations, colonial inns were often public gathering places used for courts of law, town meetings, and school classes.

The following description of a colonial inn illustrates how far American hostelries have come in 250 years:

Accommodations often meant sleeping on the floor of the "long room," with one's feet turned toward the fireplace and one's head on a rolled-up coat, alongside a dozen or more other persons of both sexes. It meant a quick cold-water wash in an outdoor basin and gingerly use of a communal towel. A warning blast on the landlord's cow horn meant all hands to table, ready to tackle breakfast with fingers and knives.<sup>1</sup>

The accommodations provided by colonial inns gradually improved over time in response to the needs of a mobile, restless society, and American innkeepers assumed their place as important community figures. Because inns functioned as centers of political and social activity, their owners and operators enjoyed a high profile in the community.

The first hotel constructed in the United States was the 73-room City Hotel, located at 115 Broadway in downtown New York City. Completed in 1794, the City Hotel was enormous compared to colonial inns and served as a model for similar establishments in other major cities throughout the world.

Boston's first hotel was the Exchange Coffee House (1806), which boasted seven stories and 200 rooms, many overlooking a five-story, domed interior courtyard (a forerunner of the atrium concept). Philadelphia's first hotel, the Mansion House, was built in 1807. Baltimore followed, with the Baltimore City Hotel opening in 1826. Each of these properties was larger and more lavish than its predecessor and became the focus of civic pride.

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1. Leslie Dorsey and Janice Devine, *Fare Thee Well* (New York: Grown Publishers, 1964), 4.



During the 1800s, hotels moved westward and flourished in major American cities and towns. The Tremont House in Boston started a trend toward luxury accommodations by offering unheard-of services and amenities: private guest rooms, doors with locks, a washbowl with a water pitcher and free soap, bellboys, French cuisine, and an annunciator system that allowed the front desk to contact guests in their rooms.

Spurred by the success of the Tremont House, hotel developers across the country attempted to outdo each other in terms of hotel size, luxury, and inventiveness. In 1836, the Astor House in New York City installed steam-powered pumps to send water up above the first-floor level so that plumbing could be installed on upper floors. The New York Hotel, built in 1844, was the first hotel to provide private baths connected to some of its bedrooms. The Buffalo Statler, built in 1908, included private baths in all of its guest rooms. In 1835, the American Hotel in New York City was the first to have gaslights throughout the building. Edison's electric light was first installed in the public areas of the Hotel Everett in 1882. The Sagamore Hotel, which opened in 1883 on Lake George in New York, was the first to have electric lights throughout. The Hotel Netherlands in New York City installed the first hotel telephone system in 1894. The Fifth Avenue Hotel in New York City was the first to have elevators, an innovation that later enabled hotels to be constructed as high-rise structures. The first fully air-conditioned hotel was the Detroit Statler.

As the number of hotels increased, many properties faced the prospect of rapid obsolescence and a consequent loss in value. The City Hotel, for example, became obsolete in 15 years due to competition and was converted into an office building 38 years later. The trend-setting Tremont House was closed for major modernization after 20 years of operation and was considered a second-class property during the last two decades of its 65-year life. Hostelrys face similar problems today because of constant changes in modes of transportation and customer preferences as well as competition from newer properties.

Many hotels of the mid-1800s followed railroad development. Ornate luxury hotels were constructed at major rail centers: the Palmer House in Chicago (1882), Brown Palace in Denver (1893), and the Palace in San Francisco (1875). Hotels became status symbols, and cities tried to outdo each other by building larger and more expensive facilities. In many cases, the hotels developed far exceeded existing or potential markets.

In addition to luxurious city hotels, resort hotels were introduced as new rail lines enabled affluent Americans to travel on vacation. Spas, which were considered the first American resorts, were opened in Saratoga Springs, New York (Grand Union Hotel) and White Sulphur Springs, West Virginia (the Greenbrier). Other grand resort hotels built during the 1800s were the Hotel Del Coronado outside San Diego, California, the Ponce de Leon in St. Augustine, Florida, and the Broadmoor in Colorado Springs, Colorado.

As rail transportation became more affordable and more middle-class people began to travel, a new type of hostelry was needed to fill the gap between luxury hotels and rooming houses. E. M. Statler recognized this demand and built the nation's first modern, commercial hotel in Buffalo, New York. When the Buffalo Statler opened in 1908, it offered many revolutionary conveniences: private baths, circulating ice water, full-length mirrors, overnight laundry, and free morning newspapers. Statler's slogan, "A room and a bath for a dollar and a half," put clean and comfortable transient accommodations within the reach of millions of Americans and increased the interest in travel among the middle class.



## Modern Hotels in the United States

The economic prosperity of the 1920s produced one of the greatest hotel construction booms in America's history. Encouraged by rising occupancy rates, which exceeded 85% in 1920, hoteliers expanded their existing properties and constructed hundreds of new and larger facilities. With the addition of large convention properties, the number of available hotel rooms in some cities doubled during this period. Chicago's 3,000-room Hotel Stevens (now the Chicago Hilton) opened in 1927 and was the world's largest hotel for more than 35 years.

Beginning in the mid-1920s, the *Hotel Management* trade publication published articles by several industry spokespersons warning against "over-hoteling." Professional hoteliers were urged to tell the public the "real facts" about hotel occupancy levels and financial conditions to offset the exaggerated stories that had circulated earlier in the decade and contributed to overbuilding. To illustrate the extent of the problem, a nationwide survey was conducted in 1928 and 1929 by an objective body, the Engineering-Economics Foundation. This postgraduate institution in Boston performed the research, quantifying hotel room supply, guest demand, occupancy levels, rates, and hotel failures from 1919 to 1928. The Foundation found that nationwide occupancy had dropped from 85.5% in 1920 to 67.6% in 1928. At the same time, room rates appeared to be fairly constant, but the Foundation claimed that additional services had to be provided to guests, which effectively lowered the rate achieved. The number of hotel failures increased, with 64 reported in 1924 and 112 in 1928.

The Depression of the 1930s put an end to new construction and sent more than 80% of the nation's hoteliers into foreclosure or receivership. One-third of the country was out of work by 1933, and the gross national product had dropped by almost half. Both commercial and leisure travel came to a virtual standstill, and the average national hotel occupancy fell to just over 50%.

Although the Depression forced many hoteliers out of business, it offered those with cash the opportunity to expand their holdings by purchasing distressed properties from receivers and lenders. Parties who had taken debt positions in the original financing structure found themselves owning a piece of the hotel after it was foreclosed. These parties included both institutional lenders and individual investors who had purchased mortgage bonds through public subscriptions in the 1920s.

Typical purchase terms for failed hotels required a small cash down payment from the buyer with the lender providing a restructured debt component for the balance of the purchase price. During the Depression, prominent appraisers warned investors not to value hotels based on the assumption that the prevailing low levels of income would continue into perpetuity; they projected future earnings to turn around in three to five years. For America's hotel industry, the Depression lasted longer than anticipated because of the severe overbuilding that had preceded it and the lack of commercial and pleasure travel during the 1930s.

During the Depression, several hotel companies significantly expanded their holdings, which provided the motivation behind the establishment of national and international hotel chains. Conrad Hilton started his lodging chain in 1919 with the acquisition of the 40-room Mobley Hotel in Cisco, Texas. He purchased and developed a total of eight hotels throughout the state of Texas during the 1920s. Because his hotels were highly leveraged, Hilton lost three of his properties during the Depression, but by 1935 profits



from oil leases provided him with the cash to satisfy his creditors and fund new purchases. Hilton took control of the Sir Francis Drake in San Francisco, the Town House and Rosslyn Hotels in Los Angeles, and the Roosevelt and Plaza in New York. In 1945, Hilton was able to acquire the Palmer House in Chicago for less than \$20 million, although it cost more than \$25 million to build in 1929. That same year, Hilton acquired the Stevens Hotel in Chicago for about \$8 million; that hotel was built in 1925 for \$30 million. In 1942, Hilton bought the Waldorf-Astoria bonds for 4.5% of their original value.

Ernest Henderson founded the Sheraton hotel chain in 1937 with the purchase of the Stonehaven Hotel in Springfield, Massachusetts. Although he was inexperienced in hotel operations, he understood real estate and the use of leverage and had some cash available. He took advantage of the depressed hotel prices of the 1930s and early 1940s and the readiness of sellers to negotiate. His company had acquired four more hotels by 1941 and was on its way to building one of the nation's largest lodging chains. Henderson believed in leveraging his cash position and acquiring hotels with a minimum amount of cash, sometimes negotiating with sellers to take back second mortgages in return for higher selling prices.

Leading hotel companies such as Hilton and Sheraton were able to overcome the fears of bankers and other lenders who were wary of independent developers and hotel investments in general. With extremely discounted sale prices and very favorable financing terms, strong hotel companies with prominent names and proven track records were able to continue their expansion. In some cases, the hotel chains guaranteed their mortgages by putting all their hotel properties up as collateral. This strategy enabled them to borrow 60% to 70% of the property's fair market value.

It was not until the early 1940s that the American hotel industry started to recover. By this time, the general economy had improved and the hotel room supply had been significantly reduced by closures. What really revived the hotel industry in the United States was the onset of World War II. The massive movement of defense industry workers, military personnel, and their families created an unprecedented demand for transient accommodations, and the national occupancy level soon exceeded 90%. Although most towns and cities needed more lodging facilities during this period, there was little new hotel construction because financing, materials, and labor were unavailable.

Financing for new hotels was unavailable because lenders and investors were still wary of risk after the downswing of the Depression. In some areas, the hotel room supply was actually reduced because hotels were being converted into housing for the troops. Properties such as the Hotel Stevens in Chicago and the Greenbrier in West Virginia served as barracks during the 1940s.

The 1950s marked the beginning of a radical change in transportation. The railroad, which had served travelers for more than a century, began to lose customers to the more economical automobile and the faster airplane. The technology developed during the war helped produce a more affluent population that enjoyed shorter work weeks, more leisure time, and a new freedom to travel. The "mobile society" was born, and an increasing number of people took advantage of the convenience of highways and airlines.

Sites directly across from downtown railway stations, which were once considered prime hotel locations, quickly became less desirable and economically obsolete. A more informal lifestyle was developing, and the traveling public seemed willing to sacrifice luxuries such as doormen, bellhops, valet parking, and evening turndown service in exchange for less expensive rooms.



## The Development of the Motel

A transient-oriented lodging facility offering inexpensive, “no-frill” accommodations was needed to meet the needs of highway travelers in the 1950s. The modern motel was born as a result of this need. Although the origins of the motel can be traced to the relatively primitive tourist cabins of the 1930s, the motels of the 1950s offered much better facilities.

Most early motels were one-story, wood-frame structures built on concrete slabs with approximately 20 to 50 guest units. Their modest rooms had inexpensive furnishings, particle board walls and ceilings, tile floors, small baths, metal shower stalls, and radios. Few motels at this time provided food and beverage service or meeting rooms.

Although motels were spartan compared to most hotels, they became competitive because of their convenient highway locations, ample free parking, and low rates. The motel market included vacation travelers (especially young families and senior citizens), salesmen, middle managers, and government employees. Operating statistics for the 1950s show steadily declining hotel occupancies but stable motel occupancy levels. Because the number of motel rooms was increasing at the time, motels were obviously beginning to capture a transient market previously monopolized by hotels both in Europe and the United States.

The first motels were radically different from hotels with respect to size, construction costs, land values, operating ratios, and management requirements. The distinction between hotels and motels has blurred, however, due to a variety of factors:

- Motels began to increase in size, with additions to existing properties and more total units constructed for new properties.
- Motels joined referral groups and franchises to obtain national images and greater exposure.
- Motels began offering more amenities, such as television, air-conditioning, tile baths, telephones, swimming pools, restaurants, lounges, meeting and banquet rooms, and gift shops.
- Motels began providing more services, such as 24-hour telephone switchboard and front desk attendants, nationwide telephone reservation systems, acceptance of credit cards, direct-dial guest room phones, and morning wake-up calls.
- Improved building techniques were introduced, including the use of concrete and steel, pre-assembled units, and high-rise construction.

By the mid-1960s, most new motels offered all the facilities and amenities typically available at hotels. At the same time, hotels were modifying their operations to compete with motels. The result was a gradual merging of the two types of properties into a new type of facility known as the *motor hotel*. Motor hotels combined the services and facilities of hotels with the convenience of motels.

Although independent motels and motor hotels flourished, their potential guests had little idea of what to expect when they pulled off the highway. Standards of service and quality varied, and guests were frequently disappointed. Kemmons Wilson recognized this problem when traveling with his own family and saw it as an opportunity. In 1952, Wilson started a new era in the hospitality industry by founding Holiday Inns, one of the earliest motel chains. Holiday Inns offered guests a modern motel with standardized





service, a recognized name, and moderate prices. Starting with four motels near Memphis, Tennessee, in the early 1950s, the Holiday Inns chain grew to more than 100 motels nationally by 1960. This tremendous growth was accomplished by selling franchises to individuals who would operate the properties as their own businesses. The first Holiday Inn franchise was sold in Clarksdale, Mississippi, for \$500 and a flat fee of \$0.05 per occupied room. In return for these payments, the franchisee received the Holiday Inn name and logo, architectural plans, training and operation manuals, and national advertising. In 1964, Holiday Inns launched its Holidex I reservation system, and a major benefit was added to the franchise package. Kemmons Wilson was overwhelmed with franchise applications.

During the 1950s, the supply of motel rooms nationwide increased from 600,000 to 1,500,000. Several factors contributed to this large increase. The first was the passage of the US Interstate Highway Act in 1956, which laid out a map for the growth of highways and thus roadside motel sites. Those traveling on interstate highways bypassed motels on state highways, and these older lodging facilities rapidly succumbed to external obsolescence. A second factor contributing to the increased motel supply in the United States was a change in the income tax laws in 1954, which permitted real property owners to use an accelerated method of depreciation. This change led to a period of readily available cash from “tax-based” lodging deals. In such deals, syndicators offered investors participation in hotels and the benefits of large depreciation and interest expense deductions to offset income in the early years of the investment. Franchising was the third factor contributing to the growth in the supply of motel rooms during the 1950s. The ability of developers to benefit from the name recognition of motel franchises enticed many non-hoteliere into the business.

## Lodging Chains

Several new lodging chains were established in the late 1950s and early 1960s. The Marriott Corporation, formerly known for its food service business, entered the lodging industry in 1957 with its Twin Bridges Marriott Motor Hotel in Arlington, Virginia (outside of Washington, D.C.). Marriott is now the largest operator of hotels in the United States and a significant operator throughout the world.

The Howard Johnson Company, previously known for its restaurants, opened its first motor lodge in 1954. By 1959, the Howard Johnson name was already on 75 motor lodges, both company-owned and franchised. In the mid-1950s, Marion Isbell and his associates began acquiring motor hotels in the Southwest region of the country. By 1962, they had formed the Ramada Inn chain.

In 1957, the Pritzker family of Chicago diversified its holdings by entering the lodging industry with the purchase of the Hyatt House at the Los Angeles International Airport. Hyatt is now a leading operator of convention hotels. Hyatt may be best known for the spectacular atrium lobbies at their Hyatt Regency properties.

In 1962, the Carlson Companies, founded by Curtis Carlson, acquired the Radisson Hotel in downtown Minneapolis to initiate that company’s diversification into the hotel business. The company began purchasing and renovating inner-city hotels in the Midwest and operating them under the Radisson name.

One of the greatest international hotel companies is Meliá Hotels, founded in Spain in 1956 and mentioned previously in this chapter. Interna-



tional activity by American hotel companies became prevalent in the 1960s. InterContinental Hotels Corporation, a Pan American Airways' subsidiary established in the late 1940s with the opening of their first hotel in Belem, Brazil, continued to develop hotels in Latin America. Hilton Hotels, which had been operating the Caribe Hilton in Puerto Rico since the late 1940s, established their Hilton International division in the 1960s, expanding their operations into Europe and South America.

A move toward vertical integration within the airline and lodging industry occurred during the 1960s as several large airlines acquired or merged with hotel companies. Trans World Airlines (TWA) purchased Hilton International Corporation. United Airlines purchased the Western International chain (now Westin Hotels). American Airlines started purchasing and developing their own hotels under the name Americana Hotels. As of now, all these relationships have been terminated, showing that the ownership synergy between the travel and lodging industries is not as strong as was once believed.

In China, major domestic players such as the China and Hong Kong Travel Service Group, the Beijing Tourism Group, Jin Jiang Hotels, and the Lingnan Group have embarked on reform programs to restructure and reorganize their portfolios to enhance their competitiveness and market orientation. Chains like Home Inns, Jin Jiang Hotels, and 7 Days Inn, on the other hand, have gone global by listing overseas. The first large-scale overseas merger and acquisition by a local hotel group took place in December 2009 when Interstate Hotels was acquired by Jin Jiang Group.

## The Arrival of the Budget Motels

As the motel evolved into the motor hotel, it began to lose one of its primary competitive advantages—its low price. By providing more facilities and services, motels were forced to charge higher rates. This evolution created a void at the low end of the room-rate scale and precipitated the creation of the “budget motel.”

Budget motels were introduced in the late 1960s and flourished during the building boom of the early 1970s. These establishments offered accommodations at prices substantially lower than the prevailing rates of first-class motor hotel chains. To offer this discount, budget motels took advantage of lower initial investment costs, operating efficiencies, and high volume.

### Lower Initial Investment Costs

The initial investment costs for budget motels are lower because these facilities have smaller guest rooms, minimal public space, lower land costs, and a simple, no-frills design. The quality of construction, however, is not significantly reduced.

Guest rooms in budget motels average 250 square feet, while rooms in conventional motor hotels typically contain 335 square feet. Smaller rooms reduce construction costs and interior decorating expenditures as well as the amount of land needed for construction. Budget motels eliminate low-revenue public areas such as meeting and banquet rooms, large lobbies, extensive food and beverage facilities, and executive offices.

Because the size of the facilities is reduced, budget motels require approximately 1.6 acres per 100 rooms, compared to 2.5 acres per 100 rooms for conventional lodging establishments. Additional savings can sometimes be realized by making use of secondary locations, such as land that is located





off an interchange or a short distance from a prime commercial/office area. Most people traveling on a budget are willing to drive a little farther for a better price.

Budget motels are planned for the efficient use of materials and space. Guest rooms are typically double loaded (back to back) and constructed on concrete slabs with cinderblock walls between rooms. Modular construction has been successfully used in some areas. Landscaping and decoration are kept to a minimum.

Many budget motels are built with construction specifications and standards similar to those of conventional motor hotels. Operators realize that inferior materials and building techniques may produce initial savings but are a poor choice in the long run when repair and maintenance expenses are considered.

### **Operating Efficiencies**

Compact facilities and fewer guest services contribute to operating efficiencies and result in lower expenses. With smaller guest rooms and reduced public space, budget motels require less cleaning and maintenance and can be more efficiently heated and lighted. Some budget chains use maintenance teams that work at several properties, performing routine repairs and preventive maintenance.

The elimination of bellmen, elaborate food and beverage facilities, room service, entertainment, the acceptance of credit cards, and other services reduces payroll and operating expenses. Major savings are realized on food and beverage service in budget motels where limited amenities such as a cafeteria or coffee shop are offered. Such operations are often located on leased land adjacent to the motel and operated by a restaurant chain, so that the lodging operator can avoid any involvement in the food service business.

Price, location, and good value for the traveler's money tend to generate high volume for budget motels. The main reason travelers select budget motels is price. As with any product that has an elastic demand curve, a reduction in price increases volume, all other things being equal. Budget motels typically operate at higher occupancy levels than surrounding conventional properties. Many budget motels are purposely located next to higher-priced hostels to attract price-conscious travelers.

Although budget motels economize in many areas, they still tend to provide clean, good-quality guest rooms. The rooms contain comfortable beds, full baths, color television, standard furnishings and fixtures, and cheerful drapes, bedspreads, and wall coverings.

From an investment or valuation perspective, budget motels are often vulnerable to the adverse effects of increased expenses and decreased occupancies. Because of its lower price structure and similar fixed costs, a budget property generally has a higher breakeven occupancy level than a standard motel. Appraisers must consider this greater risk when projecting income and expenses and determining a proper capitalization rate for such properties.

### **The 1970s Hotel Boom**

As budget motels began to flood the market in the 1970s, the entire lodging industry experienced the start of a construction boom reminiscent of the 1920s. Many factors contributed to this period of expansion and later led to its demise.

New construction was sparked by the enormous amount of financing made available by lenders in general and real estate investment trusts (REITS) in particular. These high-leverage finance companies were created



to allow small investors to participate in real estate mortgages and equities. The concept was quickly accepted by Wall Street, and soon billions of dollars were available to finance real estate projects. Many lenders became so overwhelmed with new money that their underwriting procedures broke down and some marginal developments were approved.

During the late 1960s and early 1970s, hotel companies were actively expanding their chains through franchising. Franchising was a source of new capital for hotel franchise companies, allowing them to grow and achieve national recognition without using the franchisee's financial investment in individual properties. Some franchisors, eager to demonstrate sustained growth and go national in scope, employed questionable marketing tactics to sell new franchises. Many of those selling franchises were compensated based on the number of franchises sold, so there was little incentive to discourage developers from investing in poor locations and overbuilt markets. Many lenders and hostelry developers were led to believe that a national franchise would guarantee a successful operation.

The combination of readily available financing and aggressive hotel chains eager to sell franchises resulted in overbuilding and the development of many poorly located, undercapitalized hostelrys managed by inexperienced owners. The bubble burst on the lodging industry when inflation caused construction costs and interest rates to escalate; the 1974 energy crisis drastically reduced travel, and the accompanying recession curtailed business trips, conferences, and conventions.

Operators of marginal properties quickly fell behind in their mortgage payments, and lenders were forced to foreclose. As lenders became hostelry owners, they either organized workout departments headed by experienced hoteliers or engaged professional motel management companies to assume operational responsibilities. Sales data indicate that lenders who were looking for quick sales to remove nonperforming hotel assets from their books had to lower their sale prices substantially to attract all-cash buyers. Lenders who were willing to hold on to foreclosed hotels and employ professional management to reposition and improve the properties' operations were generally able to recoup their original investments in three to five years as the hotel industry started to recover. However, even lenders who repositioned their properties had to take back favorable purchase-money financing to sell the properties because money from other sources usually was not available.

History has shown that, during economic downturns, hotel values generally do not fall in the same proportion as their declining incomes. Sellers, particularly lenders who take back hotels through foreclosure, are not always willing to sell at substantially lower prices. They are more likely to wait out the downward cycle and dispose of their assets when the market starts to rebound. Therefore, appraisers can best reflect market behavior by projecting out a facility's net income to a point of recovery and applying the proper discounted cash flow procedure over this time period.

The end of the 1970s was a period of relative calm for the lodging industry. Because most lenders were recovering from the financial wounds inflicted by the 1975 recession, they had little interest in making hotel/motel mortgages. New construction was restrained, consisting primarily of additions to existing properties and the development of large, convention-commercial hotels in downtown districts. The rebirth of center city hostelrys was a direct result of fuel shortages and the availability of government financing for innercity redevelopment projects. Highway-oriented properties,



on the other hand, were adversely affected by escalating gasoline prices and decreased automobile travel. These lodging facilities lost some of their appeal among investors and hotel companies.

Decreased building activity, combined with the normal retirement of older hostleries from the lodging market and an improving economy, created a favorable supply and demand relationship and record-high occupancy levels in 1978 and 1979. Average daily rates increased rapidly as hotel operators took advantage of the excess demand to recoup earlier losses and keep up with inflation.

## The 1980s: A Decade of Change

The lodging industry experienced significant change in the 1980s. Another massive building boom took place, several new types of hotels were introduced, and hotel chains began to increase their product lines through segmentation, a concept that will be discussed later in this chapter. The industry started to focus on the global hotel market after international investors acquired several American hotel chains and many individual properties. Use of the hotel management contract became the dominant means of operation for most publicly traded hotel companies.

After the decline in new hotel development during the late 1970s, the environment appeared suitable for a period of renewed hotel expansion. However, the US Federal Reserve tightened the nation's money supply in the 1980s, sending the prime interest rate up to record levels. Most of the projects that were in the preliminary planning stages but lacked sensible financing were put on hold.

Eventually, monetary and fiscal policies along with declining energy prices were successful at reducing the rate of inflation. These factors produced a downtrend in hotel interest rates beginning in 1985, and suddenly massive amounts of capital were available for real estate investments. Hotel developers, effectively out of the market since the mid-1970s, rushed to create new projects. They were aided by several major real estate development incentives: favorable industry trends, readily available debt and equity financing, and unique income tax benefits designed to stimulate real estate growth.

Lodging industry trends during the early 1980s were favorable for new hotel development. Many markets showed relatively high occupancy levels, hotel room rates were generally able to keep up with inflationary price increases, and the travel industry was expected to boom as a result of a healthy economy. Demographics characterized by affluent baby boomers, two-income families, and more leisure time further fueled developers' optimism. As in the past, sellers of franchises were aggressively signing up new prospects using product segmentation to justify the saturation of a market with a common brand.

Financing was readily available from the savings and loan industry. After deregulation, these financial institutions were permitted to lend on commercial real estate such as hotels. Although savings and loans had experience in making real estate loans on single-unit homes, most had little expertise with commercial properties, particularly hotels and motels. The result was almost identical to the real estate investment trust fiasco the decade before. Loan underwriting and administration was generally incompetent and sometimes nonexistent, the quantity of loans made seemed more important than the quality of the real estate and the integrity of the borrower, and short-term monies were often used to finance long-term mortgages.

On the equity side, the money raised for hotel developments and acquisitions generally came from syndicated limited partnerships. Most of these



ownership structures were devised to take full advantage of the generous tax benefits allowed for hotel real estate. Initially, the majority of hotel syndications were relatively small and the equity raised was less than \$10 million US dollars. Later, however, Wall Street investors saw the opportunity to make huge fees from selling these equities, and pools of hotels were packaged together and sold to investors in \$100,000 units. Some of the larger packages attracted more than \$100 million in equity. It seemed that everyone wanted to invest in hotels, particularly when the property was a prominent, trophy-type hotel or the sponsor organizing the partnership was a major hotel company. A number of the syndications sold out in minutes, and some were even oversubscribed.

Another factor contributing to hotel development during the 1980s was the very favorable treatment provided by US income tax regulations. By carefully structuring hotel syndications to take advantage of available tax benefits, investors could virtually recoup their total cash outlay in the first year and reap additional benefits in the future regardless of the economic success of the underlying asset. Because there was little incentive to justify a transaction's economics (i.e., cash flow and reversionary benefits), a number of syndicators overpaid for premier trophy properties, took out excessive fees, and overloaded their hotels with debt.

Hotel franchisors also played an important role in this overbuilding through a new concept called *segmentation*. To show continuous growth, the hotel companies, which at the time catered to only one pricing segment, started to realize that they could create new products for other pricing segments and thereby offer two or more affiliations in the same market without directly competing against themselves. For example, Holiday Inns, a mid-priced lodging chain, first went upscale and established the Crowne Plaza. They then ventured downscale with Hampton Inns. Marriott, which was known as a first-class operator, went downscale with Courtyard and further downscale with Fairfield Inn. In addition to adding new pricing segments, hotel companies created entirely new products, such as the all-suite hotel and the extended-stay facility. Hotel developers soon went wild building new properties financed with plentiful amounts of available money and flagged with an assortment of franchises and new products.

A change in the US tax law in 1986 eliminated many of hotels' real estate tax benefits, but the overbuilding in most markets was either in progress or had already taken place. By the end of the 1980s, the abuses of the savings and loans became apparent, but it was too late to reverse the overbuilding.

Up until 1990, the lodging industry in most areas of the country was facing the effects of massive overbuilding, which created a supply problem. Lodging demand was still strong, and although a recession seemed likely, most industry experts were hopeful that the economy would hold up. Given this favorable economic scenario and the fact that very little new development was anticipated for the first several years of the decade, some experts expected hotel occupancies to improve quickly and the lodging industry to fare better than it had during the 1970s. Unfortunately, the economy went into a recession, which curtailed business, convention, and leisure travel, and produced a downtrend in lodging demand.

## The 1990s: Recession, Recovery, and Expansion

The national economy entered another recession in 1990. This factor (coupled with overbuilding and the Persian Gulf War in 1991) caused the national hotel occupancy rate to bottom out in the low 60% range. In some markets,



occupancy rates dropped to as low as 35%. The supply and demand imbalance was almost identical to the situation in the 1970s that led to numerous failures. Trailing closely behind this downward occupancy spiral were hotel room rates. Full-scale rate wars broke out in many markets as managers, seeing their patronage erode, attempted to test the elasticity of hotel demand. Since lower room rates rarely create additional new hotel demand but instead redistribute the existing business among the area's facilities, this strategy produced only short-term revenue gains for some properties and eventually led to long-term profit declines for almost everyone.

Many hotels quickly fell behind with their highly leveraged debt service payments, and this problem immediately led to a rash of foreclosures and bankruptcies. During this same time, the savings and loan industry began to flounder under the burden of non-performing loans, and the Resolution Trust Corporation (RTC) was created to handle the crisis. Since savings and loans were prominent hotel lenders at the time, the RTC soon began to take over hundreds of defaulted hotel loans and actual properties as they acquired insolvent banks. Instead of holding on to these assets and waiting for values to recover, the RTC held massive auctions and disposed of hundreds of hotel properties at bargain prices. Investors who had the foresight to see a market turnaround made huge profits by buying low and selling high.

A number of lenders opted to restructure their non-performing hotel loans rather than force their borrowers into bankruptcy. Many combinations of principal reduction, interest rate adjustment, and other types of forgiveness were structured to assist hotel owners in coping with excessive levels of debt service. Borrowers who were able to survive and get through these crisis years generally preserved some of their equity and tax benefits.

By 1993, new hotel construction had declined significantly. Lenders, trying to get out from under problematic hotel portfolios, curtailed all real estate lending and would not even consider hotel financing opportunities. The tax benefits associated with hotels had been reduced significantly, and passive investors essentially left the hospitality market. The slowdown in supply growth, coupled with an improving national economy emerging from recession, had a beneficial effect on occupancy levels, which began to recover in 1992. As increases in lodging demand outpaced the growth in supply, occupancy levels continued to move upward through the mid-1990s. The improvement in occupancy motivated the resumption of supply growth, but only for smaller limited-service hotels that were usually financed by local banks. However, higher-rated economy and midscale properties soon started to become economically feasible (i.e., economic value exceeded development cost). These projects were more commonly financed with funds supplied by regional banks and Wall Street conduits that structured mortgage-backed securities to sell off pieces of the debt that were risk-rated by the rating agencies. During this period, the replacement costs for first-class and luxury hotels still exceeded the value of similar existing properties, so little development took place in these two segments.

The re-emergence of real estate investment trusts (REITs) also influenced pricing trends and sales volume during the mid- to late 1990s. Given their structure, organizational purpose, and low cost of capital, REITs were driven by the need to grow by acquiring assets. According to information provided by the Lodging Research Network, the number of hotels owned by REITs increased from 39 in 1993 to 970 in 1998, while the number of hotel rooms controlled by REITs increased from 6,643 in 1993 to 183,784 in



the first quarter of 1998. As the REITs and other public companies, including C-Corps, actively pursued high-quality hotels, the competition for these properties accelerated, placing upward pressure on hotel values. This rapid growth came to an abrupt end in mid-1998, when the stock market lurched downward from fears of a global recession, particularly in Asia. As the fears proved to be unfounded, stability returned to the capital markets, although the relationship between the stock prices of the larger hotel companies and the perceived health of the lodging industry continued to create a sense of uncertainty. As the decade ended, the budget and economy segments of the lodging industry were most at risk, and the luxury segment was the safest category for investment. The cost of new construction in the luxury sector continued to be difficult to justify, so additions to supply were minimal. Furthermore, the barriers to entry and the long development time required for hotels of this type delayed overbuilding for a number of years.

## The 2000s: Terrorist Attacks, Further Market Segmentation, and the Internet

The terrorist attacks of September 11, 2001, had significant effects on hotel market values, particularly in gateway cities. Flight schedules were cut back, travel decreased dramatically, and hotel occupancy levels fell sharply. In response to these dire circumstances and prompted by occupancy levels that were initially well below breakeven levels, hotel owners and managers quickly moved to a price-driven marketing strategy, offering dramatic discounts to attract patrons.<sup>2</sup>

The magnitude of the discounts—and their relatively easy availability through Internet sources—actually did create some demand, as leisure travelers were encouraged to take advantage of the “great deals” that were out there. Initially, the expectation was that this strategy would be short term, until business travel grew.

However, as the months passed after September 11th, it became clear that the problems affecting the lodging industry were not solely the result of the attacks. In fact, economists concluded that the country had been in a recession since March 2001.<sup>3</sup> This unwelcome news was not much of a surprise to owners and operators responsible for properties in the major urban areas. These markets had started to experience a softening of demand and, to a lesser extent, average daily rate as early as the first quarter of 2001. Markets with a heavy reliance on the high-tech, dot com, and telecommunications sectors felt the downturn first and to the greatest extent.<sup>4</sup>

Further market segmentation occurred with the all-suite hotel, the extended-stay hotel, the hard budget hotel, the boutique hotel, and the condo hotel introduced in recent decades. These facilities have gained wide acceptance among the traveling public. While the all-suite hotel and the hard budget essentially absorbed existing demand from traditional hotel products, extended-stay properties actually created new transient lodging demand by attracting long-term travelers who had previously used apartments and residential hotels.

The all-suite hotel concept is based on the theory that certain types of commercial and leisure travelers do not use the meeting, banquet, restaurant, and

2. B. Adams, “Battle for Bookings,” *Hotel & Motel Management* (June 17, 2002): 1-70.

3. P. Coy, “Adding to the Pink-Slip Pile,” *Business Week* (June 24, 2002): 26.

4. J. Higley, “Slow Going on Road to Recovery,” *Hotel & Motel Management* (July 1, 2002): 1-45.





lounge facilities found in most full-service hotels. By taking the space allotted to these facilities and instead using it for guest rooms, individual suites with separate living and sleeping areas could be created. The key to the all-suite concept is to reallocate space in a manner that keeps the room rates charged for a suite similar to the room rates of comparable, full-facility hotels. This approach creates a favorable price-value relationship for the guest who does not need all the facilities found in a full-service property. Most all-suite hotels also offer a free breakfast and an evening cocktail hour to attract patrons.

The all-suite hotel has been well received by individual commercial travelers and by some leisure travelers. Such hotels are currently the occupancy leader in many markets, with room rates on par with similar, full-facility hotels. Since they generally have limited food and beverage facilities, all-suite hotels are usually easier to operate and their profit margins are higher.

The extended-stay hotel is designed for the traveler who must stay in an area for five or more consecutive days. It differs from a standard hotel in that the rooms and amenities are oriented toward someone who wants a more residential atmosphere. The guest rooms in an extended-stay hotel have large living areas and full, eat-in kitchens; some have two separate sleeping areas, individual dining rooms, and separate baths. The exterior of such a hotel generally has a residential feel similar to a garden apartment complex, complete with recreational facilities and barbecue grills.

The high occupancy levels realized by the initial wave of extended-stay hotel developments dramatically heightened interest in this segment, and the number of extended-stay hotel products continues to expand, fragmenting into subsegments ranging from economy to first class. The true depth of the extended-stay demand segment remains difficult to gauge, although managers of the lower-rated extended-stay products often find themselves competing with operators of conventional select-service hotels, while higher-rated extended-stay products often compete with first-class, all-suite hotels. Generally, the hotels succeed, as the strong investment in the guest room offerings presents a strong price-value perception for guests of all types. Nevertheless, the operating efficiencies inherent in the design and operating concept are diminished when the lengths of guests' stays are shorter.

The hard budget is the contemporary version of the budget motel. Over the years, the budget motel concept has gone through what has been termed "amenity creep." In an effort to increase rooms revenue and franchise fees, hotel franchise companies encourage franchisees to upgrade their properties by adding more amenities. This process generally starts with simple additions such as a free morning newspaper and continental breakfast; later it may spread to such extras as coffeemakers in guest rooms, free shampoo and beauty supplies, fitness centers, and so forth. Each of these amenities creates an expense that must be offset by an increase in revenue. Eventually, amenity creep can turn a budget motel into a mid-rate property or a mid-rate hotel into a first-class property.

The hard budget has taken the budget concept back to basics. Its guest rooms have been downsized to only 192 square feet in some cases. It offers none of the normal hotel amenities such as a restaurant, lounge, meeting space, or swimming pool. A hard budget is 10% to 20% less expensive to construct, requires less land, is easier to operate and maintain, and can undercut the room rates of comparable budget motels by as much as 25%. The hard budget concept, which had its genesis with Statler's "room and a bath for a dollar and a half," illustrates the recurring cycles in the lodging industry.



The hotel industry phenomenon of market segmentation originated in the 1980s and continues today. Market segmentation essentially represents an expansion strategy for hotel companies. When hotel chains such as Holiday Inns, Marriott, Hilton, and Sheraton were founded, they developed a standardized form of operation that was oriented toward a single class of traveler. For example, Holiday Inns were originally designed, operated, and priced to appeal to the mid-rate commercial and leisure traveler. Marriott went after more affluent, first-class guests by offering higher-quality facilities and services. The chains developed strong brand loyalty among these specific classes and types of travelers over the years. As it became apparent that the markets for the “core” brand of these hotel chains were essentially satisfied, the hotel chains had to find a vehicle for expansion that would allow them to develop or franchise additional properties within their established market areas. The answer to this dilemma was to develop a new product and brand name to capture a different class of traveler.

Market segmentation allows hotel chains to expand without simply drawing a portion of the demand away from their core properties. For example, Holiday Inns implemented market segmentation by developing an up-scale hotel product with higher-quality finishes and decor, a higher level of service, and more amenities to attract first-class travelers. This brand of hotel was called the Holiday Inn Crowne Plaza (now known as the Crowne Plaza).

Moving in the opposite direction, Holiday Inns also developed a down-scale, budget-type product known as the Hampton Inn, which was designed to capture the more price-sensitive traveler. The Hampton Inn brand offers a lower level of service than the standard Holiday Inn. It has no restaurant, lounge, or function room, and the size of its guest rooms and quality of its decor and amenities are less than one would expect at a typical Holiday Inn. By offering three types of products, Holiday Inns significantly increased the size of its potential market. This evolution allowed the chain to develop or franchise hundreds of additional hotels within its established market areas throughout the United States. (The Hampton Inn is now controlled by the Hilton Hotel Corporation.) More recently, Holiday Inn Worldwide, now a component of InterContinental, developed the Holiday Inn Express to serve the budget-minded market niche.

Marriott has demonstrated the benefits of market segmentation as well as any hotel chain, leveraging the substantial goodwill and marketing power it has established through decades of consistent quality into nearly every possible hotel demand segment. Marriott has expanded by both segmentation and acquiring the rights to a variety of brands, including Residence Inn, Ritz-Carlton, and Renaissance. These strategic acquisitions have emerged as another common means for sustaining growth.

The 2000s also saw the growth of the boutique hotel concept. Although this concept originated in New York City with Ian Schrager’s edgy Morgans, Royalton, and Paramount hotels developed in the 1990s, it took off in the 2000s when Starwood created the *W* brand and developed a boutique concept offering unique accommodations with relatively consistent service standards. Starwood later developed the *aloft* brand to cater to guests seeking a contemporary, hip, urban experience at a somewhat lower price point. The *aloft* concept also allowed Starwood to promote a more franchise-oriented boutique hotel brand. Marriott has similarly developed its own boutique hotel concept called *Edition* and has interestingly partnered with Ian Schrager in its development.





## Strategic Acquisitions and Mergers

Earnings growth is critical to public companies, and hotel ownership has increasingly become the province of publicly held companies. Whereas market segmentation continued to represent a viable approach to achieving earnings growth (along with property-by-property acquisition), a far more efficient means to this end has been in the form of strategic acquisitions and mergers. For example, Starwood acquired the assets of hotel companies such as Sheraton, Westin, and HEI Hotels. Promus Hotel Corporation, which controlled the Doubletree, Homewood Suites, Embassy Suites, and Red Lion brands, merged with the Hilton Hotel Corporation, which later divested itself of Red Lion. The Wyndham brand was acquired by Cendant, parent of such lodging brands as Days, Howard Johnson, and Ramada. (Cendant then renamed itself Wyndham.) A few key multibrand hotel companies, marketed cooperatively for greater efficiency and economies of scale, now control most of the industry's most recognized brands in similar groups.

The outcome of this shift in the nature of hotel ownership is difficult to discern at this stage. However, hotel companies are now scrutinized and evaluated based on their ability to increase shareholder value, a shift away from the traditional primacy placed on day-to-day operations and basic property level performance. The large hotel companies have evolved into brand management and franchise administration organizations. In future years, the most successful hotel companies will likely maintain a property-level perspective and prioritize on-site management while still increasing their earnings through brand leverage, greater economies of scale, and an increasingly global perspective.

Globalization of the hotel industry should intensify during the next decade. More American hotel companies may actively expand throughout the world, and more foreign hotel chains will likely seek opportunities in the United States. From an appraisal point of view, a global knowledge of hotel trends and valuation techniques will be essential.

## Management Contracts

A final factor that has had a major impact on the hotel industry in the United States is the use of hotel management contracts, which emerged during the 1980s. Under this type of agreement, a hotel company takes over the day-to-day operations of a hotel and is paid a fee for this service. If the hotel company is a well-known chain, the management fee also includes the right to use the trade name. The hotel management company generally has little or no ownership interest in the hotel and is not responsible for funding any operating losses.

Management contracts are particularly attractive for public hotel companies, which find it undesirable to keep real estate assets such as hotels on their balance sheets for accounting purposes. Progressive chains such as Marriott have created a strategy in which they develop or acquire a hotel, implement their management, and then sell the property to either an individual investor or a partnership but retain operational control through a long-term management contract. Due to the widespread use of hotel management contracts and franchises, very few hotels operating as part of a national chain are actually owned by that chain.

## Learning from History

Many of the changes and trends that developed during the 2000s will continue to affect the lodging industry. In the short- and long-term future, the



lodging industry will have to adapt continuously to inevitable changes. Some of the factors that will likely affect the hotels and lodging establishments of the future are discussed below.

### **Faster Transportation**

The jet airplane revolutionized long-distance travel by allowing people to cover more miles in shorter trips. As the speed of transportation increases, more advanced aircraft will make it possible to fly round trip between New York and Tokyo and attend a business meeting all in one day. This change could significantly affect the need for hotel accommodations.

### **Better Communications**

Virtually every home and office is linked by a computer, and most will soon be connected by a video communication system as well. The need for face-to-face meetings may be reduced as this technology becomes commonplace around the world. Many business meetings, small conferences, training seminars, and conventions could be accomplished without incurring travel and hotel expenses.

Office and home links to the Internet have given consumers great power because so much information is now at their fingertips. Through such online travel agencies (OTAs) as Expedia, Travelocity, and Orbitz, consumers can quickly and simultaneously study the room rates of multiple hotels in a given city. Users can take this information and draw comparisons from such online hotel rating sites as Trip Advisor, now owned by Expedia. Furthermore, many consumers have opted to find the best available price on discounted travel sites such as Priceline and Hotwire (Hotwire is also owned by Expedia), creating downward pressure on room rates. These changes have created great challenges for hotel brand managers. Traditionally, hotel brands represented a promise of relative quality and consistency to the consumer, but now consumers often find themselves trusting the quality and consistency of third-party websites that are not affiliated with hotel chains. For example, if Priceline indicates that a hotel is a three-star property, the consumer may trust that rating more than the brand name of the lodging establishment. Hotel brand companies and hotel owners are faced with a challenge. They need to be listed on third-party websites, which charge the hoteliers significant fees but usually sell room nights at the same prices as the hotel brand websites or the hotel's own individual website.

OTAs have had a significant effect on hotel market values, at least in the United States. For example, if an average 15% hotel room commission/discount is paid by hotels to OTAs, and an average of 25% of occupied rooms are booked on OTAs, then the negative effect on average daily rate (ADR) is 3.75%, or 0.0375 ( $15\% \times 25\%$ ). According to STR Global, the 2011 US ADR was \$103.08. If that figure is multiplied by 0.0375, the overall OTA effect on ADR is \$3.87 ( $\$103.08 \times 0.0375$ ). Research conducted at The Pennsylvania State University shows that each \$1 in ADR is correlated with \$809 in hotel value per room, so the OTA effect on value is \$3,131 per room ( $\$809 \times \$3.87$ ). Multiplying \$3,131 per room times the 4,831,000 rooms in the United States in 2011 equals an overall negative OTA effect of \$15.1 billion on the total US hotel market value. It is important to note that these calculations assume that OTAs do not generate significant incremental business for hotels or sell rooms at relatively high rates, but rather tend to accommodate reservations that could have been booked on other channels, such as hotel chain websites. It is also important to note that OTAs have replaced traditional travel agents to a certain degree, so hotel travel agent commissions are somewhat lower today than they were decades ago.



## Globalization

Faster transportation and communication could have negative effects on the lodging industry, but the inevitable globalization of businesses will create a need for business travel when face-to-face interaction is essential. The major business centers throughout the world should benefit from this trend.

## Increased Pleasure Travel

As the number of affluent, two-income families increases and transportation becomes quicker, easier, and less expensive, the travel industry has seen an increase in pleasure travel. This trend is likely to continue, with resort areas receiving the greatest benefit.

## Industry Trends

The preceding description of the lodging industry in the United States identifies several important points that could affect the market value of lodging facilities in the future.

- The typical hostelry experiences a relatively high degree of functional and economic obsolescence. These factors tend to reduce a property's economic life, thereby decreasing the period during which an owner can fully recapture invested capital.
- The growth of the lodging industry is influenced by developments in transportation. The first hostelries were located on coach trails. When the railroad came, hotels moved closer to passenger terminals. Later, the automobile led to the creation of the motel, and the airplane generated demand for rooms at airport locations. A decline in a particular form of transportation can lead to the failure of associated lodging facilities.
- The budget motel is the result of a cyclical phenomenon. The rooming house was America's first economical lodging facility. After its popularity declined, Statler introduced the first full-facility hotel at an affordable price. In the 1950s, the highway motel brought rates down for the mass travel market, and 20 years later the "revolutionary" budget motel was introduced. Later, amenity creep made it possible to recreate the budget motel as the hard budget.
- Enormous amounts of financing were available in the late 1920s, the early 1970s, and the mid-1980s. Ready capital coupled with factors such as income tax advantages, other government incentives, and an overheated economy led to excessive overbuilding, and many properties were forced into bankruptcy or foreclosed soon after they opened. In these boom periods, hotel owners soon discovered what usually happens when a property is poorly conceived, undercapitalized, and mismanaged.
- Distressed hotels have traditionally been valued by looking ahead to a time when recovery is expected and then projecting income and expenses out until a stabilized level of occupancy is achieved. Discounted cash flow analysis is then applied to convert the projected income before debt service into an estimate of value. Using the actual net income of a distressed property would probably understate its market value because most sellers would wait for a recovery to occur unless they were forced to make an immediate sale.

Overall, the lodging industry has been characterized by change. Appraisers must stay abreast of current industry trends and developments to understand and correctly reflect investors' motivations and behavior in this dynamic market.





# Performing a Hotel Market Study and Valuation

Chapter

2

## What Is a Hotel Market Study and Valuation?

Each time a hotel is bought, sold, developed, financed, refinanced, syndicated, or assessed, parties to the transaction may require some type of market study and valuation to indicate its future financial performance. Over the years, the lodging industry has used a variety of terms to describe the process of forecasting the revenues and expenses of a property and estimating its market value. These studies may be called *feasibility studies*, *market studies*, *market studies with financial projections*, *market studies with prospective financial analyses*, *market demand studies*, *economic studies*, *economic feasibility studies*, *appraisals*, *valuations*, *economic valuations*, *economic market studies and appraisals*, or *market studies and valuations*.

Although the studies identified by these names generally produce similar findings, the term *market study and valuation* will be used in this text to describe a scope of work involving estimating the market value of the various assets comprising the business. As discussed in other Appraisal Institute texts, the real estate appraiser should define the scope of work at the beginning of an assignment. Interests that could be appraised include fee simple, leased fee, and leasehold. In the experience of the authors, most hotel appraisal assignments involve the valuation of a fee simple interest. However, this is not always the case with many assignments outside North America. For example, in China the fee simple interest in the building and the leasehold interest in the land are often estimated.

International law and political climate are constantly changing, so it is vital for appraisers to remain apprised of changing regulations. To do so, an appraiser performing work in foreign countries often needs to enlist the support of international partners.

Important elements of international appraisal work include consideration of local appraisal licensing laws, professional affiliations, banking regulations, and currency issues. In some areas, such as the United States, many regulatory systems are particularly well developed, whereas in other regions of the world this is not currently the case. Again, local partnerships are important because such partnerships may be necessary for appraisers to demonstrate competency in any given hotel appraisal assignment.

A market study and valuation for a hotel property generally includes a six-step process:

1. Evaluate the hotel's site and locational characteristics.
2. Quantify lodging demand.

3. Evaluate competitive lodging supply.
4. Measure property-specific characteristics (for an existing hotel).
5. Forecast revenues and expenses.
6. Estimate market value.

Most appraisers are already experts at estimating market value, so this book will concentrate on the process leading up to and including the forecasting of revenues and expenses. The valuation section will focus on the income capitalization approach and show how the cost and sales comparison approaches provide support for the final value conclusion. By following the procedures described in this book, appraisers can obtain the tools needed to perform various types of studies.

## **The Phases of Performing a Hotel Market Study and Valuation**

The appraiser follows a four-phase process to accomplish the goals of a hotel market study and valuation. The phases are outlined in this chapter in logical order, but some of the work required for more than one phase can proceed simultaneously. The phases employed in performing a hotel market study and valuation are:

Phase 1. Define the assignment

Phase 2. Collect the data

Phase 3. Analyze the data

Phase 4. Formulate conclusions

### **Phase 1. Define the Assignment**

Before beginning any type of study, the appraiser must define the assignment. Some questions to consider when defining a hotel market study and valuation assignment are:

- Where is the property located?
- Is the hotel existing or proposed?
- What facilities constitute the property (if it is existing)?
- What is the date of value?
- What is the purpose of the study?
- What property rights are to be appraised (fee simple, leasehold, lease fee, combination)?
- Is there any excess land?
- What elements of the property are being appraised (furniture, fixtures, and equipment; land; building)?
- Who operates or will operate the hotel?
- What is the financial structure (debt and equity) involved?

The answers to these questions are generally provided by the property owner or client and form the basis for defining the assignment.



## Phase 2. Collect the Data

Once the assignment has been defined, the appraiser begins to collect data. The process of data collection starts with determining exactly what types of data are required to complete the assignment. A data collection checklist is often employed to ensure that no essential information is overlooked. The appraiser must then determine where to look for each type of data. Typical data sources include:

- Information provided by the property owner or client
- Primary market research conducted in the field by the appraiser
- Secondary research of in-house data and other secondary sources

The data collection process should be thorough, accurate, and all-inclusive. The results of the market study and valuation are only as accurate as the data collected.

## Phase 3. Analyze the Data

The collected data are evaluated and analyzed by the appraiser to form a basis for drawing conclusions. Sophisticated analytical procedures are used to manipulate the data so that the appraiser can simulate, or model, actual market conditions. This text presents the three procedures employed in hotel data analysis: room night analysis, fixed and variable income and expense forecasting, and the mortgage equity valuation model.

### *Room Night Analysis*

Room night analysis measures the current hotel demand in the area and forecasts future demand. The market share for the subject property is then calculated based on its competitive strengths relative to other hotels in the area. With information regarding the subject's market share over the projection period and the forecasted room night demand, the program can calculate the subject's estimated future percentage of occupancy.

### *Fixed and Variable Income and Expense Forecasting*

The income and expenses for a lodging facility tend to fluctuate with changes in the sales volume and usage of the property. By identifying the portion of a revenue or expense item that is fixed and the portion that varies directly with volume or usage, the fixed and variable income and expense forecasting model provides a basis for forecasting a hotel's net income before debt service.

### *Mortgage Equity Valuation Model*

Hotel investors typically make purchase decisions using a mortgage-equity technique in which the forecasted net income before debt service and residual value are discounted to present value at a discount rate that reflects the cost of debt and equity capital.

In addition to these analytical procedures, the appraiser evaluates the data used in the cost and sales comparison approaches.

## Phase 4. Formulate Conclusions

The appraiser can formulate conclusions based on the Phase 3 analysis. In a typical market study and valuation, a series of intermediate conclusions lead to the ultimate opinion of value. Some of these intermediate conclusions are provided in the following list. Note that these intermediate conclusions will be referred to by number in the data collection checklist that appears later in this chapter.



### **Intermediate Conclusions**

1. Suitability of the site for hotel use
2. Suitability of improvements and amenities (if the hotel is existing)
3. Surrounding neighborhood characteristics
4. Local economic and demographic conditions
5. Current level of room night demand subdivided by market segments
6. Expected future trends in lodging demand
7. Existing and projected competition
8. Subject's relative competitiveness and projected capture of room night demand
9. Subject's projected annual occupancy up to a stabilized level
10. Subject's projected room rates
11. Projected use of and revenue from food, beverage, and banquet facilities as well as other services and amenities
12. Projected operating and fixed expenses
13. Estimated net income before debt service for each year of the projection period
14. Income capitalization parameters such as mortgage interest and amortization rates, loan-to-value ratio, term, equity yield, terminal capitalization rate, and inflation rate
15. Opinion of value by the income capitalization approach
16. Opinion of value by the cost approach (if appropriate)
17. Opinion of value by the sales comparison approach (if appropriate)
18. Reconciliation of each approach and final estimate of market value

### **Assumptions**

The four-phase approach to performing a hotel market study and valuation will be thoroughly described in the chapters that follow. Keep in mind that while these procedures will speed up the process of data analysis, they do not take the place of accurate and complete data collection and experienced judgment in formulating conclusions.

Before proceeding, some of the assumptions made by the authors must be set forth:

1. The term *hotel* is used throughout this text. However, the procedures described for a hotel market study and valuation are equally applicable to motels, motor inns, motor hotels, inns, conference centers, resorts, and other types of lodging properties.
2. This book does not contain a complete discussion of macro supply and demand trends or the theory behind various valuation techniques. It is assumed that the reader already has some familiarity with these topics.
3. Case study examples are provided throughout this book to illustrate the procedures and techniques described. These case studies involve an existing hotel with an operating history as well as a proposed hotel.





## Define the Assignment

The first phase in all hotel market studies and valuations is the creation of a complete and clear definition of the assignment. A clear definition is needed because you cannot determine how to get somewhere until you know where you are going. The appraiser must understand the client's exact needs before embarking on the data collection and analysis processes. A thorough assignment definition is also needed to determine the amount of time and staff required, which must be known to prepare an accurate fee quote.

## Types of Data

To define the assignment, the appraiser assembles data that can be classified as either specific to the property or the assignment. This information generally comes from the client or the property owner. Often much of these data are accumulated via e-mail attachments or over the telephone, but a sophisticated client may put together a formal request for proposal (RFP), which sets forth detailed instructions and assignment requirements.

### Property-Specific Data

Property-specific data relate to the vacant land, whether the hotel is proposed or existing, and the land and improvements if the hotel is existing. Some property-specific data are essential in defining the assignment.

#### *Does the Hotel Exist or Is It Proposed?*

A market study and valuation for a proposed hotel requires considerably more market research and data collection because the appraiser cannot examine the property's financial track record to date.

#### *Property Location*

The exact location of the property is needed. A survey is often helpful, but a street address will often suffice.

#### *Description of the Property*

If the hotel exists, the appraiser should have a complete understanding of what facilities are included in the study. A minimum facilities description would include the guest room count and mix, the number of restaurants and lounges and the capacity of these facilities, the square footage and configuration of meeting and banquet space, the amount of retail space, and a list of other facilities, amenities, and services.

Further description should be included regarding the elements that are being appraised. These elements include the building (foundation, frame, floors, ceilings, doors, windows, roof, HVAC, plumbing, electricity, and property management system); the land (size, shape, topography, dominant and servient easements, liens, ingress, and egress); and the furniture, fixtures, and equipment.

If the hotel is proposed or there is the possibility that the site contains excess land, the appraiser should obtain a description of the parcel. Size, frontage, access, visibility, and topography are important factors to consider in defining an assignment.

*Excess land* is surplus land that is not needed to accommodate a site's highest and best use. It refers to a part or section of the site that is not needed or used by the current hotel facilities or, alternately, land that could be used for an addition to the existing hotel or for another compatible use. The availability of proper zoning, access, visibility, and utilities must be considered when determining whether land can be deemed excess land.





## Assignment-Specific Data

Assignment-specific data include any general information and assumptions provided by the client, such as the purpose of the study, the property rights appraised, the date of value, and the property's financial structure and operator.

### *Purpose of the Study*

To meet the needs of the client, the appraiser must understand the function or functions of the study. This book is concerned with market study and valuation. This type of study can serve a wide variety of purposes:

- To develop an opinion of market value or investment value for potential hotel purchasers
- To estimate market value or investment value for potential hotel sellers
- To interest lenders in providing project financing
- To attract investors for equity syndications
- To resolve property tax disputes
- To establish value for bankruptcy and/or foreclosure
- To value property for condemnation proceedings
- To determine if a proposed hotel will be economically feasible
- To determine if present management is maximizing the value of the property
- To quantify the value of property expansion or renovation

### *Property Rights Appraised*

The property rights appraised are the interests that will be transferred as of the date of value. Some of the interests appraisers typically value in hotel appraisals include fee simple, leasehold, leased fee, management contract, franchise, limited partnership, corporate stock, minority ownership, or some combination of these. Each type of interest includes specific property rights and risks, which must be evaluated and reflected in the value opinion.

### *Date of Value*

Every valuation is made as of a specific point in time. A retrospective value, current value, or prospective value may be estimated. Because the data collected must reflect market conditions as of the effective date of value, the appraiser must know the client's assumed valuation date when beginning the assignment.

### *Financial Structure of the Property*

Depending on the specific purpose of the assignment, it may be necessary to examine the hotel's existing or contemplated financial structure, which usually encompasses both debt and equity components. This information is essential in developing an investment value estimate for a particular hotel investor because specific return requirements must be considered in the income capitalization approach.

### *Operator's Performance Abilities*

When a hotel market study and valuation is performed and a hotel management company is assumed to be the property's long-term operator, the forecast of income and expense should reflect the anticipated performance abilities of that specific operator. Performance abilities typically refer to the company's capacity to operate the property in a manner that maximizes long-term revenues while minimizing long-term expenses.



The performance abilities of hotel management companies vary widely and can have a significant effect on future operating results. The appraiser must determine at the outset whether the market study and valuation is to assume a generic, competent hotel management company or a specific operator. If a specific operator is assumed, the appraiser should request information pertaining to the operator's performance abilities. Helpful data would include financial statements, occupancy and average daily rates for comparable properties, and information concerning the operator's experience in managing hotels of specific types, classes, and franchise affiliations in particular locations. In later chapters of this book, procedures for evaluating these types of comparable operating data and using them to forecast the future operating performance for the subject property will be covered in detail.

Also, a hotel's franchise affiliation, if any, can sometimes have a significant effect on its overall market value. The income and expense forecast should reflect the anticipated franchise. The cost of the hotel's property improvement plan (PIP) should also be taken into account as a capital item. The performance abilities of hotels in different franchise companies vary widely and may have a significant effect on future operating results. Therefore, the appraiser must determine at the outset whether the market study and valuation is to assume a generic franchise company or a specific brand.

Both property- and assignment-specific data are useful in defining an assignment accurately. Hotels are very complex investments, so appraisers should keep in mind that each assignment is unique. Additional information not specifically set forth here may be needed to fulfill the needs and expectations of the client.

## Data Collection

Phase 2 of the hotel valuation process is data collection. The findings and recommendations contained in a hotel market study and valuation depend on the quality of the data gathered and used in the assignment. Appraisers are in the business of data collection and retrieval.

This chapter will describe a process for collecting the data needed to develop a hotel market study and valuation. Primary sources of data will be explored first, and then specific types of required data will be illustrated with directions for their collection. Because the material is arranged in a step-by-step manner, it may not be immediately clear how certain types of data will be used in the analysis. As the process unfolds, however, the use and organization of data should become apparent.

### Primary Sources of Data

Data for a hotel market study and valuation can be obtained from a wide variety of sources. The three primary data sources described as follows reflect the general direction in which the appraiser should start looking for information. The three categories of hotel market study and valuation data are client-supplied data, in-house data, and field data.

#### Client-Supplied Data

The client usually supplies property- or assignment-specific information. Client-supplied data include the information needed to define the assignment as well as additional materials such as plot plans, legal descriptions, architectural plans, financial statements, management contracts, franchise agreements, and budgets. The appraiser should request these data in the proposal contract/en-



gement letter. In fact, some appraisers begin their contractual work schedule when all the requested client-supplied data are actually received. Although there are exceptions, the quality of data provided by the client is generally good; these data tend to be factual rather than subjective in nature.

### ***In-House Data***

Information that is accumulated and maintained by a hotel appraiser in the normal course of business (i.e., not for a specific assignment) is categorized as in-house data. In-house data include comparable sales of hotels, hotel directories, travel surveys, occupancy and average daily rate databases, financial operating statements, trade and professional journals, and economic and demographic databases. The quality of these types of data is generally good. The ability of an appraisal firm to accumulate a significant amount of meaningful in-house data tends to be directly related to the quantity of hotel assignments it performs.

### ***Field Data***

Information that is not supplied by the client or found in the appraiser's in-house database must be collected from the field specifically for the assignment. Field data include site- and location-related descriptions, information on market area characteristics and the nature of local lodging demand, competitive property data, and economic and demographic trends. Field data are usually generated through primary research. Therefore, the quality of these data depends on the data collecting techniques used and the skill of the appraiser performing the fieldwork. Collecting field data for a hotel assignment can be a time-consuming process. It may take anywhere from one to 10 days of work, depending on the firm's familiarity with the specific market area, the market area's size and population density (i.e., urban versus less urban areas as fieldwork in urban areas often consumes relatively more time), and the nature of the assignment.

## **Data Collection Checklist**

The checklist in Exhibit 2.1 illustrates the specific types of data that might be accumulated in performing a hotel market study and valuation. The list is not all-encompassing, but it does indicate most of the major data used by hotel appraisers. Some of the data listed may not be appropriate for all studies; the appraiser should, of course, select only the information that is applicable to the specific assignment.

The checklist is followed by detailed explanations of individual entries. In this explanatory material, each data type is followed by a number in parentheses. These numbers refer to the intermediate conclusions listed in the description of Phase 4 of the valuation process earlier in this chapter. These references are provided to show how particular types of data are used in formulating the many conclusions that must be reached in a hotel market study and valuation.

## **Client-Supplied Data**

The client should supply the following types of data:

- Date of market study and valuation and anticipated opening date if hotel is proposed (intermediate conclusions 9-18)
- Interest appraised: fee simple, leasehold, leased fee, other (12-18)
- Purpose of study (1-18)



## Exhibit 2.1 Data Collection Checklist

- I. Client-supplied data
- II. In-house data
- III. Field data
  - A. Key contacts
    - 1. Market area information
  - B. Property-specific information
    - 1. Land
      - Access
      - Visibility
      - Utilities
    - 2. Improvements
      - General description
      - Building layout
      - Lobby and entrance
      - Guest rooms
      - Corridors and elevator lobbies
      - Food, beverage, and room service facilities
      - Kitchen(s)
      - Meeting and banquet facilities
      - Amenities
      - Back-of-the-house layout
      - Building systems
      - Vertical transportation systems
      - Heating, ventilation, and air conditioning systems
      - Energy management systems
      - Housekeeping
      - Telephones
      - Fire and life safety systems
      - Security
      - Exterior lighting
      - Miscellaneous
  - C. Area-specific data
    - 1. Neighborhood
      - Assessed valuation and real estate and personal property taxes
      - Zoning/building department
      - Planning department
      - Highway/transportation department
    - 2. Economic and demographic data and trends
      - Chamber of commerce
      - Economic development agencies
      - Newspapers
    - 3. Demand generators of visitation
      - Airport authority
      - Convention center and visitors bureau
      - Car rental agencies
    - 4. Competitive environment
      - Competitive hotels
        - Room, bed, or occupancy tax
        - Hotel associations
      - Competitive restaurants and lounges
        - Liquor license laws
    - 5. Sales transactions of competitive hotels
  - D. Other sources of data and information
    - 1. Commercial real estate firms, boards, brokers, developers, and relocation services
    - 2. Local appraisers, counselors, and bankers
  - E. Photographs



- Balance sheets and profit and loss statements for the past three years with supporting schedules (9-13)  
Financial statements should be prepared in accordance with the Uniform System of Accounts for the Lodging Industry.
- Development costs, including land, improvements, and furniture, fixtures, and equipment (16)  
Cost estimates are particularly important for proposed hotels.
- Monthly occupancy and average daily rate over two years (8-10)  
These data are the most important for hotels with seasonal demand patterns.
- Copies or summaries of all leases, management contracts, franchise agreements, title reports, stock or partnership agreements, etc. (13-18)  
Leases include ground, property, food and beverage outlet, furniture, and equipment leases.
- Architectural plans, floor layouts as built, plot plans, survey and legal description (1, 2, 16)  
If a hotel is proposed, a detailed estimate of the project's cost is essential.
- Operating budgets and projections (9-13)  
The owner or operator usually prepares these items.
- Marketing plans (5-11)  
The subject's competitive position and proposed marketing orientation should be evaluated.
- Engineering reports (1, 2, 16)  
Reports should describe current conditions and any need for capital improvements.
- Capital expenditures over the past three years and capital budget (cost) projections (1, 2, 8, 16)  
Past expenditures indicate the need for future capital expenditures.
- Real and personal property tax bills, assessments of other hotels in the market area, name of legal owner (12)  
Assessments of comparable hotels in the market area can be used to verify the fairness of the subject's assessed value or develop a hypothetical assessed value if the subject is proposed.
- Past appraisals and market studies (1-18)  
Studying the work of others can sometimes save time, but all findings should be verified.
- Purchase price, date, terms, contract, and closing statement for the subject property if sold within the past five years (16-18)  
A previous sale price of the subject property may be a good indicator of value.
- Agreement of sale, option, or listing for subject property (16-18)  
Although such data are not strong indicators of value, they can sometimes provide useful information.
- Financing documents and mortgage and equity data (14, 15, 18)  
Such information forms a basis for developing a capitalization rate if the data are recent.



- Union contracts (12)  
Contracts provide insight into labor rates and work rules. The appraiser should follow up to determine how effectively the unions control productivity.
- Franchise reports concerning occupancy, inspection, and reservations (2, 7, 8, 9, 10)  
Hotel franchise companies often provide owners with a wide variety of reports and surveys, including occupancy reports, inspection reports, and reservation reports. An occupancy report compares the occupancy and average daily rate of the subject with other hotels in the same franchise system. An inspection report records the results of periodic physical inspections made by the franchisor. A reservation report documents the reservation activity generated by the franchisor's central reservation system; it sometimes includes a denial report, which indicates the number of guests turned away because the hotel is full. All franchise reports should be requested when the subject property is an existing, franchised hotel.
- Meeting planner's brochure and marketing packages (2, 8-11)  
All property-specific descriptive information should be reviewed before starting fieldwork. Data can also be collected during inspection of the property.
- Trend reports for the most recent month (year to date) and year compared to the prior year (December) from STR Global, formerly Smith Travel Research. These reports are available for most hotels throughout the United States and now in many locations around the world as well.

## In-House Data

In-house data are gathered before fieldwork begins. Sources of such data are:

- Reports on past appraisals performed in the market area (intermediate conclusions 1-18)  
Prior work in the market area can form a base of information that will be updated and refined during fieldwork.
- Personal contacts (1-18)  
Review personal contacts you have made in the market area to identify any that could be helpful in performing the assignment.
- Local hotel associations
- Publications, including the *Official Hotel and Resort Guide*, the *Hotel and Travel Index*, the *Red Book*, the *AAA Tour Book*, *Forbes Travel Guide*, *Trip Advisor*, the *Appraisal Institute Directory of Members*, and the *Lodging DataBank* (1-18)  
Various publications on hotel properties and hotel sales data as well as directories of real estate professionals can be helpful in performing a hotel market study and valuation.
- *National Real Estate Investor* city data (3, 4)  
This is a good source of general data on real estate activity in major markets.
- Federal Aviation Administration (FAA) terminal forecasts (4, 6)  
These forecasts provide estimates of airline boardings for most commercial airports in the United States.



## Field Data

Field data are typically gathered at the subject property and in the surrounding market area. The different types of field data are discussed in this section.

### Key Contacts

The individuals in the following list can serve as primary sources of data and information pertaining to an existing subject property:

- General manager
- Assistant/resident manager
- Director of marketing
- Director of sales
- Director of engineering
- Front office or desk manager
- Controller or chief accountant

### Market Area Information

Key contacts can usually provide the following types of market area information:

- Introductions to other general managers and representatives of the local chamber of commerce, convention and visitors bureau, hotel association, etc. (intermediate conclusions 3-11)  
Ask the subject property's personnel to provide introductions to other data sources in the market area.
- Definition of the primary market area in geographic terms (3-7)  
As a rule of thumb, a hotel market area is the area within 20 driving minutes of the subject property. Defining the market area tells the appraiser where to investigate both supply and demand.
- Demand generator analysis: industry type, location, map (4-6)  
Identify which attractions create local transient and group hotel demand and plot them on a map. Investigate major generators within the market area.
- Major businesses and industries in the market area (4-6)  
List businesses to quantify commercial and meeting demand and forecast future growth trends.
- Major users of the subject property (2, 4-11)  
List the primary users of the hotel and determine whether any users receive discounted rates. This information is useful for conducting demand interviews.
- Major contract business: term, rate, number of room nights (2, 4-11)  
Contract business users such as airline crews typically rent rooms for a specific period of time at a set rate. Appraisers should understand the terms of any significant contract business.
- Competition analysis: competitive hotels, occupancy, average daily rate, and market segmentation (7-10)  
A marketing plan should contain detailed information on all the hotels that are competitive with the subject. This information is used to quantify area demand and determine the subject's relative competitiveness.



- Mode of arrival and transportation provided (1, 5-11)  
What modes of transportation do guests generally use to travel to the subject property? This information shows the importance of access and visibility and indicates the relative competitiveness of the subject.
- Market segmentation (5-11)  
Determine the types of travelers (e.g., commercial, group/meeting, leisure) as a percentage of the total usage. Note any changes in the percentages that occur over the year. This information can be used to determine the suitability of the improvements and amenities and project future hotel usage.
- Average length of stay (2, 9-11)  
How long does the average guest stay at the subject? Identify by market segment.
- Points of origin and feeder markets (5, 6)  
Where do the guests come from? Identify by market segment for both the subject and the market area.
- Seasonality: weekly, monthly, or by segment (5-11)  
How does usage change over the year? Identify by market segment for both the subject and the market area.
- Unaccommodated demand by segment (5, 8, 9)  
Quantify the amount of demand that cannot be accommodated because facilities are filled. Identify for both the subject property and the market area. These data are important if new supply enters the hotel market.
- Double occupancy percentage (10, 11)  
Determine the average number of guests per room for each market segment. This information affects the subject's room rates and usage.
- Indications of rate resistance, by segment (5, 8-10)  
What market segments display rate resistance and at what rate level does this begin? This information influences future rate increases.
- Rack rate strategy: usage of yield management (5, 8-10)  
What type of yield management, or hotel pricing policy, does the subject use? How does it function?
- Percentage of reservations from franchise (8-11)  
How effective is the franchise identification in generating room reservations? If the subject is proposed, the franchiser can sometimes provide estimates.
- Amount of travel agent commissions (8-11)  
How much business is generated from travel agents?
- Unions (12)  
Which hotels in the market area are operated by unions? This affects the labor component of operating expenses.

## Property-Specific Information

### Land

- Description of the size, topography, and shape of the land (1, 16)  
Data obtained from the plot plan or survey is important for evaluating access and visibility and the site's suitability for new improvements.





- Municipalities (3, 4, 12)  
Determine the municipality in which the subject is located and identify other municipalities in the market area. This information is needed to research sources of local economic, demographic, and municipal information.
- Area or acreage (1, 2, 16)  
The site area found on the plot plan or survey determines the number of units for a proposed hotel and the amount of excess land for an existing hotel. Land value, which is calculated in the cost approach, is usually based on area.
- Excess land: salability, highest and best use (16, 18)  
If the subject site contains surplus land that could be used for expansion or another use, additional value may be present.
- Plot plan, survey (12)  
These documents are sources of land information.
- Frontages (1, 8-11)  
Frontage determines access and visibility.
- Adjoining uses (3, 8-11)  
Inventory the land uses surrounding the subject property. Surrounding land uses can enhance or detract from the value of the subject property.
- Grade compared to surrounding roads, uses (1, 2, 16)  
Grade level can impact access, visibility, and development costs.
- Contours, slope, drainage (1, 2, 16)  
Topography affects development costs.
- Flood hazard insurance (12)  
If extra insurance is required, a hotel's fixed expenses increase.
- Soil tests, water table tests, percolation tests, flood zones, and other engineering studies (1, 2, 16)  
These considerations can affect a proposed hotel's development costs.
- Air rights, subsurface rights, and water rights (16, 18)  
Additional rights generally enhance a property's value.
- Landscaping (1, 2, 8-12, 16)  
Landscaping can significantly influence the competitiveness of a hotel.
- Easements and other restrictions (16, 18)  
Restrictions can have a positive or negative impact on property value.

#### Access

- North-south roads and east-west roads (1, 8-11)  
List immediate and nearby roads and highways. Investigate both the immediate and secondary access for all modes of transportation.
- Modes of transportation (1, 8-11)  
How do guests reach the subject property? Remember, access may be accomplished by more than one mode of transportation.
- Direct access patterns (1, 8-11)  
Describe the access to the subject property by the primary modes of transportation. Describe adjacent and nearby highways, including the number of lanes, medians, turn restrictions, traffic signals, one-way streets, curb cuts, and limited-access roads.



- Future access (8-11)  
How is access likely to change in the future?
- Distance to major facilities (8-11)  
Calculate the distance in miles and time to highways and interchanges, airports, mass transportation, convention centers, major demand generators, and competitive lodging facilities.
- Competition (8-11)  
Compare the subject's access to that of the competition.

### Visibility

- Evaluate visibility from nearby roadways (1, 8-11)  
Consider how long the subject is visible to drivers and their ability to exit the highway after the subject becomes visible.
- Visibility from nearby demand generators (1, 8-11)
- Visibility from nearby competitive hotels (1, 8-11)
- Building height and depth (1, 2, 8-11)  
How does the subject's building height and depth affect visibility?
- Slope of land (1, 8-11)  
How does the topography of the subject parcel affect visibility?
- Obstructions (1, 8-11)  
Evaluate all obstructions to visibility, both existing and proposed.
- Signage: location, visibility, condition (1, 8-11)  
Describe the subject's signage and evaluate its visibility. Can it be improved?
- Views from the subject's guest rooms, food and beverage outlets, etc. (1, 8-11)  
Evaluate visibility during the day and night as well as during different seasons (for example, consider whether trees around the site are coniferous or deciduous). Consider how visibility is likely to change in the future.

### Utilities (Intermediate Conclusions 2, 12)

- Location, capacity, and provider  
Investigate the availability and cost of the following utilities:
  - Electricity: local rates, normal demand charges, quantity discounts, seasonal adjustments
  - Natural gas: local rates, quantity discounts, seasonal adjustments
  - Oil: tank size, local prices, quantity discounts
  - Water: potable, hot, and chilled
  - Steam
  - Telephone
  - Internet
  - Cable television
  - Sewage
  - Liquefied petroleum gas (LPG), propane
  - Trash removal
  - Storm drainage



- Alternative sources  
If a utility is not available, consider any alternative sources. What will it cost to make it available?

### ***Improvements (Intermediate Conclusions 2, 8-12, 16, 18)***

The following portion of this checklist is concerned with the subject improvements. During the property inspection, the appraiser focuses on the physical and functional characteristics of the hotel, paying special attention to:

- Age and condition of the land and improvements as well as furniture, fixtures, and equipment
- Immediate and future need for upgrading and renovation
- Physical attributes of the property compared to the competition  
Evaluate the facilities offered and their condition, class, and desirability.
- Functionality of the property's layout and design  
What impact does design have on service, maintenance, labor expenses, and security?
- The improvements' effect on future revenues, expenses, and profits

### **General Description and Building Layout**

- Plans and physical description  
Obtain all necessary information from the property owner
- Year opened
- Descriptions and dates of expansions and renovations
- Number of structures
- Location of buildings on site
- Number of stories
- Building configuration: H, L, U, or I
- Total square footage
- Landscaping and sidewalks
- Exterior facade: architectural style, materials, balconies
- Future development plans, including project description and costs
- Current engineering reports
- Compliance with the Americans with Disabilities Act (ADA) and adequate number of ADA-equipped rooms

### **Lobby and Entrance**

- Porte cochere
- Valet parking stand
- Shuttle bus pickup and parking area
- Doors: automatic, airlock vestibule, bell stand
- Luggage storage
- Concierge desk
- Restrooms
- Phones: house and public
- Front desk: visibility to incoming guests, elevator visibility, reservation and registration systems



- Location of executive offices
- Lobby: decor, size, ceiling height
- Lobby layout and circulation
- Layout and circulation on other floors

### **Guest Rooms**

- Total number of rooms, broken down by type of room so all are accounted for
- Number of connecting rooms
- Walking distance from facilities
- Size, ceiling height, terraces
- Date when furnishings were last replaced, typical furniture inventory
- Refurbishment schedule
- Amenities: extra phones, multiline phones, voicemail, Internet access, computers, shoeshine, cable TV, VCR, etc.
- Doors: construction material, peephole, type of lock
- Closets: size, type of doors
- Wall material: plaster, drywall, concrete
- Windows: material, operation, glazing
- Sprinklers, smoke detectors, other life safety equipment
- Rooms for the handicapped
- Nonsmoking rooms
- Bathroom lighting and amenities
- ADA-equipped facilities

### **Corridors and Elevator Lobbies**

- Double-, single-loaded
- Interior, exterior
- Direction and width
- Lighting type(s), sufficiency of light level
- Ceiling height
- Wall covering, wainscoting
- Floor covering
- Elevator lobby furnishings
- Ice machine
- Soda and snack machines
- Maid, linen closets
- Life safety systems (smoke, fire, evacuation plan, location cards on all room doors)

### **Food, Beverage, and Room Service Facilities**

- Seating capacities, meals served, and hours of operation
- Copies of menus
- Decor, theme, style, and quality of furnishings
- Bar
- Back-of-the-house access from kitchen(s)



- Description of room service facilities
- Separate outside access, visibility of separate entrance
- Access to restrooms
- Entertainment policy
- Point-of-sale accounting system
- Number of meals served (covers) per meal period per outlet
- Average turnover per meal period per outlet
- Average check per meal period per outlet
- Estimate of in-house capture and outside capture per meal period
- Square foot area and rental rates of banquet space

#### **Kitchen(s)**

- Location(s)
- Access and distance to receiving and storage areas, food and beverage outlets, and meeting rooms
- Description, quality, quantity, configuration, and condition of equipment
- Adequacy of size and layout

#### **Meeting and Banquet Facilities**

- Size, name, and capacities of each meeting room, including floor plan and locations
- Mix and number of breakout rooms
- Decor
- Entrance, porte cochere
- Service and public corridors to and from meeting rooms
- Proximity to kitchen
- Adequacy of audiovisual equipment, furniture, and meeting support amenities
- Furniture storage area
- HVAC zone control

#### **Amenities**

- Swimming pool: shape, indoor or outdoor, type of enclosure, type of heating system
- Tennis courts and their lighting
- Golf course: number of holes and yards, annual rounds played, fees
- Jogging trails
- Type and inventory of health/exercise equipment: sauna, steam bath, whirlpool, massage, aerobics
- Description of spa
- Game rooms
- Facilities for horseback riding, ice skating, bowling, boating, sailing, fishing, water skiing, snorkeling, wind surfing, skiing, racquetball, squash, and other sports
- Business services: computer, Internet, fax, typing, express mail, etc.



### **Back-of-the-House Layout**

- Employee entrance, lockers, rest areas, cafeteria, access pattern
- Security: timekeeping, personnel, purchasing offices
- Receiving/loading dock: guest view, lift
- Storerooms
- Engineering: shops, paint, TV, locks, carpenter

### **Building Systems**

- Structural support
- Foundation type
- Framing: steel, precast concrete, reinforced concrete
- Walls: load-bearing and non-load-bearing
- Floors
- Windows
- Doors
- Roof: age, condition, sloped or flat
- Roof material: asphalt shingle, built-up felt and tar, tar and gravel, slate, metal, clay tile
- Parking: number of spaces, indoor or outdoor, valet service, cost to guests, percentage of use by others

### **Vertical Transportation Systems**

- Passenger and service elevators: number, floors served, manufacturer, cable or hydraulic, capacity, feet per minute, automatic or manned, control system (mechanical or electrical relays, computerized loan system)
- Escalators: number and floors served
- Dumbwaiters/freight lifts: number and floors served
- Stairs

### **Heating, Ventilation, and Air-Conditioning Systems**

- Type of heating system:
  - Hot water, steam, electric
  - Fuel type
  - Two-, three-, or four-pipe, forced-air delivery
  - Simultaneous heating and cooling
- Boilers and burners: manufacturer, model number, age, condition
- Water heater: manufacturer, model number, size of holding tank, age and condition
- Resistance and heat exchanger: manufacturer, model or capacity, age and condition
- Heat pump: manufacturer, model number, capacity, age and condition
- Type of cooling system: central/chilled water, heat pumps, packaged terminal air conditioning (PTAC)
- Chiller and cooling tower: manufacturer, model number, age and condition
- Zones: guest rooms, meeting rooms, public space control



### **Energy Management System**

- Type of system: manufacturer and model number
- Individual thermostats in guest rooms, meeting rooms, and public spaces

### **Housekeeping**

- Offices, storage, sorting areas
- Trash chute
- Linen chute
- Exhaust fan
- Washer(s) and dryer(s): manufacturer, model number, quantity, energy source, guest laundry and contract

### **Telephones**

- Type of system, manufacturer, and model number
- Type of call accounting, least-cost routing
- Other special functions such as two lines, call waiting, call forwarding, voicemail

### **Fire and Life Safety Systems**

- Smoke detectors (local or wired)
- Heat detectors (local or wired)
- Sprinkler system
- Fire extinguishers
- Pull stations: control, communication system, manufacturer, model
- Annunciator panel and location
- Emergency lighting and battery backup
- Exit signage and battery backup
- Fire hoses, manufacturer, and model
- Standpipes
- Kitchen range hood: CO<sub>2</sub> system or dry system
- Public address system
- Emergency generators manufacturer and model number

### **Security**

- Electronic surveillance equipment
- Motion-sensitive lighting

### **Exterior Lighting**

- Sodium, fluorescent, incandescent, spot, mercury, halogen bulbs
- Building signage

### **Miscellaneous**

- Presence of asbestos
- Presence of lead paint
- Presence of urea-formaldehyde foam insulation
- Building inspection reports
- Health inspection reports
- Underground tanks



- Estimated deferred maintenance
- Estimated functional obsolescence

## **Area-Specific Data (Intermediate Conclusions 3-12)**

### ***Neighborhood (3, 4, 6)***

- Neighborhood boundaries and uses  
A neighborhood is a group of complementary land uses that are similarly affected by the operation of the forces that affect property value. The geographic boundaries of the subject's neighborhood are indicated by land use changes, transportation arteries and bodies of water, and changes in elevation and topography.
- Define the characteristics of the neighborhood and describe how these characteristics could impact the subject's ability to generate revenue. These characteristics include:
  - Residential, commercial, retail, or industrial use
  - Rural, suburban, city, or central business district (CBD)
  - Age, condition, and economic trends
- Neighborhood buildings  
Make an inventory of the improvements surrounding the subject property and consider what effects they might have on the subject's revenue-generating ability. Investigate the following factors:
  - Types of building improvements
  - Style, size, density, vacancy levels, rental rates, and trends
  - Effective ages and maintenance or condition
  - New development and construction
  - Competitive facilities, particularly food and beverage
  - Immediate generators of visitation
  - Adverse conditions such as noise or other nuisances
- Future trends and potential changes in neighborhood characteristics  
What impact will these changes have on the subject property?

## **Assessed Valuation and Real Estate and Personal Property Taxes (Intermediate Conclusion 12)**

- Estimate of future property taxes for the subject  
Evaluate local assessing practices and determine which jurisdictions levy real estate and personal property taxes.
- Current assessment of the subject  
Obtain the name, address, and phone number of the assessor and a tax map showing the subject acreage in square feet and length of boundaries. Research lot and block number, government survey system, tax identification number, current assessed value of land and building, and assessment date.
- Basis for assessment: income capitalization approach, cost approach, sales comparison approach, change upon sale  
Consider how the assessed value is calculated for land, improvements, and personal property.
- Date and frequency of assessment, fiscal year
- Five-year and current tax history





- Future trends in equalization rates, assessed values, and mill rates for the subject's taxing jurisdictions
- Comparable hotel parcel numbers and assessments of land and buildings  
Obtain information on how comparable hotels in the area are assessed. What are the assessed values of comparable hotels for land, improvements, and personal property on a per-room basis?
- Tax abatement  
Does the subject property qualify for or receive any form of tax abatement? If so, how is it calculated and what impact does it have on property tax liability?
- Special and future assessments and reassessments  
Investigate probable future changes in assessments, including any special assessments and tax liabilities. The assessing department can sometimes provide information related to local hotel trends, including proposed hotels or hotels under construction, land sales of hotel sites, sales of hotels, rates and occupancies of local hotels, and names of hotel owners

#### **Zoning/Building Department (Intermediate Conclusions 2-12)**

- Jurisdiction covering the subject property and, when appropriate, adjacent jurisdictions
- Name, address, and phone number of all contacts
- Proposed hotel development in market: names of developers, hotel companies, etc., estimated completion dates
- Hotels under construction: status of each proposed hotel, description of approval process
- Historical and current zoning of subject  
Obtain a zoning map and a copy of the zoning regulations. Investigate the following:
  - Conforming or nonconforming use of the subject property
  - Height restrictions
  - Lot coverage, number of units, size restrictions, and floor-area ratio
  - Setback, parking, sign, and other types of restrictions
- Moratoriums on building, utilities
- Environmental impact study required for new development
- Zoning of surrounding land uses
- Future of neighborhood
- Floodplain areas
- Zoning trends for the area: potential for/probability of zoning changes, building permits (five-year history, number, and dollar value)
- Ability to expand subject property

#### **Planning Department**

- Jurisdictions encompassing the subject property and adjacent jurisdictions
- Occupancy and average daily rates of existing hotels
- Proposed hotels, additions, expansions, or renovations
- Master (renewal) plans for development



- Pertinent documents: land use map, economic/demographic studies, transportation studies
- Directions of growth: industrial, commercial, redevelopment
- Availability of public development or redevelopment funds and tax incentives for hotels
- Proposed hotels or hotels under construction

#### **Highway/Transportation Department (Intermediate Conclusions 3-11)**

- Name, address, and phone number of all contacts
- Origination and destination studies
- Traffic flow/count maps
- Future changes in transportation: road improvements and traffic rerouting roadway changes such as left-turn lanes, lights, curb cuts, medians, turn restrictions, and additional lanes
- Historic and current traffic counts, toll receipts
- Proposed hotels or hotels under construction

#### ***Economic and Demographic Data and Trends***

During fieldwork, the appraiser collects economic and demographic data describing the local economy and population. Data from the past five to 10 years provide a useful benchmark, but projected data are more useful for predicting future trends. Economic and demographic information is used to forecast changes in lodging demand as well as food and beverage usage over the projection period. The data to be collected include the following:

- North American Industry Classification System (NAICS) employment within the local market area
- Population: migration vs. births, peak vs. annual
- Population age distribution
- Income levels and effective buying income
- Retail sales
- Sales at eating and drinking establishments
- Office space occupancy levels, absorption trends
- Major businesses by employment sector, number of employees, ability to generate hotel demand
- Industrial space occupancy levels, absorption trends
- Unemployment trends
- Housing starts
- Building permits: number, dollar value
- Area maps
- Major generators of visitation room/bed tax data
- Visitor statistics, area attractions



### **Chamber of Commerce and Economic Development Agencies (Intermediate Conclusions 3-12)**

Local chamber of commerce and economic development agencies can often supply much of the previously described economic and demographic data.

The following information should be sought:

- Names, addresses, and phone numbers of all contacts
- Area description: growth, economic and population trends, industries, demand generators
- Businesses entering and leaving the area
- Businesses that are significantly expanding or contracting
- Historical and projected visitation of area attractions
- Introductions to area officials, hotel associations, etc.
- Occupancy and average daily rates at existing hotels, area-wide average
- Proposed hotels and hotels under construction
- Office, industrial, and retail space inventories, vacancy rates, and absorption rates
- Miscellaneous economic and demographic data

### **Newspapers (Intermediate Conclusions 1-18)**

- Economic and demographic data from the advertising/research department
- Articles on recently announced commercial/hotel projects and stories on recent hotel or land sales from the real estate department

### ***Demand Generators of Visitation (3-11)***

The appraiser should develop a list of market area demand generators.

- Typical hotel demand generators include:
  - Major companies
  - Office and industrial parks
  - Scenic sites
  - Hospitals: local, regional, or national specialty
  - Military installations
  - Colleges
  - Amusement parks
  - Resort facilities
  - Government offices
  - Residential developments
  - Racetracks
  - Sports stadiums
  - Historic attractions
  - Retail shopping
  - Theaters
  - Museums
  - World's and state fairs
  - Sporting events
  - Festivals



- Shows
- Historic events
- National and state parks
- Courts
- County seats and state capitals
- Information collected about each generator
  - Description
  - Proximity to subject
  - Types of visitors
  - Visitor counts, admission charges, recent changes
  - Origin of visitors
  - Accommodations required
  - Season of visitation
  - Hotels currently used and rates typically paid
- New generators entering the market

#### **Airport Authority (Intermediate Conclusions 4-12)**

If the market benefits from a nearby airport, obtain data related to its usage:

- Passenger and cargo traffic for the past five years, projected and monthly fluctuations
- Airlines currently serving the airport, number of flights, categories of aircraft, and anticipated changes to these factors
- FAA terminal forecast of projected enplanements
- Physical description of airport
- Airport expansion plans
- Cities served (origination)
- Restrictions on aircraft size and times of usage, number of days airport is closed annually

#### **Convention Center and Visitors Bureau (Intermediate Conclusions 4-11)**

A convention center can be a major generator of hotel demand. Convention centers and area attractions are often promoted by a visitors bureau.

- Names, addresses, and phone numbers of all contacts
- Physical description of convention center, including size, capacities, age, and facilities
- Historic and projected number of conventions and delegates, seasonality
- Average expenditure per conventioner
- Average length of stay, average convention size
- Future calendar, number of future events
- Marketing plan
- Promotion budget: past five years and projected, deficit funding
- Nature and type of events: local, state, regional, national
- Visitor statistics
- Hotel association



- Proposed hotels and hotels under construction

#### **Car Rental Agencies (Intermediate Conclusions 4-11)**

- List of major companies renting cars
- Number of cars rented monthly, annually
- Average length of rentals
- Renter's points of origin

#### **Competitive Environment**

##### **Competitive Hotels (Intermediate Conclusions 5-11)**

Much fieldwork is directed toward investigating competitive hotels. The data collected are used to quantify existing lodging demand and evaluate the relative competitiveness of area hotels.

- Names and addresses of competition
- Name of owner, management company, franchisor
- Location and distance from subject and demand generators
- Access and visibility
- Year opened
- Number of rooms
- Various room types: king, double-double, ADA-equipped, etc.
- Square foot area
- Rates (high, medium, or low)
- Type of construction
- Income-producing facilities
  - Name of restaurants, number of seats, type of service, hours of operation
  - Other food and beverage service
  - Banquet and meeting rooms
  - Amenities
- Interior or exterior corridors
- Condition and renovation plans
- Expansion plans
- Layout and functional utility
- Brochure description
- Published rates and special rates
- Occupancy and average daily rates, existing and historic trends
- Percentage of reservations from central reservation system
- Market segmentation (commercial, group/meeting, leisure)
- Usage of food and beverage facilities
- Seasonality of demand and usage
- Major customers
- Frequent travel programs
- Special services provided
- Unionization of workers



- Proposed hotels and hotels under construction
- Additions and renovations of existing hotels
- Hotels for sale or recently sold in market area
- Photographs of properties

### **Room, Bed, or Occupancy Tax (Intermediate Conclusions 4-10)**

Many jurisdictions impose a room tax, which is typically based on a percentage of rooms revenue. Tax data are often available and show revenue trends for the market area and sometimes for individual properties.

- Definition of taxable properties, change in number of taxable rooms
- Method of tax computation
- Historical taxes per month and for the past five years, future projections
- Identification of tax by property, occupancy and rate, if available
- Historical tax rates and changes in rates

### **Hotel Associations (Intermediate Conclusions 5-11)**

Some market areas have organized hotel associations, which can provide useful information.

- Names, addresses, and phone numbers of all contacts
- List of existing hotels, market segmentation, rates, occupancies
- Current and historical total room count
- Taxes per room or bed
- Hotels recently withdrawn or added to supply
- Sales transactions involving hotels
- Proposed hotels or hotels under construction

### **Competitive Restaurants and Lounges (Intermediate Conclusions 7-11)**

The following information is sometimes helpful in analyzing the competitiveness of the subject's food and beverage facilities.

- Name and address of competing facility
- Number of seats
- Year opened
- Meals served, days open
- Affiliation
- Name of owner
- Renovation, expansion plans
- Seasonality: weekly, monthly
- Type of menu, service
- Type of patrons and their ages and income levels
- Decor/theme
- Entertainment policy
- Average check amount
- Covers, turnover
- Annual sales



- Reputation
- Location relative to subject property
- Condition

### **Liquor License Laws (Intermediate Conclusions 2-11)**

The availability of a liquor license for a proposed hotel and the ability to transfer the liquor license of an existing hotel can be important considerations.

- Acquisition, time, cost, limitations, type(s) of licenses required
- Restrictions: ratio of liquor to food, open to public, required unit of sale, minimum age

### **Sales Transactions of Competitive Hotels**

- Local databases that accumulate information on property transfers
- Hospitality Market Data Exchange (a national clearinghouse of sales transactions involving hotels and motels)

### **Other Sources of Data and Information**

#### ***Commercial Real Estate Firms, Boards, Brokers, Developers, and Relocation Services (Intermediate Conclusions 1-18)***

- Apartments that accommodate extended-stay demand (less than six months)
- Inventory of commercial office, industrial, and retail space, vacancy rates, historic absorption, anticipated growth
- New projects, expansions, renovations  
Useful data may include developer, location, size (in square feet), opening date, description of major committed tenants, projected occupancy, and tenant mix. Tenant mix by NAICS code and national vs. local company may indicate a hotel's ability to generate room nights.
- Geographic patterns of growth in office, industrial, retail, and residential space
- Sources and types of tenants
- Sales transactions involving hotels
- Proposed hotels or hotels under construction

#### ***Local Appraisers, Counselors, and Bankers (Intermediate Conclusions 1-18)***

- Land and hotel sales
- Occupancy and average daily rate
- Market segmentation
- Proposed hotels, additions, and expansions
- Economic and demographic data
- Land use, value, and property tax rate trends

### **Photographs**

For a permanent record of site and neighborhood characteristics, the appraiser may want to take photographs depicting the following:

- Access to and visibility of subject property
- Entrance and sign
- View of subject (from all four directions)



- View from subject (from all four directions)
- Traffic (from all four directions)
- The interior of the lobby, guest rooms, food and beverage outlets, meeting space, recreational facilities, back of the house, and mechanicals
- Surrounding land uses
- Neighborhood and nearby demand generators
- Competitive hotels
- Significant demand generators

This data collection checklist is quite detailed. Appraisers should use a checklist such as this in a hotel market study and valuation to ensure that all appropriate data sources are contacted and all relevant information is collected. It should be noted that not all the data outlined in this checklist is relevant for every appraisal. The appraiser should collect only the data that is required for the situation at hand.

## Data Collection Techniques

Once the type(s) and source(s) of the necessary data have been defined, various techniques can be applied to collect the data. Appraisers know that some types of data are readily available while others must be carefully researched. Some data sources may willingly assist the collection efforts, while others may try to withhold accurate information in an attempt to influence the ultimate results. By using proven data collecting techniques, however, appraisers can obtain the best information available and usually screen out any bias or self-interest.

Data collection can be accomplished with a combination of techniques:

1. Personal observation
2. Review of published and Internet data
3. Face-to-face and telephone interviews
4. Written surveys

The order of this list reflects the perceived reliability of the data collected by each technique. For example, information derived from personal observation is highly reliable, and an experienced appraiser should not allow himself or herself to be influenced by self-interest or bias. Published data, Internet data, and interviews are somewhat less reliable. Written responses are the most suspect because each respondent is an isolated, unknown party. By understanding the shortcomings of each technique, the appraiser can employ the techniques in a manner that will produce reliable results. All four of the data collecting techniques will be discussed using the data collection checklist presented in this chapter as a framework for the types of information needed for a hotel market study and valuation.

### Personal Observation

Personal observation is generally employed during fieldwork. The appraiser visits the site, the neighborhood, and the market area; inspects the subject property (if existing), competitive properties, and demand generators; and makes any other observations necessary to formulate the required conclusions. The appraiser personally observes the following factors:

1. Suitability of the site for hotel use
  - Size





- Frontage
  - Topography
  - Excess land
  - Landscaping
  - Access
  - Visibility
  - Support amenities
  - Utilities
  - Parking area
2. Suitability of the improvements and amenities
    - Building layout and design
    - Age and condition
    - Functionality
  3. Desirability of the surrounding neighborhood
    - Types of area land use: retail, commercial, industrial
    - Age and condition of nearby improvements
    - New development(s) underway
    - Highway patterns
    - Demand generators
  4. Existing and projected competitive environment
    - Competitive lodging facilities (existing and proposed)
      - Location, access, and visibility
      - Facilities and amenities
      - Age and condition
      - Chain affiliation
      - Competitiveness
    - Competitive food, beverage, and banquet facilities
    - Competitive amenities
  5. Market sales of competitive hotels

Personal observation makes use of the appraiser's experience and hotel expertise. Intermediate conclusions are formulated by comparing the observations and the outcomes of previous assignments with the observations made during the current assignment. Personal observation is the most reliable data collection technique because it is not influenced by external bias, which can slant the results derived from other techniques.

### **Review of Published and Internet Data**

Published data include all information gathered by businesses and organizations that can be considered within the public domain, meaning that it is readily available to anyone either for free or for a price. These data are generally reliable and form the basis for many important conclusions derived in hotel market studies and valuations. Some conclusions that can be supported by published data sources are outlined in Exhibit 2.2 and explored in the discussion that follows.



## Conclusions

- Neighborhood characteristics
- Local economic and demographic conditions
- Current room night demand by market segment
- Existing and projected competitive environment
- Expected future trends in lodging demand
- Projected usage and revenue from food, beverage, and banquet facilities, as well as other services and amenities
- Projected operating and fixed expenses
- Income capitalization parameters such as mortgage interest and amortization rate, loan-to-value ratio, term, equity yield, terminal capitalization rate, and inflation rate
- Opinion of value via cost approach
- Opinion of value via sales comparison approach

### Published Data Sources

- Zoning manuals, master plans
- Economic and demographic data
- Directories of lodging facilities
- Occupancy and average daily rate data
- Economic and demographic data
- Hotel operating statistics
- Hotel operating statistics
- Mortgage rate data
- Construction cost data
- Hotel market sales data

## Zoning Manuals

Published by local municipalities, zoning manuals describe the uses permitted under a jurisdiction's zoning regulations. Zoning manuals establish what can be constructed and set forth development restrictions such as site density, building height, setbacks, and site use. Hotel market studies and valuations generally include a preliminary investigation of zoning to ensure that the subject property is in conformance (or that the proposed property is possible) and that the surrounding zoning allow uses that will enhance the neighborhood and the subject's long-term economic viability. The property owner has the ultimate responsibility to see that the project is developed in accordance with local regulations.

## Master Plans

Most municipalities have master plans that describe current and future land use policies. These plans are usually prepared periodically by the local planning department and indicate how a municipality views development and real estate trends.

## Economic and Demographic Data

Economic and demographic data refers to a wide range of statistics relating to historic and future trends in the economy as well as changes in population. This type of data may be produced by numerous sources, including econometric firms, government agencies, and professional journals.

Economic and demographic data are studied to estimate future changes in hotel demand. An appraiser begins a hotel market study by estimating the current or base level of hotel demand. The appraiser employs a unit of demand known as a *room night*; one guest room occupied for one night equals one room night. The current level of demand is of interest, but the future level of hotel demand in each projected year is more important. This calculation establishes the estimated area-wide occupancy. Obviously, future hotel demand will increase, decrease, or remain level. Economic and demographic data provide a basis for measuring future changes by determining the cause of movement in hotel room night demand based on similar trends.

When selecting economic and demographic data for use in a hotel market study and valuation, the appraiser looks for statistics that are likely to reflect future variances in lodging demand. The key to this concept is the future. Because



feasibility and value are tied to the present worth of future benefits, historic data trends are not important unless they suggest future events. Economic and demographic forecasts are far more meaningful because they represent a view of the future and can be used to model probable changes in lodging demand.

Unfortunately, most published economic and demographic data merely provide a view of history; appraisers rarely have access to a large amount of data representing future economic expectations. During fieldwork, all relevant economic and demographic data should be accumulated and researched.

### Sources of Economic and Demographic Data

Other economic and demographic data are gathered during fieldwork and from discussions and interviews with local officials and other knowledgeable individuals. Exhibit 2.3 lists information that is normally used in the economic market study and appraisal of hotels and indicates likely data sources. Keep in mind that the following data represent secondary research and, in some cases, the qualitative information associated with it may be subject to the bias of the organization providing the data.

## Market Area Information

When conducting research, the Internet can be a useful resource for information concerning the subject property's market area. The following websites create a good base of market area information.

### American Hotel and Lodging Association

[www.ahla.com](http://www.ahla.com)

This website features information on hotel news and industry trends.

### Bureau of Labor Statistics

- [http://data.bls.gov/PDQ/servlet/SurveyOutputServlet?series\\_id=LNS14000000](http://data.bls.gov/PDQ/servlet/SurveyOutputServlet?series_id=LNS14000000)

This website provides access to US unemployment rates on a monthly basis.

- <http://data.bls.gov/PDQ/outside.jsp?survey=la>

This website allows the researcher to create customized tables based on historical and current information needs in terms of unemployment rates for counties, cities, metropolitan statistical areas, and states.

### Corporate Average Yield Rate and Treasury Bill Rates

[www.federalreserve.gov/releases/h15/current](http://www.federalreserve.gov/releases/h15/current)

When applying the income capitalization approach section of an appraisal, the appraiser should present the current average yield on a Corporate A bond as well as the treasury bill rates. This website provides data that include this information for each week, ending every Friday.

### Economagic

[www.economagic.com](http://www.economagic.com)

This website provides a wide range of demographic information on many markets in the United States. It is comprehensive, extensive, and exhaustive in its range of information and can be helpful once the user learns how to search within the site for current information. Generally, this website is used for identifying demographics such as population, unemployment rates, per capita personal income, and the like.

### Government Per Diem Rates

[www.gsa.gov/portal/category/21287](http://www.gsa.gov/portal/category/21287)

Appraisers often conduct assignments in markets in which a significant amount of demand is derived from governmental entities such as associations, agencies, defense contractors, and the like. In these markets, a significant amount of hotel revenue and the average daily rate is driven by the government per diem rates. An understanding of the current, future, and historical per diem rates in a specific market is very useful in an analysis of average daily rate growth and direction in a market. This website allows the researcher to check the per diem rates for every area of the United States for the current year and going back to 1997.

### Hospitality Net

[www.hospitalitynet.org/index.html](http://www.hospitalitynet.org/index.html)

This website features trends and news in the hospitality industry. Appraisers are encouraged to receive a free subscription to this site.



## Exhibit 2.3 Other Data Sources

Type of Data	Sources
Office space absorption	Real estate brokers Chamber of commerce
Office vacancies	Real estate brokers Chamber of commerce
Office space under development	Real estate brokers Chamber of commerce Building department
Inventory of office space	Real estate brokers Chamber of commerce
Inventory of retail space	Real estate brokers Chamber of commerce
Inventory of industrial space	Real estate brokers Chamber of commerce
Highway traffic counts	Highway department/department of transportation
Origination and destination studies	Highway department/department of transportation
Major business by employment sector and number of employees	Chamber of commerce Economic development authority Department of labor
Unemployment percentages	Department of labor
Number and value of building permits	Building department
Housing starts	Building department
Hotel rooms tax	Tax collector
Number of visitors to area attractions	Visitors and convention bureau
New businesses entering area	Chamber of commerce Economic development authority
Businesses leaving area	Chamber of commerce Economic development agency Visitors and convention bureau
Convention center use (number of groups, number of attendees, types of events, expenditures per attendee, average length of stay, hotel headquarters, advertising budget)	Visitors and convention bureau
Assessed values	Assessor
Air cargo data	Federal Aviation Authority Airport authority
Tourist visitation	Tourism authority Visitors and convention bureau

### Hotel Online

[www.hotel-online.com](http://www.hotel-online.com)

This website also provides useful information regarding trends in the hotel industry, including acquisitions, mergers, construction projects, and so on. Appraisers can also subscribe to this website and receive daily updates on hotel industry news and trends.

### Hotel Resource

[www.hotelresource.com](http://www.hotelresource.com)

This website contains a wealth of information regarding the hotel industry in terms of associations, directories, franchising, management companies, etc. This site is an excellent resource for finding a wide variety of information for unique and demanding assignments.

### Lodging Econometrics

[www.lodging-econometrics.com](http://www.lodging-econometrics.com)

This website provides market-specific reports regarding hotel real estate developments, including construction, removal of supply, growth trends, and so on. Some of the information requires a fee, but a useful amount of free information is also available.



### Lodging Hospitality

<http://lhonline.com/>

This website highlights trends and investment activity in the lodging industry. The Rushmore and O'Neill columns in both the online and hard copy versions of this media outlet present current information and research regarding hotel capitalization rates, discount rates, debt rates and availability, hotel value trends, and commentary regarding factors influencing these trends.

### National Association of Counties (NACO)

[www.naco.org](http://www.naco.org)

The appraiser can use this website to identify the county in which the subject property is located and access demographic and statistical information about that county. Informational overviews discussing overall economic climate and trends are also provided for most counties.

### Site To Do Business

[www.stdb.com](http://www.stdb.com)

The Site To Do Business is a website oriented towards real estate appraisers and other commercial real estate analysts. The site includes demographic information, information about trends in specific real estate market areas, consumer information, business information, mapping capabilities, and flood plain maps.

## Analyzing Economic and Demographic Data

Once the data are collected, they must be organized into a workable format. Economic and demographic data are generally used to forecast trends in lodging demand, so the appraiser is interested in both the direction of change and the rate of this change. Exhibit 2.4, which shows annual average daily traffic counts, provides an illustration of a typical statistical analysis for a given demographic.

<b>Exhibit 2.4 Annual Average Daily Traffic (AADT) Counts</b>		
<b>Year</b>	<b>Long Island Expressway</b>	<b>Percent Change from Previous Year</b>
2007	28,950	—
2008	29,983	3.6
2009	29,082	(3.0)
2010	31,568	8.5
2011	33,910	7.4
Annual compounded percent change from 2007 to 2011:		4.03%

When evaluating trends in economic and demographic data, the appraiser is most interested in the direction and rate of change. If the data pertain to two consecutive years, the percent of annual change may be used. If the data span more than two years, the annual compounded percent of change should be calculated instead.

## Constant Dollar Calculations Using the Consumer Price Index

The annual compounded percent change calculations are used to project future changes in lodging demand. Because the unit of lodging demand—the room night—is a real number unaffected by factors such as inflation, all

growth rates must be calculated in real terms, using constant dollars rather than inflated dollars. This process is illustrated in Exhibit 2.5.

<b>Exhibit 2.5 Retail Sales (in millions)</b>			
<b>Year</b>	<b>Retail Sales (Current Dollars)</b>	<b>Retail Sales (2007 Dollars)</b>	<b>Percent Change in Retail Sales from the Previous Year</b>
2007	\$1,143,539	\$1,223,076	—
2008	1,240,106	1,288,319	+ 5.3%
2009	1,326,962	1,347,631	+ 4.6
2010	1,410,385	1,410,385	+ 4.7
2011	1,492,920	1,460,660	+3.6
Annual compounded percent change from 2007 to 2011:			4.5%

Between 2007 and 2011, retail sales increased by a total of 31% in current (inflated) dollars. Performing the same calculation with 2007 constant dollars shows a 19% increase. The real



growth in retail sales over this period would be 19%. The difference between the 31% inflated dollar calculation and the 19% constant dollar calculation was 12%, which can be attributed to inflation rather than real growth in retail demand. The annual compounded percent of change in real terms over this period was 4.5%.

Whenever economic and demographic data reflect dollar amounts at different points in time, the data should either be inflated or deflated to a standard, or constant dollar, year. This calculation requires a Consumer Price Index (CPI) adjustment.

**Directories of Lodging Facilities**

The level of supply represented by the number of competitive hotel rooms in the area is a factor in estimating the area’s lodging demand when using the build-up approach based on an analysis of lodging activity. The size and types of lodging facilities operating in the market also influence the competitive environment. Before beginning fieldwork, an appraiser can identify most hotels in the area using various directories of lodging facilities. These directories typically provide the hotel’s name, address, telephone number, room count, facilities and amenities, and published room rates. Directories such as *Forbes Travel Guide* and the *AAA Tour Book* include a quality rating for each property, which can be helpful in evaluating competitiveness. Trip Advisor ratings can also be helpful.

The key to selecting directories of lodging facilities is to make sure that they are up to date and complete in their coverage of the area and that they contain the room count for each hotel. Specialized directories may provide additional information, such as descriptions of meeting and banquet rooms, the date the hotel opened, and the names of important contacts. See the sidebar on lodging facility directories for information on current lodging supply.

**Lodging Facility Directories**

**Hotel and Travel Index**

<http://hotelandtravelindex.travelweekly.com/>  
(201) 902-2000

**Official Meeting Facilities Guide**

[www.omfg.com](http://www.omfg.com)  
(201) 902-2000

**Forbes Travel Guide**

[www.forbes.com/forbes-travel-guide](http://www.forbes.com/forbes-travel-guide)  
(800) 653-0220

**AAA Tour Books**

Complimentary to AAA members at local offices  
[www.aaa.com](http://www.aaa.com)  
(407) 444-7000

**STR Global** (formerly Smith Travel Research)

[www.strglobal.com](http://www.strglobal.com)  
(615) 824-8664

**Hotel Operating Statistics**

One of the primary objectives of a hotel market study and valuation is to derive a forecast of revenues and expenses for the subject property. The basis for such a forecast is a supply and demand analysis, which includes an estimate of the subject’s occupancy and average daily rate (rooms revenue) and a host of hotel operating statistics that support the forecast of other revenue sources and expenses. For existing hotels, the best source of operating statistics is, of course, the hotel’s actual operating history. These data provide a benchmark that can be easily adjusted to project changes in occupancy levels and evaluate the competence of management. The expected financial performance of proposed hotels can be based on the operating statistics of comparable properties. Comparability encompasses factors such as aver-



age daily rate, room count, occupancy, ratio of food and beverage revenue to rooms revenue, type of facilities (convention, resort, all-suite, extended-stay), franchise affiliation, management, and geographic proximity. The degree of comparability between the hotels providing operating statistics and the subject property is an important consideration in evaluating the reliability of the projections developed.

When an appraiser cannot find actual operating statistics from comparable properties, there is no other alternative but to use the “data of last resort,” the national averages compiled by firms such as STR Global. Each year these firms survey the financial statements of hundreds of hotels across the country. Using a computerized database program, the financial statements are sorted according to various characteristics (such as geographic location, size, and occupancy) and averaged. The results are published in tabular form and provide several types of ratios, such as percentage of total revenue, percentage of rooms revenue, amount per available room, and amount per occupied room.

Hotel operating statistics derived from an existing subject property’s actual financial results, from comparable hotels, or from a national average must be arranged in a format that facilitates the comparison of these data with the forecasted assumptions for the subject property. This process will be described more fully in subsequent chapters.

### ***Mortgage Rate Data***

Investors typically purchase hotels based on a valuation approach that employs a mortgage-equity technique. The mortgage component of this technique represents the rates and terms lenders currently offer/require on hotel mortgages. This information is entered into a formula to derive capitalization and discount rates.

Data for the mortgage component of the formula can be derived by surveying hotel lenders who actively make hotel loans. This method will work if the appraiser has a close relationship with lenders who will divulge confidential information in an accurate manner. However, a better source of data is the American Council of Life Insurers ([www.acli.com](http://www.acli.com)). This organization, which represents 20 large life insurance companies, collects and disseminates the rates and terms of mortgages actually originated by their members. Use of these data will be described later.

### ***Construction Cost Data***

The basis for the cost approach to value and an estimate of economic feasibility is a reliable estimate of the cost to produce a substitute property with equal utility. The cost of replacing a hotel is generally estimated on either a cost-per-square-foot or a cost-per-room basis using data from a construction cost manual published by a recognized cost reporting service. When any type of hotel construction cost data is used, the appraiser must verify that all components—such as improvements; furniture, fixtures, and equipment; soft costs; and pre-opening and working capital—are included in the final estimate. Complete hotel construction cost data can be obtained from Marshall and Swift at [www.marshallswift.com](http://www.marshallswift.com) or (213) 683-9000.

### ***Hotel Market Sales Data***

In the sales comparison approach, the appraiser compares recently sold comparable properties with the subject property, adjusting their sale prices for differences in factors such as market conditions, time, age, location, construction, physical condition, layout, equipment, size, and external economic factors. Although hotel investors seldom rely on sales comparison as the sole





indication of value, the approach can provide support for the value derived in the income capitalization approach.

Hotel sales data for the local market area should be accumulated during the fieldwork phase of the assignment. Other appraisers, the local assessor, and the hotel association are generally familiar with recent transfers and can provide valuable information

## Face-to-Face and Telephone Interviews

Much of the data and information collected during fieldwork is accumulated through interviews. Interviews may be conducted to gather nonconfidential factual data such as the assessed value of the subject property, the names and telephone numbers of employees of local businesses, zoning regulations, or the path of a new highway. Nonconfidential factual interviews are easily conducted once the individual with the necessary knowledge or data has been identified. Factual data are often embodied in written documents or publications that can be easily acquired. Nonconfidential factual data are usually accurate, particularly if they come from a recognized source such as a governmental agency, a chamber of commerce, or a university.

Subjective nonconfidential data may also be obtained through interviews. This information is often more opinion than fact. The interviewer may ask: How will economic conditions change over the next five years? Will the proposed hotel ever be built? What property will the subject compete with? Why does this particular hotel have the highest occupancy rate in the market? If subjective data are to be meaningful, the source must have knowledge and expertise on which the appraiser can rely. Subjective data are more prone to error than factual data; therefore, credible sources are essential.

The most difficult type of data to elicit in an interview is data that is perceived to be confidential. Information of this type may relate to the occupancy, average daily rate, key demand generators, and market segmentation of competitive hotels or the financial operating statistics and development plans for proposed hotels. The nature of the assignment may affect the availability of data perceived to be confidential. For example, a competitive hotel is more likely to provide occupancy and average daily rate statistics to support a property tax appeal that could reduce real estate taxes than to assist a market study considering additional rooms being added to the market.

When confidential information is provided to the appraiser, it may be slanted in an attempt to influence the outcome of the study. Hotel managers are seldom enthusiastic about the prospect of additional competition; their responses to questions about future lodging trends and the success of their properties may not be entirely reliable and should be verified when possible.

## Interview Techniques

Certain procedures and checks can be useful in gathering confidential data. To illustrate, assume that an appraiser is researching the occupancy of competitive hotels for an assignment involving a proposed property.

To obtain relevant information, interviews are set up with the general manager or another high-ranking individual from a competitive hotel, such as the assistant manager, front office manager, or director of sales and marketing. Because those interviewed might tend to underestimate occupancies, the appraiser must be well prepared before the interview. The key to this preparation is to have already collected accurate occupancy data from at least one hotel. This information can serve as a benchmark for evaluating the responses offered by the management of other lodging facilities.





For example, in performing the market study and valuation of the proposed hotel, the appraiser consults another appraiser and discovers that the actual occupancy of a nearby Holiday Inn was 73% the previous year. This piece of data establishes a benchmark that can be useful in interviewing hotel managers. After a series of introductory questions on the characteristics of the local market and the competitive environment, the appraiser asks the important question: “Would you mind telling me what your occupancy was last year?” The general manager being questioned may act somewhat surprised at such a question and may respond vaguely, but he might answer something like this: “You know, we have had several hotels open in the market and this has affected our operation negatively. My occupancy has dropped. I think we ended last year at about 65%.” To check the accuracy of this figure, the appraiser immediately follows up with, “That low? What do you think the occupancy of the Holiday Inn is?” Hotel managers regularly trade occupancy data with their nearby competitors, so it is not unusual for them to have this information readily available. In this case, if the general manager was truthful about the 65% occupancy, he will probably say that the Holiday Inn was operating at 73%. If, however, the occupancy estimate was biased downward—meaning that it was really 72%, but he told you it was 65%—the manager would probably make the same adjustment to the Holiday Inn estimate and say that it was 66% instead of 73%. Thus, the benchmark shows a downward bias of about seven percentage points, which could possibly be applied to the 65% estimate, bringing it up to 72%. The appraiser applies this same procedure to check the occupancies of all the other competitive hotels in the market. This procedure can also be used for other interviews with competitors as well as interviews with representatives of the chamber of commerce, visitors and convention bureau, assessor, building department, and so forth. Note that responses may be biased in either direction, depending on how the individual interviewed perceives the study and its likely effects.

When the results of the appraiser’s interviews are organized on a spreadsheet, natural biases become apparent. By exercising good judgment, the appraiser will usually be able to come up with a reasonably reliable estimate of each property’s occupancy.

Although it may be difficult to obtain unbiased occupancy data from general managers, most will provide their average daily rates and market segmentations. However, it is advisable to test their responses in these areas if supporting data are available from other properties.

## Written Surveys

Another data collection technique is the use of written surveys. A mass mailing of questionnaires is considerably less time consuming than face-to-face or telephone interviews. Appraisers may also conduct online surveys. The success of a written survey depends on several factors:

- The survey’s subject matter must be compatible with this form of data collection.
- The survey should be brief and simple so that it can be completed in a short period of time.
- The survey must be mailed or e-mailed directly to individuals who fully understand the survey’s subject matter.
- Sufficient time must be available to develop, send, collect, and tabulate the responses to the survey.



Not all of the data needed to perform a hotel market study and appraisal can be collected using written surveys. Most confidential information, for example, must be obtained through face-to-face interviews. Economic and demographic data and statistics are generally available from published data sources. Written surveys work well when a large number of data sources are available and the information to be collected is not perceived as confidential. One type of data that fits these criteria is information obtained from demand generators.

A *demand generator* is anything that attracts overnight visitors into a market area who are likely to use the facilities of a hotel. Demand generators include airports, amusement parks, association headquarters, casinos, colleges and universities, companies and businesses, convenient highway stopping points, convention centers, county seats and state capitals, courts, festivals, government centers, historic attractions and events, hospitals, military installations, museums, offices and industrial parks, parks and scenic areas, racetracks, regional shopping centers, residential developments, resort areas, special events, sports attractions and events, theaters, and tourist attractions.

One procedure for quantifying hotel room night demand is to survey a market's demand generators and estimate the number of hotel visitors that they attract over a period of time. This type of information is usually considered nonconfidential and can be obtained with written surveys.

The design of a written survey is a crucial element in obtaining an accurate response. Most people are bombarded with surveys and have little incentive or time to fill them out, so a short, easy form is essential. The format shown in Exhibit 2.6 can be used to design a written survey to compare demand generator information. When using a traditional mail survey, the appraiser should include a self-addressed, stamped envelope with the survey so that it can be returned quickly.

A good way to increase the survey's response rate is to use a cover letter signed by someone known to the survey's recipients. Depending on the nature of the assignment, this individual could be the local mayor, another government official, the president of the chamber of commerce, a prominent business leader, or a local celebrity interested in the project. Online surveys could actually be sent from the e-mail address of such esteemed individuals, with responses being forwarded to the appraiser or analyst. The cover letter should also be brief and to the point and explain how the recipient will benefit by responding.

The key to a successful written survey is pinpointing the person who is best equipped to answer the required questions. All correspondence should be directed to that specific individual. "To whom it may concern" salutations seldom elicit satisfactory responses. Mailing lists from the local chamber of commerce are usually a good starting point. Using this information as a base, a quick telephone survey can be conducted to obtain the names of the most appropriate respondents.

A relatively long lead time is needed to develop, mail, receive, and evaluate written surveys. Appraisers should allow 30 to 40 days to use this data collection technique properly. The main disadvantages of written surveys are the normally low response rate, the inability to follow up on a specific question, and a lack of data verification. Online or e-mail surveys allow for follow-up questions regarding specific issues. However, response rates to online or e-mail surveys may be particularly low, especially in countries like China where the Internet is less widely used.

The response rate for a written survey depends on many factors, including the form of the survey, the perceived benefits to the respondent, and



**Exhibit 2.6 Hotel Survey Boilerplate**

A new hotel is planned for your competitive market area. Your responses to the following questions will assist us in determining the type of lodging facility that will best serve the needs of your firm and other businesses in your area. While we realize that you may not have precise information regarding many of the following questions, we would appreciate your best estimates.

1. Your name/title \_\_\_\_\_
2. Company name/department \_\_\_\_\_
3. Mailing address \_\_\_\_\_
4. E-mail address \_\_\_\_\_
5. Telephone \_\_\_\_\_
6. What is the current number of employees at your company? \_\_\_\_\_
7. What are the primary business activities at this location? \_\_\_\_\_  
in your firm? \_\_\_\_\_  
in your department? \_\_\_\_\_
8. Within the next year, the number of employees in your firm/department is projected to (circle one)  
Increase \_\_\_\_\_ Decrease \_\_\_\_\_ Remain the same \_\_\_\_\_  
By how much? \_\_\_\_\_ By how much? \_\_\_\_\_
9. What are the seasonal percentages of visitors to your firm/department who require accommodations?  
Winter \_\_\_\_\_% Spring \_\_\_\_\_% Summer \_\_\_\_\_% Fall \_\_\_\_\_%
10. What percentage of these visitors currently book their own accommodations? \_\_\_\_\_%  
have someone within the firm book their accommodations? \_\_\_\_\_%  
Indicate the name, department, and telephone number of the person within your firm responsible for booking accommodations.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**11. Reasons for overnight stay** (Complete the following chart.)

- (a) What percentage of the people visiting your firm/department requiring overnight accommodations do so for the reasons indicated?
- (b) What is the average number of nights per visit?
- (c) On the average, how many people stay in one hotel room per visit?

Reason for Overnight Stay	(a) Percent of Total Visitors	(b) Average Length of Stay	(c) No. of People per Room
Relocation			
Training			
Temporary assignment			
Consulting			
Meeting/conference			
Other			
Total	100%		

**12. Current lodging facilities used** (Complete the following chart)

Which lodging facilities does your firm currently use? (List in the order in which you would select them.)

	Name of Lodging Facility	Room Rate Charge
1.		
2.		
3.		
4.		



(Rank the following six factors in order of importance in choosing a lodging facility.  
1 = most important and 6 = least important)

Would the availability of a health club/fitness center be an important consideration in choosing a lodging facility? \_\_\_\_\_

Do you currently use meeting and/or banquet facilities in area hotels?  
(Circle all that apply.)

	For Meetings	For Banquets
How frequently do you use these facilities?		
What is the average size of the group?		
What is the smallest size?		
What is the largest size?		
What percentage of attendees require overnight accommodations?		
What percentage of use occurs on weekends?		

(a) Are you familiar with the location of our project? \_\_\_\_\_

Better About the same Inferior

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Written surveys are often difficult to verify. During face-to-face interviews, the interviewer can evaluate the character of the respondent and judge the accuracy of the data being provided. A person's intonation, body language, and general attitude convey a sense of whether the information being supplied is reliable. Users of written surveys cannot use this form of verification.





# Demand for Transient Accommodations

Chapter

3

When performing hotel-motel valuations and feasibility studies, appraisers are primarily interested in the micro, rather than the macro, aspects of demand. Micro demand for transient accommodations refers to the demand within a limited geographic area such as a town, city, or county. By quantifying the micro demand into measurable units such as room nights, half of the supply and demand equation is known. Macro demand is much broader in scope and takes into account national and international travel patterns. Although macro demand receives only limited attention in most appraisal reports, it is an important consideration because it often foreshadows changes in travel trends for micro areas.

## Macro Demand

### Four Categories of Data

Much of the macro data relating to travel in general and hotel demand in particular is compiled by government and industry organizations. This type of data can be divided into four categories based on how well it reflects trends in hotel-motel demand.

Category 1 consists of information pertaining to the actual use of commercial accommodations. These data relate to the number of travelers actually using hotels and motels throughout the United States, a direct measure of lodging demand. These data provide the clearest indications of the current status of the hotel industry because the data require little extrapolation or interpretation. On the other hand, these industry-level, national data are not necessarily reflective of any particular hotel market area. Examples of Category 1 data would include a survey of the number of travelers using hotel accommodations during their trips or a quantification of the occupied hotel rooms within a specific macro market over a certain period of time.

Category 2 information pertains to travel that may entail the use of commercial accommodations. This type of data does not directly reflect demand for transient accommodations; rather, it provides a basis for drawing inferences that could lead to supportable estimates. Examples of Category 2 data include information on the amount of airline travel occurring, attendance at recreational attractions, or the number of people traveling in general.

Category 3 data indicate the general condition of the national, regional, state, and local economy and describe the broad demographic trends that can have an indirect impact on the use of commercial accommodations. Like Category 2 data, this type of data does not directly reflect the demand for commercial accommodations; only indirect inferences can be drawn from it. Examples

of Category 3 data include statistics on population growth, disposable income, gross domestic product, and various types of economic trend indicators.

Category 4 information details specific characteristics of transient travel demand (i.e., reasons for travel, types of accommodation selected, length of stay, and size of party). These data are used to evaluate the relative competitiveness of various types of hotels within a specific market.

The best type of data for quantifying hotel demand, evaluating historic trends, and formulating projections on a national level is Category 1 data. This type of data is generally available on a national basis from government-administered sources charged with the task of tracking travel data of all sorts. On a regional or micro level, most appraisers develop their own information on the specific market areas surrounding their subject properties and then augment their findings with competitive data provided by STR Global. The procedures for quantifying hotel demand will be discussed later in this book. Category 2 data are also readily available on a national basis but are sometimes difficult to obtain on the micro level.

Category 3 data covering most micro markets within the United States are available from many sources. Appraisers often use this type of data as a basis for forecasting future trends in hotel demand once a base level has been quantified through primary research techniques, which will be described in subsequent sections of this book. Category 4 data are available on a macro basis, but micro market data can rarely be obtained from public sources.

### Global Hotel Associations

Africa	<a href="http://www.africatravelassociation.org">www.africatravelassociation.org</a>	China	<a href="http://www.ctha.com.cn">www.ctha.com.cn</a>
Albania	<a href="http://www.balkanalliance.org">www.balkanalliance.org</a>	Colombia	<a href="http://www.cotelco.org">www.cotelco.org</a>
Anguilla	<a href="http://www.ahta.ai">www.ahta.ai</a>	Costa Rica	<a href="http://www.costaricanhotels.com">www.costaricanhotels.com</a>
Antigua and Barbuda	<a href="http://www.antiguahotels.org/v2/index.php">www.antiguahotels.org/v2/index.php</a>	Croatia	<a href="http://www.croatia-travel.org">www.croatia-travel.org</a>
Argentina	<a href="http://www.aht.com.ar">www.aht.com.ar</a>	Curacao	<a href="http://www.chataa.org">www.chataa.org</a>
Aruba	<a href="http://www.aruba.com">www.aruba.com</a>	Cyprus	<a href="http://www.pafoshoteliers.com/the_association.asp">www.pafoshoteliers.com/the_ association.asp</a>
Australia	<a href="http://aha.org.au/">http://aha.org.au/</a>	Czech Republic	<a href="http://www.czechtourism.com">www.czechtourism.com</a>
Austria	<a href="http://www.first-austrian-hotels.com">www.first-austrian-hotels.com</a>	Denmark	<a href="http://www.horesta.dk">www.horesta.dk</a>
Bahamas	<a href="http://www.bhahotels.com">www.bhahotels.com</a>	Dominica	<a href="http://www.dhta.org">www.dhta.org</a>
Bangladesh	<a href="http://www.tourtobangladesh.com">www.tourtobangladesh.com</a>	Ecuador	<a href="http://www.ecuador.us">www.ecuador.us</a>
Barbados	<a href="http://bhta.org/">http://bhta.org/</a>	Egypt	<a href="http://www.touregypt.net">www.touregypt.net</a>
Belgium	<a href="http://www.hotels-brugge.org">www.hotels-brugge.org</a>	Estonia	<a href="http://www.ehrl.ee/en">www.ehrl.ee/en</a>
Belize	<a href="http://belizehotels.org/">http://belizehotels.org/</a>	Fiji	<a href="http://www.fihota.com.fj">www.fihota.com.fj</a>
Bermuda	<a href="http://www.experiencebermuda.com">www.experiencebermuda.com</a>	France	<a href="http://www.synhorcat.com">www.synhorcat.com</a>
Bhutan	<a href="http://www.silkroadgroup.com/Bhutan">www.silkroadgroup.com/Bhutan</a>	French Guiana	<a href="http://www.tourisme-guyane.com">www.tourisme-guyane.com</a>
Bonaire	<a href="http://www.infobonaire.com">www.infobonaire.com</a>	Gambia	<a href="http://www.gambiahotels.gm">www.gambiahotels.gm</a>
Brazil	<a href="http://www.abih.com.br">www.abih.com.br</a>	Germany	<a href="http://www.hotelverband.de/home/index.html">www.hotelverband.de/home/index.html</a>
British Virgin Islands	<a href="http://www.bvihotels.org">www.bvihotels.org</a>	Greece	<a href="http://www.sete.gr">www.sete.gr</a>
Bulgaria	<a href="http://www.balkanalliance.org/bulgaria.php">www.balkanalliance.org/bulgaria.php</a>	Greenland	<a href="http://www.greenland.com/en">www.greenland.com/en</a>
Cambodia	<a href="http://catacambodia.com/">http://catacambodia.com/</a>	Grenada	<a href="http://www.grenadahotelsinfo.com">www.grenadahotelsinfo.com</a>
Canada	<a href="http://www.hotelassociation.ca">www.hotelassociation.ca</a>	Guam	<a href="http://www.ghra.org">www.ghra.org</a>
Caribbean	<a href="http://www.caribbeanhotelassociation.com">www.caribbeanhotelassociation.com</a>	Hong Kong	<a href="http://www.hkha.org">www.hkha.org</a>
Cayman Islands	<a href="http://www.cita.ky">www.cita.ky</a>		
Chile	<a href="http://www.hotelschile.com">www.hotelschile.com</a>		



Hungary	<a href="http://www.hah.hu">www.hah.hu</a>	Panamá	<a href="http://www.panamasmallhotels.com">www.panamasmallhotels.com</a>
Iceland	<a href="http://www.icetourist.is">www.icetourist.is</a>	Perú	<a href="http://www.peruviaje.com">www.peruviaje.com</a>
India	<a href="http://www.hotelassociationofindia.com">www.hotelassociationofindia.com</a>	Philippines	<a href="http://www.philtourism.com">www.philtourism.com</a>
Indonesia	<a href="http://jakartahotelsassociation.com/">http://jakartahotelsassociation.com/</a>	Portugal	<a href="http://www.hoteis-portugal.pt">www.hoteis-portugal.pt</a>
Iran	<a href="http://www.irpedia.com">www.irpedia.com</a>	Puerto Rico	<a href="http://prhta.org/">http://prhta.org/</a>
Ireland	<a href="http://www.ihf.ie">www.ihf.ie</a>	Romania	<a href="http://romaniantourism.com/">http://romaniantourism.com/</a>
Israel	<a href="http://www.israelhotels.org.il">www.israelhotels.org.il</a>	Russia	<a href="http://www.rostourunion.ru">www.rostourunion.ru</a>
Italy	<a href="http://www.italiantourism.com">www.italiantourism.com</a>	Samoa	<a href="http://www.samoahotels.ws">www.samoahotels.ws</a>
Jamaica	<a href="http://www.jhta.org">www.jhta.org</a>	Scotland	<a href="http://www.visitscotland.com">www.visitscotland.com</a>
Japan	<a href="http://www.j-hotel.or.jp">www.j-hotel.or.jp</a>	Senegal	<a href="http://www.discoversenegal.com">www.discoversenegal.com</a>
Jordan	<a href="http://www.johotels.org">www.johotels.org</a>	Serbia	<a href="http://www.balkanalliance.org">www.balkanalliance.org</a>
Kenya	<a href="http://www.kahc.co.ke">www.kahc.co.ke</a>	Seychelles	<a href="http://www.shta.sc">www.shta.sc</a>
Korea	<a href="http://www.hotelskorea.or.kr">www.hotelskorea.or.kr</a>	Singapore	<a href="http://www.sha.org.sg">www.sha.org.sg</a>
Latvia	<a href="http://www.lvra.lv/">http://www.lvra.lv/</a>	Slovakia	<a href="http://www.historichotelslovakia.com">www.historichotelslovakia.com</a>
Laos	<a href="http://laohotelgroup.org/">http://laohotelgroup.org/</a>	Slovenia	<a href="http://www.slovenia.info">www.slovenia.info</a>
Lebanon	<a href="http://www.spotlebanon.com">www.spotlebanon.com</a>	South Africa	<a href="http://www.fedhasa.co.za">www.fedhasa.co.za</a>
Macau	<a href="http://www.macauhotel.org">www.macauhotel.org</a>	Spain	<a href="http://www.barcelonahotels.es">www.barcelonahotels.es</a>
Macedonia	<a href="http://hotam.org/">http://hotam.org/</a>	Sri Lanka	<a href="http://www.fccisl.lk">www.fccisl.lk</a>
Malaysia	<a href="http://www.hotels.org.my">www.hotels.org.my</a>	St. Barthelemy	<a href="http://hotelsfbarth.org/">http://hotelsfbarth.org/</a>
Maldives	<a href="http://www.tourism.gov.mv">www.tourism.gov.mv</a>	St. Eustatius	<a href="http://statiatourism.com/">http://statiatourism.com/</a>
Malta	<a href="http://www.mhra.org.mt">www.mhra.org.mt</a>	St. Pierre and Miquelon	<a href="http://www.st-pierre-et-miquelon.com">www.st-pierre-et-miquelon.com</a>
Martinique	<a href="http://carriacoupetitemartinique.com/">http://carriacoupetitemartinique.com/</a>	Sweden	<a href="http://www.visitsweden.com">www.visitsweden.com</a>
Mauritius	<a href="http://smham.net/ang/index.html">www.smham.net/ang/index.html</a>	Switzerland	<a href="http://www.swisshotels.ch">www.swisshotels.ch</a>
Mexico	<a href="http://fonatur.gob.mx">www.fonatur.gob.mx</a>	Syria	<a href="http://www.emta.org.au">www.emta.org.au</a>
Monaco	<a href="http://visitmonaco.com/en/">http://visitmonaco.com/en/</a>	Taiwan	<a href="http://taiwan.net.tw/">http://taiwan.net.tw/</a>
Mongolia	<a href="http://mongoliatourism.gov.mn/">http://mongoliatourism.gov.mn/</a>	Tanzania	<a href="http://tanzaniatouristboard.com/">http://tanzaniatouristboard.com/</a>
Myanmar	<a href="http://umtanel.org/">http://umtanel.org/</a>	Thailand	<a href="http://www.thaihotels.org">www.thaihotels.org</a>
Namibia	<a href="http://www.hannamibia.com">www.hannamibia.com</a>	Turkey	<a href="http://historicalhotelsofturkey.org">www.historicalhotelsofturkey.org</a>
Nepal	<a href="http://www.visitnepal.com">www.visitnepal.com</a>	Uganda	<a href="http://ugandatourismassociation.org/">http://ugandatourismassociation.org/</a>
Netherlands	<a href="http://www.khn.nl">www.khn.nl</a>	United Kingdom	<a href="http://www.bha.org.uk">www.bha.org.uk</a>
New Zealand	<a href="http://www.hanz.org.nz">www.hanz.org.nz</a>	United States	<a href="http://www.ahla.com">www.ahla.com</a>
Nicaragua	<a href="http://hotelesdenicaragua.net/en">www.hotelesdenicaragua.net/en</a>		<a href="http://www.ustravel.org">www.ustravel.org</a>
Nigeria	<a href="http://hopeseanigeria.org/">http://hopeseanigeria.org/</a>	Vanuatu	<a href="http://vanuatuhotelsandresortsassociation.com">www.vanuatuhotelsandresortsassociation.com</a>
Northern Ireland	<a href="http://www.nihf.co.uk">www.nihf.co.uk</a>		
Norway	<a href="http://finnmarkhotellforening.no">www.finnmarkhotellforening.no</a>	Zambia	<a href="http://www.zambiatourism.com">www.zambiatourism.com</a>
Palau	<a href="http://visit-palau.com/">http://visit-palau.com/</a>	Zanzibar	<a href="http://www.zati.org">www.zati.org</a>
Palestine	<a href="http://palestinehotels.com/">http://palestinehotels.com/</a>		

## Macro Demand by Market Segment

The preceding discussion of the macro demand for lodging facilities focused on the overall market without regard to specific types of travelers. Since most hotels are oriented toward one or more market segments, however, the major components of the travel market must be identified. Most macro data are divided into three primary market segments: business travelers, meeting and group travelers, and pleasure or leisure travelers. Each segment has its own historic growth trends and demographic characteristics.





## Global Statistics and Tourism Data Sources

<b>Worldwide</b>		
	Economy Watch	<a href="http://www.economywatch.com/economic-statistics">www.economywatch.com/economic-statistics</a>
	The Economist	<a href="http://www.economist.com">www.economist.com</a>
	STR Global	<a href="http://www.strglobal.com">www.strglobal.com</a>
	United Nations Conference on Trade and Development	<a href="http://www.unctad.org">www.unctad.org</a>
	United Nations Development Program (UNDP)	<a href="http://www.undp.org">www.undp.org</a>
	United Nations Educational, Scientific, and Cultural Organization (UNESCO)	<a href="http://www.unesco.org">www.unesco.org</a>
	United Nations Environment Program (UNEP)	<a href="http://www.unep.org">www.unep.org</a>
	United Nations World Tourism Organization (UNWTO)	<a href="http://unwto.org">http://unwto.org</a>
	World Bank Group	<a href="http://www.worldbank.org">www.worldbank.org</a>
	World Travel and Tourism Council (WTTC)	<a href="http://www.wttc.org">www.wttc.org</a>
<b>South America</b>		
Argentina	Ministerio de Turismo	<a href="http://www.turismo.gov.ar">www.turismo.gov.ar</a>
	Gobierno de la Ciudad de Buenos Aires	<a href="http://www.buenosaires.gov.ar">www.buenosaires.gov.ar</a>
Brazil	The Brazilian Institute of Geography and Statistics (IBGE)	<a href="http://www.ibge.gov.br/home/">http://www.ibge.gov.br/home/</a>
Chile	Sernatur—Servicio Nacional de Turismo	<a href="http://www.sernatur.cl">www.sernatur.cl</a>
Colombia	Asociación Hotelera y Turística de Colombia	<a href="http://www.cotelco.org">www.cotelco.org</a>
	Departamento Administrativo de Seguridad	<a href="http://www.das.gov.co">www.das.gov.co</a>
Perú	Ministerio de Comercio y Turismo	<a href="http://www.mincetur.gob.pe">www.mincetur.gob.pe</a>
<b>Asia</b>		
	Pacific Asia Travel Association (PATA)	<a href="http://www.pata.org">www.pata.org</a>
Australia	Tourism Research Australia	<a href="http://www.ret.gov.au">www.ret.gov.au</a>
Bahrain	Bahrain Government	<a href="http://www.bahrain.bh">www.bahrain.bh</a>
Cambodia	National Institute of Statistics	<a href="http://www.nis.gov.kh">www.nis.gov.kh</a>
China	China National Tourism Administration (CNTA)	<a href="http://en.cnta.gov.cn/">http://en.cnta.gov.cn/</a>
India	India Statistics	<a href="http://www.indiastat.com">www.indiastat.com</a>
	Ministry of Tourism	<a href="http://www.tourism.nic.in">www.tourism.nic.in</a>
Indonesia	Statistics Indonesia	<a href="http://www.bps.go.id">www.bps.go.id</a>
Japan	Japan Tourism Marketing Co. (JTM)	<a href="http://www.tourism.jp">www.tourism.jp</a>
	Japan Statistics Bureau and Statistics Center	<a href="http://www.stat.go.jp">www.stat.go.jp</a>
Malaysia	Statistics Malaysia	<a href="http://www.statistics.gov.my">www.statistics.gov.my</a>
	Facts and Figures Tourism Malaysia	<a href="http://www.tourism.gov.my">www.tourism.gov.my</a>
Maldives	Maldives Monetary Authority	<a href="http://www.mma.gov.mv">www.mma.gov.mv</a>
New Zealand	Statistics New Zealand	<a href="http://www.stats.govt.nz">www.stats.govt.nz</a>
The Philippines	Department of Tourism	<a href="http://www.tourism.gov.ph">www.tourism.gov.ph</a>
	National Statistics Office	<a href="http://www.censu.gov.ph">www.censu.gov.ph</a>
Qatar	Qatar Statistics	<a href="http://www.qsa.gov.qa">www.qsa.gov.qa</a>
Saudi Arabia	Ministry of Economy and Planning	<a href="http://www.mep.gov.sa">www.mep.gov.sa</a>
	Tourism and Research Center	<a href="http://tsdb.mas.gov.sa/">http://tsdb.mas.gov.sa/</a>
Singapore	Singapore Tourism Board (STB)	<a href="https://app.stb.gov.sg/asp/index.asp/">https://app.stb.gov.sg/asp/index.asp/</a>
Sri Lanka	Department of Census and Statistics	<a href="http://www.statistics.gov.lk">www.statistics.gov.lk</a>
	Sri Lanka Tourism Development Authority	<a href="http://www.sltda.gov.lk">www.sltda.gov.lk</a>
South Korea	Korea Tourism Organization (KTO)	<a href="http://www.visitkorea.or.kr">www.visitkorea.or.kr</a>
	Statistics Korea	<a href="http://www.kostat.go.kr">www.kostat.go.kr</a>
Taiwan	Taiwan Government Entry Point	<a href="http://www.taiwan.gov.tw">www.taiwan.gov.tw</a>



Thailand	Tourism Authority of Thailand	<a href="http://www.tourismthailand.org">www.tourismthailand.org</a>
United Arab Emirates	National Bureau of Statistics	<a href="http://www.uaestatistics.gov.ae">www.uaestatistics.gov.ae</a>
	Dubai Department of Tourism and Commerce Marketing	<a href="http://www.dubaitourism.ae">www.dubaitourism.ae</a>
	Abu Dhabi Tourism Authority	<a href="http://www.abudhabitourism.ae">www.abudhabitourism.ae</a>
Vietnam	General Statistics Office	<a href="http://www.gso.gov.vn">www.gso.gov.vn</a>
<b>North America</b>		
Canada	Statistics Canada	<a href="http://www.statcan.gc.ca">www.statcan.gc.ca</a>
	Industry Canada (Tourism)	<a href="http://www.ic.gc.ca">www.ic.gc.ca</a>
Mexico	Instituto Nacional de Estadística y Geografía (INEGI)	<a href="http://www.inegi.org.mx">www.inegi.org.mx</a>
<b>Europe</b>		
	European Travel Commission	<a href="http://www.etc-corporate.org">www.etc-corporate.org</a>
Albania	Institute of Statistics	<a href="http://www.instat.gov.al">www.instat.gov.al</a>
Andorra	Department d'Estadística	<a href="http://www.estadistica.ad">www.estadistica.ad</a>
Austria	Statistik Austria	<a href="http://www.statistik.at">www.statistik.at</a>
	Wirtschaftskammer Austria	<a href="http://portal.wko.at/wk/startseite.wk">http://portal.wko.at/wk/startseite.wk</a>
Azerbaijan	Ministry of Culture and Tourism	<a href="http://www.azerbaijan.tourism.az">www.azerbaijan.tourism.az</a>
Belarus	National Statistical Committee	<a href="http://www.belstat.gov.by">www.belstat.gov.by</a>
Belgium	Economie—Statistics Belgium	<a href="http://statbel.fgov.be/">http://statbel.fgov.be/</a>
Bosnia and Herzegovina	Agencija za Statistiku	<a href="http://www.bhas.ba">www.bhas.ba</a>
	Federal Office of Statistics	<a href="http://www.fzs.ba">www.fzs.ba</a>
	Tourism Association	<a href="http://www.bhtourism.ba">www.bhtourism.ba</a>
Bulgaria	National Statistical Institute	<a href="http://www.nsi.bg">www.nsi.bg</a>
Croatia	Ministry of Economy, Labor, and Entrepreneurship	<a href="http://www.mingorp.hr">www.mingorp.hr</a>
	Ministry of Tourism	<a href="http://www.mint.hr">www.mint.hr</a>
Cyprus	Statistical Service	<a href="http://www.mof.gov.cy">www.mof.gov.cy</a>
Czech Republic	Czech Statistical Office	<a href="http://www.czso.cz">www.czso.cz</a>
Denmark	Denmark Statistics	<a href="http://www.dst.dk">www.dst.dk</a>
Estonia	Statistics Estonia	<a href="http://www.stat.ee">www.stat.ee</a>
Finland	Statistics Finland	<a href="http://www.stat.fi">www.stat.fi</a>
France	National Institute of Statistics and Economic Studies	<a href="http://www.insee.fr">www.insee.fr</a>
	Tourism	<a href="http://www.tourisme.gouv.fr">www.tourisme.gouv.fr</a>
Germany	Statistisches Bundesamt	<a href="http://www.destatis.de">www.destatis.de</a>
	National Tourist Board	<a href="http://www.germany.travel/en/index.html">www.germany.travel/en/index.html</a>
Greece	National Statistical Service	<a href="http://www.statistics.gr">www.statistics.gr</a>
Hungary	National Statistic Agency (KSH)	<a href="http://www.ksh.hu">www.ksh.hu</a>
Iceland	Statistics Iceland	<a href="http://www.statice.is">www.statice.is</a>
Ireland	Central Statistics Office	<a href="http://www.cso.ie">www.cso.ie</a>
Italy	National Institute of Statistics	<a href="http://www.istat.it">www.istat.it</a>
Kazakhstan	Agency of Statistics	<a href="http://www.stat.kz">www.stat.kz</a>
Latvia	Latvijas Statistika	<a href="http://www.csb.gov.lv">www.csb.gov.lv</a>
	Tourism Latvia	<a href="http://www.tourismlatvia.net">www.tourismlatvia.net</a>
Liechtenstein	Landesverwaltung	<a href="http://www.llv.li">www.llv.li</a>
Lithuania	Statistics Lithuania	<a href="http://www.stat.gov.lt">www.stat.gov.lt</a>
	State Department of Tourism	<a href="http://www.tourism.lt">www.tourism.lt</a>
Luxembourg	STATEC Luxembourg	<a href="http://www.statistiques.public.lu">www.statistiques.public.lu</a>

Macedonia	State Statistical Office	<a href="http://www.stat.gov.mk">www.stat.gov.mk</a>
	Ministry of Economy	<a href="http://www.economy.gov.mk">www.economy.gov.mk</a>
Malta	National Statistics Office	<a href="http://www.nso.gov.mt">www.nso.gov.mt</a>
	Tourism and Sustainable Development Unit	<a href="http://www.tourism.gov.mt">www.tourism.gov.mt</a>
Moldova	National Bureau of Statistics	<a href="http://www.statistica.md">www.statistica.md</a>
Monaco	Official Government Portal	<a href="http://www.gouv.mc">www.gouv.mc</a>
Montenegro	Statistical Office	<a href="http://www.monstat.org">www.monstat.org</a>
Netherlands	Central Bureau of Statistics	<a href="http://www.cbs.nl">www.cbs.nl</a>
Norway	Statistics Norway	<a href="http://www.ssb.no">www.ssb.no</a>
Poland	Central Statistical Office	<a href="http://www.stat.gov.pl">www.stat.gov.pl</a>
Portugal	Statistics Portugal	<a href="http://www.ine.pt">www.ine.pt</a>
Romania	National Institute of Statistics	<a href="http://www.insse.ro">www.insse.ro</a>
Russia	Federal State Statistics Service	<a href="http://www.gks.ru">www.gks.ru</a>
Serbia	Statistical Office	<a href="http://webrzs.stat.gov.rs/WebSite/">http://webrzs.stat.gov.rs/WebSite/</a>
Slovakia	Statistical Office	<a href="http://www.statistics.sk">www.statistics.sk</a>
Slovenia	Statistical Office	<a href="http://www.stat.si">www.stat.si</a>
Spain	National Statistics Office	<a href="http://www.ine.es">www.ine.es</a>
Sweden	Statistics Sweden	<a href="http://www.scb.se">www.scb.se</a>
Switzerland	Federal Statistical Office	<a href="http://www.statistics.admin.ch">www.statistics.admin.ch</a>
Turkey	Turkish Statistical Institute	<a href="http://www.turkstat.gov.tr">www.turkstat.gov.tr</a>
	Ministry of Culture and Tourism	<a href="http://www.kultur.gov.tr">www.kultur.gov.tr</a>
Ukraine	State Committee of Statistics	<a href="http://www.ukrstat.gov.ua">www.ukrstat.gov.ua</a>
United Kingdom	UK National Statistics	<a href="http://www.statistics.gov.uk">www.statistics.gov.uk</a>
	Visit Britain	<a href="http://www.visitbritain.org">www.visitbritain.org</a>
<b>Africa</b>		
	UNICEF	<a href="http://www.unicef.org">www.unicef.org</a>
Cameroon	Institut National de la Statistique	<a href="http://www.statistics-cameroon.org">www.statistics-cameroon.org</a>
Canary Islands	Gobierno de Canarias	<a href="http://www.gobiernodecanarias.org">www.gobiernodecanarias.org</a>
Egypt	Egypt Directory	<a href="http://www.egyptiandir.com">www.egyptiandir.com</a>
	Central Agency for Public Mobilization and Statistics	<a href="http://www.capmas.gov.eg">www.capmas.gov.eg</a>
Ghana	Ghana Statistical Service	<a href="http://www.statsghana.gov.gh">www.statsghana.gov.gh</a>
	Ministry of Tourism	<a href="http://www.touringghana.com">www.touringghana.com</a>
Kenya	Ministry of Tourism	<a href="http://www.tourism.go.ke">www.tourism.go.ke</a>
Madeira	Governo Regional da Madeira	<a href="http://www.gov-madeira.pt">www.gov-madeira.pt</a>
Mozambique	Instituto Nacional de Estatistica	<a href="http://www.ine.gov.mz">www.ine.gov.mz</a>
Namibia	National Planning Commission	<a href="http://www.npc.gov.na">www.npc.gov.na</a>
	Ministry of Environment and Tourism	<a href="http://www.op.gov.na">www.op.gov.na</a>
Nigeria	National Bureau of Statistics	<a href="http://www.nigerianstat.gov.ng">www.nigerianstat.gov.ng</a>
Papua New Guinea	National Statistical Office	<a href="http://www.nso.gov.pg">www.nso.gov.pg</a>
Seychelles	National Bureau of Statistics	<a href="http://www.nsb.gov.sc">www.nsb.gov.sc</a>
South Africa	Statistics South Africa	<a href="http://www.statssa.gov.za">www.statssa.gov.za</a>
	South African Tourism	<a href="http://www.southafrica.net">www.southafrica.net</a>
Tanzania	National Bureau of Statistics (NBS)	<a href="http://www.nbs.go.tz">www.nbs.go.tz</a>
Tunisia	National Institute of Statistics	<a href="http://www.ins.nat.tn">www.ins.nat.tn</a>
Uganda	Bureau of Statistics	<a href="http://www.ubos.org">www.ubos.org</a>
Zambia	Central Statistical Office	<a href="http://www.zamstats.gov.zm">www.zamstats.gov.zm</a>



## **Business Travel**

The business market segment is composed of individual business people visiting various firms within a market area. Often identified as *commercial demand*, business travel is the lifeblood of most lodging markets throughout the world. Not only does the business travel segment represent a large volume of room night demand, but on the whole it is the least price sensitive. A business-oriented hotel generally achieves higher average room rates than a comparable facility catering to meeting and group travelers.

Business demand is strongest Monday through Thursday nights, declines significantly on Friday and Saturday, and increases slightly on Sunday. The typical length of stay ranges from one to three days, and the rate of double occupancy is low, typically 1.2 to 1.3 people per room. Commercial demand is relatively constant throughout the year, although it does drop off noticeably during holiday periods. Individual business travelers are usually not very price sensitive and often use a hotel's food, beverage, and recreational facilities.

Certain types of businesses tend to generate more hotel room night demand than others. Whereas nonprofit organizations tend to have a limited impact on lodging demand, firms involved in wholesale trade tend to generate the largest amount of hotel demand. The finance, insurance, and real estate (FIRE) sector also tends to generate a strong share of business travel.

## **Meeting and Group Travel**

The meeting and group segment includes individuals attending meetings, seminars, trade association shows, tours, and similar gatherings for 10 or more people. Meeting and group demand is an important market segment for full-service hotels with meeting and banquet space. This segment is normally subdivided into three categories of meetings: corporate, convention, and association. Each has somewhat different characteristics and hotel requirements. Corporate meetings are generally organized by businesses and serve specific commercial needs. Conventions are normally large gatherings that can serve both business and social interests. Association meetings tend to be smaller than conventions and are commonly structured as business or educational functions.

The average size of meetings or conventions and the planning time required can be important considerations for a hotel appraiser. In valuing a hotel oriented toward the convention market, the appraiser should look at the amount and size of the meeting space in the facility to determine whether it is suited to meeting demand in the local area. For example, if the market is made up mostly of corporate meetings, the meeting rooms should be relatively small and contain appropriate audiovisual and computer equipment. A convention market, on the other hand, requires facilities that can accommodate large groups and exhibit space.

The lead time for different types of meetings is particularly important for hotels under development. If major conventions are planned and hotels and meeting accommodations are selected three years in advance, any new hotel scheduled to open within this period should be premarketed so that convention planners can consider it. As the meeting capacity of a hotel increases, its marketing efforts prior to opening must increase as well. A well-planned convention hotel typically starts its marketing program before construction begins.

Meeting and group demand typically peaks in the spring and fall. The summer months are slow for this market segment because of employee vacations, and winter demand can be variable. The average length of stay for meetings and conventions ranges from three to five days. Most business



groups meet between Monday and Thursday, but associations and social groups sometimes use the weekends. Business groups tend to have a low double occupancy, typically 1.3 to 1.5 people per room, while social groups are likely to have a somewhat higher double occupancy, ranging from 1.5 to 1.9 people per room. Meeting and group patronage is generally quite profitable. Although room rates are sometimes discounted for large groups, the hotel usually benefits from use of meeting space and the inclusion of in-house banquets and cocktail receptions.

### **Leisure Travel**

The leisure segment consists of individuals and families spending time in the area or passing through en route to other destinations. Purposes for travel may include sightseeing, recreation, relaxation, visiting friends or relatives, and other nonbusiness activities. Leisure demand is strongest Friday and Saturday nights and all week during holiday periods and the summer months. These peak periods of demand are negatively correlated with business visitation, which demonstrates the stabilizing effect of capturing weekend and summer leisure travelers. The typical length of stay ranges from one to four days, depending on the destination and the purpose of travel. The rate of double occupancy is generally high, with 1.8 to 2.5 people per room. Leisure travelers tend to be the most price-sensitive segment in the lodging market. Many prefer low-rise accommodations with parking near the rooms, and most demand extensive recreational facilities and amenities. The ease of highway access and proximity to recreational attractions are important locational considerations for leisure travelers.

Because each of the primary market segments displays specific characteristics that can affect the selection and use of a particular lodging facility, it is helpful to make a side-by-side comparison of the typical traveler characteristics for the business, meeting and group, and leisure segments of the market.

Peak travel seasons for business and leisure travelers are usually negatively correlated. Therefore, a hotel that is able to attract both of these segments is likely to have a smoother year-round occupancy pattern than a property that is largely dependent on only one segment. The same analogy applies to weekly travel peaks for these two market segments.

The average length of stay affects many operational aspects of a hotel property. A hotel with a shorter average stay requires more front desk personnel, luggage carriers, and accounting staff because more people will be checking in and out over the course of a week. More cleaning staff may also be needed because maids can generally clean the room of a stay-over guest in less time than it takes to prepare a room for a new occupant. Operating costs also increase with the number of checkouts.

An extended-stay property that attracts guests who stay longer than seven days solves the problem of the weekend occupancy drop-off, which occurs when business travelers go home for the weekend. In this situation, longer stays actually increase the potential stabilized occupancy. From a layout point of view, however, a hotel with a longer average length of stay, such as a resort, generally requires larger closets and more clothing storage areas to accommodate a greater amount of luggage.

Double occupancy refers to the average number of guests per room. Leisure demand, which includes many traveling families, has a double occupancy rate ranging from 1.7 to 2.5 people per room. Commercial demand, which is typically composed of individual travelers, produces a double occupancy rate of 1 to 1.3 people per room. Many hotels are able to charge higher room



rates for additional guests in a room, which tends to increase a property's overall average rate.

In terms of design, a hotel with a high double occupancy rate requires more beds per room. A family-oriented resort should have at least two double beds in each room to accommodate its high double occupancy. On the other hand, a commercial-oriented property can offer a large number of rooms furnished with a single, king-sized bed. Properties with high double occupancies generally require larger closets, a second vanity sink, and larger rooms.

The use of food and beverage facilities is higher for meeting and group travelers than other market segments because many groups incorporate banquets and other forms of food service within their function schedules.

## **Future Changes in Hotel-Motel Macro Demand**

If the past in any way reflects the future, continuous changes in the transportation industry could have a significant effect on the characteristics of the average trip. Someday, high-speed transport may prove to be as revolutionary as the jet plane once was, and travelers may be able to make international trips in a single day. Higher-priced gasoline could reduce the mobility of the average vacation traveler, while greater use of mass transportation and the possible rebirth of rail service might prompt travelers to bypass highway facilities altogether. More sophisticated telecommunication systems may someday make in-person business meetings and conferences obsolete.

Future macro travel projections should also reflect potentially positive factors. In the past decade, companies have given their employees more fringe benefits, including longer vacations. Some firms have even implemented a four-day work week. Although these trends do not necessarily mean increased travel, they do add to the amount of time that families can be away from home.

A growing number of senior citizens with better retirement incomes and more desire to travel will also generate additional lodging demand. Lastly, the emerging middle-class populations of China, India, and Brazil have begun to generate huge domestic hotel demand within these countries. Over the next decade, this new group of travelers will become a dominant factor throughout the world. Most hotel experts believe this element of macro demand will have a larger effect on the growth of world tourism than any factor ever experienced in the past.

## **Using Hotel-Motel Macro Data**

The following example shows the use of Category 1 data in developing hotel trend information that can be used when evaluating micro markets to project hotel supply, demand, occupancy, average rate, and rooms revenue per available room (RevPAR). Category 1 data consist of information pertaining to the number of travelers actually using hotels and motels, which is a direct measure of lodging demand. While this example uses hotel data for the United States, the techniques used to analyze these data can be employed for macro markets and specific micro markets throughout the world. The data were developed by HVS and Smith Travel Research (now known as STR Global) and date back to the early 1970s.

The first set of data consists of the supply of hotel rooms in the United States. It shows the time periods when the rate of growth in hotel supply increased and decreased. As a benchmark, hotel supply over the past 40 years has increased at an average annual compound rate of 2.5%. Exhibit 5.1 shows the number of rooms available each year from 1970 to 1982, which represents



the total US hotel supply. The periods of recession are noted in the second column. The column labeled “Net Rooms Added” shows the total number of new hotel rooms added to the market minus the number of rooms withdrawn from the market. The annual percent change is shown in the next column. To smooth out the annual net rooms added, the next column to the right quantifies the total net rooms added during the previous four years. The last column shows the percent of supply represented by the total net rooms for the previous four years. For example, in 1974 the total number of net rooms added for the previous four years was 389,000, which equates to 16.9% of the 2,300,000 total supply. This was one of the peak years in this data set, which can be attributed to the readily available mortgage financing provided by real estate investment trusts to real estate developers in 1974. The 1973 recession, coupled with an oil embargo and followed by a record high rate of inflation and escalating interest rates, slowed new hotel development as shown by the decline in the rate of growth in new hotel rooms through the early 1980s.

Exhibit 3.2 shows the same type of hotel supply data, this time for the years 1983 to 1995. Another record four-year supply growth occurred in 1989, when the net rooms added for the previous four years was 17.3% of total supply. This extraordinary growth of new hotel rooms was attributed to several factors, including huge real estate tax benefits provided by the federal government to stimulate the economy during the 1980 recession. Thousands of new hotel rooms were developed with virtually no equity because the government provided investment tax credits. In addition, the recently deregulated savings and loan industry provided sufficient mortgage funds to allow hotel developers to build new hotels without putting their own capital at risk. Unfortunately, many of these banks made poor lending decisions, which caused them to fail and led to their being overseen by the federal government. These problem loans were purchased by the Resolution Trust Corporation (RTC) and disposed of during the early 1990s. The turmoil caused by the huge number of savings and loan bank failures, coupled with a period of recession, halted lending from all sources for a good part of the

early 1990s. As Exhibit 3.2 shows, this slowed new hotel development each year through 1994.

Exhibit 3.3 shows the same type of hotel supply data, this time for the years 1996 to 2010. Another peak year in supply growth occurred in 1999, when the four-year growth in new hotel supply was 13.1% of total hotel supply. During this period, the US economy was showing strong economic growth. In addition, a number of new public hotel companies fueled the growth of new hotel supply by providing development and acquisition funds.

Exhibit 3.1 US Hotel Room Supply Growth, 1970-1982						
Year	Recession	Rooms Available Supply (+000)	Net Rooms Added (+000)	Percent Change	Total Net Rooms Previous Four Years (+000)	Percent of Supply
1970		1,911				
1971		1,970	59	3.1%		
1972		2,053	83	4.2%		
1973	Recession	2,162	109	5.3%		
1974	Recession	2,300	138	6.4%	389	16.9%
1975	Recession	2,360	60	2.6%	390	16.5%
1976		2,381	21	0.9%	328	13.8%
1977		2,405	24	1.0%	243	10.1%
1978		2,432	27	1.1%	132	5.4%
1979		2,466	34	1.4%	106	4.3%
1980	Recession	2,485	19	0.8%	104	4.2%
1981	Recession	2,523	38	1.5%	118	4.7%
1982	Recession	2,540	17	0.7%	108	4.3%



The events of September 11th, together with a three-year recession, slowed the growth of new hotel development. Commercial mortgage-backed security (CMBS) lending provided vast amounts of financing to existing hotels during the mid 2000s. However, this form of debt did not work well for new hotel development that had no established stream of income, which was critical for the CMBS structure. In 2004, the number of net rooms added amounted to just 1,000. In 2005, the net rooms added showed a negative 6,000, largely due to the destruction caused by Hurricane Katrina in New Orleans that year. Hotel development commenced again in 2006 and continued to grow until 2008, when the nation was hit by a massive recession caused by the collapse of the housing and banking industries. With virtually no construction lending taking place as of 2010, the supply of new hotel rooms is expected to slow significantly over the next several years. The four-year rolling average of supply growth peaked in 2010 at 8.4%, which was much lower than the 13.1%, 17.3%, and 16.9% growth rates in 1999, 1989, and 1974. This slower rate of supply growth should

lead to a faster recovery when the United States emerges from this recession. The historic hotel supply growth rates establish a benchmark for forecasting future supply growth in a strong economy with readily available financing.

Exhibits 3.1 through 3.3 show that hotel supply growth occurs during periods when development financing is readily available. It also shows that hotel supply growth slows during periods of recession, when development financing typically evaporates. Thus, financing drives growth in new hotel supply.

A second benchmark can be established for the growth in hotel supply after either a recession or a period of readily available financing. Exhibit 3.4

**Exhibit 3.2 US Hotel Room Supply Growth, 1983-1995**

Year	Recession	Rooms Available	Net Rooms Added	Percent Change	Total Net Rooms Previous	Percent of Supply
		Supply (+000)	(+000)		Four Years (+000)	
1983		2,571	31		105	4.1%
1984		2,609	38	1.5%	124	4.8%
1985		2,682	73	2.8%	159	5.9%
1986		2,899	217	8.1%	359	12.4%
1987		3,004	105	3.6%	433	14.4%
1988		3,133	129	4.3%	524	16.7%
1989		3,243	110	3.5%	561	17.3%
1990	Recession	3,343	100	3.1%	444	13.3%
1991	Recession	3,382	39	1.2%	378	11.2%
1992		3,411	28	0.8%	277	8.1%
1993		3,442	32	0.9%	199	5.8%
1994		3,489	46	1.3%	146	4.2%
1995		3,552	64	1.8%	170	4.8%

**Exhibit 3.3 US Hotel Room Supply Growth, 1996-2010**

Year	Recession	Rooms Available	Net Rooms Added	Percent Change	Total Net Rooms Previous	Percent of Supply
		Supply (+000)	(+000)		Four Years (+000)	
1996		3,659	107		248	6.8%
1997		3,804	145	4.0%	362	9.5%
1998		3,954	150	3.9%	466	11.8%
1999		4,090	135	3.4%	537	13.1%
2000		4,201	111	2.7%	542	12.9%
2001	Recession	4,283	83	2.0%	479	11.2%
2002	Recession	4,346	63	1.5%	392	9.0%
2003	Recession	4,381	35	0.8%	292	6.7%
2004		4,383	1	0.0%	182	4.1%
2005		4,376	-6	-0.1%	93	2.1%
2006		4,411	34	0.8%	64	1.5%
2007	Recession	4,488	78	1.8%	107	2.4%
2008	Recession	4,630	142	3.2%	248	5.4%
2009	Recession	4,759	129	2.8%	383	8.1%
2010		4,815	56	1.2%	404	8.4%





**Exhibit 3.4 Percentage Increase in US Hotel Supply after a Recession**

Year	Notes	Rooms Available Supply (+000)	Net Rooms Added (+000)	Percent Change
1975	Recession with overbuilding	2,360	60	2.6%
1976		2,381	21	0.9%
1977		2,405	24	1.0%
1978		2,432	27	1.1%
1982	Recession—no overbuilding	2,540	17	0.7%
1983		2,571	31	1.2%
1984		2,609	38	1.5%
1991	Recession with overbuilding	3,382	39	1.2%
1992		3,411	28	0.8%
1993		3,442	32	0.9%
1994		3,489	46	1.3%
2002	Recession with overbuilding	4,346	63	1.5%
2003		4,381	35	0.8%
2004		4,383	1	0.0%
2005		4,376	-6	-0.1%
2006		4,411	34	0.8%

shows the yearly percentage increase in US hotel supply after a recession. The data cover four recessions. Three of the recessions (1975-1978, 1991-1994, and 2002-2006) were preceded by significant overbuilding brought on by the availability of massive amounts of financing. The 1982-1984 recession was not preceded by overbuilding, due to a period of high inflation and record-high interest rates. Generally, during the three years after a recession that were preceded by overbuilding (1975, 1991, and 2002), US hotel supply increased each year at a rate of less than 1%. The growth in hotel room supply after the 1982 recession was 1.2% and 1.5%. Because of the lack of financing and hotel development prior to this recession, there was a

significant amount of pent-up demand from hotel developers who were eager to start building hotels as soon as financing became available. The federal government assisted in the real estate recovery by providing hotel developers with income tax incentives. In addition, the government deregulated the savings and loan institutions, allowing them to lend on commercial properties rather than only residential properties

The growth in hotel supply in local micro markets is not only affected by macro trends such as recessions and the availability of financing, it is also affected by other factors such as local zoning, land availability, microeconomic trends, types of demand generators, and transportation accessibility.

A second set of data consists of the room night demand for hotel rooms in the United States. It shows the time periods when the rate of growth in hotel demand increased and decreased. As a benchmark, hotel demand over the past 40 years has increased at an average annual compound rate of 1.7%.

Exhibit 3.5 shows the total US hotel demand for each year between 1970 and 1978. The periods of recession are noted in the second column. The third column shows the number of years it took for hotel demand to recover to pre-recession levels. For example, US hotel demand peaked at 1,594,000 room nights in 1973 at the start of the recession. Demand decreased by 46,000 room nights in 1974. It took two years to recover that lost demand, which occurred in 1976 when the total US hotel demand reached 1,647,000 room nights. The fifth column shows the change in room night demand by the actual number of room nights, and the last column shows the percentage change. During the 1973 recession, hotel demand declined by 2.9% one year and then took two years to recover.



Exhibit 3.6 shows the same type of US hotel demand data as shown in Exhibit 3.5, but this time for the years 1979 to 1989. During this period, the United States went through a three-year recession that started in 1980. The US hotel industry experienced three years of negative demand growth when 122,000 room nights of hotel demand growth was lost. It took four years to recover this lost demand. This recession represents the longest period of negative demand growth over the past 40 years. Compared to the 1975 recession, the recovery growth percentages in this recession were much lower.

Exhibit 3.7 shows the same type of US hotel demand data, this time for the years 1990 to 1999. During this period, the United States experienced another recession, which lasted two years. Hotel demand declined by 18,000 room nights during 1991 and then took only one year to recover to pre-recession levels. While this recession had a minimal impact on hotel demand, it was particularly devastating due to the massive overbuilding of hotel supply that preceded it. After this recession, hotel demand increased at a moderate rate through 2000. This period was one of the longest stretches of sustained hotel demand growth. Hotel owners that acquired properties during the low point in the recession benefited from this long recovery as hotel values increased significantly over these years.

Exhibit 3.5 US Hotel Demand Recovery after a Recession, 1970-1978					
Year	Recession	Years to Recover	Daily Hotel Room Night Demand (+000)	Room Night Demand Change (+000)	Percent Change
1970			1,425		
1971			1,436	11	0.8%
1972			1,513	76	5.3%
1973	Recession		1,594	82	5.4%
1974	Recession		1,548	-46	-2.9%
1975	Recession	1	1,579	31	2.0%
1976		2	1,647	68	4.3%
1977			1,700	53	3.2%
1978			1,769	70	4.1%

Exhibit 3.6 US Hotel Demand Recovery after a Recession, 1979-1989					
Year	Recession	Years to Recover	Daily Hotel Room Night Demand (+000)	Room Night Demand Change (+000)	Percent Change
1979			1,863	94	5.3%
1980	Recession		1,844	-19	-1.0%
1981	Recession		1,800	-44	-2.4%
1982	Recession		1,778	-22	-1.2%
1983			1,741	-37	-2.1%
1984		1	1,757	16	0.9%
1985		2	1,780	23	1.3%
1986		3	1,821	41	2.3%
1987		4	1,885	64	3.5%
1988			1,973	88	4.7%
1989			2,075	102	5.2%

Exhibit 3.7 US Hotel Demand Recovery after a Recession, 1990-1999					
Year	Recession	Years to Recover	Daily Hotel Room Night Demand (+000)	Room Night Demand Change (+000)	Percent Change
1990	Recession		2,123	48	2.3%
1991	Recession		2,105	-18	-0.8%
1992		1	2,146	41	1.9%
1993			2,188	42	2.0%
1994			2,259	71	3.2%
1995			2,303	45	2.0%
1996			2,349	45	2.0%
1997			2,410	62	2.6%
1998			2,478	67	2.8%
1999			2,553	75	3.0%

Exhibit 3.8 shows the same US hotel demand data from 2000 to 2010. During this 10-year period, the United States went through two recessions that had a major impact on hotel demand. The first recession occurred in 2001 and coincided with the events of September 11th. Hotel demand declined by 86,000 room nights, or 3.3%, which was the largest amount of loss in a single year up to this point in time. The recession lasted three years, and it took the US hotel industry three years to recover the lost demand. Except for 2004, the growth rate in hotel demand was fairly slow between 2002 and 2007. The second recession of this decade commenced in 2007 as the housing market and banking industry started to collapse. The unemployment rate quickly exceeded 9%, and most economists believed that this recession was the worst economic downturn since the depression of 1929. The recession lasted three years. During this time US hotel demand dropped by a total of 236,000 room nights during 2008 and 2009, representing an 8.5% decline. The previous worst decline was the 1980 recession, when 122,000 room nights of hotel demand were lost. The worst year was 2009, when 167,000 room nights (or 6.1% of the total) were lost. Most hotel industry professionals were surprised when the recovery commenced in 2010 and 198,000 room nights were added, equating to a record 7.7% growth rate. At this rate of growth, the recovery could be completed in just two years. This quick turnaround reflects the pent-up travel demand that re-enters the market during periods of economic recovery.

Exhibit 3.9 shows US hotel occupancy from 1970 to 2010. Occupancy is calculated by dividing the total room night demand by the total room night supply. The table shows that during this 40-year period, there was only one year (2005) when US hotel supply actually declined. There were only nine years in which US hotel demand declined, with four of those years occurring during the 1980 recession. At the same time, there were 22 years when hotel occupancies declined, which was more than half the years during this 40-year period. These facts indicate that in the United States, one of the most significant risk factors is represented by periods of excessive supply growth rather than declines in room night demand. This phenomenon is further illustrated by the fact that the average annual compound supply growth over the past 40 years was 2.3%, compared to an average annual compound demand growth of 1.7%.

The volatility caused by periods of extreme hotel supply growth in the United States is unique. In Europe, South America, and India, hotel development has been constrained due to factors such as available land, zoning and development restrictions, lack of financing, high land costs, and weak transient demand. Recent years have seen excessive hotel supply growth in areas such as the Middle East, particularly in Dubai and parts of China.

<b>Exhibit 3.8 US Hotel Demand Recovery after a Recession, 2000-2010</b>					
<b>Year</b>	<b>Recession</b>	<b>Years to Recover</b>	<b>Daily Hotel Room Night Demand (+000)</b>	<b>Room Night Demand Change (+000)</b>	<b>Percent Change</b>
2000			2,644	91	3.6%
2001	Recession		2,558	-86	-3.3%
2002	Recession	1	2,570	11	0.4%
2003	Recession	2	2,608	38	1.5%
2004		3	2,707	99	3.8%
2005			2,782	75	2.8%
2006			2,794	12	0.4%
2007	Recession		2,815	21	0.7%
2008	Recession		2,746	-69	-2.4%
2009	Recession		2,579	-167	-6.1%
2010			2,777	198	7.7%



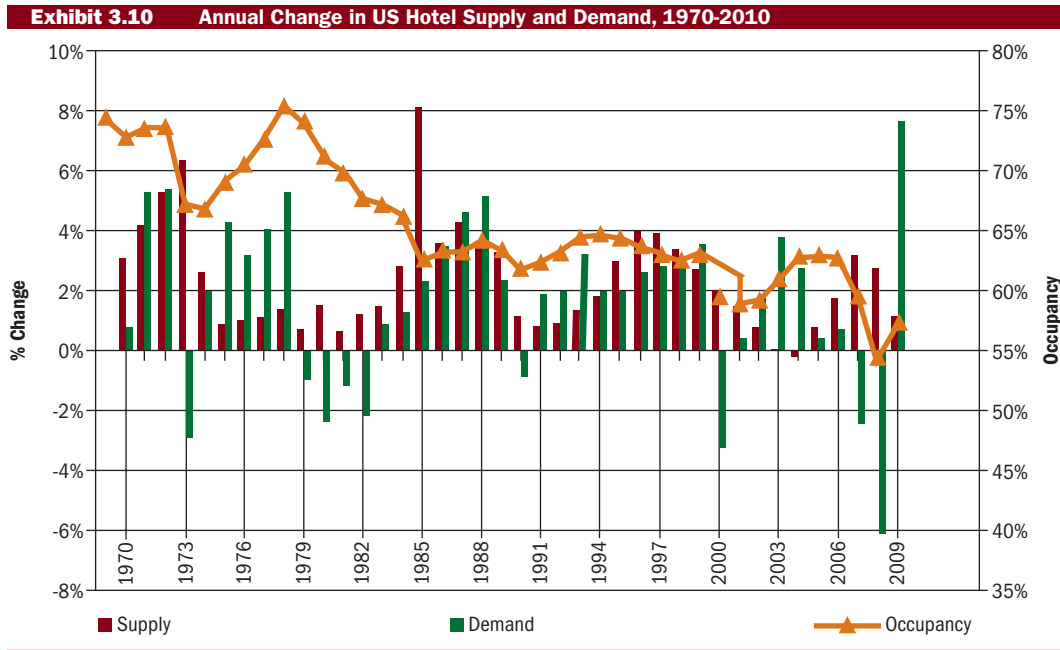
**Exhibit 3.9 US Hotel Occupancy, 1970-2010**

Year	Rooms Available Supply (+000)	Net Rooms Added	Supply Percent Change	Demand (+000)	Demand Percent Change	Demand Change (+000)	Occupancy	Occupancy Percent Change
1970	1,911			1,425			74.6%	
1971	1,970	59	3.1%	1,436	0.8%	11	72.9%	-2.2%
1972	2,053	83	4.2%	1,513	5.3%	76	73.7%	1.0%
1973	2,162	109	5.3%	1,594	5.4%	82	73.7%	0.1%
1974	2,300	138	6.4%	1,548	-2.9%	-46	67.3%	-8.7%
1975	2,360	60	2.6%	1,579	2.0%	31	66.9%	-0.6%
1976	2,381	21	0.9%	1,647	4.3%	68	69.2%	3.4%
1977	2,405	24	1.0%	1,700	3.2%	53	70.7%	2.2%
1978	2,432	27	1.1%	1,769	4.1%	70	72.7%	2.9%
1979	2,466	34	1.4%	1,863	5.3%	94	75.5%	3.8%
1980	2,485	19	0.8%	1,844	-1.0%	-19	74.2%	-1.8%
1981	2,523	38	1.5%	1,800	-2.4%	-44	71.3%	-3.9%
1982	2,540	17	0.7%	1,778	-1.2%	-22	70.0%	-1.9%
1983	2,571	31	1.2%	1,741	-2.1%	-37	67.7%	-3.3%
1984	2,609	38	1.5%	1,757	0.9%	16	67.3%	-0.6%
1985	2,682	73	2.8%	1,780	1.3%	23	66.4%	-1.5%
1986	2,899	217	8.1%	1,821	2.3%	41	62.8%	-5.4%
1987	3,004	105	3.6%	1,885	3.5%	64	63.5%	1.0%
1988	3,133	129	4.3%	1,973	4.7%	88	63.5%	0.0%
1989	3,243	110	3.5%	2,075	5.2%	102	64.4%	1.4%
1990	3,343	100	3.1%	2,123	2.3%	48	63.6%	-1.2%
1991	3,382	39	1.2%	2,105	-0.8%	-18	62.0%	-2.6%
1992	3,411	28	0.8%	2,146	1.9%	41	62.5%	0.9%
1993	3,442	32	0.9%	2,188	2.0%	42	63.3%	1.3%
1994	3,489	46	1.3%	2,259	3.2%	71	64.6%	1.9%
1995	3,552	64	1.8%	2,303	2.0%	45	64.8%	0.4%
1996	3,659	107	3.0%	2,349	2.0%	45	64.5%	-0.4%
1997	3,804	145	4.0%	2,410	2.6%	62	64.0%	-0.8%
1998	3,954	150	3.9%	2,478	2.8%	67	63.2%	-1.1%
1999	4,090	135	3.4%	2,553	3.0%	75	62.8%	-0.8%
2000	4,201	111	2.7%	2,644	3.6%	91	63.2%	0.7%
2001	4,283	83	2.0%	2,558	-3.3%	-86	59.7%	-5.5%
2002	4,346	63	1.5%	2,570	0.4%	11	59.0%	-1.1%
2003	4,381	35	0.8%	2,608	1.5%	38	59.3%	0.5%
2004	4,383	1	0.0%	2,707	3.8%	99	61.3%	3.4%
2005	4,376	-6	-0.1%	2,782	2.8%	75	63.0%	2.8%
2006	4,411	34	0.8%	2,794	0.4%	12	63.1%	0.2%
2007	4,488	78	1.8%	2,815	0.7%	21	62.8%	-0.5%
2008	4,630	142	3.2%	2,746	-2.4%	-69	59.8%	-4.8%
2009	4,759	129	2.8%	2,579	-6.1%	-167	54.5%	-8.8%
2010	4,815	56	1.2%	2,777	7.7%	198	57.6%	5.6%



Exhibit 3.10 shows a visualization of the annual change in US hotel supply and demand. Superimposed over the supply and demand trend is the percentage of occupancy, which mimics the changes in supply. It also shows the gradual overall occupancy decline during the past 40 years due to the imbalance between the growth in hotel supply and hotel demand.

When performing a hotel market study and valuation, this type of supply, demand, and occupancy analysis is helpful in evaluating local hotel-related economic trends. Historic growth rate patterns of supply, demand, and occupancy as they relate to underlying economic cycles can form a basis for making future projections.



## Micro Demand

In preparing a hotel market study and appraisal, accurate quantification of micro demand is essential. The unit of measurement commonly employed is the *room night*, which is defined as one transient room occupied by one or more persons for one night. For example, one business traveler who stays at a hotel for three nights accounts for three room nights. A family who uses one room for three nights also generates three room nights. If this family occupies two guest rooms during their stay, the demand generated would be six room nights.

The total number of room nights within a defined market area represents the total potential demand, which can be measured on a daily, weekly, monthly, or yearly basis, depending on local travel patterns. The total demand for transient accommodations within a micro market is generally quantified using the build-up approach based on an analysis of lodging activity; secondary support is provided by the build-up approach based on an analysis of demand generators.

To apply the build-up approach based on an analysis of lodging activity, an area's transient room night demand is estimated by totaling the rooms ac-



tually occupied in local hotels and motels. Through interviews with hostelry operators, owners, and other knowledgeable individuals, occupancy levels for individual lodging operations and area occupancy trends can be established. The percentage of occupancy for each property times the available number of rooms is multiplied by 365 days to produce the total number of room nights actually occupied each year. The area's total room night lodging demand can be quantified by combining the estimated number of occupied hotel rooms for each property and adding a factor for latent demand.

The build-up approach based on an analysis of demand generators involves interviews and statistical sampling market research. Lodging demand is estimated by totaling the room nights generated from sources of transient visitation. Drawing from a sample of major transient generators located within a defined market area, interviews and surveys are conducted to determine the amount of demand each source attracts during a specified period of time, such as a week or a month. When these data are combined with other survey information, such as facility preferences, price sensitivity, the nature of the demand, and travel patterns, the analysis of demand generators provides both support and amplification for the findings derived from the analysis of lodging activity.

Appraisers use a combination of the two procedures to save time and unnecessary research effort. In practice, an overall area demand is first established by analyzing lodging activity. Then selective interviews are conducted at one or more major generators of visitation to verify the transient demand and establish traveler characteristics. By defining not only the quantity of transient demand but also its lodging characteristics, the analyst has enough data to develop a micro demand projection. Because each market area is unique, the analytic approach must often be adjusted to account for particular demand characteristics.

## The Build-Up Approach Based on an Analysis of Lodging Activity

The complete build-up approach based on an analysis of lodging activity is generally performed in seventeen steps:

1. Define the primary market area.
2. Define the area's primary market segments (commercial, meeting and group, and leisure).
3. Identify all primary and secondary competitive lodging facilities in the market area and determine their individual room counts and competitive weighting factors.
4. Estimate the percentage of occupancy for each competitive hotel or motel on an annual basis.
5. Determine the percentage relationship between each market segment and the whole market for each competitive hotel.
6. Quantify the accommodated room night demand by multiplying each property's room count by its annual occupancy and then by the 365 days in a year. Each property's total accommodated room night demand is then allocated among the primary market segments (i.e., commercial, meeting and group, and leisure) within the market area.



7. Estimate latent demand, which includes both unaccommodated and induced demand.
8. Quantify the area's total room night demand.
9. Forecast demand growth rates and project room night demand growth into the future.
10. Quantify the existing and expected competitive room supply of lodging accommodations.
11. Estimate overall area occupancy during the projection period.
12. Develop base-year competitive indices for each hotel and market segment. (The competitive index measures the relative competitiveness of the hotel relative to the other lodging facilities in the market.)
13. Determine how competitive the subject property will be for each market segment using competitive indices.
14. Project the competitive indices of each hotel and each market segment over the projection period.
15. Based on the competitive indices, estimate the subject property's market share for each segment by multiplying the subject's competitive index by its fair share.
16. Multiply the subject property's market share for each segment by the total room nights available for each segment to determine the subject property's capture.
17. The total number of room nights captured by the subject property divided by the total number of rooms available is equal to the occupancy.

Steps 1-9 are used to quantify existing and projected hotel demand. Step 10 quantifies the local competitive supply of hotel rooms. Steps 11-17 allocate the demand among the competitive supply, resulting in an estimate of occupancy for each projection year. Each of these steps will be described and demonstrated using a case study that will be referenced throughout this text. In addition, the case study will demonstrate how Hotel Valuation Software assists in the analysis and the projection of occupancy.

## Case Study

### Introduction

This case study is presented to illustrate the hotel market analysis and valuation procedures used throughout the world. The case study will be developed throughout the book and will demonstrate procedures for the collection and analysis of data. It will also show how these data are processed into a market study and valuation to estimate the market value of the various assets comprising the business.

Since this book provides a global perspective on performing hotel market studies and valuations, the case study will

specifically address many of the similarities and differences in the procedures for data collection and analysis used in hotel studies in the following five regions of the world:

- North America
- South America
- Europe
- India
- China

### Hotel Valuation Software

An important component of the case study is the demonstration of Hotel Valuation





Software, which is an integral part of this book and an invaluable tool for hotel appraisers and consultants. Consisting of three modules, this software significantly enhances the appraiser's ability to analyze and process data into a hotel market study and valuation assignment that involves estimating the market value of the various assets comprising the business. The tool consists of three separate software programs written as Microsoft Excel macro-enabled workbooks and a software manual. They require a personal computer capable of running Microsoft Excel 2007 (or later versions for the PC), Microsoft Office 2011 for Mac, and Adobe Acrobat Reader or Adobe Acrobat. All output is formatted for a standard laser printer using 8½-by-11-inch or A4 paper. The three software modules are described as follows:

#### **Market Analysis and Occupancy and Average Daily Rate Forecasting Module (Room Night Analysis- RNAADR V3)**

The room night analysis program performs several functions:

1. Enables the appraiser to quantify the demand for transient accommodations within a defined market area. The program identifies both accommodated hotel demand and latent demand, which includes unaccommodated and induced demand. This demand can be projected into the future.
2. Enables the user to evaluate the various competitive factors such as occupancy, average daily rate, and market segmentation of all hotels in the local market once the existing and proposed supply of hotel rooms are identified by the appraiser.
3. Calculates the area-wide occupancy and average daily rate as well as the competitive market mix.
4. Produces a 10-year forecast of occupancy for each existing and proposed hotel identified by the appraiser using competitive indices that measure the relative competitiveness of each hotel based on market segmentation.
5. Uses room night analysis to perform a projection of average daily rate based on a build-up segment-by-segment rate analysis

#### **Financial Forecast of Income and Expense Module (Fixed Variable FIXVAR V3)**

The key to any hotel market study and valuation assignment that involves estimating the market value of the various assets comprising the business is a supportable forecast of revenues and expenses. Hotel revenues and expenses are made up of many different components that display certain fixed and variable relationships. This program enables the appraiser to input comparable financial operating data and forecast a complete 11-year income and expense statement by defining the following inputs:

1. The projected future occupancy and average rate levels for the subject hotel
2. Base year operating data from the subject property or a comparable hotel
3. Expected inflation rates for revenues and expenses

The output income and expense statement is formatted in accordance with the Uniform System of Accounts for Hotels.

#### **Hotel Mortgage-Equity Valuation Model and Hotel Mortgage-Equity Valuation Model-Refinancing Extension (HMEV VarHold V3 and HMEV Refi V3)**

A discounted cash flow valuation model utilizing the mortgage-equity technique forms the basis for this program. By inputting the terms of typical hotel financing along with a forecast of revenues and expenses, the program determines the value that provides the stated returns to the mortgage and equity components. The software allows the following assumptions:

1. Mortgage component inputs: interest, amortization, loan-to-value ratio, debt coverage ratio, payments per year, and refinancing of debt
2. Equity inputs: equity yield



3. General inputs: terminal capitalization rate, selling expenses, holding period, cash flow, and inflation

The models value the cash flow based on the loan-to-value ratio, the debt coverage ratio, and the debt yield. There are two separate software modules for the Hotel Mortgage Equity Valuation Models; one allows variable holding or projection periods and the other incorporates a refinancing during the projection period.

**Tabbed Version of Hotel Valuation Software**

Hotel Valuation Software comes in a tabbed version and a version without tabs. By purchasing a copy of this book, you receive access to the enhanced tabbed version of the software. The tabbed version contains tabs along the bottom of each page that enable the user to get into the calculation sections of the software. This allows the user to view the actual calculations taking place within the software so that modifications can be made when appropriate. For example, in the FIXVAR software that projects income and expense, the user can adjust the reserve for replacement calculation so that the reserve for replacement percentage will build up each year, such as 3% in Year 1, 4% in Year 2, and 5% thereafter. These modifications cannot be made in the untabbed version. Exhibit 3.11 shows a screenshot of the FIXVAR software showing the tabs along the bottom. The red tabs indicate calculation areas where changes can be made. This enhanced version of the Hotel Valuation Software is significantly more powerful than the untabbed version.

**Overview**

The case study consists of a number of steps that need to be completed when performing a hotel market study and valuation assignment estimating the market value of

the various assets comprising the business. Each step will be thoroughly described and demonstrated with hypothetical examples. The many mathematical calculations incorporated within the software modules will be set forth and explained prior to demonstrating the software. It is important for the appraiser to understand all the calculations being performed by the software in order to be able to rely on the output. The case study consists of three stages that correspond to the three software modules: 1) market analysis to forecast hotel occupancy and average daily rate, 2) income and expense forecast, and 3) mortgage equity income valuation approach

**Stage 1. Market Analysis to Forecast Hotel Occupancy and Room Rate**

A forecast of hotel occupancy is accomplished through a supply and demand analysis. Demand is quantified by the build-up approach based on the analysis of lodging activity and is allocated among the competitive supply based on each hotel's relative competitiveness. The result is the number of room nights of demand captured by each hotel, which can then be processed into a forecast of occupancy. The room night analysis software module also has a room rate forecasting model that takes the demand captured by each hotel and uses that data to derive the subject property's average room rate for each projected year.

The process of performing a hotel market analysis to forecast occupancy and average room rate is similar in the five regions of the world we are reviewing. While collecting data can be more challenging in some of the emerging areas, the analysis and processing of these data is similar. As such, the market study portion of the case study will be a generic approach applicable to all regions of the world. The resulting occupancy and room rate will then serve



as a basis for the income and expense forecast and the mortgage equity valuation; both of these steps need to consider local differences. By using the identical forecasted occupancies and average rates for each region of the world, we will be able to illustrate the differences in value attributed to unique local revenues, operating expenses, and mortgage equity valuation parameters.

### Stage 2. Income and Expense Forecast

The second stage of data analysis is the forecast of revenues and expenses. In the forecasting process, the occupancy and average rate projections derived from the market analysis are converted into an estimate of rooms revenue. Using additional data collected from the subject's operating history (if available) along with market and industry statistics from comparable properties, the appraiser then forecasts food, beverage, telephone revenue, other income, and normal hotel operating expenses. When all this information is put together, it results in a highly documented forecast of income and expense, which is a key component in estimating market value and evaluating the economics of a hotel investment.

Since hotel revenues and expenses are market specific, a separate forecast will be made for each of the five regions of the world. Factors such as the cultural use of food and beverage facilities, the cost of labor, energy costs, property and other taxes, land leases, and so forth differ widely around the world.

### Stage 3. Mortgage Equity Income Capitalization Valuation Approach

Most hotels around the world are valued by the income capitalization approach utilizing a 10-year discounted cash flow procedure. Since hotels are typically financed using a combination of debt and equity capital, the most appropriate valuation approach is therefore the mortgage equity income capitalization approach, also known simply as the *mortgage equity approach*. Under the mortgage equity approach, the forecasted income is converted into an estimate of value by allocating the net income to the mortgage

and equity components of the investment based on market rates of return and loan-to-value ratios. The value of the mortgage component plus the equity component equals the value of the property. The income capitalization approach is often the preferred valuation method for hotels and motels because it reflects the investment thinking of knowledgeable buyers and sellers. By using a mortgage-equity technique rather than merely discounting the yearly net income before debt service at an overall rate, the appraiser can derive a more supportable, and therefore reliable, valuation conclusion. Most hotel buyers and sellers indicate that they use some version of the mortgage-equity technique in making their investment decisions, so this approach is usually given the greatest weight in the valuation of hotels.

### Important Assumptions

It should be noted that while this case study is realistic, the location, facts, names, and so forth are totally hypothetical. Any resemblance to an actual lodging facility is pure coincidence. All the hotels included in this case study are assumed to be competently managed. Any differences in the operating results among these hotels are due to external locational factors and not because of the quality of management or brand affiliation. In the real world, each assignment is unique, and not all the steps and procedures set forth in this book need to be included in every analysis. It is up to the individual appraiser to determine the proper methodology for each assignment. This text has attempted to include most of the procedures utilized in a hotel market study and valuation merely to illustrate the many ways an appraiser and consultant can collect and analyze the data and information. Few assignments require the type of detailed analysis set forth in this case study. Many factors influence the applicability of the various approaches, including the availability of data, the nature of the market, the characteristics of the subject property, and time and economic considerations. An experienced hotel consultant can generally



arrive at a credible estimate of value using a more abbreviated set of procedures.

## Getting Started

The subject of the case study is a proposed 200-room Marriott Hotel assumed to enter the market in 2014. The purpose of this study is to estimate the market value of the Marriott on the day it opens and becomes fully operational. The study is being performed during the first quarter of 2013 using data from the full year of 2012, which is called the *base year*.

## Background

The subject lodging market consists of various hotels located throughout a fully developed suburban area just outside of a major urban center. The site of the proposed Marriott is located at the intersection of two major highways. Because of the high level of traffic, the site affords especially good exposure. The east-west highway is heavily traveled and connects various suburban communities with a nearby urban center, and the four-lane, north-south feeder road provides access to several nearby large industrial and office parks.

The surrounding neighborhood has experienced strong growth over the past 10 years as the nearby urban center has extended its area of influence. What was once farmland now supports residential developments, regional shopping malls, office

complexes, and industrial districts. Several large aerospace and communications manufacturers have established plants in the area; these manufacturers provide work for many smaller subcontracting production firms. These high technology businesses support an affluent population with large disposable incomes, attractive homes, and a leisure-oriented lifestyle.

Although the aerospace industry tends to be highly cyclical, most of the larger plants have long-term government contracts. Economic planners expect moderate growth to continue. More than 40% of the land remains undeveloped, and the area has been attracting many firms from the nearby urban center.

As a result of the recent wave of economic growth, new first-class, full-service hotel development has potentially become cost justified. A developer is considering building a 200-room Marriott Hotel on a five-acre site located in the southeast quadrant of the intersection formed by the two highways. In addition to its 200 guest rooms, the hotel will have a restaurant, a lounge, a 40-seat lobby bar, and approximately 15,000 square feet of meeting space. The decor and construction specifications indicate a top-quality property capable of attracting first-class patrons. For the purposes of this analysis, the Marriott Hotel is assumed to open as of the first day of the second projection year.

## Define the Primary Market Area

The first step in analyzing lodging activity is to define the subject's market area. The market area for a lodging facility is the geographical region where the sources of transient visitation (demand) and the competitive supply are located. To delineate the boundaries of a market area, four factors must be considered:

1. Travel time between the source of visitation and the subject property
2. Methods of travel commonly used
3. Sources of transient visitation
4. Location of competitive lodging facilities

Travel time is generally a better measure of distance than miles because highways, road conditions, and travel patterns differ. Most people are willing to travel up to 20 minutes to get from a source of visitation to their lodging accommodations. If most of visitors' travel time is spent on high-speed, inter-



state highways, the market area will be larger than if the route to the subject facility is along busy downtown streets. This 20-minute market area radius is a rule of thumb that is generally appropriate for suburban areas. In rural regions, the travel time radius can be significantly increased, sometimes to as much as one hour. Central business districts usually have a much shorter travel time radius of five to 10 minutes.

The means of transportation used also affects travel time. For example, a convenient rapid transit system can increase the market area by shortening the length of time needed to reach the subject property. Airport properties that depend on shuttle bus service should consider visitors' waiting time. These hostelrys should be located no more than 10 minutes from the airport to allow for a 20-minute round trip.

The analyst should locate the subject property on a detailed road map and indicate points that could be reached within 20 minutes of travel time. Connecting these points creates an irregular circle, which represents the boundaries of the initial market area. To determine the actual shape of the final market area, certain adjustments must be made to show the influence of competition and other demand characteristics.

Before any modifications are made, however, the potential sources of transient visitation within the initial market area should be identified and located on the map. Any attraction that draws out-of-town travelers who require commercial lodging facilities is a source of transient visitation.

After the initial market area has been determined, all competitive hostelrys should be located on the map and their positions with respect to the subject property and sources of visitation should be noted. Travelers tend to stay at the lodging facility closest to their destination, assuming the property meets certain requirements. If a comparable hotel is located between a source of demand and the property being appraised, the competitive facility may attract patrons first and the subject hostelry will receive the overflow. Care must be taken to evaluate the drawing power of the competition because travelers will generally bypass one facility for another if it better suits their needs and budget. The location of competitive properties between the property being appraised and the attraction-generating business can decrease the size of the initial market area and may even eliminate some sources of visitation from consideration.

In evaluating competition, local travel patterns and popular routes are important factors to consider. Travelers usually prefer to travel along familiar routes and are not inclined to venture into unfamiliar areas. If the customary route to a source of demand happens to bypass the subject property, its potential for capturing that market is greatly reduced. The location of one or more comparable lodging facilities along the route also decreases the drawing power of the subject property. Traffic counts and origination and destination studies prepared by state and local agencies can help pinpoint popular routes and identify area travel patterns. By plotting this information on the map showing the initial market area, appropriate adjustments can be made to the boundaries indicated. The resulting enclosure is the final market area, which contains the sources of transient visitation available to the subject property.



## Case Study

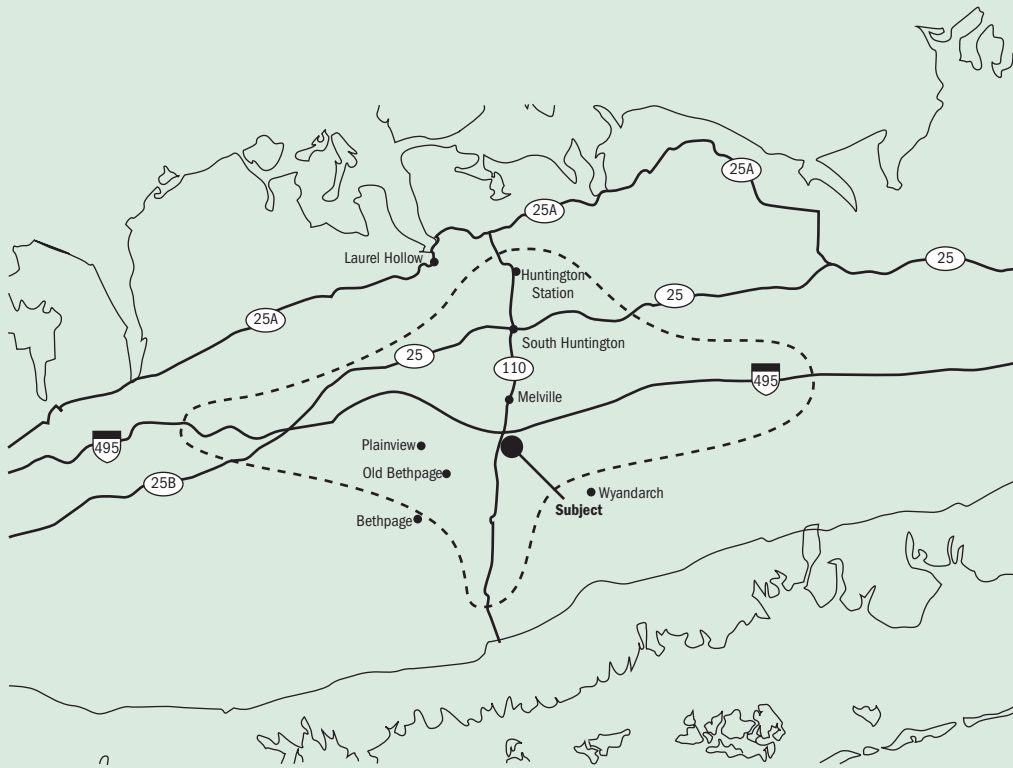
### Define the Primary Market Area

The site of the proposed Marriott Hotel is identified on a detailed highway map. Based on the site's suburban location, a 20-minute drive time is considered appropriate. A route is traced along each major highway, starting at this intersection and ending at a point 20 driving minutes away, based on average highway speeds and road conditions. The accompanying map (Exhibit 3.12) illustrates the two, long radiating

east-west and north-south routes. Secondary roads intersecting these two highways are also measured for travel time. The end points of all possible routes on the map are then joined by a continuous line; the resulting market area resembles a circle that has been pushed in on four sides.

Most of the visitors to the market area arrive by automobile. Although limousine and taxi service from the nearby airport is available, rental cars are the preferred means of transportation.

**Exhibit 3.12**



### Define the Market Segments

Once the market area has been outlined, the appraiser should determine the primary segments of transient demand that are now using local hotels. The three market segments found in most areas are commercial, meeting and group, and leisure. Other market segments that are sometimes considered include

extended-stay travelers, government workers, airline crews, delayed passengers, sports teams, military personnel, truck drivers, and cruise ship passengers.

Market segmentation is a useful procedure because individual market segments generally exhibit unique characteristics relating to future growth potential, seasonal aspects of demand, average length of stay, rates of double occupancy, facility requirements, price sensitivity, and other factors. Once the room night demand has been quantified by market segment and the individual characteristics of each segment have been defined, the future demand for transient accommodations can be more accurately forecasted by making separate projections for each segment. Some of the unique characteristics of the major market segments were described at the beginning of this chapter.

### Case Study

#### Define the Market Segments

The primary market segments observed during fieldwork in the subject's market area were commercial, meeting and group, leisure, and airline travelers. In addition to these primary segments, a number of sec-

ondary segments, such as bus tour passengers, truck drivers, extended-stay travelers, and military personnel, were noted. Because the impact of these secondary segments on total demand is considered minimal, they were merged into the appropriate primary segments in allocating room night demand.

### Identify Primary and Secondary Competition, Room Counts, and Competitive Weighting Factors

The primary and secondary competitive lodging facilities located within a market area are part of the overall lodging supply, which can be defined as all transient accommodations catering to overnight visitors. Transient accommodations include hotels, motels, conference centers, bed and breakfast inns, rooming houses, health spas, and other facilities. Although all transient lodging facilities operating in the same market area compete with one another to some extent, only those that are considered primary or secondary competition are generally included in the lodging analysis.

Primary competitive lodging facilities are hotels that are similar to the subject property with respect to the class and type of facilities offered and attempt to capture the same types of transient visitors and market segments. Secondary competition consists of lodging facilities that would not normally attract all of the same types of transient visitors or market segments but become competitive because they do attract some of the same visitors within one or more of the identified market segments.

Determining which hotels represent primary or secondary competition and which provide no competition at all is largely subjective. Relative competitiveness can be evaluated by looking at area demand and identifying the different types of accommodations that transient visitors are actually selecting. Alternatively, competitive supply can be examined to identify accommodations that are similar to the subject in their market orientation (i.e., facilities, class, image, location, and other characteristics).

Demand generator interviews can provide information on the types of accommodations market area travelers are currently using. The responses to the interview questions should allow the appraiser to pinpoint which lodging facilities are competitive with each other and why.



To evaluate the similarities of facilities and the market orientation of the hotels that make up the lodging supply, an appraiser may visit each property and judge its competitiveness using specific criteria. The following questions can be used to judge whether a lodging facility represents primary or secondary competition or does not compete with the subject property at all.

- Does the hotel occupy a similar location? Is it within 20 travel minutes of the demand generators? Is it identified with a specialized location such as an airport, convention center, downtown area, or resort?
- Is the hotel similar in terms of the types of facilities offered? Specialized types of hotels include convention, resort, suite, residence, conference center, casino, and health spa hotels.
- Does the hotel offer similar amenities? Amenities may include restaurants, lounges, meeting rooms, a pool (indoor or outdoor), a health spa, tennis courts, and golf facilities.
- Is the hotel similar in class—i.e., quality and price? Classes of lodging facilities include luxury, first-class, standard/mid-rate, economy/budget, and hard budget.
- Is the hotel similar in image? Image refers to the hotel's brand name, local reputation, management expertise, and unique characteristics.

Area hotels can be considered primary competition if they are similar to the subject property with respect to many of these criteria, particularly those related to types of facilities, class, and image. Secondary competition would include hotels that are similar in location-related characteristics but meet few of the other criteria, particularly class and image. Secondary properties are considered competitive because they sometimes attract the same market or travelers as the subject property and other primary competitors.

When all primarily competitive hotels are sold out, travelers desiring these accommodations must settle for one of the secondarily competitive properties. If, for example, a traveler wanted an upscale, first-class hotel, a budget property would be a secondary alternative. A budget traveler who found all the economy properties filled might have to patronize a first-class facility.

A secondary competitor is sometimes in demand because it has a particularly good location. A secondary property adjacent to a demand generator may do good business in inclement weather when people want to stay at the first hotel they encounter.

A secondary hotel is usually not as competitive as the primary properties. To reflect this lesser degree of competitiveness, a weighting factor is assigned to a secondary property, which effectively reduces the hotel's room count. For example, a 100-room, secondary hotel that is considered to be 25% competitive with the subject property is assumed to have an effective room count of only 25 rooms. This assumption not only reduces the existing supply of competitive hotel rooms, but it also lowers the area's current room night demand. If it is determined that more than one hotel can be considered secondarily competitive, then all of the secondary properties are typically combined into a single hotel using a weighted-average calculation in the market analysis. These combining calculations and the overall impact of secondary hotels will be illustrated in the case study example.

A few hotels in the market area usually offer no competition to the subject property and are therefore not considered in the analysis of lodging activity. These properties are generally so dissimilar to the subject property



that any crossover of demand would be highly unlikely. Most travelers would probably defer their trip if they were unable to obtain accommodations in either the primary or secondary competitive properties.

To quantify hotel room night demand using the build-up approach based on lodging activity, it is necessary to determine the room counts of all competitive hotels. This information is usually available directly from the properties or from various lodging directories. The room counts of any hotels that opened during the 12-month base year (12 months before the commencement of the first projection year) must be adjusted based on estimates of occupancy and market segmentation. For example, the 250-room Hyatt Hotel identified in the case study opened in early July of the base year period, which extended from January 1 to December 31. Since the Hyatt only operated for six months of the base year period, its historic average room count is 125 rooms ( $50\% \times 250 = 125$ ).

The *historic average room count* (HARC) is the hotel's room count multiplied by the percentage of the base year that the property is actually open. In addition to weighting the impact of new hotels on the market, the HARC can also be used to adjust the room counts of seasonal properties that close for a portion of the year and existing hotels that add new rooms during the base year.

### Case Study

#### Identify Primary and Secondary Competition, Room Counts, and Competitive Weighting Factors

A survey of the subject market area revealed a total of 15 hotels containing 2,219 rooms. Of these 15 hotels, four were judged to represent primary competition (975 rooms) and four were considered secondarily competitive (560 rooms). Seven hotels do not compete in the subject lodging market at all. The general criteria applied to identify primary and secondary competition are outlined as follows.

- **Location**  
Competitive hotels are either within or close to the previously defined market area.
- **Facilities**  
All hotels must offer individual guest rooms on a transient basis.
- **Amenities**  
To be considered primary competition, a hotel must offer a full range of amenities, including a restaurant, a lounge, meeting rooms, and a swimming pool. Secondarily competitive hotels must provide either a restaurant or a breakfast buffet. Two of the hotels (Novotel and Hyatt Place) had

limited meeting space and thus were considered secondarily competitive.

- **Class, quality, and price**  
Primary competition includes first-class, full-service hotels. Secondary competition includes a mid-rate, full-service hotel (Holiday Inn), two limited-service hotels (Novotel and Hyatt Place), and a five-star luxury hotel (Four Seasons). All competitive hotels offer clean, comfortable, and safe accommodations.
- **Image**  
A hotel needs a national affiliation or a strong local reputation to be included as primary competition. Hotels with poor reputations are not included in the primary or secondary competition.

#### Primary Competition

The hotels considered primarily competitive with the subject property are shown in Exhibit 3.13. The room counts were obtained from lodging directories.

#### Secondary Competition

The hotels shown in Exhibit 3.14 are considered secondarily competitive within the subject competitive market. These hotels are identified as secondary competition





**Exhibit 3.13 Primary Competition**

Hotel	Room Count
InterContinental	200
Hilton	275
Sheraton	250
Hyatt	250
Total	975

\* The Hyatt opened on July 2nd of the base year, so its historic average room count (HARC) is 125 ( $0.50 \times 250 = 125$ ).

**Exhibit 3.14 Secondary Competition**

Hotel	Full Room Count	Competitive Weighting Factor	Weighted Room Count
Holiday Inn	110	50%	55
Novotel	125	50	63
Hyatt Place	100	25	25
Four Seasons	225	25	56
Total	560		199

rather than primary competition because of differences in location, product quality, amenities, and/or market orientation.

The four secondarily competitive hotels were evaluated to determine their degree of competitiveness within the market. Based on the previously outlined competitive criteria, weighting factors were assigned to each secondary hotel in Exhibit 3.14. When used in a supply and demand analysis, a competitive weighting factor effectively reduces a hotel's room count; this is called the *weighted room count*.

Seven hotels in the market area are not considered either primary or secondary competition because they have inferior locations and poor local reputations, do not offer the required amenities, and do not have any national affiliation.

## Estimate Occupancy and Determine Market Segmentation

The key ingredient in the build-up approach based on an analysis of lodging activity is the occupancy estimate for each of the primary and secondary competitive hotels in the market area. The estimate of competitive occupancies should cover a full, 12-month period. Ideally, this period, which is called the *base year*, closely precedes the first year projected in the supply and demand analysis.

When collecting occupancy and average room rate data, the appraiser should be aware of factors that could skew the data and produce errors in the analysis. For example, occupancy is calculated as the number of rooms occupied over a period of time divided by the number of rooms available. The appraiser should first understand how the hotel defines "rooms." Generally, a room is synonymous with the term *hotel unit*, which is the smallest accommodation that can be rented to a guest. Each unit must have a full bath and its own entrance to a public hallway or to the exterior. Some hotel units are composed of two rooms, but since such a unit may have only one entrance or one bath, it would be impossible to rent it to two unrelated parties. If, on the other hand, each room has its own bath and entrance and the connection between the two rooms can be locked, then each room could be considered a separate unit.

The best occupancy data to input into the build-up approach based on an analysis of lodging activity is the actual occupancy for each competitive hotel during the base year. This information can come from primary research during fieldwork, past studies performed in the market, and industry contacts. The top hotel consulting and appraisal firms around the world devote significant resources to collecting occupancy data because of its importance in performing hotel market studies and valuations. Appraisers without access to occupancy information from individual hotels can use a secondary data source from STR Global called a *trend report*, which was described in Chapter 2. A trend report provides occupancy information in aggregate form for four or more hotels defined by the appraiser. While this type of occupancy data is



somewhat helpful in approximating the level of hotel demand within a market, it does not take the place of having the actual occupancies of each individual competitive hotel. The Hotel Valuation Software was developed specifically to handle the input of occupancies for individual hotels; however, it will also accommodate one generic hotel derived from the output of a trend report.

The need to divide the market's overall room night demand into individual market segments has already been discussed. In applying the lodging activity approach, market segmentation is determined by interviewing competitive management about the percentage relationship of each market segment to the whole market. This information is usually not considered confidential and should be easily obtained from each of the hotels. The appraiser must define the market segments in detail before asking about percentage relationships so that the interviewee will understand and employ the same basis in allocating the hotel's occupied rooms. The percentages should add up to 100% when all segments are considered.

Case Study

Estimate Occupancy and Determine Market Segmentation

Occupancy, market segmentation, and historic average room counts have been calculated based on field interviews and in-house data. The current level of occupancy is estimated for each of the competitive hotels in the market. Because the fieldwork for the appraisal was performed in the first quarter of the year following the base year, the estimates of occupancy and market segmentation apply to the calendar base year. In addition to estimated occupancy levels, market segmentation percentages have been established for all the competitive hotels based on the relationship of each market segment to the whole. As described previously, this appraisal recognizes four market segments: commercial, meeting and group, leisure, and airline. To account for hotels that open during the base year, the HARC is used instead of the actual room count.

To reduce the number of calculations required, the hotels comprising the secondary competition are combined into a single aggregate hotel by applying weighted averages. The aggregate hotel is called the "secondary competition." Exhibit 3.15 sets forth the necessary calculations.

The weighted average is calculated by multiplying the weighted room count of each hotel by the appropriate occupancy or market segmentation percentage. The sum of these products is then divided by the total weighted room count (199). Exhibit 3.16 shows the weighted-average calculation for occupancy.

Exhibit 3.17 shows the operating characteristics of each of the four primary hotel competitors and the aggregate secondary competition. A similar weighted-average computation is made to determine the market-wide occupancy and market segmentation percentages.

Exhibit 3.15 Weighted Average of Secondary Competition							
Hotel	Weighted Room Count	Occupancy	Market Segmentation				Total
			Commercial	Meeting & Group	Leisure	Airline	
Holiday Inn	55	76%	60%	10%	25%	5%	100%
Novotel	63	78	60	15	15	10	100
Hyatt Place	25	69	75	10	10	5	100
Four Seasons	56	71	85	5	10	0	100
Total	199	74%	68%	10%	16%	5%	100%



**Exhibit 3.16      Occupancy—Secondary Competition**

Hotel	Weighted Room Count	Occupancy	Effective Room Count	Occupancy
Holiday Inn	55	76%	42	
Novotel	63	78	49	
Hyatt Place	25	69	17	
Four Seasons	56	71	40	
Total	199	74%	148	
Weighted average:	148 / 199 = 74%			

**Exhibit 3.17      Room Count, HARC, Occupancy, and Market Segmentation**

Hotel	Number of Rooms	HARC	Occupancy	Market Segmentation				Total
				Commercial	Meeting & Group	Leisure	Airline	
InterContinental	200	200	66%	60%	30%	5%	5%	100%
Hilton	275	275	72	40	35	15	10	100
Sheraton	250	250	68	45	25	15	15	100
Hyatt	250	125	65	20	50	25	5	100
Secondary competition	199	199	74	68	10	16	5	99
Total/weighted average	1,174	1,049	69.5%	48%	28%	14%	9%	100%

**Quantify Accommodated Room Night Demand**

The current accommodated room night demand for each market segment is calculated separately for each competitive hotel using the following equation:

Historic average room count × occupancy × market segmentation × 365 = Total accommodated room night demand

The number of occupied rooms per market segment for all the competitive hotels in the market area is then combined to yield the area's current accommodated room night demand. The accommodated room night demand represents the actual number of competitive rooms occupied during the base year.

**Case Study****Quantify Accommodated Room Night Demand**

Exhibit 3.18 shows the estimated accommodated room night demand divided by market segment.

**Exhibit 3.18      Accommodated Room Night Demand**

Hotel	HARC	Occupancy	Market Segmentation				Market Segmentation				Total
			Commercial	Meeting & Group	Leisure	Airline	Commercial	Meeting & Group	Leisure	Airline	
InterContinental	200	66%	60%	30%	5%	5%	28,908	14,454	2,409	2,409	48,180
Hilton	275	72	40	35	15	10	28,908	25,295	10,841	7,227	72,270
Sheraton	250	68	45	25	15	15	27,923	15,513	9,308	9,308	62,050
Hyatt	125	65	20	50	25	5	5,931	14,828	7,414	1,483	29,656
Secondary competition	199	74	68	10	16	5	36,974	5,571	8,586	2,871	54,002
Accommodated room night demand							128,643	75,660	38,557	23,298	266,158
Percent of total							48%	28%	14%	9%	100%



## Hotel Valuation Software

The data from this case study will now be entered into the Hotel Valuation Software. The first program is called RNAADR V3, which stands for room night analysis and average daily rate. The RNA results in a projection of occupancy and the ADR produces a projection of average daily rate. The program is an Excel template containing a number of input and output screens. The name of each screen is listed on the navigation bar on the left side of the template. To access a particular screen, click once on the screen name in the navigation bar.

A security warning may appear in the upper-left corner of the screen when the software files are first opened. If this warning appears, click on “Options,” “Enable this content,” and then “OK” to allow for full access of the software.

When the RNAADR program opens, the first screen to appear is the Intro screen, which contains information on the software authors, copyrights, versions, and level of software support available.

The screenshot shows the 'Hotel Valuation Software, 3rd Edition Room Night Analysis Module' Intro screen. On the left is a vertical navigation bar with a 'Contents' menu listing various project stages from 'Project Information' to 'Final Output'. The main content area has a red header with the title. Below it, a light blue box contains text identifying the authors: Jan A. deRoos, Ph.D. and Stephen Rushmore, MAI, FRICS, CHA. It lists their addresses, titles (Professor and President & Founder), and affiliations (Cornell University School of Hotel Administration). Copyright information for 2011 is also present. To the right of the blue box are two buttons: 'Begin Room Night Analysis' and 'Begin ADR Analysis'. At the bottom of the main area, a small disclaimer states that the software is a freely downloadable tool and that the authors do not provide software support as part of the distribution.

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the Hotel Valuation Software. The Appraisal Institute does not warrant the accuracy or timeliness of the data, information or any other content within the Hotel Valuation Software. All risks involved in the use of the Software are left entirely with the user.

To begin the room night analysis, click on either the “Begin Room Night Analysis” box or “Project Information” on the navigation bar. The Project Information screen contains a legend at the top and an area for general information at the bottom.

Hotel Valuation Software

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Project Information

Legend

Mandatory Input:

Optional Input:

Output Only:

No User Input:

No User Input:

Information/Instructions:

Enter the following general information for this analysis. These inputs will be used on the final reports.

Job Title:

Prepared By:

Prepared For:

Job #:

Base Year:

First Day of Base Year:

1/1/00

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The legend describes the color-coding used for the input and output cells in the software. A white cell requires mandatory input. Orange cells are for optional input. Green cells are for output only. The two light blue cells are “no user input” areas. The dark blue cells are for information or instructions.

General information identifying the project is entered at the bottom of the Project Information screen. These inputs will be used on the final reports; they include the job title, the name of the preparer, the party or parties the job is prepared for, and the job number. In this screen, the base year needs to be defined. The base year is generally the calendar year preceding the first projection year of the room night analysis. It is entered as a whole year rather than in the month/day/year format. When the base year is entered, the following line labeled “First Day of Base Year” assumes that the base year is a calendar year and returns 1/1/base year. If the base year is not a calendar year, insert the day/month/year of the first day of the base year.

The following screenshot shows the Project Information screen with data from the case study. The base year is 2012. Since the base year represents a calendar year, the first day of the base year is 1/1/2012.



Project Information

Legend

Mandatory Input:

Optional Input:

Output Only:

No User Input:

No User Input:

Information/Instructions:

Enter the following general information for this analysis. These inputs will be used on the final reports.

Job Title:

Prepared By:

Prepared For:

Job #:

Base Year:

First Day of Base Year:

Proposed Marriott Hotel

Steve Rushmore

HEI Hotels, LLC

4451

2012

1/1/12

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Continue >

To move to the next screen, click on either the “Continue” tab at the bottom right of the screen or “Market Segments” on the navigation bar. To go back one screen, click on the “Go Back” tab at the bottom left of the screen.

The Market Segments screen is where each market segment is identified. The software allows up to seven market segments.

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Market Segments

Enter up to 7 market segments. Common market segments include commercial, group, and leisure among others.

Market Segment 1:

Market Segment 2:

Market Segment 3:

Market Segment 4:

Market Segment 5:

Market Segment 6:

Market Segment 7:

Enter Segment #1

Enter Segment #2

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Continue >

The case study identifies four market segments: commercial, meeting and group, leisure, and airline. The following screenshot shows how these data are entered.

Market Segments

Enter up to 7 market segments. Common market segments include commercial, group, and leisure among others.

Market Segment 1:

Market Segment 2:

Market Segment 3:

Market Segment 4:

Market Segment 5:

Market Segment 6:

Market Segment 7:

Commercial

Meeting & Group

Leisure

Airline

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The names of the primary competitors are then entered on the next screen.

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Primary Competitors

Enter your primary competitors below. Click the Add button to add another competitor.  
The accompanying ADR Module projects the ADR for Primary Competitor 1.

Primary Competitor 1

Hotel #1

Primary Competitor 2

Hotel #2

Add Primary Competitor

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If there are more than two primary competitors, click on the “Add Primary Competitor” box for each additional primary competitor to be added. Before clicking on the “Add Primary Competitor” box, it is important to either press the Enter key on your keyboard after entering the name of the hotel or move the cursor down one cell. The software will accommodate up to 20 primary competitors. If you want to project the average daily rate using the ADR Module of this software, then make that hotel Competitor 1.

The following screenshot shows the Primary Competitors screen with data on the four primary competitive hotels.

Primary Competitors

Enter your primary competitors below. Click the Add button to add another competitor.  
The accompanying ADR Module projects the ADR for Primary Competitor 1.

Primary Competitor 1

InterContinental

Primary Competitor 2

Hilton

Primary Competitor 3

Sheraton

Primary Competitor 4

Hyatt

Add Primary Competitor

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Continue >

The next screen shows the Primary Competitors’ Property Data. The first column lists the four previously entered primary competitors. In the next column, the room count for each hotel is entered. As the room counts are entered, the software assumes that the HARC is the same as the room count

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and carries the room count over to the column labeled “Historical ARC.” If one of the competitive hotels opens during the base year, then the date it opens is entered into the column labeled “Date Opened During Base Year.” The software then calculates the HARC, which is entered into the historical ARC column. The occupancy of each hotel is entered in the last column.

	# Rooms	Date Opened During Base Year	Historical ARC	Occupancy %
InterContinental			0	
Hilton			0	
Sheraton			0	
Hyatt			0	

The following screenshot shows the case study data inserted in the proper cells. The 250-room Hyatt, which opened during the base year on July 2, 2012, produces an HARC of 125.

	# Rooms	Date Opened During Base Year	Historical ARC	Occupancy %
InterContinental	200		200	66%
Hilton	275		275	72%
Sheraton	250		250	68%
Hyatt	250	7/2/12	125	65%

The next screen, Estimated Market Segmentation–Primary Competitors, is where the market segment percentages for each of the primarily competitive hotels are entered.

	Commercial	Meeting & Group	Leisure	Airline	Total
InterContinental					0%
Hilton					0%
Sheraton					0%
Hyatt					0%





Each of the primarily competitive hotels is listed along with the respective market segments. The last column to the right shows the total of all the market segments, which in most cases should equal 100% after all the data are entered.

**Estimated Market Segmentation - Primary Competitors**

Enter market segment percentages.

	Commercial	Meeting & Group	Leisure	Airline	Total
InterContinental	60%	30%	5%	5%	100%
Hilton	40%	35%	15%	10%	100%
Sheraton	45%	25%	15%	15%	100%
Hyatt	20%	50%	25%	5%	100%

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The next screen, Primary Competitor Room Nights Captured, is an output screen showing the room nights captured by segment for each of the primary competitors. Because it is an output screen, no data can be entered here.

**Primary Competitor Room Nights Captured**

Room nights captured per segment by the Primary Competitors.

	Commercial	Meeting & Group	Leisure	Airline	Total
InterContinental	28,908	14,454	2,409	2,409	48,180
Hilton	28,908	25,295	10,841	7,227	72,270
Sheraton	27,923	15,513	9,308	9,308	62,050
Hyatt	5,931	14,828	7,414	1,483	29,656
<b>Total</b>	<b>91,670</b>	<b>70,089</b>	<b>29,971</b>	<b>20,426</b>	<b>212,156</b>

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The names of the secondary competitors are entered in the next screen.

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**Secondary Competitors**

Enter secondary competitors. Click the Add button to add another competitor.

<b>Secondary Competitor 1</b>	Sec Comp 1	Add Secondary Competitor
<b>Secondary Competitor 2</b>	Sec Comp 2	

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Continue >

If there are more than two secondary competitors, click on the “Add Secondary Competitor” box to add each additional secondary competitor. Before clicking on the “Add Secondary Competitor” box, it is important to either press the Enter key on your keyboard after entering the name of the hotel or move the cursor down one cell. The software will accommodate up to 20 secondary competitors. The following screenshot shows the four secondary competitive hotels entered on this screen.



## Secondary Competitors

Enter secondary competitors. Click the Add button to add another competitor.

Secondary Competitor 1 Holiday Inn  
 Secondary Competitor 2 Novotel  
 Secondary Competitor 3 Hyatt Place  
 Secondary Competitor 4 Four Seasons

Add Secondary Competitor

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The Secondary Competitors Property Data screen is where the number of rooms for each secondary competitive hotel is entered.

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- Secondary Property Data**
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- Latent Demand
- Historical Market Growth Rates
- Demand Growth Rates
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- Proposed Data
- Additions To Supply
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- Final Output

### Secondary Competitors Property Data

Enter Property Data. If hotel opens during base year, enter the date it opens.

	# Rooms	Date Opened During Base Year	Historical ARC	Comp. %	Eff. HARC	Occupancy %
Holiday Inn			0		0	
Novotel			0		0	
Hyatt Place			0		0	
Four Seasons			0		0	

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Continue >

The HARC is calculated by the software when the hotel's date of opening during the base year is entered in the corresponding column. The competitive weighting factor showing the competitive percentage is then entered in the column labeled "Comp. %." The next column to the right, labeled "Eff. HARC," shows the calculation of the effective HARC, which is the HARC times the competitive percentage. Lastly, the percentage of occupancy during the base year is entered for each hotel in the far right column.

The next screenshot shows the Secondary Competitors Property Data screen with the case study data. The first column lists the four previously entered secondary competitors. In the next column, the room count for each hotel is entered. As the room counts are entered, the software assumes that the HARC is the same as the room count and carries the room count over to the column labeled "Historical ARC." If one of the secondary competitive hotels opens during the base year, then the date it opens is entered into the column labeled "Date Opened During Base Year." The software then calculates the HARC, which appears in the corresponding column. The next column is where the competitive weighting factor is entered, and the effective HARC is calculated in the following column. The occupancy of each hotel is entered in the last column.

### Secondary Competitors Property Data

Enter Property Data. If hotel opens during base year, enter the date it opens.

	# Rooms	Date Opened During Base Year	Historical ARC	Comp. %	Eff. HARC	Occupancy %
Holiday Inn	110		110	50%	55	76%
Novotel	125		125	50%	63	78%
Hyatt Place	100		100	25%	25	69%
Four Seasons	225		225	25%	56	71%

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The market segment percentages are then entered for each of the secondary competitive hotels in the next screen, labeled Secondary Competitor Market Segmentation.

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**Secondary Competitor Market Segmentation**

Enter market segment percentages.

	Commercial	Meeting & Group	Leisure	Airline	Total
Holiday Inn					0%
Novotel					0%
Hyatt Place					0%
Four Seasons					0%

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Each of the secondary competitive hotels is listed here, along with the respective market segments. The last column to the right shows the total percentages of all the market segments, which in most cases should equal 100% after all the data are entered.

**Secondary Competitor Market Segmentation**

Enter market segment percentages.

	Commercial	Meeting & Group	Leisure	Airline	Total
Holiday Inn	60%	10%	25%	5%	100%
Novotel	60%	15%	15%	10%	100%
Hyatt Place	75%	10%	10%	5%	100%
Four Seasons	85%	5%	10%	0%	100%

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The next screen, Secondary Competitors Room Nights Captured, is an output screen showing the room nights captured by segment for each of the secondary competitors. Because it is an output screen, no data can be entered here.

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**Secondary Competitors Room Nights Captured**

Room nights captured per segment by the Secondary Competitors.

	Commercial	Meeting & Group	Leisure	Airline	Total
Holiday Inn	9,154	1,526	3,814	763	15,257
Novotel	10,762	2,690	2,690	1,794	17,936
Hyatt Place	4,722	630	630	315	6,296
Four Seasons	12,336	726	1,451	-	14,512
<b>Total</b>	<b>36,974</b>	<b>5,571</b>	<b>8,586</b>	<b>2,871</b>	<b>54,002</b>

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The Accommodated Demand Base Year screen is an output screen detailing the room night demand captured by both the primary and secondary hotels during the base year.

Accommodated Demand Base Year								
	Room Nights Captured by Market Segment				Total Room Nights	Market Share	Fair Share	Overall Comp Index
	Commercial	Meeting & Group	Leisure	Airline				
InterContinental	28,908	14,454	2,409	2,409	48,180	18.1%	19.1%	94.9%
Hilton	28,908	25,295	10,841	7,227	72,270	27.2%	26.2%	103.6%
Sherraton	27,923	15,513	9,308	9,308	62,050	23.3%	23.8%	97.8%
Hyatt	5,931	14,828	7,414	1,483	29,656	11.1%	11.9%	93.5%
<b>Primary Market Total:</b>	<b>91,670</b>	<b>70,089</b>	<b>29,971</b>	<b>20,426</b>	<b>212,156</b>			
Holiday Inn	9,154	1,526	3,814	763	15,257			
Novotel	10,762	2,690	2,690	1,794	17,936			
Hyatt Place	4,722	630	630	315	6,296			
Four Seasons	12,336	726	1,451	0	14,512			
<b>Secondary Market Total:</b>	<b>36,974</b>	<b>5,571</b>	<b>8,586</b>	<b>2,871</b>	<b>54,002</b>	<b>20.3%</b>	<b>19.0%</b>	<b>107.0%</b>
<b>Total</b>	<b>128,643</b>	<b>75,660</b>	<b>38,557</b>	<b>23,298</b>	<b>266,158</b>			

This screen summarizes the accommodated room night demand by hotel and by market segment. At the top of the table are columns identifying the four market segments along with columns with “Market Share,” “Fair Share” and “Overall Competitive Index” headings. These three headings will be discussed in a later section. On the left-hand side of the table are the primary competition hotels listed at the top, followed by the secondary competition. The table shows the subtotals for the primary and secondary competition plus the grand total for both.

It should be noted that “accommodated demand” is demand actually accommodated by the hotels in the market and is calculated by using actual hotel occupancies. Accommodated demand is not necessarily the total hotel demand existing within a given market. Other types of demand, such as unaccommodated and induced demand, need to be considered and will be discussed as the case study is further developed.

Market share represents the percentage share of the accommodated room night demand actually captured by a particular hotel and is calculated by taking the accommodated room night demand captured by one hotel and dividing it by the total accommodated room night demand of all the hotels. Thus, the market share for the Hilton is calculated as:

$$72,270 / 266,158 = 27\%$$

The fair share represents the average market share and is calculated by dividing the room count of one hotel by the room count of all the hotels. The fair share for the Hilton is calculated as:

$$275 / 1,049 = 26\%$$

The overall competitive index compares a hotel’s market share to its fair share. It is calculated by dividing the property’s market share by its fair share. Thus, the overall competitive index for the Hilton is calculated as:

$$27\% / 26\% = 104\%$$



Of the primary competitive hotels, the Hilton is the most competitive in the market, with the Hyatt currently the least competitive because it is still in its start-up phase. The competitive index can also be calculated for individual market segments to evaluate how each hotel competes on a segment-by-segment basis. This technique will be developed further in the room night analysis.

### Determine Fair Share, Market Share, and Competitive Indices

Each competitive hotel's historical performance may be judged by comparing their respective occupancy rates. A statistical measure of each hotel's relative competitiveness is the *competitive index*, which relates a specific hotel's performance (both overall and by segment) to that of the market at large. The competitive index calculation is based on each hotel's fair share, which simply equates to a given property's room count divided by the market wide room count. The fair share percentage functions as the denominator in all competitive index calculations, whereas market share is the numerator. Market share represents that portion of demand actually accommodated by a particular property (either overall or by segment), divided by market-wide demand. Market share divided by fair share results in the competitive index.

### Case Study

#### Determine Fair Share, Market Share, and Competitive Indices

Exhibit 3.19 shows the basis for the calculation of each competitive property's fair share factor. The fair share factor is calculated by dividing the HARC of each particular property by the market-wide HARC.

Exhibit 3.20 identifies the basis for the calculation of each competitive property's competitive index. The competitive indices are calculated for each segment, and the "overall" indices are calculated as well.

To demonstrate the methodology, consider the 118% competitive index achieved

**Exhibit 3.19 Fair Share Factors**

Hotel	HARC	Percent of Total
InterContinental	200	19.1%
Hilton	275	26.2
Sheraton	250	23.8
Hyatt	125	11.9
Secondary competition	199	19.0
Total	1,049	100.0

**Exhibit 3.20 Competitive Index**

Hotel	Room Nights Sold by Market Segment										Competitive Index by Segment				
	Commercial		Mtg. & Group		Leisure		Airline		Total	Fair Share	Mtg. & Group		Leisure	Airline	Overall
	RN	MS	RN	MS	RN	MS	RN	MS	RN		Commercial	Group			
InterContinental	28,908	22.5%	14,454	19.1%	2,409	6.2%	2,409	10.3%	48,180	19.1%	118.0%	100.0%	33.0%	54.0	94.9%
Hilton	28,908	22.5%	25,295	33.4%	10,841	28.1%	7,227	31.0%	72,270	26.2	86.0	128.0	107.0	118.0	103.6
Sheraton	27,923	21.7%	15,513	20.5%	9,308	24.1%	9,308	40.0%	62,050	23.8	91.0	86.0	101.0	168.0	97.8
Hyatt	5,931	4.6%	14,828	19.6%	7,414	19.2%	1,483	6.4%	29,656	11.9	39.0	164.0	161.0	53.0	93.5
Secondary competition	36,974	28.7%	5,571	7.4%	8,586	22.3%	2,871	12.3%	54,002	19.0	152.0	39.0	117.0	65.0	107.0
Total	128,643	100.0%	75,660	100.0%	38,557	100.0%	23,298	100.0%	266,158	100.0%					





## Estimate Latent Demand

The area's current accommodated room night demand is based on actual occupancies and accounts for only hotel rooms that have been used by guests. It does not consider other types of demand that may have been present in the market but, for one reason or another, have not been accommodated by the current supply of lodging facilities. This additional demand is called *latent demand* and is composed of both unaccommodated demand and induced demand.

### Unaccommodated Demand

Unaccommodated demand represents transient travelers who seek accommodations within a market area but, because all the local lodging facilities happen to be filled, must defer their trips, settle for less desirable accommodations, or stay outside the market area.

Since this type of demand is not actually accommodated by the area's lodging facilities, it is not included in the room nights quantified in the previous steps of the lodging activity analysis.

Unaccommodated demand is actually a form of excess demand that develops because of the cyclical nature of the hotel business. For example, in markets where commercial demand predominates, area occupancy levels for Monday through Thursday often approach 100%, which indicates that many travelers are not being accommodated locally. Many resort market areas also sell out during peak vacation periods, thereby generating unaccommodated room night demand. Because hotels cannot expand or contract in response to cyclical lodging demand, unaccommodated transient visitation is a normal occurrence in many market areas.

In quantifying the current hotel room night demand, unaccommodated demand only becomes a factor when the number of competitive rooms in the market is expanding. As the supply of hotel rooms increases, more of the previously unaccommodated demand will be accommodated during periods of peak visitation. Since these uncounted room nights will help cushion the dilution effect of adding more rooms to a market, it is important to quantify the number of unaccommodated travelers attempting to use lodging facilities in the area.

Quantifying the room nights that are not currently being accommodated in a market is a difficult task requiring both judgment and experience. The following list outlines some factors that should be considered in deriving this type of estimate.

- The nature of the demand  
Does the area demand tend to be cyclical and concentrated at certain points in time (Monday through Thursday, vacation periods, special local events)?
- Area occupancy  
Considering the nature of the area's transient demand, are most of the local lodging facilities operating at appropriate stabilized levels of occupancy? For example, in a typical, commercially oriented market where lodging demand is high Monday through Thursday and drops considerably over the weekends, one might expect that a strong stabilized level of occupancy would be approximately 70%. Under these circumstances, an area-wide occupancy of 78% could produce a significant amount of unaccommodated demand. If most of the area's hotels were operating at 60% occupancy, however, the amount of the unaccommodated demand would probably be negligible.



- **Fill nights**  
How many fill nights are area hotels experiencing? When conducting competitive interviews, the appraiser should try to determine the number of nights that area hotels are actually filled to capacity. Once this number has been established, the number of turn-away room nights can be quantified. Sometimes hotels with centralized reservation systems maintain monthly denial reports, which show the number of people who called to make reservations at a specific hotel but were denied because the property was fully booked. Occasionally, individual hotels also track the number of walk-ins (i.e., people who arrive without reservations) turned away on days that the hotel is fully booked.
- **Alternative accommodations**  
If it appears that a sizable amount of unaccommodated demand exists in an area, the appraiser might want to conduct interviews at alternative accommodations to identify the sources of their demand and determine whether a portion of these customers would choose other facilities if they were available. Alternative accommodations might include lodging facilities outside the market area or hotels within the area that are considered less desirable.

In most instances, data on fill nights and turn-away frequency are not available. Appraisers should try to obtain as much information as possible but must be prepared to estimate unaccommodated room night demand without a strong factual basis. The appraiser's experience plays an important role in quantifying unaccommodated demand. By observing numerous market areas that have over the years experienced cycles of building, declining occupancies, and recovery, appraisers can develop a feel for an appropriate estimate of unaccommodated demand.

Unaccommodated demand is generally estimated as a percentage of the accommodated demand for each individual market segment. The range for unaccommodated demand typically extends from 0% to 30% of accommodated demand. The upper end of this range would be appropriate for exceptionally strong markets where nearly every hotel is experiencing high levels of occupancy, many fill nights, and a large amount of turn-away demand. In good hotel markets, 5% to 10% is a reasonable level of unaccommodated demand. Since unaccommodated demand is difficult to quantify, a conservative estimate is usually warranted.

Unaccommodated demand is generally brought into the market analysis as accommodated demand at the point in time when there are sufficient new rooms available to absorb this form of latent demand. Care must be taken to ensure that the amount of unaccommodated demand converted into accommodated demand is justified by the number of new rooms opening in the market. The capacity (new rooms) available to convert unaccommodated demand into accommodated demand is called the *accommodatable latent demand*. This form of demand will be covered later in this book.

### **Induced Demand**

The second type of latent demand is called *induced demand*. Induced demand represents the additional room nights that will be attracted to the market area for one or more specific reasons. Induced demand may be created by specific circumstances, such as the following:

- The opening of new hotels that offer new amenities, such as extensive meeting and group space or specialized recreational amenities such as a golf course, ski slope, or health spa





These hotels are expected to attract a new market segment that does not currently seek accommodations in the subject's market area. For example, if a new hotel with a 60,000-sq.-ft. exhibit hall opens in a market where no similar facility exists, this hotel will probably be able to attract groups into the area that had previously selected hotels elsewhere.

- The aggressive marketing efforts of individual properties  
Some major hotel chains have been able to bring new room nights into the market by aggressively marketing the properties they operate. Convention-oriented lodging chains are frequently able to rotate convention groups around to various hotels within their system, thereby creating induced demand for any new hotels they operate.
- The opening of a new major demand generator, such as a convention center, commercial enterprise, retail complex, transportation facility, or recreational attraction  
The development of Disney World is an example of an induced demand generator. Airport expansions commonly induce new demand, particularly if the facility develops as a major hub for many airlines.

Induced demand can generally be traced to one or more specific factors, so quantifying these additional room nights is somewhat easier than estimating unaccommodated demand. The procedure used is similar to the build-up approach based on an analysis of demand generators. The appraiser evaluates each generator of induced demand to determine the number of room nights that will be attracted to the market area. Induced demand may either enter the market all at once or gradually over the course of one or more years.

Induced demand is occasionally factored into the market on a temporary basis. Examples of this scenario involve one-time or cyclical events hosted by a given lodging market, such as the Olympics and the Super Bowl. Movie crews in town for extended shoots are another common example of temporary induced demand. In such cases, appraisers must take care to factor the associated demand levels in and out of the projections at the appropriate time.

Unaccommodated demand and induced demand combined equal the total latent demand for the market area. The following case study demonstrates the procedures for estimating the unaccommodated and induced demand for the subject's market area.

### Case Study

#### Estimate Latent Demand

Analysis of the subject's market area indicates the presence of latent hotel demand composed of both unaccommodated and induced room night demand. To show the true depth of the market, latent demand must be quantified.

#### Unaccommodated Demand

The composition of demand in the market, area-wide occupancy, the number of fill nights, and the amount of turn-away

demand all indicate that the local market has a certain amount of unaccommodated room night demand.

The composition of local hotel demand shows a definite commercial orientation (48% of total accommodated demand), which suggests a heavy influx of room nights on Monday, Tuesday, Wednesday, and Thursday, with a significant drop-off on Friday, Saturday, and Sunday. Moreover, the groups currently using the area's lodging facilities (28% of the total accommodated



demand) are business related and tend to meet Monday through Thursday rather than on weekends. Given these findings, more than 76% of the local room night demand is likely to need accommodations during the week. This demand pattern could produce an overflow condition and create unaccommodated demand.

The area-wide occupancy calculated from accommodated demand was 69.5% in the base year. Considering the depth of the commercial and meetings market and the Monday through Thursday orientation of the demand, 69.5% occupancy reflects a healthy hotel market. This observation further supports the presence of unaccommodated demand.

To quantify the amount of unaccommodated demand, the total number of fill nights must be estimated. Assuming that 85% of the base year's commercial demand, 75% of the meeting and group demand, 7.5% of the leisure demand, and 43% of the airline demand is concentrated on Monday, Tuesday, and Wednesday nights, a total of 178,969 room nights are demanded during this time period, as illustrated in Exhibit 3.21.

The 85% Monday, Tuesday, and Wednesday demand concentration for the commercial segment and 75% demand for the meeting and group segment were based on an analysis of the local market and the characteristics of this type of demand. Approximately 90% of the leisure demand was concentrated on the weekend nights of Friday, Saturday, and Sunday, leaving 10% evenly spread out over the other four days at a rate of about 2.5% per day. This results in a total of 7.5% of the leisure demand occurring on Monday, Tuesday, and Wednesday nights. Airline demand is evenly spread throughout the week, with

approximately 43% occurring on Monday, Tuesday, and Wednesday nights.

There are 156 Monday, Tuesday, and Wednesday nights per year, so the total number of room nights of demand per day would be  $178,969 / 156 = 1,147$ . Since the total HARC is 1,049, the unaccommodated demand averages 98 rooms per night ( $1,147 - 1,049 = 98$ ), or a total of 15,334 room nights ( $98 \times 156 = 15,288$ ) of unaccommodated demand during the base year.

The total unaccommodated demand needs to be allocated among the market segments. Based on the nature of the commercial demand as well as the meeting and group demand, it is likely that most of the unaccommodated demand would be concentrated in these two segments. Since leisure demand occurs mostly on weekends, there would be minimal unaccommodated demand on Monday, Tuesday, and Wednesday nights. Airline demand is usually contracted a year in advance, so we assume that there is no unaccommodated demand. Exhibit 3.22 shows the al-

Exhibit 3.21 Room Night Demand for Monday-Wednesday Nights			
	Accommodated Demand	% M, T, W	Room Nights M, T, W
Commercial	128,643	85%	109,347
Meeting & Group	75,660	75%	56,745
Leisure	38,557	7.5%	2,892
Airline	23,298	42.9%	9,995
Total RN-M, T, W			178,978
Total M, T, W/yr.			156
Total RN/day M, T, W			1,147
HARC			1,049
Difference			98
Total M, T, W/yr.			156
Unaccommodated demand			15,334

Exhibit 3.22 Allocation of Unaccommodated Demand					
	Meeting & Commercial	Group	Leisure	Airline	Total
Accommodated demand	128,643	75,660	38,557	23,298	266,158
Unaccommodated percentage	8.0%	5.0%	3.0%	0.0%	
Unaccommodated demand	10,291	3,783	1,157	0	15,231



location of the unaccommodated demand based on a percentage of accommodated demand. The difference in the total unaccommodated demand between Exhibit 3.22 and Exhibit 3.21 is due to rounding.

The percentage of accommodated demand that equates to unaccommodated demand is 8% for commercial, 5% for meeting and group, and 3% for leisure. Using these percentages, the total unaccommodated demand is 15,251 room nights, which is close to the 15,334 room nights calculated in the previous table.

**Induced Demand**

The local convention center booked an unusually large group for the year 2015. This group will use the center’s meeting facilities during the normally slow summer months. The group will also patronize nearby hotels and generate an estimated 20,000 room nights. This nonrecurring demand is an example of one-time induced demand that will

increase the total meeting and group room nights in the third year by an additional 20,000 room nights. Exhibit 3.23 shows the induced demand generated by this group.

A second source of induced demand is created by the expansion of the local airport, which was completed during the base year. The expansion was made possible after a major airline designated this airport as one of its hubs and significantly increased the number of flights using this facility. The airport constructed a new terminal, added additional gates, and built two new runways, which nearly doubled its original size. The airline estimated that it required an additional 23,000 room nights each year to house its crews and delayed passengers. This induced demand will be phased in by 90% in 2013 and 100% in 2014. This demand will increase by 10% in 2015 due to the previously mentioned large group using the convention center. Exhibit 3.24 shows the induced airline demand.

Exhibit 3.23 Induced Demand Phase-In—Meeting and Convention Segment			
Projection Year	Potential Induced Demand	Induced Demand Percentage Phase-In	Induced Meeting & Group Demand
2013			
2014			
2015	20,000	100%	20,000
2016			
2017			

Exhibit 3.24 Induced Demand Phase-In—Airline Demand			
Projection Year	Potential Induced Demand	Induced Demand Percentage Phase-In	Induced Airline Demand
2013	23,000	90%	20,700
2014	23,000	100%	23,000
2015	23,000	110%	25,300
2016	23,000	100%	23,000
2017	23,000	100%	23,000



## Hotel Valuation Software

The next screen in the room night analysis software is an input screen for entering latent demand, which includes both unaccommodated and induced demand.

**Latent Demand**

In the table below, enter the appropriate latent demand.  
Note that unaccommodated demand and induced demand are introduced separately.

**Select the latent demand input format below (% vs number) using the drop-down box below.**

As A Percentage of Segment Demand

Induced Demand in Room Nights

Phase In For The Induced Demand

**Enter Segment #1**

0.0%

**Enter Segment #2**

0.0%

	0	0	0	0
1	0.0%	0	0.0%	0
2	0.0%	0	0.0%	0
3	0.0%	0	0.0%	0
4	0.0%	0	0.0%	0
5	0.0%	0	0.0%	0
6	0.0%	0	0.0%	0
7	0.0%	0	0.0%	0
8	0.0%	0	0.0%	0
9	0.0%	0	0.0%	0
10	0.0%	0	0.0%	0

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The input table allows for inputting unaccommodated and induced demand separately. Unaccommodated demand can be entered for each market segment as either a percentage of the segment's room night demand or as a specific estimate of the number of unaccommodated room nights. Click the arrow just to the right of the white box in the left column labeled "As a Percentage of Segment Demand" to reveal a drop-down option that will change the input to "As Number of Room Nights." The unaccommodated demand percentages or numbers are then entered in the top white row directly under each market segment.

Induced demand for any segment is entered as the number of room nights in the next row of white input boxes below the unaccommodated demand input boxes. The software allows for phasing in or out the induced demand for any year. The phasing is accomplished by entering the appropriate percentage in the orange cells each year under the desired market segments. The percentage is used to calculate the amount of the induced demand that will be incorporated into the projections for a particular year. The software replicates a percentage entered into one cell directly into the cell below it. Care must be taken to make sure that the cells below are correct when a percentage changes or stabilizes. Clicking the "Reset Sheet" button at the top of the screen removes all entries.

The following screenshot shows the latent demand data entered into the software.



Latent Demand

In the table below, enter the appropriate latent demand.  
Note that unaccommodated demand and induced demand are introduced separately.

Select the latent demand input format below (% vs number) using the drop-down box below.

As A Percentage of Segment Demand

Induced Demand in Room Nights

Phase-In For The Induced Demand

Reset Sheet

	Commercial	Meeting & Group	Leisure	Airline				
	8.0%	5.0%	3.0%					
	0	20,000	0	23,000				
2013	0.0%	0	0.0%	0	90.0%	20,700		
2014	0.0%	0	0.0%	0	100.0%	23,000		
2015	0.0%	0	100.0%	20,000	0.0%	0	110.0%	25,300
2016	0.0%	0	0.0%	0	0.0%	0	100.0%	23,000
2017	0.0%	0	0.0%	0	0.0%	0	100.0%	23,000
2018	0.0%	0	0.0%	0	0.0%	0	100.0%	23,000
2019	0.0%	0	0.0%	0	0.0%	0	100.0%	23,000
2020	0.0%	0	0.0%	0	0.0%	0	100.0%	23,000
2021	0.0%	0	0.0%	0	0.0%	0	100.0%	23,000
2022	0.0%	0	0.0%	0	0.0%	0	100.0%	23,000

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The unaccommodated demand has been entered as a percentage of the segment demand (8% for commercial, 5% for meeting and group, 3% for leisure, and 0% for airline). The 20,000 room nights of one-time induced demand in the meeting and group segment occurring in 2015 from the large convention that meets during the summer is entered in the appropriate white input box. The phase-in is accomplished by inputting 0% for all the years except 2015, for which 100% is entered in the orange area. This entry shows the 20,000 room nights in the adjacent green cell.

The 23,000 room nights of induced airline demand is phased in by entering 90% in 2013, 100% in 2014, 110% in 2015, and 100% for the years thereafter. The green cells next to the percentages show the room nights of induced demand for the airline segment that will be used in the projections.

### Build-Up Approach Based on an Analysis of Demand Generators

In markets with relatively few demand generators, it is sometimes appropriate to quantify the existing hotel room night demand by interviewing demand generators. As markets become more complex and the numbers of generators increase, it becomes more difficult to identify all the demand generators and conduct an accurate survey. Most markets are too complex to rely solely on this approach, so the analysis of lodging activity is usually emphasized and selective demand generator interviews are used to determine the characteristics of the transient demand.

The build-up approach based on an analysis of demand generators is typically performed in three steps:

1. Identify generators of transient visitation.
2. Interview or survey selected demand generators and identify the characteristics of the demand.
3. Quantify room night demand.

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Each step in the analysis of demand generators will be discussed in this section. Then all three steps will be illustrated as the process is applied to the case study property.

## Identify Generators of Transient Visitation

The generators of transient visitation are identified when the final market area is defined. There may be many possible sources of transient visitation, and every effort should be made to compile a complete list. The following methods can be used to identify generators of hotel demand:

1. Interview local hotel and motel managers to determine the sources of their occupancy.  
Ask for a percentage breakdown of the types of customers (i.e., commercial, meeting and group, leisure) and try to learn the names of specific firms or groups that use the facility on a regular basis.
2. Obtain a directory of local businesses and identify those with regional or national operations that are likely to attract out-of-town customers, suppliers, vendors, or company representatives.
3. Obtain statistics pertaining to area visitation from the local convention and visitors bureau.  
Request a list of recent conventions and meetings that used local hostels. Determine if the primary market area has any popular tourist or vacation attractions. Visitor counts and projections can be helpful if their reliability can be verified.
4. Visit car rental agencies, especially those at local airports, to determine which firms regularly rent cars.  
This information will indicate which area businesses attract out-of-town visitation. These agencies can also supply information about which motels are popular among their clients.
5. Drive around the area looking for concentrations of out-of-state cars in industrial parks, office complexes, government centers, regional hospitals, and other facilities.  
The parking lots of local hostels also contain many market indicators. Do most of the cars belong to out-of-state or in-state residents? Do they belong to solo business travelers (clean and neat) or families on vacation (filled with luggage, games, and roadmaps)? A late-night parking lot count can indicate a highway motel's occupancy, assuming one vehicle per room. Even more important, a parking lot count can indicate the relative competitiveness of area hostels if all are surveyed on the same night. One night's count is not necessarily indicative of annual occupancy, so additional factors should also be considered.
6. Interview chamber of commerce officials, visitor information center employees, taxi drivers, gas station operators, and restaurant managers.  
These individuals are often helpful in identifying potential sources of transient visitation. The local building department can also provide information on proposed projects and changes in highway patterns.



Identifying the prime generators of demand within a given market area is relatively simple. When the survey is completed, the list will probably contain one or more of the following:

- Businesses: office buildings, industrial parks, research facilities, and manufacturing plants
- Government centers
- Airports
- Convention centers and conference facilities
- Colleges and universities
- Tourist attractions
- Vacation and recreation areas
- Parks and scenic areas
- Hospitals
- Sports attractions
- Casinos
- Military bases
- Trade and professional associations
- Convenient highway stopping points
- Regional shopping centers
- Special events such as state fairs and parades

For market areas with many demand generators, the list should rank the sources in order of their estimated potential to generate demand. Prime sources with the greatest ability to attract out-of-town visitors should be researched first so that the appraiser can conduct a thorough analysis.

### **Interview or Survey Selected Demand Generators**

The most important step in the survey process is quantifying the total demand into measurable units—i.e., room nights. By estimating the number of room nights attributable to each generator of visitation in the subject market area, the total micro demand can be determined.

In addition to quantifying total demand, the appraiser's survey should outline the general characteristics of the travelers who make up the potential market. The following list indicates factors that can help define the demand and may be useful in designing a proposed hostelry.

- Demand factors
  - Number of nights per stay
  - Number of people per room
  - Periods of use during the year
  - Definition of seasonality—fluctuations in use during the year, month, or week
  - Price willing to pay
  - Food, beverage, entertainment, and telephone usage
- Design factors
  - Number of people per guest room—space, bed, bathroom, closet, and storage requirements



- Use of guest rooms for purposes other than sleeping (meetings, entertainment, interviewing, or displays)—space requirements, furniture and lay-out, lighting, and décor
- Restaurant and lounge facilities—space requirements, decor, menu, price, kitchen equipment, and staffing
- Meeting and banquet facilities—space requirements, types of configurations, special equipment
- Methods of travel—parking, entrance, loading, and baggage requirements
- Recreational facilities

The list of demand generators must be analyzed in order to select market-surveying techniques that will be most effective in quantifying potential demand and defining specific traveler characteristics. Research techniques may include personal and telephone interviews, letter or online questionnaires, and the use of available data and surveys.

Regardless of the techniques chosen, it is most important to locate and question the individuals most knowledgeable on the subject. For a hotel demand study, these people are typically those who make hotel reservations—such as secretaries, executive transfer departments, travel departments, personnel and recruitment departments, convention and visitors bureau placement departments, tour operators and travel agents, airline flight service and customer relations departments, and college alumni and athletic offices. The individuals who actually book reservations for out-of-town visitors are referred to as *bookers*. Purchasing agents and buyers, executives, receptionists, college admissions officers, and park rangers who greet out-of-town visitors might also be questioned. Security departments, convention and visitors bureau registration and research departments, and hospital admissions departments who control visitation data are other good sources. People who see and come in contact with out-of-town visitors are called *seers*.

Personal interviews produce the most reliable data but are usually very time-consuming. In areas with many sources of visitation, personal interviews may be limited to those with the greatest potential for generating room nights. A checklist of essential items to cover should be devised, and interview time should be limited to five to 10 minutes. Use appointments only if an initial drop-in visit produces no results.

Some of the key questions typically asked during an interview include:

- How many out-of-town visitors do you average each week, month, or year?
- What is the purpose of the visitation?
- How long do the visitors stay?
- Are the visitors visiting any other demand sources in the area?
- Where are the visitors staying now?
- What rates are they willing to pay?

Once these questions are answered, more detailed questions should be asked to identify some of the market's characteristics. The previously listed demand and design factors can be used as a guide. The interviewer should always ask if there are any other people in the organization who have contact with visitors. The interviewer should specify the purpose of the interview; the more information the interviewer is willing to provide, the more information he or she will receive.





Telephone interviews are less time-consuming, but they rarely produce the same quality of data. Less important demand sources can be interviewed over the phone and later seen personally if greater potential is discovered.

Letter or online questionnaires are useful for mass surveys when hundreds of identifiable demand generators are involved. A short, simple form that can be completed in less than five minutes usually yields the best results. It is important to contact the person best suited to answer the questions when using this type of survey. A brief letter explaining the purpose of the survey should accompany each questionnaire. A greater response will be obtained if someone who is well known in the community signs the letter. A self-addressed, stamped envelope for returning replies must be enclosed.

Occasionally, various groups and municipal agencies compile data pertaining to local transient demand. These data are normally part of larger studies conducted in connection with urban renewal or redevelopment projects, proposed convention centers, and master development plans. Some organizations that may perform such market surveys include chambers of commerce, convention bureaus, municipal planning departments, redevelopment agencies, financial institutions, and utility companies. Data obtained from these sources should be verified. If the information is usable it can serve as a good starting point for defining the local transient market.

All major generators of transient visitation should be surveyed with a personal or telephone interview or a mailed questionnaire. In market areas with many secondary generators of visitation, however, these techniques may not be practical. Time restraints and the inability to identify smaller generators often necessitate some form of sampling.

### **Quantify Room Night Demand**

Sampling is a market research procedure in which conclusions about a large population are drawn from a thorough analysis of a representative portion of the population. Properly applied, sampling generally yields more accurate results than complete surveys because more time can be devoted to correct interviewing and data collection techniques.

The key to good sampling is selecting the unit of comparison that best reflects the total market. For example, a frequently used measure of potential commercial traveler demand is room nights per square foot of office space. Interviewing a representative sample of office space users and estimating how many out-of-town visitors are received over a given period of time can be used to develop a unit of comparison. The number of visitor room nights is divided by the total square footage of office space within the sample. Multiplying this factor by the amount of office space within the market area produces an indication of the potential commercial demand. If necessary, adjustments can be made to avoid double-counting travelers visiting more than one firm.

Other units of comparison that may reflect transient visitation include population, employment, university enrollment, hospital beds, traffic counts, retail sales, and convention attendance. Many books have been written on correct sampling and market research procedures. Although every market area requires a somewhat specialized approach, three basic rules should be followed:

1. The sample must be representative of the total market.
2. Data and information from the sample must be factual and unbiased.
3. The units of comparison applied should reflect market behavior.



Analyzing demand generators provides an estimate of the total number of room nights available in the market area as well as specific information about the characteristics of the demand. The total potential demand must be divided among all the competitive lodging facilities before the market capture rate for the subject property can be estimated.

## Case Study

### Identify Generators of Transient Visitation

Local chamber of commerce officials, county planners, and various hotel and real estate professionals were interviewed to identify the generators of transient visitation in the market area. Most of the major businesses and attractions in the area that attract overnight visitors are described in the following list:

1. **Office park**  
A large office park is located directly across the expressway from the site of the proposed Marriott Hotel. This fully developed and leased office park houses many regional sales and service departments as well as national firms.
2. **Aerospace firm**  
This major aircraft component manufacturer has significant building space and employs more than 15,000 people. It is situated one exit east of the subject.
3. **Communications firm**  
The research division of a national communications firm is housed in a major office complex two miles north of the subject.
4. **Aircraft engineer producer**  
This jet engine manufacturer currently employs 5,000 people and is located approximately three miles south of the Marriott.
5. **High-technology research park**  
An office park of 25 communication-oriented research facilities owned by major manufacturers is located adjacent to the Marriott site, directly to the south.
6. **Industrial park**  
This established industrial park houses 100 small and medium-sized manufacturing firms that perform subcontracting work for the aircraft engine producer. Located one mile east of the proposed Marriott and on a service road next to the expressway, the industrial park has some excess land for future expansion.
7. **Office district**  
A downtown-type office district with high-rent office space is located nine miles west of the subject property. The businesses occupying space in this office district are primarily financial, legal, and insurance firms.
8. **Regional mall**  
Located on a secondary highway approximately five miles northeast of the proposed Marriott site, this shopping mall has 135 stores.
9. **State hospital**  
A 1,000-bed state mental hospital located eight miles southwest of the subject on a secondary highway generates some commercial visitation.
10. **Convention center**  
The 10-year-old convention center expanded its exhibit space from 75,000 to 100,000 square feet of floor area three years ago. It is located just south of a nearby Hilton Hotel. The convention center, used primarily for trade shows and local events, can accommodate up to 7,500 people. A renovation that should be completed in 2014 is currently underway.
11. **Resort area**  
A beach resort area, which attracts vacationers during the summer months and weekend travelers during the rest of the year, is a 30-minute drive by car from the site of the proposed Marriott.



## 12. Regional airport

The regional airport recently expanded and became a hub for a major airline.

### Interview or Survey Selected Demand Generators

These 12 potential generators of demand indicate that the transient market is composed of business, meeting and group, and leisure travelers.

The commercial demand in the area uses lodging facilities four to five nights per week. Some business visitors arrive Sunday night to start work early Monday morning. Commercial demand is low on Sunday nights, increases and remains fairly level on Monday, Tuesday, and Wednesday nights, and then drops off significantly on Thursday, Friday, and Saturday nights.

The meeting and group demand is generated primarily by the convention center and by several research-oriented firms that hold conferences and training sessions in the area. The bulk of this demand is felt during the fall, winter, and spring months. Mondays, Tuesdays, and Wednesdays are the peak convention days. Although business travelers rarely use lodging facilities on Friday or Saturday nights, certain types of conventions prefer weekends and holiday periods when rates are typically lower. The renovation of the convention center should make it more attractive to meetings and groups.

The area immediately surrounding the proposed Marriott has very few tourist attractions. However, a summer beach resort approximately 30 minutes to the south draws a significant number of leisure travelers on weekends during the spring and fall and all week during the summer. Because this resort area is seasonal, there are only a few small, family-owned motels near the beach. Consequently, many overnight visitors must find accommodations further away. Since primary access to the beach resort is via the expressway, many vacationers stay in the various hotels surrounding the subject site. The leisure demand generated by this resort area tends

to be negatively correlated to the commercial and meeting and group patronage attracted to the area's business and convention center. Local lodging facilities benefit from this situation, which tends to create level occupancy throughout the year.

The expansion of the nearby regional airport designated as a hub for a major air carrier is expected to almost double the airline market demand, which consists of both airline crews and delayed passengers.

The subject market area has a number of primary generators of transient demand, many of which make up secondary generators such as office parks that house many different tenants. It has therefore been determined that the build-up approach based on an analysis of demand generators is not an appropriate method for quantifying the existing transient demand. The demand generators identified have been analyzed to assess the nature of the transient demand and the characteristics and desires of local visitors. Personal interviews, telephone surveys, and letter questionnaires were used to gather information from several demand generators. A summary of the appraiser's findings follows.

### Commercial Demand

- **Aerospace firm**  
The security department of this large manufacturer provided the best information on transient visitation. Based on an analysis of the visitor registration log over a 24-month period, the appraiser estimates that the aerospace firm attracts approximately 110 outside visitors per week. These visitors stay at local hotels for an average of two nights per visit. Over the past several years, this type of visitation has remained fairly stable.
- **Communications firm**  
The bulk of the outside visitation to this firm consists of meeting and group demand. Most of the transient business visitors are out-of-town suppliers, salespeople, and manufacturers' representatives. Many of these visitors pass through the firm's



purchasing department.

- **Aircraft engine producer**  
This firm recently moved into the area and maintains few records on outside visitation. Before constructing the plant, however, the company had to submit to the county an economic impact study outlining the firm's potential benefits to the area. One of the benefits cited was hotel patronage from visitors to the plant. A footnote to the study stated that the company's visitation estimate was based on visitation histories from the firm's other plants throughout the United States. According to this study, approximately 12,850 room nights would be generated during the first year, or an average of 247 room nights per week. This figure is expected to increase by approximately 5% per year.
- **Office district**  
A list of office district tenants was compared to a list of the tenants occupying the office park. The office district has more local accounting and legal firms, which would probably not generate as much visitation as the regional and national firms with offices in the park.
- **Regional mall**  
Many tenants of the regional mall are national retailers. Home office personnel, who take inventories and prepare audits, visit each store on a regular basis.
- **State hospital**  
State officials visit this property weekly to perform various administrative functions.

### **Meeting and Group Demand**

Discussions with the director of the local convention and visitors bureau revealed that the area has three main generators of meeting and group demand: the convention center, the communications firm, which sponsors training sessions, and the research park, which holds seminars.

- **Convention and visitors bureau**  
The primary source for information on the meeting and group segment was the local convention and visitors bureau, which is responsible for booking and tracking this type of visitation.
- **Convention center**  
The 10-year-old convention center has been operating at a stable level for several years. In the past, efforts to attract larger conventions were generally unsuccessful because exhibit space was limited. The current renovation of this facility is expected to contribute to meeting and group demand growth in future years. The convention center is excited about the large meeting it will host in the summer of 2015. This will bring in a significant number of room nights during a traditionally slow period.
- **Research park**  
While assessing the commercial demand generated by the research park, the appraiser discovered that strong meeting and seminar demand was created by this concentration of research-oriented businesses.

### **Leisure Demand**

Discussions with the local visitors bureau in the resort community showed interest in the area to be growing because of the recent development of several resort amenities, such as an 18-hole public golf course, several miniature golf courses, a bowling alley, an amusement park, and an aquarium. These amenities not only attract additional visitors to this destination, they also provide incentive for visitors to extend their stays, creating more room night demand.

### **Airline Demand**

The expansion of the regional airport and the demand created by making it a hub for a major carrier will have significant impact on airline demand. This demand is spread evenly over the week and throughout the year. It tends to be somewhat price sensitive, so it will be a greater benefit to the lower-rated hotels.



## Forecasting Room Night Demand

By analyzing lodging activity and/or demand generators, the appraiser has quantified the total room night demand in the current market as of the base year (2012). This existing demand consists of accommodated demand and/or latent demand, made up of unaccommodated demand and induced demand.

Because a market study and valuation require the appraiser to look into the future, the existing room night demand must be forecasted over the projection period. Future hotel demand will increase, decrease, or remain level. The direction and rate of change is estimated by analyzing various economic and demographic indicators.

A starting point for projecting future hotel room night demand within a given market is to review historic data related to the number of occupied rooms. This procedure is similar to the build-up approach based on an analysis of lodging activity in which the competitive hotel supply is multiplied by the overall market occupancy times 365 to calculate the number of occupied rooms per year, which represents the accommodated demand. When this is done for several years, the cyclical demand trend becomes apparent and provides a good starting point for a hotel demand projection. While past experience doesn't always reflect the future, this approach produces another data set that should be reviewed. Historic information on the overall market occupancies and competitive supply can be obtained through primary market research, data from local hotel associations, hotel consulting organizations, and data providers such as STR Global. Hotel demand projections are also based on analysis of the various economic and demographic data gathered during field work. Forecasts depend on how well various types of economic and demographic data reflect actual changes in hotel room night demand. Data that accurately mirror future trends in transient visitation are given greater weight in the appraiser's analysis. Since changes in hotel demand are generally tied to specific types of visitation, individual market segments—commercial, meeting and group, and leisure—are analyzed. Exhibit 3.25 shows the three primary market segments and the types of data that have some propensity to cause changes in hotel room night demand. Other market segments, such as extended stay demand, generally have a profile or character that aligns with one of the three primary segments.

Commercial hotel demand is greatly influenced by trends that relate to business activity, such as office space absorption; employment (particularly the wholesale and retail trade, financial, insurance, real estate, and service sectors); new businesses moving into the area; and airport enplanements. Population growth is not a strong indicator of changes in commercial demand, but it usually sets the lower limit for potential growth in commercial visitation. For example, if an area's population is expected to grow at an annual compounded rate of 1.5%, it is likely that commercial hotel demand will grow by at least the same rate. Other indicators may justify using a higher rate.

There are fewer indicators of meeting and group demand, and a number of these indicators provide only an indirect basis for projecting trends in hotel demand. Convention center activity, particularly usage that generates visitation from outside the area, is probably the best indicator of meeting and group demand. The commercial activity reflected in employment trends and office and industrial space absorption provides an indirect indication of meeting and group demand because many meetings are the result of business activity. Meeting and group demand is also created through the sales efforts of individual hotels; this type of induced demand was discussed previously in this text.



**Exhibit 3.25 Data Reflecting Changes in Hotel Demand**

<b>Commercial</b>	<b>Meeting &amp; Group</b>	<b>Leisure</b>
Total employment by category	Convention center patronage	Tourist visitation
Office space	Total employment by category	Highway traffic counts
- Absorption	Airport enplanements	Visitor count by attractions
- Inventory	Air cargo data	Employment by category
- Under development	Tourist visitation	Gross domestic product
- Vacancy rate	Retail sales	
Retail space	Visitor count by attraction	
- Absorption	Office space	
- Inventory	- Absorption	
- Under development	- Inventory	
- Vacancy rate	- Under development	
Industrial space	- Vacancy rate	
- Absorption	Retail space	
- Inventory	- Absorption	
- Under development	- Inventory	
- Vacancy rate	- Under development	
New business entering area	- Vacancy rate	
Highway traffic counts	Industrial space	
Airport enplanements	- Absorption	
Air cargo data	- Inventory	
Commercial building permits	- Under development	
Housing starts	- Vacancy rate	
Assessed values	New business entering area	
Population	Gross domestic product	
Retail sales		
Effective buying income		
Personal income		
Gross domestic product		

Very few indicators of leisure demand are available. Visitor statistics, particularly in resort areas, can provide some good indications of leisure demand trends. Attendance data for area tourist attractions are also useful.

Changes in hotel demand are generally projected by market segment for periods ranging from three to 10 years. In forecasting lodging demand, it is wise to keep the projection period as short as possible. The annual compounded percent of change should reflect the most probable trend in hotel room night demand. Many hotel market studies and valuations seem to project continuous growth in lodging demand, but demand trends do not have to be positive, nor does growth have to increase by the same percentage each year.

The forecasted direction and rate of change in hotel room night demand are generally applied to both accommodated and unaccommodated demand components, which tend to move in tandem.

Changes in induced demand are not usually related to projected changes in the accommodated and unaccommodated components of demand. Rather, induced demand depends on the latent demand characteristics exhibited by the specific demand generator. For example, if a large convention hotel is expected to open in a market enabling the area to attract major groups that previously could not be accommodated, the growth and ultimate size of this





induced demand will reflect the marketing ability of the hotel operator as well as the hotel’s capacity to handle these groups. Depending on the size of this convention hotel, the additional demand will usually be expected to increase over a period of time and then stabilize as the hotel approaches its capacity. Although the growth in induced demand is generally not dependent on the growth in the area’s convention demand, the surrounding meeting and group market should be given some consideration in quantifying induced demand.

Case Study

Forecasting Room Night Demand

Exhibit 3.26 shows the market-wide supply, occupancy, and room night demand for the local market and is based on research performed by HVS and data from the local hotel association. Between 2003 and 2012, hotel demand among the local competitive hotels increased at an average annual compounded percentage rate of 3.1%, with the rate of growth ranging from -4.7% to +11% per year during this period.

The room night demand projection can also be based on the local economic and demographic trends. Exhibit 3.27 summarizes the various types of data accumulated in the field and analyzed in house. It indicates the date of the data, whether it is actual (historic) or projected, and the average annual compounded percent of change observed over that period.

Based on these data, the following analysis was undertaken to estimate the demand growth rates to be used in project-

ing future hotel room night demand for the subject market area.

One of the best indicators of hotel demand is the gross domestic product (GDP). The correlation between hotel demand and GDP is very close, as shown in Exhibit 3.28.

The GDP in the local market had an annual compounded percentage growth rate of 3%. Local economists are projecting the local GDP to increase 4% per year over the next several years.

Commercial Demand

Historic economic and demographic trends in the subject market area show strong growth. The local population has grown at an annual compounded rate of 2.5% over the past 10 years. Commercial indicators for the FIRE (finance, insurance, and real estate), trade, and service employment sectors have increased by 2.5%, 1.6%, and 3%, respectively. Airport enplanements were strong at 3.8%, and new business showed

Exhibit 3.26 Historic Market Supply, Occupancy, and Room Night Demand						
Year	Market Supply	Percent Change	Market-Wide Occupancy	Percent Change	Room Night Demand	Percent Change
2003	305,000	—	66.0%	—	201,300	—
2004	315,000	3.3%	67.0	1.5%	211,050	4.8%
2005	330,000	4.8	71.0	6.0	234,300	11.0
2006	345,000	4.5	72.0	1.4	248,400	6.0
2007	355,000	2.9	68.0	(5.6)	241,400	(2.8)
2008	365,000	2.8	63.0	(7.4)	229,950	(4.7)
2009	370,000	1.4	60.0	(4.8)	222,000	(3.5)
2010	375,000	1.4	63.0	5.0	236,250	6.4
2011	378,000	0.8	66.0	4.8	249,480	5.6
2012	380,000	0.5	70.0	6.1	266,000	6.6
Avg. annual % change, 2003-12:		2.5%		0.7%		3.1%

Source: HVS

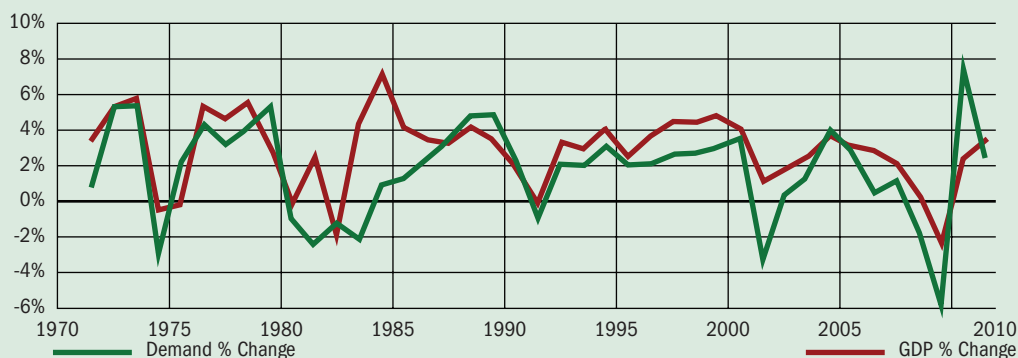
### Exhibit 3.27 Room Night Demand Growth Indicators

Type of Data	Historic (Actual) or Projected Date of Data	Annual Compounded Percentage Change
Population	Historic	2.5%
Population	Projected	2.2
Retail sales	Historic	1.3
Retail sales	Projected	3.0
Effective buying income	Historic	2.0
Effective buying income	Projected	2.5
Personal income	Historic	1.5
Personal income	Projected	2.0
Gross domestic product	Historic	3.0
Gross domestic product	Projected	4.0
Employment by category		
Manufacturing	Historic	1.0
Construction	Historic	2.0
TCPU*	Historic	2.0
FIRE **	Historic	2.5
Trade	Historic	1.6
Services	Historic	3.0
Government	Historic	0.5
Assessed values	Historic	1.8
Housing starts	Historic	2.5
Commercial building permits	Historic	1.7
Airport enplanements	Historic	3.8
Airport enplanements	Projected	4.0
Air cargo data	Historic	1.5
Highway traffic counts	Historic	2.0
Inventory of office space	Projected	4.0
Office space absorption	Projected	5.5
Office space construction	Projected	4.0
Inventory of industrial space	Projected	4.8
Industrial space absorption	Projected	5.0
Industrial space construction	Projected	5.0
Inventory of retail space	Projected	4.0
Retail space absorption	Projected	4.5
Retail space construction	Projected	5.0
New businesses to area	Historic	2.0
Convention center usage	Historic	3.0
Tourist visitation	Projected	3.5
Visitor counts at attractions	Historic	2.0

\* Transportation, communications, and public utilities

\*\* Finance, insurance, and real estate

### Exhibit 3.28 US Market Demand vs. GDP



Source: HVS and STR





an annual gain of 2%. Future projections suggest continued growth at a slightly higher level. Office space, industrial space, and retail space absorption is expected to grow at 5.5%, 5%, and 4.5%, respectively. Population growth is projected to slow to 2.2%, while airport enplanement growth will likely accelerate to 4%.

Based on this analysis, we have projected a commercial demand growth of 5% in 2013 and 2014, slowing to 4% in 2015 and 2016, stabilizing at 3% in 2017, and continuing at that rate thereafter.

### Meeting and Group Demand

Whereas the historical rate of meeting and group demand growth in the subject lodging market appears to have been realized at a rate of 3% per year, the completion of the convention center’s renovation justifies the use of a stronger growth rate throughout our projection period. The convention center now features greater potential for attracting more groups. Based on these considerations, we have projected an annual meeting and group demand growth of 3% in 2013; 4% in 2014; 5% in 2015, 2016, and 2017; and 4% in 2018. Meeting and group demand growth is projected to stabilize at 3% per year thereafter.

### Leisure Demand

Visitor counts in the resort area south of the subject site have grown at an annual rate of 2% for the past five years. According to the local visitors bureau, the upgraded

amenities at the resort are having a positive impact on overnight tourist visitation. As such, the annual leisure segment demand growth factor is projected at 2% for 2013; 2.5% for 2014; 3% for 2015; 3.5% for 2016 and 2017; and 3% for 2018. The rate is projected to stabilize at 2.5% per year thereafter.

### Airline Demand

Airline demand from airline crews and delayed passengers is expected to show a stable growth of 2% per year. In 2015, when the large group is expected to come to the market during the summer, the airline demand increase is projected to double to 4% for that year. In the following year, a -2% growth rate is used to reflect the fact that the large group was a one-time occurrence.

Exhibit 3.29 shows the projected growth in hotel room night demand for each of the four market segments. These compounded annual growth rates are applied to both accommodated and unaccommodated room night demand. Exhibit 3.30 shows the projected room night demand for each of the four market segments for the next five years.

Now the micro demand analysis for the subject market area is complete. The next component of the market study is an analysis of the competitive lodging supply, which will form the basis for allocating the total area-wide room night demand among the competitive hotels in the market.

Exhibit 3.29      Projected Demand Growth Rates							
Segment	Projection Year						
	2013	2014	2015	2016	2017	2018	2019
Commercial	5.00%	5.00%	4.00%	4.00%	3.00%	3.00%	3.00%
Meeting and group	3.00	4.00	5.00	5.00	5.00	4.00	3.00
Leisure	2.00	2.50	3.00	3.50	3.50	3.00	2.50
Airline crew	2.00	2.00	4.00	(2.00)	2.00	2.00	2.00
Weighted average	3.67%	3.99%	4.18%	3.39%	3.47%	3.14%	2.81%

**Exhibit 3.30 Projection of Market Demand (Unadjusted for Unaccommodatable Demand)**

Segment	Base	Projection Year						
	2012	2013	2014	2015	2016	2017	2018	2019
<b>Commercial Segment</b>								
Growth rate	—	5.00%	5.00%	4.00%	4.00%	3.00%	3.00%	3.00%
Accommodated demand	128,643	135,076	141,830	147,503	153,403	158,005	162,745	167,627
Unaccommodated demand	10,291	10,806	11,346	11,800	12,272	12,640	13,019	13,410
Induced demand	0	0	0	0	0	0	0	0
Total demand	138,934	145,882	153,176	159,303	165,675	170,645	175,764	181,037
<b>Meeting and Group Segment</b>								
Growth rate	—	3.00%	4.00%	5.00%	5.00%	5.00%	4.00%	3.00%
Accommodated demand	75,660	77,930	81,047	85,099	89,354	93,822	97,575	100,502
Unaccommodated demand	3,783	3,896	4,052	4,255	4,468	4,691	4,879	5,025
Induced demand	0	0	0	20,000	0	0	0	0
Total demand	79,443	81,826	85,099	109,354	93,822	98,513	102,454	105,527
<b>Leisure Segment</b>								
Growth rate	—	2.00%	2.50%	3.00%	3.50%	3.50%	3.00%	2.50%
Accommodated demand	38,557	39,328	40,311	41,520	42,973	44,477	45,811	46,956
Unaccommodated demand	1,157	1,180	1,210	1,246	1,290	1,335	1,375	1,409
Induced demand	0	0	0	0	0	0	0	0
Total demand	39,714	40,508	41,521	42,766	44,263	45,812	47,186	48,365
<b>Airline Crew Segment</b>								
Growth rate	—	2.00%	2.00%	4.00%	(2.00)%	2.00%	2.00%	2.00%
Accommodated demand	23,298	23,764	24,239	25,209	24,705	25,199	25,703	26,217
Unaccommodated demand	0	0	0	0	0	0	0	0
Induced demand	0	20,700	23,000	25,300	23,000	23,000	23,000	23,000
Total demand	23,298	44,464	47,239	50,509	47,705	48,199	48,703	49,217
<b>Total Demand—All Segments</b>	<b>281,389</b>	<b>312,680</b>	<b>327,035</b>	<b>361,932</b>	<b>351,465</b>	<b>363,169</b>	<b>374,107</b>	<b>384,146</b>



## Hotel Valuation Software

The next screen in the software is an input screen for the demand growth rates. It lists each segment and the projection years. The top set of input cells are for the accommodated demand growth rates, and the bottom set is for unaccommodated demand growth rates. The accommodated demand growth rates are normally the same as the unaccommodated demand growth rates, so the program automatically transfers the input in the top set of cells to the appropriate bottom set of cells. If the unaccommodated demand growth rate is different, then the reference cells can be overwritten. The screen calculates the weighted average growth rate of all the segments for each year along with the compound growth rate for each segment over the projection period. The software replicates a percentage entered into one cell directly to the cells to its right. Care must be taken to make sure that the cells to the right are correct when a percentage changes or stabilizes.

- Contents
- Intro
- Project Information
- Market Segments
- Primary Competitors
- Primary Prop. Data
- Estimated Market Segmentation
- Primary Room Nights
- Secondary Competitors
- Secondary Property Data
- Secondary Market Segmentation
- Secondary Room Nights
- Demand Base Year
- Competitive Indices
- Accommodated Demand
- Unaccommodated Demand
- Historical Market Growth Rates
- Demand Growth Rates
- Proposed Hotels
- Proposed Data
- Additions To Supply
- Competitive Indices Input
- Final Output

### Demand Growth Rates

In the tables below, enter the appropriate percentages for accommodated and unaccommodated demand growth.

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Compound Growth
Commercial	Meeting & Group	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	Leisure	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	Airline	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	Weighted Average	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Compound Growth
Commercial	Meeting & Group	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	Leisure	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	Airline	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	Weighted Average	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

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The following screenshot shows the case study data entered on the Demand Growth Rates screen. It is assumed that the growth rates entered for the accommodated demand would also apply for the unaccommodated demand. Note that the growth rates can be entered as both positive and negative numbers, as shown by the airline demand in 2015 and 2016.

### Demand Growth Rates

In the tables below, enter the appropriate percentages for accommodated and unaccommodated demand growth.

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Compound Growth
Commercial	Meeting & Group	5.0%	5.0%	4.0%	4.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.60%
	Leisure	3.0%	4.0%	5.0%	5.0%	5.0%	4.0%	3.0%	3.0%	3.0%	3.0%	3.80%
	Airline	2.0%	2.5%	3.0%	3.5%	3.5%	3.0%	2.5%	2.5%	2.5%	2.5%	2.75%
	Weighted Average	3.73%	4.00%	4.13%	3.41%	3.46%	3.14%	2.81%	2.81%	2.81%	2.81%	3.31%

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Compound Growth
Commercial	Meeting & Group	5.0%	5.0%	4.0%	4.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.60%
	Leisure	3.0%	4.0%	5.0%	5.0%	5.0%	4.0%	3.0%	3.0%	3.0%	3.0%	3.80%
	Airline	2.0%	2.0%	4.0%	-2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	1.79%
	Weighted Average	3.73%	4.00%	4.13%	3.41%	3.46%	3.14%	2.81%	2.81%	2.81%	2.81%	3.31%

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# Supply of Transient Accommodations

Chapter

4

A hotel appraiser should be familiar with both macro and micro hotel supply factors. Long-term macro supply trends often have a significant effect on local hotels, particularly with respect to hotel size, layout, design, chain affiliation, financial structure, and type of management. An understanding of the micro supply is also needed to predict the relative competitiveness of area properties and estimate the subject property's probable market share.

## Macro Supply

It has traditionally been difficult to determine the macro supply of transient lodging accommodations on a worldwide basis due to the fact that there has been no uniform, long-term census that quantifies the number of hotels and hotel units throughout the world. One of the underlying problems with this relates to definition. What constitutes a lodging facility? Should properties such as rooming houses, residential hotels, dormitories, camps, seasonal resorts, and motels with fewer than 10 units be included? The US Census Bureau has information dating back to 1939, but the definition of a lodging facility used at that time included many properties that would not be considered competitive lodgings today.

Today the hotel data-collection firm STR Global addresses the problem of quantifying the supply of hotel properties and rooms in the United States as well as other areas around the world. STR Global began operations in the United States under the name Smith Travel Research in 1987 and has excellent data going back to the late 1980s. They recently embarked on a global expansion and are now collecting data from many different parts of the world, but their global historical information is not as robust as their US historical data. Exhibit 4.1 shows the global supply of hotels and hotel rooms, along with their average occupancy, average daily rate, and RevPAR (rooms revenue per available room) as of 2010.

The largest concentration of hotels and hotel rooms is in North America, with the United States showing over 51,000 hotels, containing more than 4,800,000 rooms. Europe is the second largest region, with almost 52,000 hotels and 4,000,000 rooms. Asia has over 19,000 hotels with 2,600,000 rooms, and South America has 2,700 hotels with almost 300,000 rooms. It is interesting to see the data for India; one of the world's most populous countries has just over 150,000 hotel rooms—no wonder why so many international companies are planning to develop hotels in India. China is another huge country with relatively few hotels, at 6,000 properties with 1,225,000 rooms.

**Exhibit 4.1 Global Hotel Supply—2010**

	Properties	Rooms	Average Size (Rooms)	Occupancy	Average Daily Rate	RevPAR
Asia						
China	6,182	1,224,932	198	61.2%	\$112.86	\$69.09
India	2,535	154,422	61	60.8%	\$145.97	\$88.81
Other Asia Pacific	10,692	1,251,562	117	72.1%	\$144.34	\$104.14
Total Asia Pacific	19,409	2,630,916	136	66.4%	\$129.78	\$86.17
Europe						
Total Europe	51,756	3,938,796	76	64.3%	\$137.86	\$88.70
Middle East						
Total Middle East	1,080	186,600	173	60.8%	\$200.33	\$121.82
North America						
Canada	7,852	433,804	55	58.2%	\$116.76	\$67.91
Mexico	2,639	305,115	116	55.0%	\$101.94	\$56.10
United States	51,015	4,801,973	94	57.6%	\$98.09	\$58.48
Total North America	61,510	5,541,167	90	57.7%	\$99.27	\$57.26
South America						
Brazil	1,338	171,921	128	66.9%	\$115.59	\$77.28
Other South America	1,402	122,004	87	62.6%	\$131.76	\$82.53
Total South America	2,740	293,925	107	65.1%	\$122.30	\$79.63
Africa						
Total Africa	2,782	414,551	149	65.0%	\$105.93	\$68.83

Source: STR

Dividing the total number of rooms by the number of properties gives the average hotel size. It is interesting to see that China has the largest hotels, with an average size of 198 rooms per hotel. The Middle East is next, with an average size of 173 rooms per property. India, Europe, Canada, and the United States have fewer than 100 rooms per property.

The average occupancy rates range from a low of 55% for Mexico to a high of 72% for the “Other Asia Pacific” category of countries. It appears that North America has the lowest occupancies; North America’s occupancy rates are all below 60%, while all the other regions of the world are experiencing hotel occupancy levels in the 60% to 70% range.

The Middle East posted the highest average daily rate (ADR) at just over \$200, which also gave them the highest RevPAR at just under \$122. The United States had the lowest ADR at \$98, followed by Mexico at \$102. China was a little better at \$113, and India hotels averaged \$146.

This global macro hotel data shows the great potential for investing in India, where the supply of hotels is very low and the region enjoys a relatively high daily rate. Brazil is another country that needs more hotel supply to service its growing population and economy. Europe and the United States seem to be fully developed, with some pockets of opportunity for specific locations and types of hotels.

## Classification of Lodging Facilities

Hotels are designed and located to attract one or more specific markets. Because hotels differ in terms of design, physical facilities, amenities, and loca-



tion, all of which directly impact financial operating results, it is important to define and accurately classify the different characteristics of lodging facilities.

Hotels and motels can be classified using three categories:

- Type of facilities offered
- Class or quality of facilities and services
- Location

Using this classification procedure, a particular hotel could be described as a mid-rate, convention hotel with an airport location, for example. In this case, the hotel's class or quality level is mid-rate, the facilities are specifically designed to accommodate conventions, and the property's location is near an airport. Each of these three categories will be discussed and illustrated with examples.

### **Type of Facilities Offered**

The type of facilities offered refers to the physical hotel property as well as the amenities and services available to guests. The types of lodging facilities commonly found in the United States include:

- Commercial hotels
- Convention hotels
- Resorts
- All-suite hotels
- Focused-service hotels
- Extended-stay (service apartment) hotels
- Boutique and lifestyle hotels
- Eco hotels
- Conference centers
- Casino hotels
- Bed and breakfasts
- Health spa resorts

### **Commercial Hotels**

Commercial facilities cater primarily to the individual commercial traveler, whose purpose of travel is generally to conduct business within the market area surrounding the hotel. Consequently, these properties are usually situated near concentrations of office and industrial buildings, restaurants, entertainment outlets, and one or more modes of transportation. Facilities and amenities normally include a restaurant and lounge (on site or nearby), small meeting and conference rooms, recreational facilities (such as a swimming pool or fitness center), and retail shops. The services offered are oriented toward the commercial traveler and generally include room service, secretarial support, computer terminals, high-speed Internet (cable and wireless), photocopy and fax services, concierge and valet services, airport pickup, local transportation, and auto rentals. Commercial hotels typically experience high occupancy rates Monday through Thursday nights, with a significant drop-off on Friday, Saturday, and Sunday nights. This weekly occupancy pattern can sometimes be balanced by supplementing the low week-end commercial demand with meeting and group patronage.



### **Convention Hotels**

Convention hotels are designed to accommodate large groups and functions. They provide facilities such as one or more large ballrooms with break-out areas for meetings and conferences, exhibit space for trade shows, sample and display rooms for sales meetings, extensive restaurant and lounge capacity, and the same recreational amenities found in commercial hotels. The key component of a convention hotel is meeting space, which should amount to at least 50 square feet per guest room. Convention hotels are often located near commercial hotels and can sometimes be found near convention centers. The services offered are oriented toward groups and generally include those previously described for commercial hotels as well as meeting planning and support services; efficient check-in, check-out, and billing procedures; audiovisual, computer, and communications equipment rentals; and entertainment. Convention hotels experience occupancy trends that are generally strong Monday through Thursday nights and drop off on weekends. Since some groups prefer to meet on weekends, a convention hotel may post higher weekend occupancies than most commercial hotels. Convention hotels are also affected by monthly occupancy trends because many groups do not meet during the summer months or holiday periods.

### **Resorts**

Because resort hotels are oriented toward the leisure traveler, they either provide or are located near facilities for recreational activities such as a swimming, tennis, golf, boating, skiing, ice skating, horseback riding, hiking, sightseeing, and so on. Resort properties are usually situated in scenic areas, such as the mountains or the coast. In addition to recreational activities, resort hotels generally offer a limited amount of meeting and banquet space; restaurant, lounge, and entertainment outlets; a fitness center; concierge and valet services; and transportation and tour services.

Meals may be included in the room rate. The “American plan” provides breakfast, lunch, and dinner, while only breakfast and dinner are included in the “modified American plan.” A “European plan” hotel includes no meals in the price of the accommodations. All-inclusive resorts are becoming increasingly popular and predominate in Caribbean and Mexican resort areas. Under this type of plan, any activity that might commonly generate an extra charge (meals, beverages, recreation, etc.) is included in the tariff.

Resort hotels are often affected by seasonality. Depending on the nature of the resort area, certain seasons may bring potentially high or low levels of occupancy. For example, a ski resort should boom during the winter ski months, see moderate occupancy during the summer, and slow down considerably during the shoulder months in the spring and fall. These fluctuations in occupancies create operational inefficiencies that may adversely affect a property’s financial performance.

### **All-Suite Hotels**

All-suite hotels have guest rooms that include a sleeping area and a separate living area in a single unit. In some hotels, the suites are two-room modules that are side-by-side; others have elongated suites with the living area located at the front and the sleeping area to the rear. The living area typically contains a couch that converts into a bed, armchairs, a coffee table, an eating table, and a television. Most offer a kitchen with at least a microwave oven and a small refrigerator. Some are more elaborate and contain full kitchens. The bedrooms generally have less area than normal hotel rooms but are



All-suite hotels offer most of the amenities normally found in commercial hotels, but in some instances they are downsized. Amenities may include a restaurant that serves in the evenings as a lounge, a swimming pool, some meeting space, and a fitness center. The services offered are generally comparable to a commercial hotel. In a number of chain hotels, the all-suite service includes a full breakfast and a complimentary cocktail period in the evening. All-suite hotels can be located in any area suitable for commercial hotels.

*Focused-service* is a relatively new term that has largely replaced the term *select-service*. Focused-service hotels are midscale, limited-service properties that offer only the services and facilities desired by most guests. Thus, they generally offer very limited (if any) food and beverage facilities and services, function space, or public space. Also, these properties do not usually offer extraordinary guest services, such as bell or room service. This design has created a relatively efficient and profitable business model favored by hotel developers in the current market environment. This model has largely replaced an obsolete midscale hotel business model that offered more extensive food, beverage, and function space and services, which was usually not profitable. Examples of brands that are considered to be focused-service include Fairfield Inn (Marriott), Sleep Inn (Choice), and Holiday Inn Express (InterContinental) at the relatively lower end, and Courtyard (Marriott), Hilton Garden (Hilton), and aloft (Starwood) at the higher end.

The extended-stay hotel, also known as a *service apartment*, is a cross between an apartment complex and an all-suite hotel. Its guest room units are generally larger than those found in a standard, all-suite hotel and contain more living space, larger closets, and a full kitchen. Because the guest units are designed to accommodate stays of more than seven days, they are equipped with full-size refrigerators, stoves with ovens, microwaves, sinks, and dishwashers. Guest units also include cooking equipment, dishes, and eating utensils. The exterior of the property generally resembles a garden apartment complex, and the overall atmosphere is residential. The amenities and services offered by an extended-stay hotel are similar to those provided by all-suite facilities. Some chains include a free continental breakfast along with a complimentary cocktail reception. A unique service offered by at least one extended-stay chain is a grocery-shopping service in which hotel staff purchase the items requested on a guest's shopping list and deliver the order by the end of the day. The best locations for extended-stay hotels are residential or commercial areas where guests have access to daily conveniences such as dry cleaners, pharmacies, grocery stores, restaurants, movie theaters, and other entertainment.

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and can account for at least 70% of the property's overall occupancy. This customer mix enables the hotel to achieve high weekend occupancy, which greatly enhances the property's operational efficiencies. Well-run extended-stay hotels routinely operate at more than 80% occupancy when there is a sufficient amount of long-term patronage.

### ***Boutique and Lifestyle Hotels***

Boutique and lifestyle hotels are a recent addition to the industry. While there are many definitions for these types of properties and no universal standard, boutique and lifestyle hotels tend to be distinctive in architecture and design and built around a specific theme rather than following the model of the standard cookie-cutter brand-name hotels. Words such as *stylish*, *warm*, *hip*, and *intimate* are used to describe boutique hotels that attract a niche of customers looking for a special and differentiated hotel to fulfill their individual needs. Most boutique hotels tend to be smaller, generally with fewer than 150 rooms. Their relatively small size enables these types of hotels to differentiate themselves from the larger chain-affiliated properties because their staff can better connect with the individual guest, addressing the guest by name and providing a more unique, individual guest experience. It is this level of guest service that creates a lifestyle experience. Boutique hotels often have a locally famous restaurant with a celebrity chef and an active bar and cocktail lounge where patrons come to be seen. Lighting throughout the property tends to be subdued. Guest rooms have comfortable beds, often with down comforters and many pillows. In boutique hotels in New York and Los Angeles, staff members tend to be aspiring actors and actresses who wear black uniforms and speak through communication headsets. Boutique hotels tend to attract younger commercial travelers during the week and leisure travelers over the weekend. A few chains have created their own boutique brands, such as Starwood's *W*, InterContinental's Indigo, and Marriott's Edition. Kimpton Hotels is a chain of boutique hotels.

Most boutique hotels are independent, either relying on their own sales and marketing team to bring in new business or employing old-fashioned word-of-mouth promotion. As independent hotels, they do not have to pay franchise, royalty, and other fees to a chain but can instead use this money to do their own promotion. A well-located boutique hotel offering the level of service, style, and comfort travelers are looking for along with a great restaurant and hip lounge can often produce operating results that are better than a chain-affiliated property.

### ***Eco Hotels***

Eco hotels are also referred to as *sustainable* or *green hotels*. They are both commercial and resort properties that are constructed and operated in an environmentally friendly manner. One of the first hotel environmental certification programs was developed by the ECOTEL brand. Their ratings not only focus on how environmentally friendly the development and construction process is, but whether the hotel operates in a sustainable manner. The following are some of the operational procedures necessary for a hotel to achieve the ECOTEL rating:

- Implement a policy that defines environmental objectives, programs, processes, and best practices through which the hotel seeks to achieve these objectives
- Provide the appropriate training and resources to ensure that management and staff are able to effectively implement the environmental policy



- Implement programs and practices that have shown substantial and measurable results for reducing the generation of solid waste and the consumption of water and energy
- Use environmentally friendly cleaning products and procedures whenever possible
- Integrate environmental considerations into purchasing decisions
- Form a green team that includes staff whose input is critical to making the program work and consists of one or more representatives from each department
- Raise awareness among employees about climate change and the need for environmentally responsible behavior
- Encourage engagement with the local community to raise environmental awareness and support the community's green initiatives
- Comply with all applicable environmental legislation as a minimum standard

In addition to these environmentally oriented operational procedures, hotel developers looking to obtain recognition for building in a sustainable manner must follow the guidelines published by the US Green Building Council, which certifies buildings with a LEED certification.

Eco hotels and resorts cater to a market segment that is concerned with sustainability and preserving the environment. To date, this market segment has not demonstrated that it is willing pay a higher room rate to stay at an eco hotel. As a result, the higher cost of developing an environmentally oriented hotel is not always economically justified. Time will tell whether the eco hotel segment is as economically viable as non-eco hotels.

### **Conference Centers**

Dedicated conference centers are unique hotel products designed specifically to accommodate small groups and meetings. Unlike commercial hotels with attached conference space that derive demand from all market segments, conference centers usually concentrate on the meeting market, and some actually exclude other segments that might distract the in-house groups. The primary objective of a conference center is to create an ideal environment for productive, successful meetings. To this end, the following facilities and services are usually offered: high technology meeting space with the latest audiovisual and computer equipment; conference planning services; group meals and coffee breaks that are generally packaged in an all-inclusive price; recreational facilities such as swimming pools, tennis courts, golf courses, and fitness equipment; and guest rooms that are suitable for studying and doing homework. Conference centers are often situated in relatively remote locations to eliminate any distractions that could disrupt the purpose of the meeting. However, good transportation is essential and driving time to and from a major airport is usually under one hour.

Conference centers typically cater to small groups that are meeting for training or educational purposes. Social activities are usually minimized so as not to distract the attendees. During weekends and holiday periods when meeting demand is low, conference centers either try to attract leisure travelers or close down altogether.

The marketing of a conference center is highly specialized because the facilities are directed almost totally toward the high-end meeting planner. Conference center operators must have established contacts in this market



niche to capture this segment of the market. Once stable revenue can be established, the profitability of a dedicated conference center is generally very good because facility usage is known at least several weeks in advance and staffing and purchasing can be highly regulated and controlled.

In addition to commercially oriented conference centers, a number of educational institutions and large companies have their own dedicated meeting and lodging facilities.

### **Casino Hotels**

Casino hotels combine a transient hotel with a full casino facility. The guest rooms, restaurants, lounges, and other hotel amenities are usually designed to attract guests to the casino and keep them on the property. The rooms are actually an amenity to the casino. Casino hotels seek to attract individuals and groups of leisure travelers who enjoy gambling. The operation of a casino hotel requires very specialized expertise, not only in marketing the product to the gambler-user but also in controlling the actual gaming activities.

### **Bed and Breakfasts**

During the past two decades, the bed and breakfast inn has experienced a tremendous increase in popularity. This product, which is not much more than a spruced-up rooming house, offers relatively low-cost accommodations in a comfortable, residential atmosphere. Many establishments are historic houses with period furnishings, and breakfast is generally included in the price. Bed and breakfast establishments are typically owner-operated. They are basically large homes whose owners take roomers in to help supplement the property's operating expenses. Because the economics or income-generating capability of such small lodging facilities can seldom support absentee ownership, the most appropriate appraisal approach for bed and breakfast properties is usually the sales comparison approach.

A bed and breakfast facility traditionally connotes a lodging establishment that has a residential external appearance with a historical feel. Certain older, independent, small motels feature the same type of ownership and economics as a bed and breakfast; however, these are generally referred to as *mom and pop motels*.

### **Health Spa Resorts**

Dedicated health spa resorts are similar in concept to dedicated conference centers in that they cater almost exclusively to one market segment: the health-conscious leisure traveler. A number of hotels offer health and fitness facilities, but they usually do not provide the total environment of a dedicated health spa resort. Health spas generally offer an all-inclusive program that includes accommodations, meals, a medical check-up, individually designed health-related activities (usually exercise programs), and various types of counseling. Guests normally stay for three days to two weeks and are not encouraged to partake in meals or activities off the premises except under the supervision of the spa's staff. This type of regulation is designed to help the guest achieve a desired, health-related goal. These properties are usually located in resort areas. Their facilities typically include those normally found in resort hotels, with heavy emphasis placed on fitness equipment, exercise rooms, and similar amenities. Health spas require highly specialized marketing and operating expertise, particularly in the area of exercise, fitness, and health management. The ratio of staff to guests is quite high, so a constant, year-round occupancy is important for operating efficiency.



## Class or Quality of Facilities and Services

The class of a lodging facility is a way of describing the quality of the property and the level of service provided by the staff. Generally, class is reflected in a hotel's ability to achieve a particular room rate. The class of a hotel relates to its particular market area. For example, the facilities and level of service that might be considered first-class in Amarillo, Texas, may not get such a rating in San Francisco. The best hotel in a particular market is usually classified as the area's first-class property, and other facilities in the same area that offer a lower level of quality or service are assigned lower rankings.

STR Global has established a worldwide class ranking system for hotel chains based on the ADR of the hotels comprising each chain. Exhibit 4.2 shows the six chain classes along with an independent class for hotels that are not affiliated with a chain. The 2010 ADR for each class is also provided.

Hotel chains try to market their properties to a particular class of traveler. For example, Accor's Formule 1 hotel chain caters to the very rate-sensitive budget traveler, while Four Seasons hotels attract a high-end, luxury-oriented clientele. Exhibit 4.3 shows STR Global's class ranking of the world's leading hotel chains based on the previously set forth ranking system.

**Exhibit 4.2 Hotel Class and Room Rates**

Class Ranking or Chain Scale	2010 Average Rate
United States luxury chains	\$243
United States upper-upscale chains	\$143
United States upscale chains	\$108
United States upper-midscale chains	\$91
United States midscale chains	\$73
United States economy chains	\$49
United States independents	\$95

Source: STR

**Exhibit 4.3 2011 STR Global Chain Scales**

<b>Luxury</b>	761 Grand Hyatt	759 Park Hyatt	<b>Upper Upscale</b>	4540 Embassy Suites
15 Adrian Hoteles	535 Guoman	1040 Preferred	27 Aiila	430 Exclusive Hotel
18 African Pride	628 Habtoor Grand	1173 Quarters Hotels	47 Amarante	527 Fraser
21 AKA	645 Helmsley Hotel	1185 Raffles	69 Arjaan by Rotana	529 Gaylord
14 Affinia	679 Hospes Hotel	1255 Regalia Hotel	49 Art Series Hotel	531 Gems of Barbados
31 Aldemar	708 Imperial	1268 Regent Hotel	17 Autograph Collection	562 Gran Melia
26 Anantara	800 InterContinental	1560 Ritz-Carlton	68 Axel Hotels	555 Grand Metropark
71 Andaz	808 Jaz	1283 RockResorts	185 Boscolo	592 Hand Picked
62 Angsana	829 Jumeirah	1296 Rosewood	193 Caesar	638 Hard Rock
104 Baglioni	991 JW Marriott	1308 Royal Demeure	205 Camino Real	653 Heartland Hotel
107 Banyan Tree	839 Kamuela Villas	1307 Royal Tulip Hotels	212 Carlton Hotel	670 Hilton
210 Carlton Hotels	831 Kempinski	1355 Shangri-La	249 Club Quarters	691 Hotel Du Vin
270 Colony	862 Langham	730 Sofitel	275 Columbus Hotel	701 Hotel Keihan
287 Concorde	866 Leela Palace	1325 St Regis	283 Comwell	703 Hotel Petit Palace
295 Conrad	930 Loews	1500 Taj	337 Dai-ichi	760 Hyatt
284 Constance Hotels	935 Lungarno	1118 The Peninsula	338 Dan Hotels	765 IC Hotel
373 Doyle Collection	945 Luxury Collection	1930 The Prince	359 Derby Hotels Collection	816 ITC
394 Dreams	965 Mandarin Oriental	1920 The Tides	362 Divani	820 Jebel Ali
414 Edition	1011 ME	1605 Trump Hotel Collection	365 Dolce	813 Jinling Hotel
420 Elegant	1066 Mokara Hotel & Spa	1652 Viceroy	370 Doral	803 Joie De Vivre
490 Fairmont	1078 Oberoi	1646 W Hotel	392 Dream Hotel	845 Kimpton
489 Firmdale	1085 One & Only Resorts	1652 Waldorf-Astoria	407 Dusit Thani	859 Layia
510 Four Seasons		1820 Zoetry Wellness & Spa Resorts	415 Electra	1020 Le Meridien
517 Franklyn				



887 Legacy Hotels	1633 Victoria Hotels & Resort	209 Canad Inns	509 Four Pillars	782 InterCity (Brazil)
867 Legacy Hotels UK		222 Centara	508 Four Points	815 Isrotel
915 Life Hotels	1636 Village Hotel	214 CenterHotel	522 Fujiya Hotel	817 Jin Jiang Hotel
936 Luca Hotels & Resorts	1770 Vivanta by Taj	253 Centro Hotels by Rotana	514 Furama Hotel	823 Jolly
963 Malmaison	1651 Welsch Rarebits		910 Grand America	838 K+K Hotel
968 MaMaison	1680 Westin	224 Century	558 Grand Prince Hotel	905 Lemon Tree Hotel
990 Marriott	1710 Wyndham	197 Chaaya		911 LifeClass Hotels & Resorts
	<b>Upscale</b>	227 Cham Palace	1024 Grand Mercure	
992 Marriott Conference Center	2 Abba	228 Chandris	563 Grange Hotel	909 Lindner
	3 Abode	199 Chinas Best Value Inn	561 Great Wolf Lodge	933 Loisir Hotel
994 Marriott Executive Apartments	5 Abou Nawas	241 Cinnamon	565 Grecotel	949 Macdonald
	7 AC Hotel	260 Ciutat Hotel	564 Gresham Hotel	953 Maistra
997 Marti	28 acora Hotel and Wohnen	245 Clarion Collection	588 H10	960 Maldron Hotels
999 Martin's		235 Club Med	641 Hampshire	970 Manotel
1016 Melia Boutique	16 Adina	267 Coast	620 Hankyu Hotel	974 Marco Polo
1027 Meritus	35 Al Diar	265 Coast Hotel	514 Hanover International	985 Maritim
1023 Metro	24 Allegro Resort	302 Copthorne	622 Harbour Plaza	1002 MAX Hotels & Resorts
951 MGallery Hotel	6 aloft Hotel	286 Coral	643 Hastings Hotel	1014 Median Hotel
1045 Millennium	40 Alp'Azur	298 Corinthia	635 Hayley Conference Centres	1008 Medina
1050 Mitsis	45 Amathus Beach Hotel	308 Courtyard by Marriott	651 HELIOPARK	1015 Melia
1063 Myhotel	50 Amber Hotel	236 Courtyard Hotel (City Lodge)	650 Helnan	1025 Mercure
1960 Naiade	76 ANA	314 Cresta Hotel	660 Hesperia	1029 Metropark
1070 New Otani	64 Apa Hotel	330 Crowne Plaza	704 High Tech Hotel	1028 Metropolitan
1075 Nikko	77 Apex	345 Dazzler	309 Hilton Garden Inn	233 Mint Hotel
1084 Okura	32 Apollo Hotels & Resorts	358 De Vere	685 Homewood Suites	1051 Miyako Hotels
1080 Omni	79 Aranzazu	359 Derag	695 Hoteis Othon	1064 Moevenpick
1037 Oro Verde Hotel	78 Arcotel	368 Disney	459 Hotel Equatorial	1054 Moran Hotel
1091 Pan Pacific	82 Arora	361 Divan	694 Hotel Grand	1061 Mutiara
1124 Pestana	84 Art'Otel	375 Dorint	554 Hotel Grand Chancellor	1022 My One Hotel
1152 Pullman	11 Ascend	380 Doubletree	552 Hotel Grand Continental	1074 N H
1163 Quay	88 Ascott	411 dusitD2	577 Hotel Guldsmeden	1073 New World
1183 Radisson Blu	87 Aston Hotels	406 Duxton	702 Hotel Indigo	720 Novotel
1219 Rayhaan by Rotana	72 Aston Hotels UK	409 Dynasty Hotel	804 Hotel Jal City	869 NYLO Hotel
1217 Red Carnation	74 Aston International	416 Eaton	713 Hotel Monterey	1850 Oaks
1220 Renaissance	96 Atahotel	423 Element	1395 Hotel Sierra	1038 O'Callaghan
1305 Rotana	85 Austria Trend	446 Elite	750 Hungarhotels	724 Occidental
1353 Serena	65 Azur	448 Elysees West Hotel	696 Husa	1103 Oceania
1360 Sheraton Hotel	127 B4	454 Esplendor	762 Hyatt Place	1035 Orea Hotel
1415 Sky City Grand	122 Barcelo Premium	462 EuroAgentur	1460 Hyatt Summerfield Suites	1090 Outrigger
1445 Starhotels	140 Bilderberg	461 Eurostars Hotel	764 Iberostar	1104 Oxford
1448 Steigenberger	148 Blue Tree Hotel	470 Evenia	768 Imperial Hotel	1099 Palladium Hotel
1464 Sun International	106 Bourbon Hotels & Resorts	425 Excel Hotel Tokyu	788 Innside Premium	1087 Paradisus
1498 Swissotel	640 Caesars Entertainment	504 First		1095 Paradores
1525 The Marmara	207 Cambria Suites	511 Fitzpatrick Hotel		1093 Park Plaza
1925 The Park				1100 Parkroyal
1588 Tivoli				1116 Pearl Continental Hotel
1619 Trident Hotel				1122 Peppers



**Upscale (continued)**

1153 Prince Hotel	1564 Three Cities	301 Coralia	709 Home2	1314 Sahid Hotel
1157 Principal Hayley	1591 Tokyu Resort	299 Cosmopolitan	689 Hotel Clarine	1318 Sana
1168 Quest	1597 Traders Hotel	303 Country Hotel	97 Hotel Des Gouverneurs	1320 Sandman
1180 Radisson	1627 UNA	331 Crystal Hotel	692 Hotel Edda	1337 Scanticon
1261 Regal	1644 Vibe hotel	333 Cumulus	663 Hotel Tokyu Bizfort	1407 Silver Cloud
1269 Rendezvous Hotel	1634 Vila Gale	339 Danubius	665 Hotetur	1427 Sol Y Mar
1270 Residence Inn	1643 Voyages	353 Days Hotel	752 Hunguest	1429 Somerset
1267 Resta	1648 Washington Hotel	354 Days Serviced Apartment	763 Iberotel	1435 Spar Hotel
1274 Rica Hotel	1690 Woodfin Hotel	355 Delta Hotel	767 Idea Hotels	1446 Starlight
1273 Rimoni	1718 Wyndham Vacation Resort	364 Dolan	706 Isle of Capri	12 StayAt
1277 Riu Hotel	<b>Upper Midscale</b>	366 Domina	819 Jardin	1444 StayEasy
1279 Rixos	1950 3 Palms	290 Doubletree Club	827 Jurys Inn	732 Sunroute
1282 Robinson Club	4 Abotel	400 Drury Inn	834 Key West Inns & Suites	1467 Sunspree Resorts
1294 Room Mate	19 Adagio City Aparthotel	402 Drury Inn & Suites	858 Kyriad Prestige	1496 Sweden Hotel
1309 Royal Regency	23 Alfa Hotel	403 Drury Lodge	888 Leonardo Hotel	1520 the b
1316 Safir	73 AS Hotels	401 Drury Plaza Hotel	900 Lexington	1540 The Don Suite Hotel
1315 Sandals	101 Ashok	404 Drury Suites	937 Lotus	655 The Heritage (New Zealand)
1321 Sarova	91 Avari	412 Dusit Princess	948 Lynch Hotel	1582 Timhotel
1327 Sawridge Inns	29 Ayre	442 Elba	971 Mantra	1589 Tokyu Hotel
1335 Scandic Hotel	86 Ayres	485 Fairfield Inn	1019 Menzies	1594 TOP City & CountryLine
1328 Sea Hotel	81 Azimut	487 Festival Inn	1012 Meriton Serviced Apartments	1596 TOP International Hotel
1346 Sebel	112 Barcelo	512 FJB Hotel	1058 nestor Hotel	1595 TownePlace Suites
1348 Sedona	111 Bastion	515 Flair Hotel	1071 New Hotel	1617 Travelodge (Australia)
1382 Shire Hotel	18 Bayview	518 Fleming's Hotel	1076 Norlandia	1623 Tryp
1403 Signature Hotels (Africa)	133 Best Western Plus	533 Floris	1081 Oakford Hotel	1624 Tulip Inn
1405 Silken	134 Best Western Premier	497 Fosshotel	1082 Ohana	1628 UNAWAY Hotel
1414 Sky City	132 Beta Hotel	523 Frantou	1004 Paradise Hotel	1631 Van der Valk
1428 Sokos	114 Bewleys	526 FX Hotels Group	1094 Park Inn	1772 Villa Fontaine
1430 Sonesta Hotel	145 Bleu Marine	524 G S M Hoteles	1105 Parthenon	1653 Welcome Hotel
1432 Southern Sun	116 Britannia	528 Garden Court	1120 Penta	1350 Westmark
1438 Springhill Suites	219 Central Apartment Hotel	525 Garden Plaza	1125 Phoenix Inn	1715 Wyndham Garden Hotel
1443 Stamford	216 Chase Suites	545 Golden Tulip	1155 Princess	90 Xanterra
1447 Staybridge Suites 8 Suite Novotel	231 Citadines Apart'Hotel	579 Gunnewig Hotel	1156 Prodomo	1800 Zenit
1439 Sunstar Hotel	242 Citigate	610 Hampton Inn	1158 Protea Hotel	<b>Midscale</b>
1475 Superclubs	250 City Express	611 Hampton Inn Suites	1161 Quality	9 Achat
1398 Swiss-Belhotel	226 City Lodge	649 Hatton Hotel	1165 Quality Resort	13 acom Hotel
1492 Swiss-Garden	234 CityLife Hotel	625 HCC Hotel	1166 Queens	30 All Seasons
225 The Chifley	230 Clarion	655 Heritage	1202 Ramada Plaza	115 America's Best Suites
1523 The Gateway	279 Comfort	680 Holiday Inn Express	1215 Rantasipi	60 AmericInn
1562 The Heritage Hotel (Thailand)	280 Comfort Inn	683 Holiday Inn Express	1264 Regardz	94 Aristos Hotel
1545 The Three Corners	282 Comfort Suites	682 Holiday Inn Garden Court	1266 Relexa	121 Barcelo Comfort
1555 The Triton	292 Confortel	681 Holiday Inn Select	1271 Richmond Hotels	
1563 Thistle	300 Continental Plaza	707 Home Inn	1275 Ringhotel	
1189 Thon Hotels			1292 Rogner Hotel	
			1313 Rydges	





180 Baymont Inns & Suites	782 InterCity	1590 Tokyu Inn	465 Etap	1005 Masters Inn
130 Best Western	801 JR Kyushu Hotel Group	238 Town Lodge	463 Evergreen	1030 Microtel Inn
149 BlueBay Resorts	836 Kibbutz Hotel	1622 Treff	483 Extended Stay America	1059 Motel 168
147 Bonsai Hotel	837 Kingsgate	1612 TRH Hoteles	484 Extended Stay Deluxe	1056 Motel 268
187 Breakfree Resort	857 Kyriad	1629 Uniquestay	410 E-Z 8	1060 Motel 6
200 Cabot Lodge	880 La Quinta Inn	1630 Vagabond Inn	500 Family Inns Of America	1057 Motel One
208 Campanile	882 La Quinta Inn & Suites	1638 Villages Hotel	495 Fasthotel	1065 National 9
196 Canadas Best Value Inn	865 Lakeview Distinctive Hotels	1775 VIP Hotel	486 Fave Hotel	1083 Old English
195 Candlewood Suites	908 Libertel	1641 Vista	693 Formule 1	1067 Omena Hotels
221 Catalonia	950 Maeva	1647 Wayfarer Inn	540 Ginger	1068 One Hotels
239 Chisun	955 Mainstay Suites	1656 WelcomHeritage	542 Golden Chain	1110 Passport Inns
251 City Suites	1026 Merlin	1687 Wingate By Wyndham	548 Good Nite Inn	1115 Pear Tree Inn
240 ClubHouse	1079 N H Express	1750 Yotel QQ	560 Great Western	1618 Premier Inn
288 Corus Hotel	1069 Nishitetsu Inn	<b>Economy</b>	559 Greene King	727 Premiere Classe
306 Country Inn & Suites	1077 Nuit D'Hotel	810 1st Interstate Inn	568 GreenTree Inn	1235 Red Carpet Inns
320 Crossings by GrandStay	1092 Palace Resort	33 Affordable Suites of America	575 GuestHouse Inn	1250 Red Roof Inn
334 Crystal Inn	1102 Park Regis	110 America's Best Inn	659 Home Towne Suites	237 Road Lodge
356 Dedeman	1148 Punt Hill	120 Americas Best Value Inn	686 Homegate	1280 Roadstar Inn
357 Delfin Hotel	1160 Quality Inn (and Quality Suites)	102 Australis	687 Homestead	1285 Rodd Hotel
457 EuroHotel	1200 Ramada (and Ramada Limited)	109 B&B Hotel	688 Homotel	1290 Rodeway Inn
460 Europa	1232 Real De Minas	103 Balladins	690 Hotel Climat	1300 RT Hotel
501 Fiesta Hotels	1240 Red Lion	113 Best Hotel	667 Hoteles Serena	1322 Savannah Suites
503 Fiesta Inn	1272 Reval	150 Budget Host	678 Howard Johnson Express	1345 Scottish Inn
534 Fortune	1284 Roc	163 Budget Suites of America	783 Innkeeper's Lodge	1347 Select Inn
519 Fresh	1281 Rode Inn	117 Budgetel	445 Inns of America	1390 Shoney's Inn
532 Gloria	1338 Scenic	252 City Junior	795 InTown Suites	1425 Slumber Lodge
557 GrandStay Residential Suites	1352 Sercotel Hotel	297 Commundo Tagungshotels	822 Jameson Inn	1456 Studio 6
569 Grupotel	1354 Settle Inn	307 Country Comfort	818 Jin Jiang Inn	1455 Studio Plus
644 Hawthorn Suites by Wyndham	1380 Shilo Inn	305 Country Hearth Inn	814 Jin's Inn	1457 Suburban Extended Stay
647 Heartland Inn	1400 Signature Inn	312 Crestwood Suites	832 Key West Inn	1463 Sun Suites Hotels
697 Hotel Star	1423 Sleep Inn	317 Crossland Suites	840 Knights Inn	1465 Sundowner
735 Hoteles Vista	1433 Sorat	350 Days Inn	852 Kris Hoteles	1470 Super 8
740 Howard Johnson	1441 START hotel	390 Downtowner Inns	885 Lees Inn of America	1565 Thriftlodge
700 Ibis	1473 Super Hotel	434 easyHotel	889 Leisure Inn	1615 Travelodge
790 InnSuites Hotel	1495 Swallow	440 Econo Lodge	1000 Master Hosts Inns	1614 Travelodge UK
	1497 Swiss Inn			1632 Value Place
				98 Wandlyn Inn
				1650 Wellesley Inn
				1900 Zleep

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Over the years there has been very little movement between classes by hotel chains. Most chains attempt to create and maintain a specific image with respect to their class of facilities and service. Hotel chains occasionally change classes, usually falling to a lower class when they are unable to maintain the chain's quality and ADR levels. Exhibit 4.4 shows the STR Global hotel chain class rankings as of 2007. Some of the changes in rankings that have occurred between 2007 and 2011 include:

- Prince Hotels dropped two classes from luxury to upscale.
- Pan Pacific and Starhotels fell from luxury to upper upscale.
- Doubletree Hotels fell from upper upscale to upscale.
- Langham Hotels rose from upper upscale to luxury.
- Wyndham Hotels rose from upscale to upper upscale.

<b>Exhibit 4.4 2007 STR Chain Scales</b>			
<b>Luxury</b>	Hyatt	Homewood Suites	Ramada
Colony	Jury's Hotels	Hotel Indigo	Ramada Plaza
Conrad	Langham Hotels	Hotel Novotel	Red Lion
Fairmont Hotel	Le Meridien	Hyatt Place	Romantik Hotel
Four Seasons	Marriott	Hyatt Summerfield Suites	Westmark
Hotel Sofitel	Marriott International	Outrigger	Sunspreet Resort
Inter-Continental	Marriott Conf. Center	Radisson	Westcoast
Loews	Millennium Hotels	Residence Inn	Wyndham Garden Hotel
Luxury Collection	New Otani Hotels, The	Resortquest Hawaii	<b>Midscale W/O F &amp; B</b>
Mandarin Oriental	Nikko	Sierra Suites	Amerihost
Pan Pacific	Omni	Springhill Suites	Americinn
Preferred	Renaissance	Staybridge Suites	Baymont Inns & Suites
The Peninsula Group	Sheraton Hotels	Woodfield Suites	Bradford Homesuites
Prince Hotels	Sonesta Hotels	Woodfin Suites	Cabot Lodge
St. Regis	Swissotel	Wyndham Hotels	Candlewood Hotel
Regent Hotels	Westin	Xanterra Parks & Resorts	Clubhouse Inns of America
Ritz-Carlton	<b>Upscale</b>	<b>Midscale W/ F &amp; B</b>	Comfort Inn
Starhotels	Adam's Mark	Best Western	Comfort Suites
W Hotels	Aloft	Clarion	Country Inn & Suites
The Waldorf-Astoria Collection	Amerisuites	Doubletree Club	Drury Inn
<b>Upper Upscale</b>	Aston	Golden Tulip	Drury Lodge
Affinia Hospitality	Ayres	Harvey Hotel	Drury Plaza Hotel
Caesars	Cambria Suites	Hawthorn Inn & Suites	Extended Stay Deluxe
Concorde Hotels	Chase Suites	Holiday Inn	Fairfield Inn
Doral	Club Med	Holiday Inn Select	Hampton Inn
Doubletree Hotels	Coast Hotels Usa	Howard Johnson	Hampton Inn & Suites
Embassy Suites	Courtyard	Jolly Hotels	Heartland Inn
Embassy Vacation Resorts	Hilton Garden Inn	Little America	Holiday Inn Express
Gaylord Entertainment	Crowne Plaza	Marc	Innsuites Hotels
Helmsley Hotel	Four Points	Ohana Hotels	La Quinta Inns
Hilton Hotels	Harrah's	Park Plaza	La Quinta Inns & Suites
Hilton Gaming	Hawthorn Suites	Quality	Lees Inn of America
	Hawthorn Suites Ltd	Quality Inn Suites	Mainstay Suites





<b>Midscale W/O F &amp; B</b>	America's Best Suites	America	Knights Inn	Savannah Suites
<b>(continued)</b>	America's Best Value	Family Inns of America	Lexington Hotel Suites	Scottish Inn
Phoenix Inn	Budget Host Inn	Good Nite Inn	Master Hosts Inn	Select Inn
Ramada Limited	Country Hearth Inn	Great Western	Masters Inn	Select Suites
Shilo Inn	Crestwood Suites	Guesthouse Inns	Mcintosh Motor Inn	Shoney's Inn
Signature Inns	Cross Country Inn	Homegate	Microtel Inn	Studio 6
Silver Cloud	Crossland Suites	Homestead Studio Suites	Motel 6	Studio Plus
Sleep Inn	Days Inn	Howard Johnson Exp. Inn	National 9	Suburban Extended Stay Hotels
Townplace Suites	Downtowner Motor Inn	Innkeeper	Park Inn	Sun Suites Hotels
Wellesley Inn	E-Z 8	Inncal	Passport Inn	Super 8
Wellesley Suites	Econolodge	Intown Suites	Pearlree Inn	Thrift Lodge
Wingate Inn	Inns of America	Jameson Inn	Red Carpet Inn	Travelodge
<b>Economy</b>	Exel Inn	Key West Inn	Red Roof Inn	Vagabond
1st Interstate Inn	Extended Stay		Roadstar Inn	Wandlyn Inn
Admiral Benbow			Rodeway Inn	
America's Best Inns				

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In the United States, the *Forbes Travel Guide* (formerly the *Mobil Travel Guide*) and the American Automobile Association (AAA) regularly inspect and rate hotels and motels based on factors such as the quality and cleanliness of the facilities, the level of service provided, staff professionalism, and the types of amenities offered. Their findings are published annually and include a quality rating. Forbes ranks lodging facilities with one to five stars, and AAA uses one to five diamonds. Many travelers rely on these guides in their selection of a lodging facility. The accompanying sidebar lists other hotel rating organizations throughout the world. Each generally operates independently, and there is no uniform worldwide rating system.

When performing a hotel market study, it is important for the appraiser to review the quality level of all the competitive hotels in the market from both a physical and service perspective. Physical quality, service, and cleanliness are some of the criteria that patrons use when selecting a hotel.

## Location

The third way to classify lodging facilities is based on location. A property's location affects many factors, including the market segments served, the types of facilities and services required, and occupancy cycles. Hotel locations may be classified in a number of ways, including classifications as airport, highway, center city, suburban, convention center, and resort locations.

### Airport

An airport hotel is situated near a commercial airport and serves out-of-town visitors. This type of location attracts those who use the airport, mostly airline passengers from delayed flights, flight crews, and, in the case of hotels near international airports, guests arriving to the area on the night prior to their expected flight departure. Airport hotels are also natural sites for small and medium-sized meetings when some or all of the attendees are coming from outside the immediate area. Most airport hotels are designed to accommodate commercial travelers as well as meeting and group patronage. Leisure demand does not normally make up a significant portion of an airport hotel's market area. Lodging facilities that go after a significant amount



## Hotel Rating Organizations

Country/Region	Company/Rating Agency	Web Address
<b>Europe</b>	Hotelstars Union (HOTREC)	www.hotelstars.eu
Austria	HOTREC	www.hotelsterne.at
Czech Republic	HOTREC	www.hotelstars.cz
Estonia	HOTREC	www.ehrl.ee
Germany	HOTREC	www.hotelsterne.de/de/
Hungary	HOTREC	www.hah.hu
Latvia	HOTREC	www.lvra.lv
Lithuania	HOTREC	www.lvra.lt
Sweden	HOTREC	http://shr.se/hotelsinsweden/
Switzerland	HOTREC	www.hotelleriesuisse.ch/de/pub/services/klassifikation.htm/
The Netherlands	HOTREC	www.kenniscentrumhoreca.nl/hotelsterren
France	Michelin	www.michelinguide.com
Italy	Touring Club Italiano	www.touringclub.it
United Kingdom	AA	www.theaa.com/travel_editorial/hotel_services_hotel_recognition_scheme_html
	Les Routiers	http://routiers.co.uk/
<b>North America</b>	Diamond Rating System	www.aaanewsroom.net
	Forbes Travel Guide/Startle	www.startle.com
<b>Africa</b>		
South Africa	Tourism Grading Council	www.tourismgrading.co.za
<b>Asia Pacific</b>		
Australia	Star Rating Licensees (AAA Tourism)	www2.aaatourism.com.au
New Zealand	Qualmark	www.qualmark.co.nz
India	A+ Quality Grading	www.aplusquality.org
	Ministry of Tourism	http://tourism.gov.in/
Taiwan	Tourism Bureau	http://eng.taiwan.net.tw/
<b>Countries with Their Own Rating Systems</b>		
China	China National Tourism Administration	www.travelchinaguide.com/faq/when/hotel.htm (Note: This is not an official rating agency.)
Thailand	Tourism Authority of Thailand	www.tatnews.org/tourism_news/detail.asp?id=2618
South Korea		no website found
Singapore		no website found
Taiwan	Tourism Bureau	www.taipeitimes.com/News/taiwan/archives/2010/11/17/2003488732

of airline-generated business, such as airline crews and delayed passengers, tend to trade room rates for occupancy. This type of demand is extremely price-sensitive, so the property's ADR must be low. The offsetting benefit of higher occupancy sometimes makes this strategy effective.

One of the unique services provided by most airport hotels is passenger pick-up and delivery using hotel cars and vans. Depending on the flight schedule, airport shuttle service can range from intermittent to continuous. In either case, operating an airport van is expensive, and this expense should be considered in the projection of operating expenses. Airport hotels generally experience fairly stable year-round occupancy patterns; they usually have higher weekend occupancies than most commercial hotels.



### **Highway**

A highway-oriented lodging facility is located near a major travel route such as an interstate highway. Visibility and easy access are important. Highway hotels generally attract individual commercial and leisure travelers. These properties are not normally used by the meeting and group segment, so several small meeting rooms are usually sufficient. A highway hotel should either have its own restaurant or be located near a food service facility that serves three meals a day. The long-term success of a highway hotel depends on auto travel, which has at times been adversely affected by shortages of fuel. Changes in highway traffic patterns brought about by new roads, highways, and interchanges can also affect the desirability of a particular location. These are some of the risks inherent in a lodging facility that depends on a single mode of travel access. The occupancy patterns of highway hotels typically reflect the type of travelers using the adjacent highway. Their average length of stay is usually short, ranging from one to three days.

### **Center City**

Center city hotels are located in urban, downtown areas. This type of location generally attracts individual commercial travelers as well as the meeting and group market. Some center city hotels in popular destinations, such as New York City, London, Paris, and Hong Kong, also attract leisure demand. The physical characteristics important to a center city hotel are adequate parking (usually on-site or valet), strong security, quiet rooms protected from street noise, and room service. A center city hotel in an area with a good selection of restaurants nearby needs only minimal food and beverage facilities, unless the property depends on a significant amount of meeting and banquet business. Center city hotels usually have high-rise construction and are more expensive to operate than their suburban counterparts. These properties are almost always subject to higher property taxes, energy costs, and labor rates. Moreover, due to site constraints, the physical layout of a center city hotel is not always the most efficient.

### **Suburban**

Suburban hotels are located just outside the center city near commercial areas with concentrations of office, retail, and industrial businesses. These properties cater to individual commercial travelers, meeting and group demand, and some leisure business—particularly on weekends and holidays. Many suburban hotels are constructed as mid-rise buildings and provide a full range of amenities, including restaurants, lounges, meeting and banquet rooms, swimming pools (indoor and outdoor), health and fitness clubs, tennis courts, and jogging tracks. Parking is generally free and readily available. Developing a suburban hotel is generally less expensive than developing a comparable center city property.

### **Convention Center**

As the number of convention centers throughout the world has grown, so has the number of convention center hotels constructed in conjunction with convention facilities. Some of these hotels are physically attached to convention centers, while others are in close proximity to them. These hotels generally capture a significant portion of the room nights generated by the convention center, but it must be recognized that even the best convention centers are only used for approximately half of the year. This statistic can be easily verified. Assuming that a typical, four-day convention takes two days to set up and two days to dismantle, that leaves three days out of every week in which the facilities are not being used. This does not include the weeks—such as



during the Christmas/New Year’s holiday season—when there are no conventions at all. Thus, the facilities are really only in use about 180 days per year, or 50% of the time. If this is the maximum potential use and slow periods are experienced in summer and during holiday periods, it is easy to see why convention facilities are not consistent generators of lodging demand.

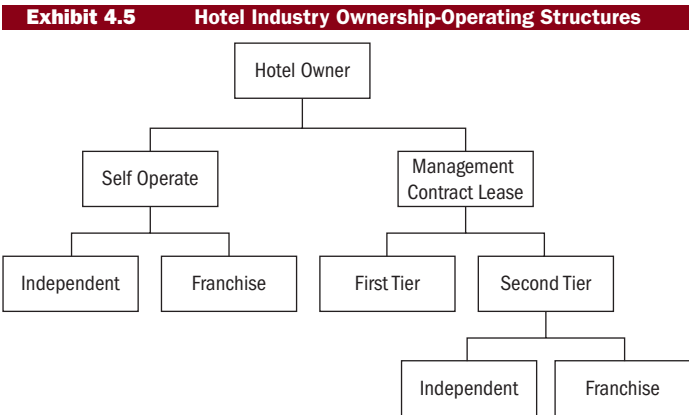
**Resort**

Leisure travelers go to resorts during vacations and other free time to relax and have fun. Resort locations often offer one or more special recreational attractions, such as water sports, winter activities, unique entertainment, scenic beauty, or a historic experience. Many resort locations also attract leisure-oriented meeting and group demand, but most are not frequented by commercial travelers. Immediate site access and visibility are often unimportant and can actually be detrimental to a resort location. Area access can be critical, however, particularly for remote locations. Other factors that can affect the desirability of resort locations are: climate (especially adverse periods such as hurricane season in the Caribbean), perceived safety and guest comfort, political stability (in foreign countries), and distance and travel time from the point of origination to the resort destination.

**Structure of the Hotel Industry**

When performing a hotel market study and appraisal, it is important to understand the underlying structure of the hotel industry. There are many components to this structure, including management contracts, franchises, leases, fee ownership, owner operators, and so on. For example, when a guest stays at a Marriott hotel, the guest usually assumes that Marriott owns and operates the property. In fact, it is more likely that Marriott does not own the hotel but rather operates it under a management contract and/or provides a franchise and license enabling either the property owner or a third-party management company to operate it. The appraiser needs to review all of the ownership, management, and franchise documents to know the financial and ownership structure being appraised. Exhibit 4.5 illustrates the typical hotel ownership-operating structures found in the hotel industry:

Most hotels are developed by independent owners, not one of the larger well-known hotel companies. These owners typically own one to 10 hotels situated in a particular region of the world. Exhibit 4.5 shows that these hotel owners can either self-operate the hotel or find a hotel company that will either operate the property under a management contract or lease the hotel from the owner. If the owner decides to self-operate the hotel, a decision needs to be made to either operate the hotel as an independent property (without a brand affiliation) or obtain a franchise from one of the brands.



Under the alternative scenario, the hotel owner may decide not to operate the property but rather use the service of a professional hotel management company. This structure can be accomplished with either a lease or a management contract.

The practice of using professional hotel companies to manage lodging facilities for property owners began in the early 1900s. During this period, hotels became larger and more complicated to operate, and the benefit of chain identification became an important competitive factor as the general population gained mobility. At first, the most common method by which hotel companies furnished management services was through total property leases. A total property lease is an agreement between a hotel company and a hotel property owner in which the hotel company leases the hotel (land, improvements, and sometimes the furniture, fixtures, and equipment) from the property owner. The hotel company thus becomes the tenant and assumes all operating responsibilities as well as the financial obligations of funding working capital, operating expenses, and rent. The landlord-owner is passive with respect to all operating decisions and is not responsible for working capital or operating expenses. The hotel company receives the residual net income after all expenses are paid, including rent. Under a total property lease, the financial burden is placed on the hotel company, which enjoys the benefits if the property is successful but suffers losses when operating performance is not adequate.

Hotel management contracts came into use between 1950 and 1960. During that time, travel became more global in nature; foreign governments were interested in attracting tourists and began encouraging hotel companies to develop hotels in their countries. The concept of a worldwide lodging chain was appealing to a number of hotel companies, but many were reluctant to expose themselves to the development and operating risks associated with owning or leasing a hotel in a foreign country. Many factors, including governmental instability, fiscal uncertainty, and a lack of skilled labor, led hotel companies to develop a replacement for the property lease that would shift the financial burden from the operator to the owner. The result of the hotel companies' efforts was the hotel management contract.

A management contract is an agreement between a hotel management company and a hotel property owner in which the management company takes on the responsibility of managing the hotel and its facilities. The owner, unless stipulated otherwise, assumes a passive position with respect to operating decisions while assuming responsibility for all working capital, operating expenses, and debt service. The management company is paid a fee for its services and the owner receives the residual net income after all expenses.

Unlike a property lease, the financial burden under a management contract is placed entirely on the owner, who enjoys the upside benefits of a successful property but suffers the downside losses if the operation is not profitable. Under this arrangement, hotel companies were eager to expand overseas because the foreign country assumed the financial risk for the benefit of developing tourism and the management company provided operational expertise and name recognition. Chains such as Hilton International, Hyatt, Sheraton, Western International (Westin), and InterContinental were among the hotel companies that used management contracts to expand their bases of operations worldwide.

Once hotel companies discovered that they could make almost as much money with a management contract as with a property lease without assuming any of the financial risks, they started to change their modes of operation.



Going back to the ownership operating structure flow chart, the owner needs to select either a first-tier or a second-tier hotel company to operate the property once he or she has decided not to operate it personally. A first-tier management company operates lodging facilities for third parties under a management contract and provides two types of services: 1) day-to-day operational supervision and property management, and 2) global, national, or regional customer recognition through affiliation with a chain. Marriott, Hilton, Four Seasons, Mandarin, and InterContinental are examples of first-tier management companies.

A second-tier management company, which also operates lodging facilities for third parties under a management contract, provides day-to-day operational supervision and property management but offers no trade name customer recognition. Second-tier management companies often use hotel franchises for identification. Examples of second-tier management companies include Interstate Hotels and Resorts, HEI Hotels and Resorts, White Lodging, GF Management, and Pyramid Hotel Group.

If the owner decides to use a second-tier management company, a decision needs to be made to either operate the hotel as an independent property (without a brand affiliation) or obtain a franchise from one of the brands.

## Hotel Chains

A hotel chain is defined as any group of three or more hotels or resorts operated under a common name or by a single owner or operator. A hotel chain is usually equated with a recognizable name, such as Marriott, Holiday Inn, or Accor, rather than an independent hotel with no brand-name affiliation. Over the past 40 years, chain affiliation has become increasingly prevalent in the hotel industry. In 1970, 35% of all hotels were affiliated with a chain, while the current ratio is estimated to be in the range of 80%. In other areas of the world, this ratio is typically reversed. However, the growth of chain-affiliated hotels continues to expand on a global basis, which gradually increases the ratio of chain versus independent hotels. The growth of hotel chains over the last four decades can be attributed to three factors: franchising, management contracts, and internal expansion.

Exhibit 4.6 identifies the world's top 50 hotel chains as of 2008 and 2009, based on the total number of rooms.

## Franchising

A franchise is an agreement between a hotel-motel company (usually a national or regional chain) and an independent hotel owner in which the owner pays a fee to use the name, trademarks, and various services offered by the chain. The selection of an appropriate franchise affiliation affects a property's ability to compete in the local market, generate profits, achieve a certain image or market orientation, and benefit from referral business. A franchise creates certain benefits and costs for both the owner and the chain. The following is a description of the benefits and costs of utilizing a franchise affiliation.

### Benefits to the Owner

The following list details the benefits of franchising enjoyed by the franchise owner, or franchisee.

- Instant identity, recognition, and image  
Every chain has its own image, which indicates its price level (the previously described classes) and market (leisure, commercial, or conven-



**Exhibit 4.6 World's Top Hotel Chains, 2008-2009**

Rank	Company, City, Country/State	2009 Rooms	2009 Hotels	2008 Rooms	2008 Hotels
1	InterContinental Hotels Group PLC, Windsor, England	646,679	4,438	619,851	4186
2	Wyndham Hotel Group, Parsippany, New Jersey	597,674	7,114	592,880	7043
3	Marriott International Inc., Bethesda, Maryland	595,461	3,420	560,681	3178
4	Hilton Worldwide, McLean, Virginia	585,060	3,530	545,725	3265
5	Accor Hospitality, Paris, France	499,456	4,120	478,975	3982
6	Choice Hotels International Inc., Silver Spring, Maryland	487,410	6,021	472,526	5827
7	Best Western International, Phoenix, Arizona	308,477	4,048	305,000	4000
8	Starwood Hotels & Resorts Worldwide Inc., White Plains, New York	298,522	992	248,000	942
9	Carlson Hotels Worldwide, Minneapolis, Minnesota	159,756	1,058	151,077	1013
10	Hyatt Hotels Corp., Chicago, Illinois	122,317	424	114,332	375
11	Westmont Hospitality Group, Houston, Texas	113,771	803	106,097	689
12	Groupe du Louvre, Paris, France	91,409	1,097	61,077	856
13	Jin Jiang International Hotels, Shanghai, China	89,251	546	80,164	465
14	TUI AG, Hannover, Germany	83,728	297	83,728	297
15	The Rezidor Hotel Group, Brussels, Belgium	83,200	389	76,779	361
16	LQ Management LLC, Irving, Texas	78,945	766	75,832	721
17	Sol Meliá SA, Palma de Mallorca, Spain	76,887	305	76,335	304
18	Extended Stay Hotels, Spartanburg, South Carolina	76,384	686	76,384	686
19	Home Inns & Hotels Management, Shanghai, China	71,671	616	55,578	471
20	Vantage Hospitality Group, Coral Springs, Florida	65,232	906	60,354	845
21	NH Hoteles SA, Madrid, Spain	61,317	401	49,677	341
22	GreenTree Inns Hotel Management Group Inc., Shanghai, China	49,700	450	14,481	131
23	Interstate Hotels & Resorts, Arlington, Virginia	46,129	228	46,448	226
24	Barceló Hotels & Resorts, Palma de Mallorca, Spain	45,939	181	47,000	186
25	MGM Resorts International, Las Vegas, Nevada	45,701	16	49,919	17
26	Whitbread PLC, Leagrave, England	40,000	583	38,000	568
27	Riu Hotels & Resorts, Palma de Mallorca, Spain	39,208	104	37,000	100
28	Harrah's Entertainment Inc., Las Vegas, Nevada	39,000	34	38,000	35
29	Archon Hospitality, Irving, Texas	37,900	348	—	—
30	Red Roof Inn, Columbus, Ohio	36,298	343	36,654	343
31	The Walt Disney Co., Burbank, California	36,119	36	34,000	38
32	Iberostar Hoteles y Apartamentos SL, Palma de Mallorca, Spain	36,000	100	36,000	100
33	Fairmont Raffles Hotels International, Toronto, Ontario	35,831	94	34,712	91
34	7 Days Group Holdings Ltd., Guangzhou, China	32,836	337	—	—
35	Shangri-La International Hotel Management Ltd., Hong Kong, China	29,700	65	27,987	58
36	Millennium & Copthorne Hotels PLC, London, England	29,340	105	33,726	119
37	China Lodging Group Ltd., Shanghai, China	28,360	236	—	—
38	Travelodge Hotels Ltd., Thame, England	28,294	393	25,000	370
39	Scandic Hotels, Stockholm, Sweden	25,070	138	24,898	138
40	Columbia Sussex Corp., Crestview Hills, Kentucky	23,932	69	24,448	70
41	Club Méditerranée, Paris, France	23,816	84	26,807	80
42	Shanghai Motel Chain Co. Ltd., Shanghai, China	23,084	199	—	—
43	HK CTS Hotels Co. Ltd., Beijing, China	22,393	66	19,268	58
44	Prince Hotels, Tokyo, Japan	22,077	56	22,210	58
45	BTG-Jianguo Hotel Management Co. Ltd., Beijing, China	21,358	71	—	—
46	Ocean Hospitality Inc., Portsmouth, New Hampshire	20,887	132	20,598	136
47	White Lodging Services, Merrillville, Indiana	20,259	144	19,580	139
48	Jinling Hotels & Resorts Corp., Nanjing, China	19,785	81	18,075	73
49	Grupo Posadas, Mexico City, Mexico	19,600	111	19,800	110
50	Four Seasons Hotels and Resorts, Toronto, Ontario	19,231	83	19,184	82

Source: "Special Report: Hotels' 325," *Hotels Magazine* (Oct. 2010): 24.





tion). To have a positive effect, the franchise image must conform to the facilities offered and the available market.

- **Reservation or referral service**  
Most franchises have some type of centralized reservation system that enables guests to reserve a room online or by calling a toll-free number. A good reservation system generates approximately 15% to 30% of a property's occupancy.
- **Chain advertising and sales**  
All major franchises have comprehensive websites on which each property is briefly described and location and rate information are provided. The extent of media advertising and actual sales solicitation varies from chain to chain. In most cases, the business generated through the reservation system and global, national, or regional promotions cannot support an individual hotel. Sales efforts on a local level are also necessary.
- **Procedures manual**  
Chains urge all their properties to follow standardized systems and procedures. Operating manuals are provided, and each affiliated facility is inspected periodically to ensure that policies and standards are being observed. Some chains have training schools to instruct management on basic operational techniques.
- **Management assistance**  
Most chains can provide franchises with specialized assistance in the various aspects of hotel-motel development and management, such as planning, operations, and marketing. These services generally are not covered by the normal franchise fee and are contracted separately.
- **Group purchasing**  
Chains require that affiliated properties use certain identity items, such as ashtrays, monogrammed towels, silverware, china, and uniforms. They offer group purchasing programs that reduce the cost of these items to owners.
- **Loyalty program**  
Virtually every major hotel chain offers a loyalty program for frequent travelers. Program members receive points based on staying at that chain's properties, whether or not those properties are managed by the chain. For the hotel owner, loyalty programs represent an expense that is passed from the chain to the property owner as well as a benefit in the form of guests who will patronize a hotel, sight unseen, at least partially because they want to accumulate points.

### **Hotel Franchise Fees**

Hotel franchise fees are the compensation paid to the franchisor for the use of the chain's name, logo, identity, image, goodwill, procedures, controls, marketing, and referral and reservation systems.

Franchise fees normally include an initial fee with the franchise application, plus continuing fees paid periodically throughout the term of the agreement. The following is a description of hotel franchise fees for hotel companies operating in the United States. The data come from the 2011 *US Hotel Franchise Fee Guide*, published by HVS.

The initial fee typically takes the form of a minimum dollar amount based on a hotel's room count. For example, the initial fee may be a minimum of \$45,000 plus \$300 per room for each room over 150. Thus, a hotel



with 125 rooms would pay \$45,000, and a hotel with 200 rooms would pay \$60,000. The initial fee is paid upon submission of the franchise application. This amount covers the franchisor's cost of processing the application, reviewing the site, assessing market potential, evaluating the franchisee and his or her hotel operating background and credit, assessing the proposed hotel's impact on nearby properties affiliated with the same brand, evaluating the plans or existing layout, inspecting the property during construction, and providing services during the preopening or conversion phases. In the case of reflagging an existing hotel, the initial fee structure is occasionally reduced. Some franchisors return the initial fee if the franchise is not approved, while others keep a portion (approximately 5% to 20%) to cover the cost of reviewing the application.

Converting the affiliation of an existing hotel may require the purchase of towels, brochures, operating supplies, and paper items imprinted with the national franchisor's logos. The potential affiliate may have to undertake property refurbishment or renovation (such as laying a higher-grade carpet or enclosing a property's exterior corridors). Both new franchises and conversions also pay for the cost of signage and property management systems. Some franchisors require the operator to pay a property improvement plan fee.

### **Continuing Franchise Fees**

Payment of continuing franchise fees commences when the hotel assumes the franchise affiliation, and fees are usually paid monthly over the term of the agreement. Continuing costs generally include a royalty fee, an advertising or marketing contribution fee, and a reservation fee. In addition, continuing fees may include a loyalty program and other miscellaneous fees. The following list details the different types of continuing fees:

- **Royalty fee**  
Almost all franchisors collect a royalty fee, which represents compensation for the use of the brand's trade name, service marks, and associated logos, goodwill, and other franchise services. Royalty fees represent a major source of revenue for a franchisor.
- **Advertising or marketing contribution fee**  
Brand-wide advertising and marketing consist of national or regional advertising in various types of media, the development and distribution of a brand directory, and marketing geared toward specific groups and segments. In many instances, the advertising or marketing contribution fee goes into a fund that is administered by the franchisor on behalf of all members of the brand.
- **Reservation fee**  
If the franchise brand has a reservation system, the reservation fee supports the cost of operating the central office, telephones, computers, and reservation personnel. The reservation fee contains all distribution-related fees, including fees payable to third parties, such as travel agents and distributors.
- **Loyalty program fee**  
Most franchisors offer incentive programs that reward guests for frequent stays; these programs are designed to encourage loyalty toward a brand. The cost of managing such programs is financed by frequent traveler assessments paid by hotel owners.



- **Other miscellaneous fees**  
This category includes fees payable to the franchisor or third-party supplier(s) for additional systems and technical support. It also includes fees related to training programs and national and regional annual conferences.

Sometimes franchisors offer additional services. These services generally include consulting, purchasing assistance, computer equipment, equipment rental, on-site pre-opening assistance, and marketing campaigns.

### Calculation of Continuing Franchise Fees

The assessment of continuing franchise fees is determined using several different formulas. In general, royalty fees are calculated based on a percentage of rooms revenue. However, a few hotel operators charge an additional royalty fee based on a percentage of food and beverage revenue. The ratio of royalty fee to rooms revenue ranges from 3% to 7%. Advertising and marketing fees are usually calculated as a percentage of rooms revenue and range from 1% to 4.3%.

In some cases, reservation fees are based on a combination of a percentage of rooms revenue (0.4% to 10%) and/or a dollar amount per available room per month (\$1.10 to \$10), which depends on the source of booking, per reservation.

Many franchisors require franchisees to bear their fair share of the costs associated with operating a frequent traveler program. Frequent traveler program assessments are typically based on a percentage of total or rooms-only revenue (0.3% to 6.2%) generated by a program member staying at a hotel, or a fixed dollar amount (\$4.20 to \$5.85) for each room occupied by a program member. Many brands also require hotels to contribute a one-time participation fee, while others use a combination of the three methods.

These various fee formulas are usually applied individually, but franchisors sometimes combine a number of formulas. Many also have first-month contingency fees in lieu of recorded revenue (such as a royalty fee of \$24 per room for the first month and then 5% of gross revenue in the ensuing months).

Each fee structure offers advantages and disadvantages. A fee based entirely on a percentage of rooms revenue is favorable for hotels that derive significant income from food and beverage sales. Fees based on an amount per available room are fixed and tend to benefit high-volume hotels and penalize properties with lower operating results. Paying a reservation fee based on the number of reservations received is equitable, as long as the reservations equate to occupied room nights and not to no-shows.

A potential franchisee should evaluate the fee structure, project the total cost of initial and continuing franchise fees, and then determine whether or not the relationship between price and value warrants the acquisition of the franchise. Because the Federal Trade Commission regulates the sale of franchises, information regarding each franchise fee structure is readily available through disclosure documents known as the Uniform Franchise Offering Circular (UFOC) and the Franchise Disclosure Document (FDD). Franchisors must reveal and adhere to all terms of the franchise agreement as set forth in these documents, thereby eliminating any potential for negotiating a more or less favorable contract.

### Review of Franchise Fees

To provide a preliminary comparison of hotel franchise fees, Exhibits 4.8, 4.11, and 4.14 were developed from information presented in the disclosure documents prepared by the respective franchisors. Each table assumes a different



class of lodging facility (economy, mid-rate, or first class), so that comparisons can be made between brands of a similar class. Exhibit 4.7 summarizes the assumptions incorporated in Exhibits 4.8, 4.11, and 4.14. The data is for the year 2010 and was compiled from the 2011 *US Hotel Franchise Fee Guide*.

<b>Exhibit 4.7 Assumptions Incorporated into Exhibits 4.8, 4.11, and 4.14</b>			
	<b>Economy</b>	<b>Mid-Rate</b>	<b>First-Class</b>
<b>Room Count</b>	100	200	300
Average room rate (Year One)	\$50	\$80	\$110
Room rate growth (per annum)	3.0%	3.0%	3.0%
<b>Occupancy</b>			
Year One	60.0%	60.0%	60.0%
Year Two	70.0%	70.0%	70.0%
Years Three to Ten	75.0%	75.0%	75.0%
Projection period	10 years	10 years	10 years
Total occupied room nights	266,450	532,900	799,350
Total bookings	133,225	266,450	399,675
Total rooms revenue	\$15,323,447	\$49,035,031	\$101,134,752
F&b ratio to rooms revenue	n/a	n/a	60.0%
Total food and beverage revenue	n/a	n/a	\$60,680,851
Total reservations (% of rooms occupied)	91.0%	96.0%	96.0%
Central reservations system	10.0%	10.0%	10.0%
Internet-brand website	35.0%	35.0%	30.0%
Global distribution system (gds)	30.0%	30.0%	30.0%
Internet-based travel agent (e.g., Expedia)	5.0%	5.0%	5.0%
Loyalty program guests—% of total reservations	10.0%	15.0%	20.0%
Global sales office	1.0%	1.0%	1.0%
Average length of stay (nights)	2	2	2
Days in year	365	365	365

A total of 89 franchise brands were studied. This number includes brand variants; for example, Hampton Inn and Suites is a variant of Hampton Inn, and Wyndham Garden is a variant of Wyndham. The breakdown by class is 21 economy, 27 mid-rate, and 41 first-class brands. The survey also encompassed some of the recently launched brands, such as Home 2 Suites by Hilton, NYLO, and XP by NYLO. The 2011 *US Hotel Franchise Fee Guide* also includes upscale hotel consortia such as the Leading Hotels of the World, Preferred Hotels and Resorts, Preferred Boutique, Summit Hotels and Resorts, and Sterling Hotels.

Exhibits 4.8, 4.11, and 4.14 summarize the estimates of 10-year franchise costs for each brand, categorized by class. The continuing fees were calculated on an annual basis and represent the total amount that would be paid by the franchisee over the 10-year projection period.

As indicated in Exhibit 4.8, franchise fees as a percentage of total rooms revenue in the economy category ranged from 5.6% to 15.8% in 2010. The average franchise fee as a percentage of total rooms revenue was 9.9%, and the median was 9.8%. In addition, the total initial fees ranged from \$6,000 to \$250,000. The initial fee represents only 2.3% of the total 10-year fee, whereas the royalty, reservation, and marketing fees accounted for 90% of the overall 10-year franchise fees (see Exhibit 4.9).

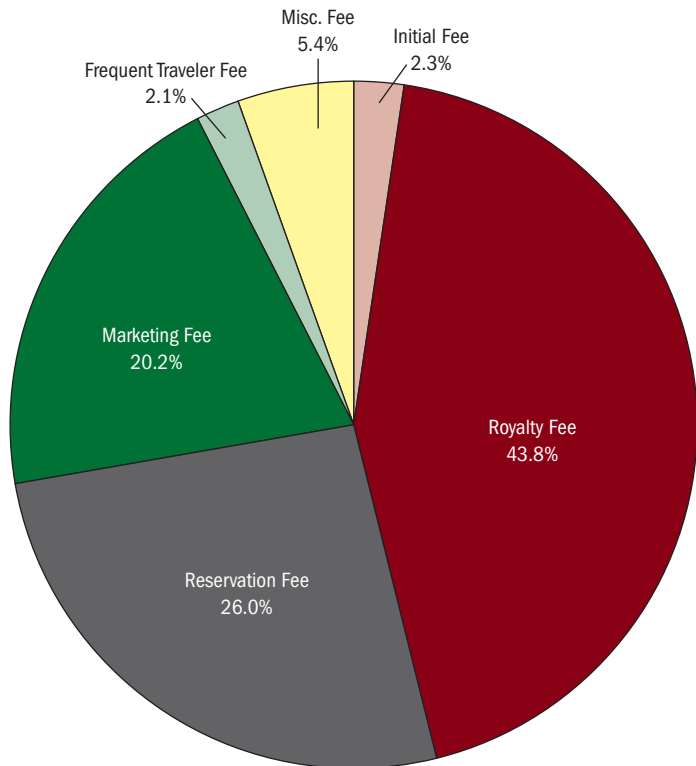


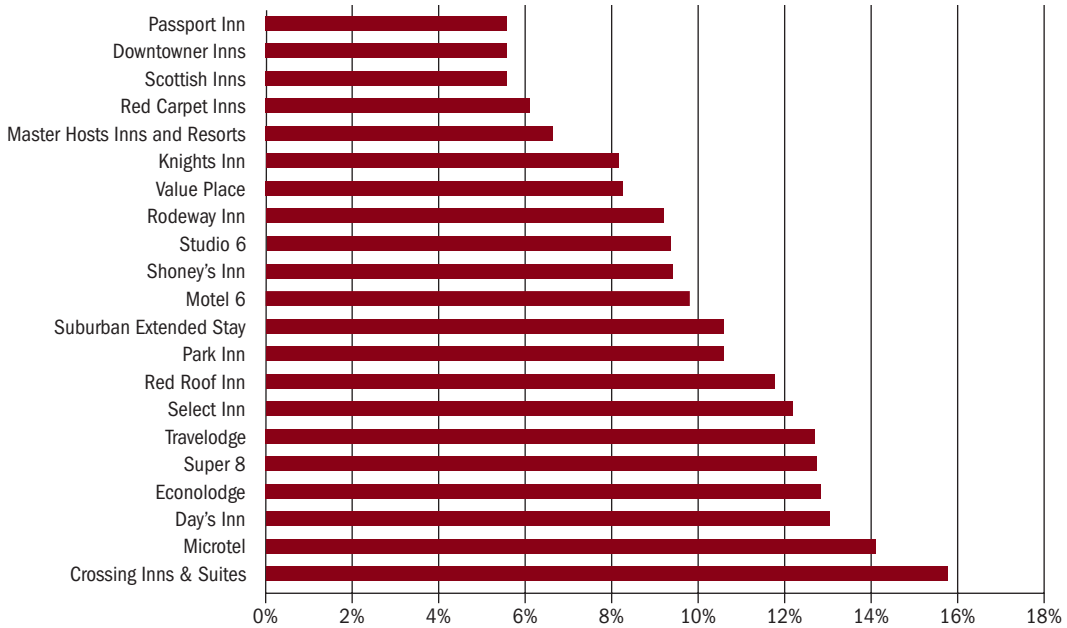
**Exhibit 4.8 Summary of Brand Franchise Fees—Economy Hotels (Based on 100 Rooms)**

Brand	Initial Fee	Royalty Fee	Reservation Fee	Marketing Fee	Frequent Traveler Fee	Misc. Fee	Ten-Year Fee	Ten-Year Fee/Room	Percent of Total Rooms
Crossing Inns & Suites	\$35,000	\$1,145,456	\$929,511	\$306,469	\$0	\$0	\$2,416,437	\$12,082	15.8%
Days Inn	\$46,000	\$766,172	\$316,910	\$582,291	\$87,833	\$197,795	\$1,997,001	\$19,970	13.0%
Downtowner Inns	\$6,000	\$459,703	\$0	\$383,086	\$0	\$5,732	\$854,522	\$8,545	5.6%
Econolodge	\$25,000	\$689,555	\$590,674	\$552,370	\$52,700	\$54,660	\$1,964,958	\$19,650	12.8%
Knights Inn	\$6,000	\$766,172	\$352,801	\$0	\$87,833	\$38,684	\$1,251,490	\$12,515	8.2%
Master Hosts Inns and Resorts	\$16,000	\$612,938	\$0	\$383,086	\$0	\$5,732	\$1,017,756	\$10,178	6.6%
Microtel	\$40,000	\$904,083	\$665,128	\$321,792	\$87,833	\$140,464	\$2,159,302	\$21,593	14.1%
Motel 6	\$25,000	\$612,938	\$536,321	\$153,234	\$0	\$177,455	\$1,504,948	\$15,049	9.8%
Park Inn	\$35,000	\$689,555	\$391,998	\$306,469	\$0	\$196,320	\$1,619,342	\$16,193	10.6%
Passport Inn	\$6,000	\$459,703	\$0	\$383,086	\$0	\$5,732	\$854,522	\$8,545	5.6%
Red Carpet Inn	\$11,000	\$536,321	\$0	\$383,086	\$0	\$5,732	\$936,139	\$9,361	6.1%
Red Roof Inn	\$27,000	\$689,555	\$612,938	\$306,469	\$70,266	\$98,373	\$1,804,601	\$18,046	11.8%
Rodeway Inn	\$12,500	\$426,456	\$590,674	\$277,426	\$0	\$54,660	\$1,414,415	\$14,144	9.2%
Scottish Inns	\$8,500	\$459,703	\$0	\$383,086	\$0	\$5,732	\$857,022	\$8,570	5.6%
Select Inn	\$18,500	\$612,938	\$1,225,876	\$0	\$0	\$7,778	\$1,865,092	\$18,651	12.2%
Shoney's Inn	\$250,000	\$536,321	\$390,748	\$153,234	\$64,146	\$44,973	\$1,439,421	\$14,394	9.4%
Studio 6	\$25,000	\$766,172	\$306,469	\$153,234	\$0	\$177,455	\$1,428,331	\$14,283	9.3%
Suburban Extended Stay	\$30,000	\$766,172	\$590,674	\$383,086	\$52,700	\$58,867	\$1,881,499	\$18,815	10.6%
Super 8	\$25,000	\$842,790	\$316,910	\$459,703	\$87,833	\$218,366	\$1,950,601	\$19,506	12.7%
Travelodge	\$36,000	\$689,555	\$623,379	\$306,469	\$87,833	\$205,351	\$1,948,586	\$19,486	12.7%
Value Place	\$59,200	\$766,172	\$0	\$383,086	\$0	\$54,315	\$1,262,774	\$12,628	8.2%

Over a 10-year period, the total franchise fees per available room (based on 100 rooms) range from \$8,545 to \$21,593 for economy brands, with an average of \$14,867. Exhibit 4.10 presents the ranking for economy brands based on a percentage of total rooms revenue.

Exhibit 4.11 details the franchise fees for mid-rate hotels. As indicated in Exhibit 4.11, franchise fees as a percentage of total rooms revenue for the mid-rate category ranged from 2% to 13.2% in 2010. The average franchise fee as a percentage of total rooms revenue was 9.9%, and the median was 10.3%. In addition, the total initial fees ranged from \$8,500 to \$105,000. The initial fee represents only 1.3% of the total 10-year fee, whereas the royalty,

**Exhibit 4.9 Franchise Fees Allocation—Economy Brands**

**Exhibit 4.10 Ranking of Economy Brands—Franchise Fees as a Percentage of Total Rooms Revenue****Exhibit 4.11 Summary of Brand Franchise Fees—Mid-Rate Hotels (Based on 200 Rooms)**

Brand	Total Initial Fee	Total Royalty Fee	Total Reservation Fee	Total Marketing Fee	Total Frequent Traveler Fee	Total Misc. Fee	Total Ten-Year Fee	Total Ten-Year Fee/Room	Percent of Total Rooms Revenue
AmericInn	\$35,000	\$2,451,752	\$1,158,175	\$980,701	\$337,279	\$82,831	\$5,045,737	\$25,229	10.3%
Baymont Inn & Suites	\$26,000	\$2,451,752	\$1,318,945	\$980,701	\$421,599	\$269,785	\$5,468,780	\$27,344	11.2%
Best Western	\$70,000	\$1,110,804	\$117,161	\$0	\$0	\$0	\$1,297,965	\$6,490	2.6%
Candlewood Suites	\$102,500	\$2,451,752	\$96,060	\$1,501,009	\$203,317	\$230,178	\$4,584,816	\$22,924	9.4%
Clarion	\$60,000	\$2,083,989	\$1,181,347	\$1,609,688	\$421,599	\$81,670	\$5,438,293	\$27,191	11.1%
Comfort Inn/Suites	\$100,000	\$2,770,479	\$1,181,347	\$1,903,898	\$421,599	\$81,670	\$6,458,994	\$32,295	13.2%
Country Inn/Suites	\$90,000	\$2,206,576	\$1,013,848	\$1,225,876	\$0	\$217,354	\$4,753,654	\$23,768	9.7%
Fairfield Inn/Suites	\$80,000	\$2,206,576	\$619,900	\$1,225,876	\$375,223	\$698,915	\$5,206,491	\$26,032	10.6%
Grandstay Residential Suites	\$35,000	\$2,290,913	\$1,929,136	\$980,701	\$0	\$0	\$5,235,750	\$26,179	10.7%
GuestHouse International	\$25,000	\$1,691,709	\$2,329,490	\$490,350	\$192,437	\$44,973	\$4,773,958	\$23,870	9.7%
Hampton Inn/Suites	\$95,000	\$2,451,752	\$0	\$1,961,401	\$413,167	\$524,197	\$5,445,517	\$27,228	11.1%
Hawthorn Suites	\$80,000	\$2,451,752	\$665,128	\$1,225,876	\$486,459	\$133,712	\$5,042,927	\$25,215	10.3%
Holiday Inn	\$102,500	\$2,451,752	\$96,060	\$1,225,876	\$402,519	\$338,433	\$4,617,139	\$23,086	9.4%
Holiday Inn Express	\$102,500	\$2,942,102	\$96,060	\$1,471,051	\$402,519	\$338,433	\$5,352,665	\$26,763	10.9%
Home2 Suites	\$50,000	\$2,451,752	\$0	\$4,045,390	\$151,776	\$536,519	\$4,661,097	\$23,305	9.5%
Howard Johnson	\$71,000	\$1,961,401	\$1,859,695	\$980,701	\$421,599	\$279,785	\$5,574,180	\$27,871	11.4%
InnSuites Boutique Hotel Collection	\$20,000	\$248,906	\$705,937	\$0	\$0	\$0	\$974,843	\$4,874	2.0%
Key West Inn/Suites	\$8,500	\$357,673	\$958,972	\$2,751,331	\$0	\$3,631	\$4,080,108	\$20,401	8.3%
La Quinta Inn & Suites	\$105,000	\$2,157,541	\$980,701	\$1,225,876	\$421,599	\$91,700	\$4,982,417	\$24,912	10.2%
Mainstay Suites	\$60,000	\$2,451,752	\$1,181,347	\$1,225,876	\$252,959	\$80,877	\$5,252,811	\$26,264	10.7%
Quality Inn/Suites	\$60,000	\$2,280,129	\$1,181,347	\$1,903,898	\$421,599	\$81,670	\$5,928,644	\$29,643	12.1%
Ramada Inn	\$71,000	\$1,961,401	\$1,614,520	\$1,225,876	\$835,599	\$265,937	\$5,974,333	\$29,872	12.2%
Settle Inn/ Suites	\$25,000	\$1,691,709	\$2,329,490	\$490,350	\$192,437	\$44,973	\$4,773,958	\$23,870	9.7%
Sleep Inn	\$60,000	\$2,280,129	\$1,181,347	\$1,903,898	\$421,599	\$81,670	\$5,928,644	\$29,643	12.1%
TownePlace Suites	\$80,000	\$2,451,752	\$673,022	\$735,525	\$84,320	\$455,521	\$4,480,139	\$22,401	9.1%
Vista Inn/Suites	\$32,250	\$467,726	\$3,922,803	\$192,593	\$0	\$7,778	\$4,623,150	\$23,116	9.4%
Wingate by Wyndham	\$71,000	\$2,206,576	\$633,819	\$1,961,401	\$486,459	\$294,472	\$5,653,728	\$28,269	11.5%



reservation, and marketing fees account for approximately 91% of the overall 10-year franchise fees (see Exhibit 4.12).

Over a 10-year period, the total franchise fees per available room (based on 200 rooms) range from \$4,874 to \$32,295 for mid-rate brands, with an average of \$24,372. Exhibit 4.13 presents the ranking for mid-rate brands based on a percentage of total rooms revenue.

Exhibit 4.14. details the franchise fees for first-class hotels. As indicated in Exhibit 4.14, franchise fees as a percentage of total rooms revenue in the first-class category ranged from 0.6% to 17.2% in 2010. The average franchise fee as a percentage of total rooms revenue was 9.6%, and the median was 10.9%. In addition, the total initial fee ranged from \$0 to \$152,500. Note that the hotel consortia included in this study charge comparatively lower initial fees than

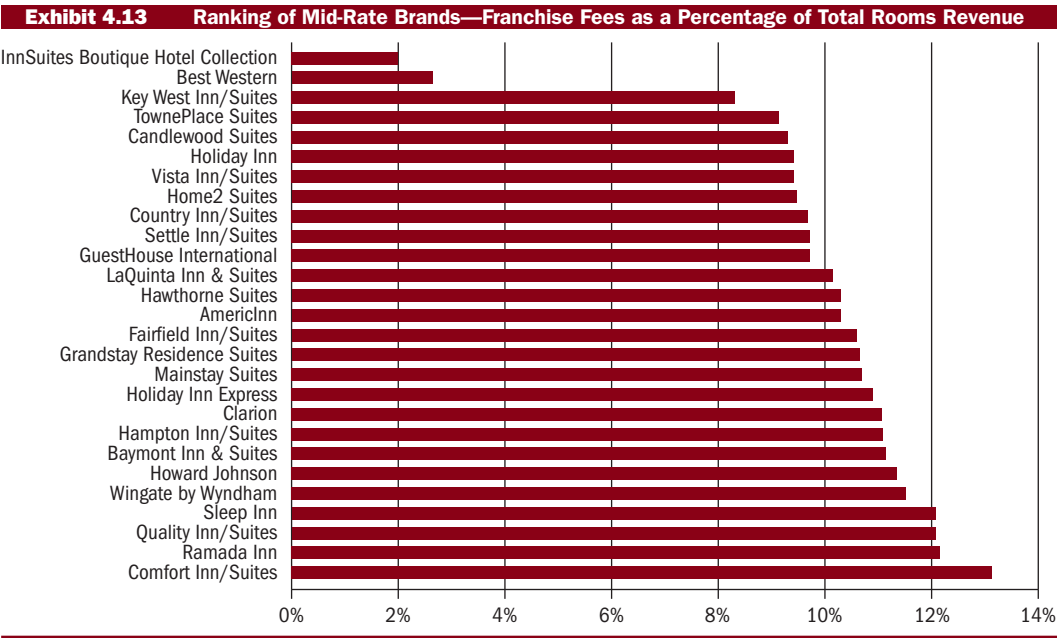
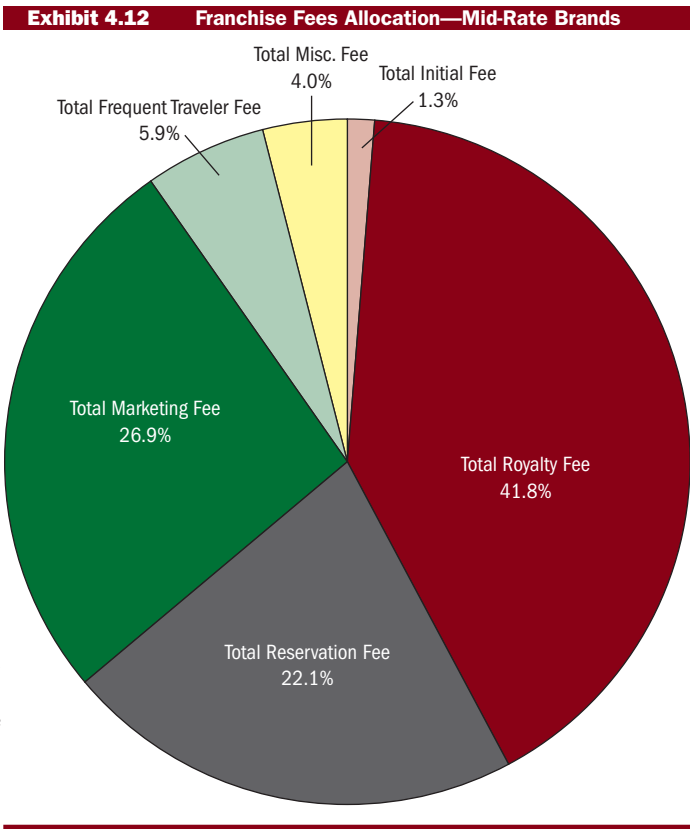




Exhibit 4.14 Summary of Brand Franchise Fees—First-Class Hotels (Based on 300 Rooms)									
Brand	Total Initial Fee	Total Royalty Fee	Total Reservation Fee	Total Marketing Fee	Total Frequent Traveler Fee	Total Misc. Fee	Total Ten-Year Fee	Total Ten-Year Fee/Room	Percent of Total Rooms Revenue
aloft	\$132,500	\$5,562,411	\$1,331,020	\$4,045,390	\$1,521,128	\$485,917	\$13,078,367	\$43,595	12.9%
Ascend	\$112,500	\$4,045,390	\$1,635,712	\$2,544,418	\$1,855,035	\$78,970	\$10,272,025	\$34,240	10.2%
Autograph	\$60,000	\$5,056,738	\$422,380	\$1,517,021	\$997,081	\$843,546	\$8,896,766	\$29,656	8.8%
Cambria Suites	\$150,000	\$5,056,738	\$1,635,712	\$4,061,440	\$1,855,035	\$92,842	\$12,851,766	\$42,839	12.7%
Coast Hotels & Resorts	\$0	\$4,045,390	\$481,092	\$0	\$82,540	\$0	\$4,609,022	\$15,363	4.6%
Courtyard	\$150,000	\$5,562,411	\$1,320,693	\$2,022,695	\$1,055,051	\$391,076	\$10,501,927	\$35,006	10.4%
Crowne Plaza	\$152,500	\$5,056,738	\$96,060	\$1,553,591	\$1,765,283	\$306,982	\$8,931,153	\$29,771	8.8%
Doubletree Hotels	\$90,000	\$5,056,738	\$0	\$4,045,390	\$1,576,779	\$1,287,426	\$12,056,333	\$40,188	11.9%
element	\$127,500	\$5,562,411	\$1,331,020	\$4,045,390	\$1,521,128	\$183,984	\$12,771,434	\$42,571	12.6%
Embassy Suites	\$90,000	\$4,753,333	\$0	\$4,045,390	\$1,576,779	\$793,941	\$11,259,444	\$37,531	11.1%
Four Points	\$127,500	\$5,562,411	\$2,497,084	\$1,264,184	\$1,521,143	\$654,318	\$12,792,704	\$42,642	12.6%
Hilton	\$92,500	\$6,877,163	\$0	\$4,045,390	\$1,743,732	\$1,461,976	\$14,220,762	\$47,403	14.1%
Hilton Garden Inn	\$127,500	\$5,056,738	\$0	\$4,348,794	\$1,743,732	\$519,419	\$11,796,183	\$39,321	11.7%
Historic Hotels of America	\$6,000	\$171,958	\$343,916	\$57,319	\$0	\$34,392	\$613,586	\$3,068	0.6%
Homewood Suites	\$127,500	\$4,045,390	\$0	\$4,045,390	\$834,766	\$632,037	\$9,685,083	\$32,284	9.6%
Hotel Indigo	\$152,500	\$5,469,437	\$96,060	\$3,539,716	\$1,765,283	\$431,974	\$11,454,971	\$38,183	11.3%
Hyatt Place	\$120,000	\$4,753,333	\$721,179	\$3,539,716	\$0	\$198,663	\$9,332,892	\$31,110	9.2%
Hyatt Regency	\$100,000	\$7,888,511	\$721,638	\$0	\$0	\$262,000	\$8,972,148	\$29,907	8.9%
Hyatt Summerfield Suites	\$120,000	\$4,753,333	\$721,179	\$3,539,716	\$0	\$198,663	\$9,332,892	\$31,110	9.2%
InterContinental Hotels & Resorts	\$152,500	\$5,056,738	\$95,760	\$3,446,742	\$3,000	\$446,942	\$9,201,682	\$30,672	9.1%
Le Meridien	\$115,000	\$5,056,738	\$2,497,084	\$1,011,348	\$2,315,682	\$1,248,222	\$13,410,136	\$44,700	13.3%
Leading Hotels of the World	\$50,000	\$3,140,708	\$4,439,237	\$0	\$0	\$0	\$7,629,946	\$25,433	7.5%
Luxury Collection	\$115,000	\$5,663,546	\$2,497,084	\$1,011,348	\$1,521,128	\$1,170,101	\$13,144,269	\$43,814	13.0%
Marriott	\$90,000	\$7,888,511	\$1,978,590	\$1,011,348	\$1,391,614	\$584,063	\$12,944,125	\$43,147	12.8%
NYLO	\$109,600	\$5,056,738	\$767,456	\$3,539,716	\$1,855,035	\$187,045	\$11,515,589	\$38,385	11.4%
Preferred Boutique	\$15,000	\$257,937	\$286,597	\$114,639	\$0	\$68,783	\$742,956	\$9,906	0.7%
Preferred Hotels and Resorts	\$45,000	\$230,000	\$729,274	\$230,000	\$0	\$137,567	\$1,371,841	\$4,573	1.4%
Radisson	\$150,000	\$5,056,738	\$2,624,060	\$2,022,695	\$0	\$513,292	\$10,366,784	\$34,556	10.3%
Renaissance	\$60,000	\$5,056,738	\$2,356,687	\$1,517,021	\$1,391,614	\$1,414,881	\$11,796,941	\$39,323	11.7%
Residence Inn	\$150,000	\$5,562,411	\$156,673	\$2,528,369	\$417,383	\$545,231	\$9,360,067	\$31,200	9.3%
Sheraton	\$115,000	\$7,281,702	\$2,485,629	\$1,011,348	\$1,521,128	\$1,046,303	\$14,627,174	\$48,757	14.5%
Sonesta	\$150,000	\$766,172	\$956,524	\$0	\$742,014	\$150,514	\$2,765,225	\$9,217	2.7%
SpringHill Suites	\$120,000	\$5,056,738	\$731,853	\$2,528,369	\$790,593	\$391,896	\$9,619,448	\$32,065	9.5%
Staybridge Suites	\$152,500	\$5,056,738	\$3,130,103	\$2,528,369	\$3,000	\$389,998	\$11,260,707	\$37,536	11.1%
Sterling Hotels	\$15,000	\$286,597	\$859,791	\$114,639	\$0	\$57,319	\$1,333,346	\$6,667	1.3%
Summit Hotels & Resorts	\$20,000	\$343,916	\$859,791	\$171,958	\$0	\$34,392	\$1,430,057	\$7,150	1.4%
Waldorf-Astoria Collection Affiliated Hotels	\$50,000	\$5,056,738	\$0	\$4,045,390	\$1,224,323	\$1,886,204	\$12,262,655	\$40,876	12.1%
Waldorf-Astoria Collection Named Hotels	\$100,000	\$5,056,738	\$0	\$4,045,390	\$1,224,323	\$1,886,204	\$12,312,655	\$41,042	12.2%
Westin	\$115,000	\$8,899,858	\$2,497,084	\$2,022,695	\$1,558,229	\$1,091,047	\$17,349,976	\$57,833	17.2%
Wyndham/Wyndham Garden	\$92,500	\$5,056,738	\$2,474,186	\$3,034,043	\$596,859	\$5,897	\$11,260,222	\$37,534	11.1%
XP1 by NYLO	\$105,550	\$5,056,738	\$767,456	\$3,034,043	\$1,855,035	\$156,818	\$10,975,639	\$36,585	10.9%

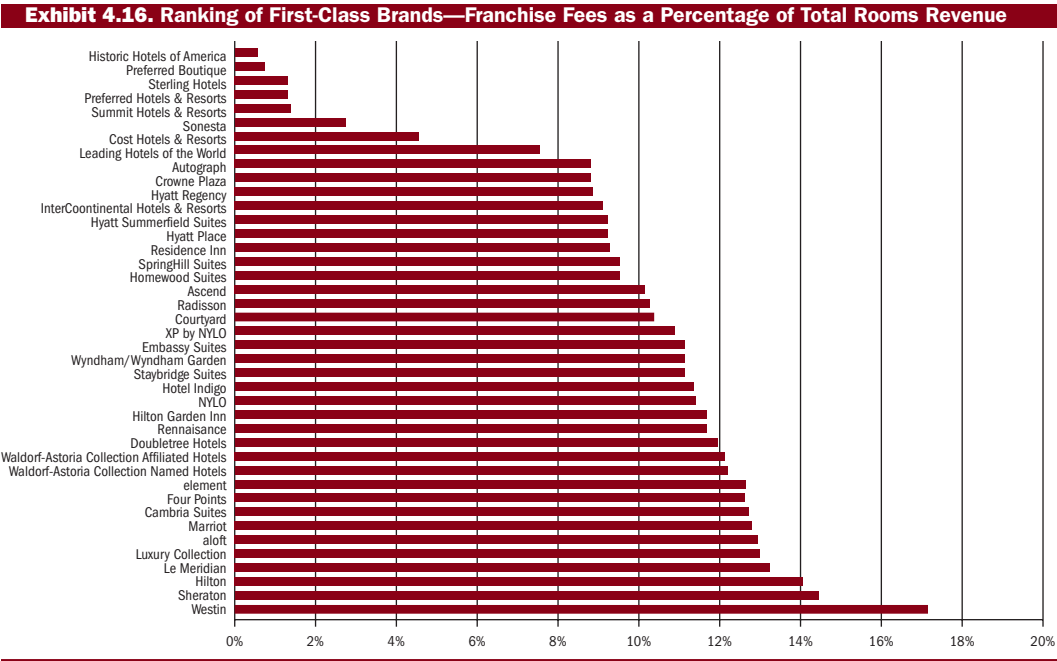
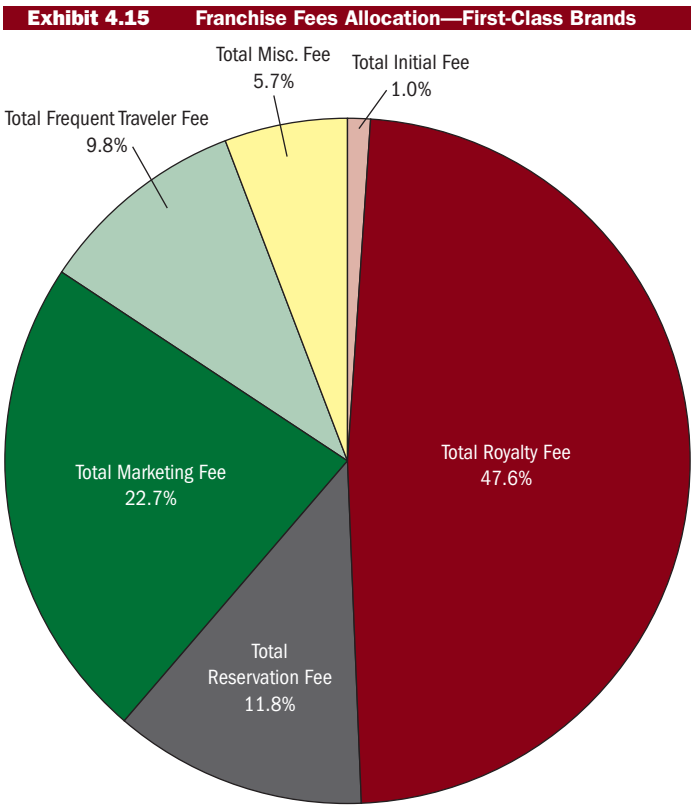
those charged by the traditional franchisors. Initial fees for hotel consortia included in the 2011 *US Hotel Franchise Fee Guide* average \$32,500, whereas traditional first-class hotel franchisors have initial fees that average \$115,576. The initial fee for first-class brands represents only 1% of the total 10-year fee, whereas the royalty, marketing, and reservation fees account for approximately 82% of the overall 10-year franchise fees (see Exhibit 4.15).

Over a 10-year period, the total franchise fees per available room (based on 300 rooms) range from \$5,068 to \$57,833 for first-class brands, with an



average of \$32,848. Note that the fees charged by the hotel consortia generally fall toward the lower end of this range. The upscale brands that base their royalty fees on a percentage of the combined rooms and food and beverage revenues, such as Westin and Le Meridien, fall toward the upper end of the franchise fee percentage range. Upscale brands also generate significant fees from their frequent traveler programs; the average frequent traveler fee for first-class brands is approximately \$971,353, compared to \$287,691 for mid-rate brands and \$32,332 for economy brands.

Exhibit 4.16 presents the ranking for first-class brands based on a percentage of total rooms revenue.



### **Liability of Owner**

In granting a franchise, a chain generally offers no guarantee or financial commitment to the success of the property. Should the property fail, the chain can immediately withdraw its franchise and demand that all forms of identity be removed. The owner assumes all financial liabilities.

### **Benefits to Chain**

The benefits of franchising to the chain or franchisor are:

- **Inexpensive, low-risk expansion**  
Franchising allows hotel chains to expand their operations with minimal capital and personnel investment. Increased representation improves the chain's recognition, which tends to increase occupancies. The cash flow from franchise fees and royalties is attractive to publicly held companies.
- **Allied expansion**  
Several chains have developed allied businesses to support their franchises and company-owned operations. These businesses include interior designers, building contractors, furniture equipment and supply dealers, travel agencies, and tour packagers.

### **Costs to Chain**

Franchising involves the following costs to the chain:

- **Franchise services**  
Chains must provide the services described in the franchise agreement. Maintaining the reservation system, loyalty program, and advertising comprise the bulk of their responsibility.
- **Quality control**  
Inspection, supervision, and enforcement of franchise procedures and standards are essential. One neglected property can harm the reputation of the entire chain. The need for strict quality control has led some chains to abandon their franchise programs because they found it impossible to enforce operational standards.

From a valuation standpoint, a franchise is neither a requirement nor a guarantee of success. A franchise well-suited to the local market demand can provide a competitive advantage over independent properties and those with less desirable affiliations.

It is important to remember that franchises are not permanent and are commonly terminated when the property is sold. New owners must apply for and be granted a new franchise, which could require that an outdated hotel be brought up to current chain standards. It may cost several hundred thousand dollars to maintain a franchise affiliation, and the appraiser must be sure to consider this factor in determining a property's present value.

### **Management Contracts**

A *management contract* is an agreement between a management company (operator) and a property owner (investor) in which the operator assumes complete responsibility for managing the hotel. For this service, the operator is paid a fee based on a prescribed formula. The owner has little say in operational policies, procedures, and day-to-day management, but he or she is financially responsible for the property and must replenish operating capital if necessary. The difference between a management contract and a lease is that under a management contract, the residual income (or loss) after



payment of all expenses, including the management fee, goes to the owner, while in a lease arrangement the residual income (or loss) after payment of rent goes to the tenant or operator.

Hotel management contracts offer both benefits and costs to the property owner (investor) and the management company.

### **Benefits to Investor**

Management contracts offer the following benefits to the investor (property owner):

- **Professional management**  
Management contracts allow an inexperienced investor to participate in the benefits of hotel ownership without becoming involved in day-to-day management. Management companies offer professional talent, proven methods of operation, and relief from most of the operational burden. An owner who contracts with a first-tier management company benefits from the chain's image, reservation system, loyalty program, and advertising program.
- **Profitable affiliation**  
Some chains do not franchise, so the only way an owner can obtain the benefits of a potentially profitable affiliation with such a chain is through a management contract with a first-tier management company.
- **Borrowing power and possible operator investment.**  
Many lenders are more willing to make loans on hotels that are managed by reputable management companies rather than by individual operators. Management companies occasionally pay to obtain particularly desirable contracts. They may invest initial working capital, inventories, or furniture, fixtures, and equipment.

### **Costs to Investor**

On the other hand, management contracts involve the following costs for the investor:

- **Management fees**  
Unlike a franchise fee, the individual investor and operator typically negotiate management fees. These fees may be influenced by projected operating results, the expected ratio of food and beverage volume to rooms revenue, the services offered by the operator, the financial investment of the operator, and the property's desirability. The fee for management contracts is generally structured in one of three ways:
  - A percentage of defined gross revenue (usually 2%-6%)
  - A percentage of a defined gross revenue as a basic fee, plus a percentage of a defined operating income as an incentive fee (usually 1%-4% of the gross and 5%-10% of the net)
  - A percentage of a defined operating income (usually 10%-25%)From the investor's point of view, a fee structure based on a percentage of the hotel's operating profit is more desirable than one based on a percentage of gross revenue. Because the investor receives only the residual income after all expenses have been paid, a fee structure that provides an incentive to maximize revenue and minimize costs is a logical choice.
- **Required facilities and standards**  
Management companies require that the properties they operate meet certain physical specifications pertaining to size, layout, design, and decor.



Operators actively participate in the planning of new hotels and the renovation of existing ones. The investor must provide sufficient funds to maintain the property properly and to replace short-lived items periodically.

### **Benefits to Operator**

Management contracts bring the following benefits to the operator:

- Inexpensive expansion with quality control  
Like franchises, hotel chains can expand with a low capital investment and still keep quality under control with in-house management.
- Good profit potential  
Management contracts offer good potential for profit, especially with high-volume operations. Because the owner is responsible for all expenses, the financial risk to the operator is minimal.

### **Costs to Operator**

Under a management contract, the operator must pay for management services. In addition to providing the standard franchise services of a reservation system and chain advertising, the operator employs a staff of regional managers, supervisors, and specialists in rooms operations, revenue management, food and beverage service, accounting, marketing, and engineering.

The quality of the management provided by a professional hotel company varies depending on the chain and the individual property. The appraiser should thoroughly evaluate the management's effectiveness to determine whether current operating results indicate competent supervision. The assumption of competent management is discussed in a subsequent section of this text.

### **Choice of Management**

Using either a first-tier or second-tier hotel management company has certain advantages and disadvantages.

The advantages of a first-tier management company include:

- First-tier management companies are often less expensive than using a second-tier management company and franchise affiliation.
- Some chain affiliations are only available by management contracts (such as Four Seasons and Ritz-Carlton).
- First-tier management companies combine the operating company with the entity that carries the name recognition, which tends to produce more unified management.
- First-tier companies usually provide a larger, more effective convention and group sales infrastructure.

The disadvantages of a first-tier management company include:

- First-tier companies are sometimes not available for smaller properties.
- First-tier companies are less likely to manage distressed properties.
- The term of contract is usually longer with first-tier companies.
- Termination provisions are often more difficult to obtain.
- It is often more difficult to negotiate an owner-oriented management contract with a first-tier company.



The advantages of using a second-tier management company over a first-tier company include:

- Owner-oriented management contracts are easier to negotiate with second-tier companies.
- Smaller management companies are likely to give a property more individual attention.
- Second-tier companies are more likely to manage unique hotels that are small, distressed, or operating in specialized markets, secondary locations, or secondary cities.

The disadvantages of second-tier management companies over first-tier companies include:

- Lenders are less likely to approve financing for second-tier companies.
- The perceived risk of a second-tier company is higher.
- Second-tier companies can be more expensive when a management fee is added to the franchise fee. (Some second-tier management companies attempt to negotiate a first-tier fee structure.)

### **Management Contract Provisions**

#### **Management Fees**

As has historically been the case, the management fee paid to hotel companies typically consists of a two-tiered structure: a *base fee* and an *incentive fee*. The base fee is commonly defined as a percentage of gross revenue, while the incentive fee is tied to some profit criteria.

Historically (in the 1970s and 1980s), the base fee ranged from 3% to 5% of gross revenue and constituted the greater part of the compensation achieved by the operator. Incentive fees were typically defined as a percentage of defined net operating income. This amount was sometimes subordinated to debt service but often also subject to accruals. In virtually all cases, the revenue derived from the base fee was significantly greater than the revenue derived from the incentive fee.

Common examples from this period include typical Marriott contracts that generally provided for a base fee of 3% of gross revenue plus an incentive fee of 20% of defined net income that, if deferred, was often subject to accruals. Typical Hyatt contracts dating from this period provided for a management fee equal to the greater of 5% of gross revenue or 20% of net income. As this structure required the management company to achieve a net income level of 25% of gross revenue to have the incentive fee surpass the base fee, the incentive factor was somewhat limited.

Today, the emphasis has shifted from the base to the incentive fee. Base fees now range from 1.5% to 4% of gross revenue, with the most common range being 2% to 3%. With the higher base fees (3% and above), it is not uncommon for a portion of the base fee to be subordinated to debt service and/or some owner's priority whereby the operator receives a reduced management fee if certain objectives are not achieved.

Incentive fees are now very deal-specific, as opposed to being based on a standardized formula. Common structures include a percentage of gross operating profit over a defined amount (hurdle), usually related to the historic or budgeted performance of the property. Depending on the threshold, these fees range from 10% to 25% of the defined amount. Moreover, incentive fees are virtually always subordinate to debt service and, in many cases, also to



an owner's priority return. These amounts may be influential in determining the hurdle for the incentive fee to be earned. The strategy behind these structures is to align the operator with the owner's position by exposing the operator to a similar level of risk as related to both the operation and the capital structure of the deal.

### Termination Provisions

Termination provisions set forth the circumstances in which a management contract may be canceled by either the owner or the operator. Termination provisions may be generally divided into two categories: those related to ownership of the hotel, and those that are "for cause." While many specific terms may influence termination "for cause," the most common are related to the performance of the two parties in fulfilling their obligations under the contract.

Historically, the termination provisions in hotel management contracts were extremely limited and were related to the financial health of the parties to the contract. The most common opportunity for termination was the bankruptcy or other financial breach by one of the parties. With respect to termination upon the sale of the property, such provisions (when included) usually addressed the operator's right to terminate the contract upon the sale of the hotel. Typically, the owner had no such right. Some contracts also provided the owner with the right to terminate in the event that the operator did not perform to some standard. In some instances, the standard was defined on the basis of performance as compared to operating history or budget or in terms of market share. However, more often, these clauses were ill defined and difficult to enforce. One common cause was "failure to operate and maintain the hotel in a first-class manner," or some similarly vague language, which could result in years of dispute.

In management contracts that are currently being negotiated, the termination provision is often the most crucial clause. In some cases, the owner has the right to terminate the contract upon sale of the property, with minimal notice (30 to 60 days). This clause is of particular importance to the owner in terms of enhancing the salability of the hotel by enabling another hotel operator to bid on the property. In the early 1990s, many contracts (particularly those of the second-tier companies) also provided the owner the right to terminate with minimal notice, for no specific cause (i.e., without the sale of the property). Today, these latter provisions are tempered by buy-out clauses under which the owner may terminate the contract on short notice but must make a payment to the management company—usually 0.5 to 3 times the management fee paid during the past 12 months.

### Term of the Contract

The term of the contract refers to the period of time for which the contract will be in force. Included in this category are renewals of the initial term, which may be invoked at the behest of the owner or operator.

Given the prevalence of termination provisions, the significance of the term of the contract has been somewhat undermined. During the recent past, some contracts were written with relatively short terms, ranging from one to five years, with no renewal provision. The majority of these were shorter (one to two years), and some were actually month-to-month, contrasting dramatically with the longer terms of 10 to 30 years (and many as long as 50 years, including renewal options) that had historically prevailed.

The current standard has shifted away from the extreme short term and now ranges from three to 10 years for second-tier operators and 10 to 20 years for first-tier companies. Renewals are most commonly subject to negotiation





within the year prior to the expiration of the original term. These more extended terms recognize the benefit of long-term, consistent management and are often seen as a way to “reward” the management company for good performance.

### Other Contract Issues

The following issues are also subject to negotiation in hotel management contracts. The ranges and standards set forth represent the terms currently employed in today’s hotel management contracts:

- **Financial reporting requirements**  
Monthly statements should be provided within 10 to 15 days. Annual budgets should be prepared for owner review and approval 60 days in advance.
- **Operator independence/owner control**  
The owner should have the right to approve the budget and any expenditure exceeding a defined amount (\$10,000 to \$20,000, depending on the size of the hotel).
- **Owner versus operator as employer of personnel**  
This issue is generally dictated by the specific circumstances of the owner as well as the structure of the management company. Institutional owners typically require all employees to be employed by the operator.
- **Allocation of home office expenses**  
The current standards indicate a wide range of fees charged under this heading. These charges typically include reservation fees, central marketing expenses, charges for frequent guest programs, and possibly some accounting or computer use fees. Reservation fees are most often charged on a dollar-per-reservation transaction, which can include both the making of and the canceling of a reservation. These charges range from \$4 to \$6 per reservation. Central marketing fees typically range from 2% to 3% of revenue and may be supplemented by the cost of participation in select (voluntary) marketing programs. The cost of frequent guest programs varies dramatically depending on the nature of the program and cannot be standardized. Similarly, the accounting and computer use fees vary from chain to chain; the latter are usually relatively minimal and depend on the sophistication of the management company’s management information systems.
- **Reserve for replacement**  
This is one issue on which owners and operators are increasingly in agreement, as both parties recognize the necessity and importance of maintaining the asset in marketable condition. Although most contracts now provide a reserve for replacement equal to a minimum of 3% of gross revenue, we have also seen 4% and 5% reserves with increasing frequency.
- **Capital contributions by the operator**  
In today’s highly competitive market for management contracts, a number of operators now assume an actual ownership position in the hotel. Thus, capital contributions may be seen as crucial to the successful attainment of a management contract.
- **Restrictive covenants concerning other hotels and contracts.**  
This issue is most important in the case of first-tier management companies and generally depends on the likelihood that multiple hotels with the same brand will be located in a given market area. Restrictive covenants are still used, but the specific scope of the restriction is subject to negotiation based on market circumstances and the strength of the brand.



## Hotel Leases

With the exception of ground leases, the use of total property leases in the United States is not particularly prevalent outside of real estate investment trusts (REITs). This is due to US accounting rules that make hotel lease structures unfavorable to public hotel companies. The leasing of hotels occurs in Europe but is being replaced by management contracts. The following is a discussion of hotel total property leases.

### Rental Formulas

Many types of rental formulas have been devised for total property lease agreements. In one of the arrangements, known as a “25, 10, and 5 lease,” the rent is based on the total of the percentages of various revenues realized by the property—25% of rooms revenue plus 10% of beverage revenue plus 5% of food revenue. Under such an arrangement, the landlord—as owner of the land and improvements—is responsible for the payment of real estate taxes. The tenant owns the personal property and pays all of the operating expenses incurred by the hotel. Sometimes the rental agreement also provides the landlord with a minimum rent to cover the debt service on any mortgages on the property. In such cases, the tenant pays the greater of the minimum rent amount or the rental formula.

### Advantages and Disadvantages of Property Lease Agreements

A property lease agreement contains advantages and disadvantages for both parties. The property owner realizes the following advantages:

- The owner retains title to the property, which provides possession and creates residual value when the term of the lease expires.
- The financial risk to the owner is minimized, particularly if the hotel company is creditworthy and has guaranteed a minimum rent amount.
- The owner has no operational responsibilities.

On the other hand, the property owner faces the following disadvantages:

- The operator has little incentive to maintain the property in top condition as the lease term nears its expiration date. For this reason, many hotels are returned to the owners in poor physical condition and with a tainted reputation. Furthermore, because much of the existing business is often diverted to other hotels managed by the operator, few reservations are on the books for the owner or new tenant.
- A hotel lease places the owner in a passive position. Under such an agreement, the owner has no input in the hotel’s operations or control over the hotel management. Little can be done if the property is not operated in a profitable and appropriate manner unless the terms of the lease are violated.
- If the hotel is extremely successful, the property owner does not participate in the financial rewards to the extent of an owner/operator. Thus, the potential for profit is somewhat limited.
- Leases are difficult to terminate. Unlike a management contract, which is an agency agreement, a lease creates an encumbrance on the real estate that gives the tenant specific rights of possession.



There are several advantages for the hotel operator in a property lease agreement:

- The operator has total control of the hotel during the term of the lease with very few approvals required from ownership.
- A profitable hotel creates a leasehold value that can sometimes be mortgaged by the operator. If the terms of the lease permit a transfer, the leasehold value can also be realized through a sale.
- The upside profit created by a successful hotel solely benefits the operator, who receives whatever money remains after operating expenses and lease rentals have been paid.

The disadvantages of a property lease agreement for a hotel operator are as follows:

- The hotel operator loses possession of the property when the lease term expires.
- The leasehold loses its value as the term of the lease expires.
- The financial risks of operating the hotel are borne by the hotel company, so the operator must have a net worth great enough to be able to incur the exposure.
- Leasehold interests create contingent liabilities on corporate balance sheets that can adversely affect the value of stock in publicly traded companies.

## Micro Supply

Another term for the micro supply of hotels is *competition*. The previous section described how to classify lodging accommodations by the type of facilities offered (commercial, convention, resort, suite, extended stay), class (luxury, upper upscale, upscale, upper midscale, midscale, economy), and location (highway, downtown, suburban, airport, resort). Compiling this information on all of the hotels within the local market area allows the appraiser to identify the primary and secondary competition and evaluate the relative competitiveness of each property. These tasks are fundamental to the build-up approach based on the analysis of lodging activity.

The appraiser's next step is to determine the future guest room supply considering both the addition of new properties into the market and the removal of existing rooms. From this information, the total room nights available can be projected. The accommodatable latent demand and the total usable latent demand are then calculated to project annual area-wide occupancy.

The last step in the market analysis phase of the appraisal is to evaluate the relative competitiveness of all the hotels within the market area. This evaluation forms a basis for projecting the future market share of the subject property. Once the market share has been determined, the number of room nights captured and the resulting projected occupancy can be calculated.

## Total Guest Room Supply

The total guest room supply consists of the existing area hotels (primary and secondary competition), which were previously identified in the build-up approach based on an analysis of lodging activity, plus any facilities currently under construction and proposed projects likely to be completed. Information on the room counts of existing hotels and those under construction is fairly simple to obtain.



Since most proposed hotels are never actually developed, it may be difficult to pinpoint projects that have a reasonable probability of reaching fruition. Good sources of information about proposed hotels include the local building or planning department, economic development agencies, the chamber of commerce, local hotel associations, newspapers, developers, hotel managers, real estate brokers, lenders, and other appraisers.

The key issue in evaluating a proposed hotel is determining whether the project will ultimately be developed. Considering the questions presented in the following list can help the appraiser determine if the project will in fact be developed:

- Does the developer have all necessary zoning approvals, building permits, and licenses? These approvals must be obtained before construction can begin. A project planned for a jurisdiction with restrictive development policies has less chance of reaching the development stage.
- Is the project financing in place?  
The entire financing package, including both debt and equity capital, must be fully committed and in place before a proposed hotel is considered definite. Hotel financing has always been relatively difficult to secure, and most of the projects that are discontinued during the development process fail because they lack some form of financing.
- Does the project have a franchise and/or management company commitment (contractually obligated)?  
Sophisticated lenders generally require a franchise affiliation and an experienced operator before committing to financing a project. In markets where appropriate identification is unavailable, the development probability is reduced.
- Does the developer have a track record of successful hotel projects?  
Most first-time developers fail to complete their contemplated hotel projects. Lenders are often reluctant to finance inexperienced hotel developers.
- What is the current supply and demand situation in the local hotel market?  
If the lodging market is overbuilt or suffering from decreased demand, proposed hotel projects are generally reconsidered and either postponed or terminated. The appraiser should investigate the competitive environment several years into the future to determine the probable impact of definite additions to supply over the projection period. Should the anticipated area-wide occupancy drop below an acceptable level, it becomes more likely that some of the proposed hotel projects will be withdrawn.
- What is the current condition of the hotel financing market?  
Over the past 40 years, the availability of hotel financing has followed a cyclical trend. Since very few hotel projects are developed without some form of financing, a downward trend in the availability of debt and/or equity money usually curtails many proposed projects.

Using these criteria, the appraiser evaluates each proposed hotel within the market area and determines whether the project should be considered a definite addition to the future lodging supply or disregarded as unlikely to be built. A third alternative would be to assign a probability factor to the project based on its chance of being developed. Using the criteria set forth previously, the project can be considered a future addition to the competitive supply, but its room count would be weighted to reflect its development probability. For example, assume that a 200-room hotel is planned for a site within a given



market area. Based on the preceding development criteria and discussions with the building department and developer, the appraiser estimates that there is a 50% chance that this project will be built. When projecting the competitive supply, the appraiser would include this project but apply a 50% probability factor and consider it a 100-room hotel rather than a 200-room hotel.

The total guest room supply is estimated for each projection year by totaling the existing supply of hotel rooms. Actual room counts are used for hotels considered to be primary competition, and appropriately weighted room counts are used for properties considered secondarily competitive. Any new rooms currently under construction and rooms in proposed hotels that are likely to be completed are added to this existing supply. If a hotel that is proposed or under construction is expected to open at some point during one of the projection years, its room count is weighted for that year based on the ratio of 12 minus the month opened and then divided by 12. If a hotel will be removed from the market during the projection period, its room count is deducted after it is appropriately weighted for the number of rooms available.

### Total Room Nights Available

The total room nights available is quantified by multiplying the total guest room supply for each projection year by 365.

### Total Accommodatable Latent Demand

If the appraiser projects any type of latent demand, a calculation should be made to determine what portion of the latent demand can be accommodated by the new additions to the guest room supply. Accommodatable latent demand is calculated for each projection year by multiplying the number of new hotel rooms that have opened since the base year by 365. This calculation indicates the number of new rooms available per year, which is then multiplied by the estimated area-wide occupancy for that year. The portion of the latent demand that cannot be accommodated by the new rooms entering the market is known as the *unaccommodatable latent demand* and is calculated as follows:

$$\text{Latent demand} - \text{accommodatable latent demand} = \text{unaccommodatable latent demand}$$

Since, by definition, the supply of hotel rooms is insufficient to accommodate the unaccommodatable latent demand, the unaccommodatable latent demand must be deducted from the previously calculated total demand to produce an accurate estimate of occupancy and total usable demand. The unaccommodatable latent demand is allocated to each market segment based on the percentage relationship between each segment's latent demand and the market's total latent demand.

### Total Usable Latent Demand

The total usable latent demand for any given projection year is either the total latent demand or the total accommodatable latent demand, whichever is less.

The following case study illustrates quantification of the area's total guest room supply, the total room nights available, the area occupancy, the accommodatable latent demand, and the total usable latent demand. The case study is oriented around an appraisal assignment involving an estimate of the market value of the various assets comprising the business. The case study illustrates the input for a market study involving the proposed 200-room, full-service Marriott Hotel described in the previous chapter. This type and size of hotel are used to illustrate relative complexity. Keep in mind that some of the input would be simpler for focused-service or existing hotels.



## Case Study

Due to the rounding of the numbers in the tables in this case study, the individual calculations using the rounded numbers may return different results than those that appear in the text.

### Total Guest Room Supply

In addition to the 200-room subject Marriott Hotel, which is expected to open on January 1, 2014, a 150-room *W* Hotel is scheduled to open on June 2, 2015. Financing for the *W* Hotel has been secured, and the likelihood of its completion appears to be very high. Both of these hotels are expected to enter the market at 100% competitiveness. In addition, rumors have spread that Westin is interested in developing a 300-room convention hotel within the subject market. A site has not been selected, and suitable zoning would be difficult to obtain because of a local water moratorium. At this preliminary stage, the development is highly speculative; even if a site and approvals could be obtained, this property would probably not enter the market for six to eight years. For these reasons, a new Westin is not included in this supply analysis. Exhibit 4.17 shows the projected guest room supply for the market area.

During the base year, the total existing supply or historical average room count (HARC) equated to 1,049 rooms. The Marriott is expected to open on January

1, 2014, so its full room count of 200 is entered for that year. The 150-room *W* is projected to open in mid-2015 on June 2 of that year, so its effective room count is 88 in 2015 and 150 in 2016. The line labeled “Change in HARC” represents the 250-room Hyatt, which opened on July 2 of the base year with an HARC of 125. The additional 125 rooms were added in 2013, the first projection year. The total room nights available is the total number of rooms multiplied by 365 ( $1,174 \times 365 = 428,419$ ).<sup>1</sup>

### Unadjusted and Adjusted Market-Wide Occupancy

Before the market-wide occupancy can be properly calculated, the accommodatable latent demand and the total usable latent demand must first be determined. Exhibit 4.18 begins by presenting an unadjusted forecast of market-wide occupancy using the room night demand levels developed in Chapter 3 and the room night supply levels identified previously in this chapter. As indicated, an unadjusted market-wide occupancy rate of 73.5% is calculated for the base year, followed by 73% in 2013, the first projection year.

Since the market-wide occupancy projection for each year contains latent demand, this occupancy figure may be overstated because latent demand cannot be accommodated until new rooms are added to the market. Further calcula-

**Exhibit 4.17** Projection of Market Supply

Hotel	Base	Projection Year							
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Existing supply (HARC)	1,049	1,049	1,049	1,049	1,049	1,049	1,049	1,049	1,049
Marriott (subject)	—	0	200	200	200	200	200	200	200
<i>W</i>	—	0	0	88	150	150	150	150	150
Change in HARC	—	125	125	125	125	125	125	125	125
Total supply	1,049	1,174	1,374	1,462	1,524	1,524	1,524	1,524	1,524
Total room nights available	382,885	428,419	501,419	533,539	556,169	556,169	556,169	556,169	556,169

1. Due to the rounding of the numbers in the tables throughout this case study, individual calculations using the rounded numbers may return different results than the results that appear in the text.



**Exhibit 4.18 Unadjusted and Adjusted Market-Wide Occupancy Forecast**

Hotel	Base	Projection Year						
	2012	2013	2014	2015	2016	2017	2018	2019
Total room night demand	281,389	312,680	327,035	361,932	351,465	363,169	374,107	384,146
Total room nights available	382,885	428,419	501,419	533,539	556,169	556,169	556,169	556,169
Unadjusted marketwide occupancy rate	73.5%	73.0%	65.2%	67.8%	63.2%	65.3%	67.3%	69.1%
New rooms	0	125	325	413	475	475	475	475
New room nights available	0	45,534	118,534	150,654	173,284	173,284	173,284	173,284
Accommodatable room nights	0	33,233	77,310	102,198	109,505	113,151	116,559	119,687
Total latent demand	15,231	36,582	39,608	62,601	41,030	41,666	42,273	42,844
Unaccommodatable demand	(15,231)	(3,349)	0	0	0	0	0	0
Usable latent demand	0	33,233	39,608	62,601	41,030	41,666	42,273	42,844
<b>Allocation Ratio</b>								
Commercial	67.6%	29.5%	28.6%	18.8%	29.9%	30.3%	30.8%	31.3%
Group	24.8%	10.7%	10.2%	38.7%	10.9%	11.3%	11.5%	11.7%
Leisure	7.6%	3.2%	3.1%	2.0%	3.1%	3.2%	3.3%	3.3%
Airline	0.0%	56.6%	58.1%	40.4%	56.1%	55.2%	54.4%	53.7%
<b>Unaccommodated Demand by Segment</b>								
Commercial	(10,291)	(989)	0	0	0	0	0	0
Group	(3,783)	(357)	0	0	0	0	0	0
Leisure	(1,157)	(108)	0	0	0	0	0	0
Airline	0	(1,895)	0	0	0	0	0	0
Total	(15,231)	(3,349)	0	0	0	0	0	0
<b>Adjusted Market Demand by Segment</b>								
Commercial	128,643	144,893	153,176	159,303	165,675	170,645	175,764	181,037
Group	75,660	81,469	85,099	109,354	93,822	98,513	102,454	105,527
Leisure	38,557	40,400	41,521	42,766	44,263	45,812	47,186	48,365
Airline	23,298	42,569	47,239	50,509	47,705	48,199	48,703	49,217
Total	266,158	309,331	327,035	361,932	351,465	363,169	374,107	384,146
Adjusted Marketwide Occupancy Rate	69.5%	72.2%	65.2%	67.8%	63.2%	65.3%	67.3%	69.1%

tions are needed to determine the actual market-wide occupancy based on total usable latent demand.

During the base year, the accommodatable latent demand is always zero. As a result, all of the latent demand is considered unaccommodatable latent demand, and the total usable latent demand is zero. Only after new inventory enters the market can latent demand begin to be realized as accommodatable demand. Exhibit 4.18 identifies the quantity of new rooms that is scheduled to enter the subject lodging market. In 2013, the first projection year, a total of 125 new rooms are expected to enter the market, offering a total of 45,534

room nights per year ( $125 \text{ rooms} \times 365 = 45,534$  room nights per year). This new supply component is then multiplied by the unadjusted market-wide occupancy rate (73%) to calculate the share of rooms that could logically be expected to accommodate latent demand. The result, in the first projection year, is 33,233 ( $45,534 \times 73\% = 33,233$ ) accommodatable room nights. In the successive years, the new inventory component is calculated on a rolling basis rather than incrementally.

To test the extent to which the latent demand is usable, the total latent demand is compared to the accommodatable room nights allocated to the new supply. In





the first projection year, latent demand amounts to 36,582 room nights, exceeding the accommodatable room nights of 33,233 by 3,349 room nights. The 3,349 room nights represent unaccommodatable demand. From 2014, the second projection year forward, the new inventory of hotel rooms provide far more capacity than the available latent demand. As such, unaccommodatable demand drops to zero for the remainder of the projection period.

Once the overall unaccommodatable demand figures have been quantified for the base year and each projection year for which it exists, this total must be allocated to each specific demand segment. The bottom half of Exhibit 4.18 is devoted to this methodology. The allocation ratio is determined by calculating the share of

latent demand generated by each segment for each year. Exhibit 4.19 demonstrates this process. The total latent demand, which is composed of unaccommodated and induced demand, is calculated for each market segment for each year.

The percentage relationship of the total latent demand for an individual segment to the total of all segments is calculated using each year's total latent demand by segment. Exhibit 4.20 shows this calculation of the allocation ratios for the base year and 2013.

Based on the calculated allocation ratios, the amount of base year (2012) unaccommodatable demand (15,231 room nights) is allocated to each segment as follows: 10,291 room nights in the commercial segment, 3,783 room nights in the

**Exhibit 4.19 Calculation of Allocation Ratios for Unaccommodatable Demand**

Hotel	Base	Projection Year							
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Unaccommodated Demand									
Commercial	10,291	10,806	11,346	11,800	12,272	12,640	13,019	13,410	13,812
Meeting & group	3,783	3,896	4,052	4,255	4,468	4,691	4,879	5,025	5,176
Leisure	1,157	1,180	1,210	1,246	1,290	1,335	1,375	1,409	1,444
Airline	0	0	0	0	0	0	0	0	0
Total	15,231	15,882	16,608	17,301	18,030	18,666	19,273	19,844	20,432
Induced Demand									
Commercial	0	0	0	0	0	0	0	0	0
Meeting & group	0	0	0	20,000	0	0	0	0	0
Leisure	0	0	0	0	0	0	0	0	0
Airline	0	20,700	23,000	25,300	23,000	23,000	23,000	23,000	23,000
Total	0	20,700	23,000	45,300	23,000	23,000	23,000	23,000	23,000
Total Latent Demand									
Commercial	10,291	10,806	11,346	11,800	12,272	12,640	13,019	13,410	13,812
Meeting & group	3,783	3,896	4,052	24,255	4,468	4,691	4,879	5,025	5,176
Leisure	1,157	1,180	1,210	1,246	1,290	1,335	1,375	1,409	1,444
Airline	0	20,700	23,000	25,300	23,000	23,000	23,000	23,000	23,000
Total	15,231	36,582	39,608	62,601	41,030	41,666	42,273	42,844	43,432
Percentage of Total									
Commercial	67.6%	29.5%	28.6%	18.8%	29.9%	30.3%	30.8%	31.3%	31.8%
Meeting & group	24.8%	10.7%	10.2%	38.7%	10.9%	11.3%	11.5%	11.7%	11.9%
Leisure	7.6%	3.2%	3.1%	2.0%	3.1%	3.2%	3.3%	3.3%	3.3%
Airline	0.0%	56.6%	58.1%	40.4%	56.1%	55.2%	54.4%	53.7%	53.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



**Exhibit 4.20 Allocation Ratio Calculation**

Market Segment	Total Latent Demand Base	Allocation of Ratios Percent of Total	Total Latent Demand 2014	Allocation Ratios Percent of Total
Commercial	10,291	67.6%	10,806	29.5%
Meeting & group	3,783	24.8%	3,896	10.7%
Leisure	1,157	7.6%	1,180	3.2%
Airline	0	0.0%	20,700	56.6%
Total	15,231	100.0%	36,582	100.0%

meeting and group segment, 1,157 room nights in the leisure segment, and zero room nights in the airline segment.

**Exhibit 4.21 Base Year Unaccommodatable Demand by Segment**

Market Segment	Unaccommodatable Latent Demand	Percent of Total	Allocation to Each Segment
Commercial	15,231 ×	67.6%	= 10,291
Group	15,231 ×	24.8%	= 3,783
Leisure	15,231 ×	7.6%	= 1,157
Airline	15,231 ×	0.0%	= 0
Total		100.0%	15,231

Exhibit 4.22 illustrates the calculation of the adjusted room night demand levels, by segment, for the base year.

**Exhibit 4.22 Base Year Adjusted Room Night Demand by Segment**

Market Segment	Unadjusted Room Night Demand	Unaccommodated Latent Demand	Adjusted Room Night Demand
Commercial	138,934	– 10,291	= 128,643
Group	79,443	– 3,783	= 75,660
Leisure	39,714	– 1,157	= 38,557
Airline	23,298	– 0	= 23,298
Total	281,389	15,231	266,158

The unadjusted room night demand for each segment is reduced by deducting the unaccommodatable demand, resulting in the adjusted room night demand for each segment. After adjustment, the base year market-wide occupancy rate equals

69.5%, as illustrated in Exhibit 4.18. This figure compares to the unadjusted market-wide occupancy of 73.5%.

Exhibits 4.23 and 4.24 set forth the calculations associated with the adjustment of the Year 1 (2013) projections. After adjustment, the Year 1 market-wide occupancy rate equates to 72.2%. This figure compares to the unadjusted market-wide occupancy of 73%.

From 2014 through the projection period, the accommodatable room nights exceed the total latent demand, so no further adjustment allocations are necessary.

**Exhibit 4.23 Year 2013 Unaccommodatable Demand by Segment**

Market Segment	Unaccommodatable Latent Demand	Percent of Total	Allocation to Each Segment
Commercial	3,349 ×	29.5%	= 989
Group	3,349 ×	10.7%	= 357
Leisure	3,349 ×	3.2%	= 108
Airline	3,349 ×	56.6%	= 1,895
Total		100.0%	3,349

**Exhibit 4.24 Year 2013 Adjusted Room Night Demand by Segment**

Market Segment	Unadjusted Room Night Demand	Unaccommodated Latent Demand	Adjusted Room Night Demand
Commercial	145,882	– 989	= 144,893
Group	81,826	– 357	= 81,469
Leisure	40,508	– 108	= 40,400
Airline	44,464	– 1,895	= 42,569
Total	312,680	3,349	309,331



## Hospitality Valuation Software (RNAADR V3)

Picking up where we left off in the last chapter, the names of the proposed hotels are entered on the next screen of the RNAADR V3 software module, Proposed Hotels–Additions to Supply.

**Hospitality Valuation Software**

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- Competitive Indices
- Accommodated Demand
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- Historical Market Growth Rates
- Demand Growth Rates
- Proposed Hotels**
- Proposed Data
- Additions To Supply
- Competitive Indices Input
- Final Output

**Proposed Hotels - Additions to Supply**

Enter the proposed hotels. If there are none then enter N/A in each field. If there are more than two, use the button to add more.

The accompanying ADR Module projects the ADR for Proposed Competitor 1.

<b>Proposed Competitor 1</b>	Proposed 1
<b>Proposed Competitor 2</b>	Proposed 2

[Add Proposed Competitor](#)

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If there are more than two proposed competitors, click on the “Add Proposed Competitor” box to add each additional primary competitor. Before clicking on this box, it is important to either press the Enter button on the keyboard after entering the name of the hotel or move the cursor down one cell. The software will accommodate up to 20 proposed competitors. If you want to project average daily rate using the ADR Module of this software, make the subject hotel Proposed Competitor 1.

The following screenshot shows the two proposed competitive hotels entered on this screen.

**Proposed Hotels - Additions to Supply**

Enter the proposed hotels. If there are none then enter N/A in each field. If there are more than two, use the button to add more.

The accompanying ADR Module projects the ADR for Proposed Competitor 1.

<b>Proposed Competitor 1</b>	Marriott
<b>Proposed Competitor 2</b>	W

[Add Proposed Competitor](#)

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The next screen is for the proposed hotels' property data.



**Hospitality Valuation Software**

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- Demand Growth Rates
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Proposed Hotels Property Data

Enter the relevant information for the proposed properties below.

	# Rooms	Date Opened	Historical ARC <span style="color: red;">▼</span>
Proposed 1			0
Proposed 2			0

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In the first column, the two proposed hotels were previously entered. In the next column, the room count for each hotel is entered. As the room count is entered, the software assumes that the HARC is the same as the room count and carries the room count over to the column labeled “Historical ARC.” If one of the competitive hotels is expected to open during the base year, then the date it opens is entered in the column labeled “Date Opened.” The software then calculates the HARC, which is entered in the HARC column. The following screenshot shows the case study data inserted in the proper cells. The 200-room Marriott, which is expected to open on January 1, 2014, produces an HARC of 200. The 150-room *W* Hotel is projected to open on June 2, 2015, and produces an HARC of 88.

Proposed Hotels Property Data

Enter the relevant information for the proposed properties below.

	# Rooms	Date Opened	Historical ARC <span style="color: red;">▼</span>
Marriott	200	1/1/14	200
W	150	6/2/15	88

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The following screenshot shows the output of the existing and proposed supply.



## Additions to Supply

Verify that the additions to supply are correctly entered. If changes need to be made, make them on the proposed hotel data sheet.

Assumed Compound Supply Growth		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Existing Rooms	1049	1049	1049	1049	1049	1049	1049	1049	1049	1049	1049	1049
Marriott	0	200	200	200	200	200	200	200	200	200	200	200
W	0	0	88	150	150	150	150	150	150	150	150	150
Long Term Supply Growth	0	0	0	0	0	0	0	0	0	0	0	0
Total New Rooms	0	0	200	288	350	350	350	350	350	350	350	350
Change in HARC	125	125	125	125	125	125	125	125	125	125	125	125
Total Supply	1049	1174	1374	1462	1524	1524	1524	1524	1524	1524	1524	1524
Total Rooms Available	382,885	428,419	501,419	533,539	556,169	556,169	556,169	556,169	556,169	556,169	556,169	556,169
Total Room Night Demand	266,158	309,331	327,035	361,932	381,465	385,169	374,107	384,146	394,476	405,105	416,042	416,042
Unadjusted Market Occupancy	73.49%	72.98%	65.22%	67.84%	63.19%	65.30%	67.27%	69.07%	70.93%	72.84%	74.80%	74.80%
Adjusted Market Occupancy	69.51%	72.20%	65.22%	67.84%	63.19%	65.30%	67.27%	69.07%	70.93%	72.84%	74.80%	74.80%

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The first row of data is the existing rooms as of the base year (2012). The existing rooms include the four primary competitors, with the Hyatt's HARC at 125 plus the effective rooms of the four secondary competitors. The next two rows show the addition of the Marriott—with 200 rooms in 2014—and the *W* Hotel coming halfway through 2015 with 88 effective rooms, followed by the full 150 rooms in 2016. The row labeled “Long Term Supply Growth” will be discussed shortly. The “Total New Rooms” row is the sum of the new rooms added by the Marriott and *W* hotels. The “Change in HARC” represents the additional 125 rooms of the new Hyatt, which brings the room count of this property to 250 as of 2013. The “Total Supply” row is the sum of the existing rooms plus the total number of new rooms plus the change in HARC. The “Total Rooms Available” is the total supply times 365 (days per year). The “Total Room Night Demand” row is for the result of the previously described room night analysis, utilizing the build-up approach based on lodging activity and taking into account accommodatable latent demand. The “Unadjusted Market Occupancy” row is for the total room night demand without the adjustment for unaccommodatable latent demand divided by the total number of rooms available. The “Adjusted Market Occupancy” row is the total room night demand adjusted for unaccommodatable latent demand divided by the total number of rooms available. Based on the previously described unaccommodatable latent demand, only the base year (2012) and 2013 are impacted. As a result, the unadjusted market occupancy is somewhat higher than the adjusted market occupancy. Starting in 2014, when all the latent demand can be accommodated, both of these occupancies are identical.

A unique feature of this screen is the “Assumed Compound Supply Growth” input box on the upper left side of the table. The assumed compound supply growth adds additional new rooms to the market for any years in which a specific new hotel does not add rooms. The following screenshot shows what happens with the utilization of a 2% assumed compound supply growth. In 2013, no new rooms are being added to the market, so the table automatically adds 21 additional rooms in the “Long Term Supply Growth” row, ( $1049 \times 2\% = 21$ ). From 2014 to 2016, the Marriott and *W* hotels will be adding rooms to the market, so the long-term supply growth does not change; the 21 rooms is cumulative. Starting in 2017, no new rooms will be added to the market, so the long-term supply growth starts to increase. The calculation for 2017 is:  $1,545$  (total supply)  $\times 2\% + 21 = 52$ . Although this screenshot shows the utilization of assumed compound supply growth, this case study will not use this feature because the occupancy of the subject property is assumed to stabilize over a relatively short period of time.





Within a penetration analysis, the subject hotel's penetration rates are normally assumed to experience annual increases (and possibly intermittent decreases) until stabilization occurs. This level of stabilization of lodging demand penetration, along with the anticipated stabilization of lodging demand available in the competitive market, results in an anticipated level of occupancy stabilization for the subject hotel. In other words, the assumption regarding the number of years it will take the subject property to reach its stabilization of penetration is also typically the number of years it is expected to take to reach stabilized occupancy. In some cases, when market occupancy is anticipated to change in years subsequent to the subject hotel's expected stabilized penetration, the subject hotel will reach stabilized occupancy after it reaches stabilized penetration.

Stabilized hotel operating performance is generally considered to be a point of equilibrium when it is not logical to assume continuing increases in occupancy. This is because if lodging demand continues to grow, other new hotel rooms are eventually expected to enter the market and limit the occupancy increases of any individual hotel. Assumptions regarding future occupancy estimates are very important because the feasibility and financial success of hotels are extremely sensitive to occupancy. However, although it has been suggested that factors such as a hotel's location may influence its stabilized level of occupancy, until recently there was no empirical research that tested long-held assumptions regarding the period of time it may take a hotel to reach a stabilized operating level.<sup>6</sup>

Hotel feasibility studies benefit from rigorous research regarding the typical assumptions they contain. More sophisticated analyses regarding the period of time hotels take to reach their stabilized operating levels should not only result in more accurate operating forecasts, but these more sophisticated analyses should also help to reduce hotel restructurings and foreclosures brought on in part by inadequately supported prospective financial analyses.<sup>7</sup>

### Data Used in Recent Research

Recent research analyzed the actual occupancy build-up of new hotels in the United States over the past several years using the STR Global database of annual occupancy levels for 3,699 newly opened hotels in consecutive years during the seven-year economic cycle of 2002 through 2008. Stabilized occupancy was considered to be the first high point in annual occupancy percentage when occupancy rate no longer increased by at least one percentage point beyond the previous year; the stabilized year was considered to be the first year the hotel reached its stabilized occupancy level. This definition required a full year of stabilized operating performance and the STR Global data represent full calendar years. It was possible to estimate the stabilized year in half-year increments because the data also included the month and year that each hotel opened. Since it was necessary to examine multiple consecutive years of performance to determine the stabilized year, hotels that opened between 2001 and 2006 were considered. For the purposes of this study, each hotel's first calendar year of operation was considered to be a year only if it opened during the first quarter—i.e., January through March. Hotels that opened during the middle two quarters of the year (April through

6. Ransley and Ingram, *Developing Hospitality Properties and Facilities*; G. A. Overstreet, "Profiles in Hotel Feasibility: The Consequences of Overbuilding," *Cornell Hotel and Restaurant Administration Quarterly* 30, no. 1 (1989): 10-18; Stephen Rushmore, *Hotels and Motels: A Guide to Market Analysis, Investment Analysis, and Valuations* (Chicago: Appraisal Institute, 1992).
7. P. Beals, "Rehabilitating Hotel Feasibility Studies," *Real Estate Review* 24, no. 1 (1994): 58-61.



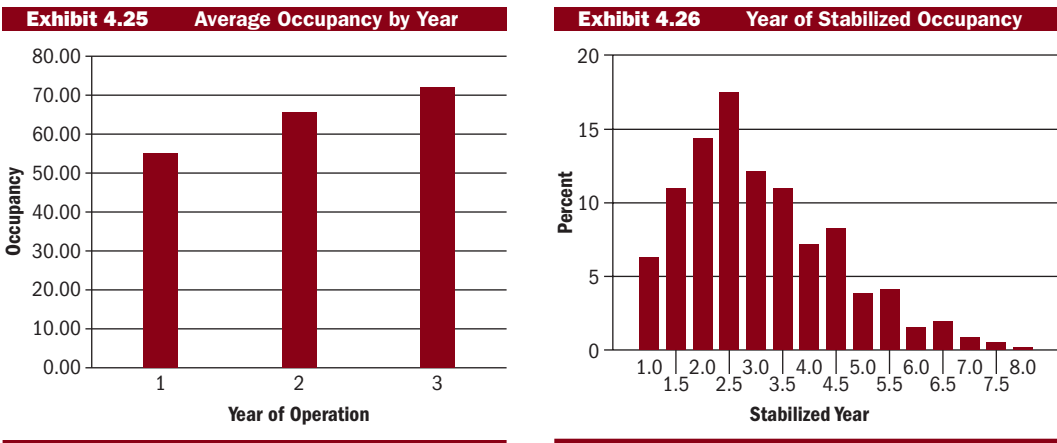


September) were considered to have a half-year of operation during their first calendar year. If hotels opened during the final quarter of the year (October through December), their first calendar year, or *stub year*, was not considered to be an operating year. The average property had 107 guest rooms (standard deviation, or SD = 93 rooms) with a mean stabilized occupancy percentage of 71.96% (SD = 9.96%).<sup>8</sup>

Is the three-year occupancy build-up supported? The study indicated that this typical three-year occupancy build-up assumption was supported because the average hotel stabilized in 3.08 years (SD = 1.41 years; range = 1-8 years).<sup>9</sup> A total of 61.9% of hotels stabilized in between two and four years. Only 6.3% of hotels stabilized in one year (i.e., their first year of operation), and a mere 0.2% of hotels took eight years to stabilize.

The average hotel achieved an annual occupancy percentage of 55.31% in its first full year of operation, 65.54% in its second year, and 71.96% in its third year. Stated alternatively, the average hotel achieved 76.86% of its long-term average occupancy during its first year of operation (and hence 76.86% of its long-term penetration mathematically based on a long-term penetration of 100%), 91.08% in its second year, and 100% in its third year. The first, second, and third years represented many different calendar years for different hotels in the study. Thus, these figures accounted for hotel performance during the different economic conditions occurring in the multiple years studied. Exhibit 4.25 presents the average occupancy by year.

Exhibit 4.26 presents a histogram of stabilized years for the sample. The graph indicates that although the mean stabilization period was 3.08 years, many hotels stabilized more quickly or slowly. Therefore, subsequent analyses focused on the examination of stabilization by hotel type.



## Hotel Type Matters

STR Global data indicated each hotel’s type based on the chain scale segments used by STR Global at the time of the study, e.g., luxury, upper upscale, upscale, midscale with food and beverage, midscale without food and beverage, economy, and independent. An analysis of variance (ANOVA)

8. O’Neill, “Hotel Occupancy: Is the Three-Year Stabilization Assumption Justified?”

9. Ibid.

indicated that there were significant differences in the length of time it took hotels to stabilize based on scale ( $F = 5.57, p < 0.001$ ). Based on post hoc statistical Tukey tests, luxury hotels (3.31 years), upper-upscale hotels (3.35 years), and independent hotels (3.32 years) stabilized significantly slower than upscale hotels, which stabilized quicker than any other hotel type, with a mean of 2.88 years. In other words, upscale hotel brands, such as Courtyard by Marriott and Hilton Garden Inn, reached their stabilized occupancy quicker than their more luxurious counterparts. A number of explanations could exist for this difference. For example, hotels that typically appeal to more affluent travelers may take more time to build their reputations and customer bases within their local markets. Other explanations could be based on the number of luxury hotels located in the market or the affiliations of those luxury hotels.

Another way STR data indicates hotel type is based on whether or not the hotel is an extended-stay property. Of the 3,699 hotels in the sample, 546 were classified as extended-stay (such as Residence Inns or Homewood Suites) and 3,153 were not. A *t*-test indicated that extended-stay hotels stabilized significantly more quickly than conventional properties. Specifically, Levene's test for equality of variances was significant ( $F = 17.98, p < 0.001$ ), and the average conventional hotel stabilized in a mean of 5.15 years while the average extended-stay hotel stabilized in only 2.75 years.

### The Effects of Hotel Location

Hotels were classified by STR as having location types that were either city, suburban, highway, airport, or resort. An ANOVA indicated that location was a significant predictor of the stabilization period ( $F = 2.60, p < 0.05$ ). Based on post hoc Tukey tests, airport hotels stabilized significantly more rapidly (2.98 years) than city hotels (3.23 years).

Hotels were also classified by nine different US regions. An ANOVA concluded that region was a significant predictor of the period of time it took properties to stabilize ( $F = 5.09, p < 0.001$ ). Based on post hoc Tukey tests, hotels located in the heavily populated Mid-Atlantic region (New York, Pennsylvania, and New Jersey) stabilized significantly more quickly (2.94 years) than hotels located in the Midwest region (Michigan, Wisconsin, Illinois, Indiana, and Ohio), which took an average of 3.23 years to stabilize. Hotels in the Midwest region stabilized significantly more slowly than hotels in virtually every other region of the United States.

Hotels were additionally classified based on whether or not they were located in one of the top 25 largest markets in the country. An ANOVA indicated that this factor was a significant predictor of the stabilization period ( $F = 13.30, p < 0.001$ ). Based on post hoc Tukey tests, hotels located in the top 25 markets stabilized significantly more quickly (3.03 years) than hotels in the smaller market areas (3.36 years). It appears that hotels may stabilize more quickly in more heavily populated, higher-trafficked areas.

Variables that did not appear to make a difference in the amount of time it took hotels to reach their stabilized occupancy included hotel size in terms of the number of guest rooms in the subject hotel property ( $p > 0.05$ ) and property service level, specifically whether or not the hotel had any food and beverage outlets ( $p > 0.05$ ).

### Occupancy Levels

The absolute stabilized occupancy levels were analyzed to determine whether there were any significant differences in occupancies based on the period



of time required for stabilization. Exhibit 4.27 presents the mean stabilized occupancy percentages by stabilized years.

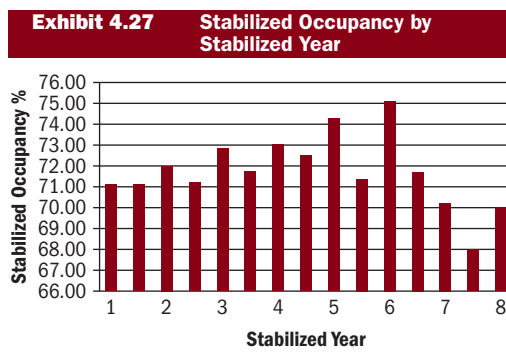
A linear regression analysis ( $df = 1, 3,697$ ) indicated that there was a systematic correlation in which hotels stabilizing later in their operating lives did so with relatively higher occupancies ( $F = 5.40, p < 0.05$ ). However, in observing the data, it also appeared that hotels stabilizing much later, such as after seven to eight years, stabilized at relatively lower occupancy rates. Therefore, a quadratic (curvilinear) equation was tested ( $df = 2, 3,696$ ), and this curvilinear equation was a superior representation of the data ( $F = 5.77, p < 0.01$ ), indicating that hotels stabilizing after a moderate number of years of operation (e.g., three to six years) stabilized at relatively higher occupancy rates. These results suggest that the relatively unusual hotels not stabilizing within three to six years are affected by negative factors that do not affect most other properties. Such factors may include lack of or inappropriate branding, poor locations, or overbuilt markets.

A  $t$ -test indicated that extended-stay hotels stabilized at significantly higher occupancy rates than conventional hotels ( $F = 48.20, p < 0.001$ ). Specifically, while conventional hotel stabilized occupancies were a mean 70.87%, extended-stay hotel stabilized occupancies averaged 78.25%. It appears that the extended-stay hotel concept may continue to present a compelling business model to hotel developers, at least due to its relatively high occupancy level.

To evaluate the effects of hotel room prices on stabilized occupancy level, an ANOVA was conducted. This analysis used the STR pricing levels of luxury, upscale, mid-price, economy, and budget, which were determined based on each hotel's relative ADR within its respective marketplace. This ANOVA was significant ( $F = 11.42, p < 0.001$ ). Based on post hoc Tukey tests, hotels priced at both the upper end (luxury hotels had a mean stabilized occupancy of 73.65%) and lower end of the spectrum of prices (budget motels had a mean stabilized occupancy of 73.31%) stabilized at significantly higher occupancy rates than hotels in the middle of the spectrum, meaning that mid-price hotels had a mean stabilized occupancy rate of 70.38%. This analysis suggests that although previous research concluded that a problem with mid-price hotels is that they tend to perform relatively poorly because they are older and more obsolete than higher and lower-priced properties, even new mid-price hotels appear to operate with a competitive disadvantage as suggested by their relatively low occupancy levels.<sup>10</sup>

## Guidance for Developing Prospective Financial Analyses

This exploratory study provides a number of points of guidance regarding considerations that should be made by those who are charged with estimating the future occupancies of new hotels. It is important to note that this guidance is not intended as a substitute for the model-driven analyses of



10. John W. O'Neill, "ADR Rule-of-Thumb: Validity and Suggestions for Its Application." *Cornell Hotel and Restaurant Administration Quarterly* 44, no. 4 (2003): 7-16.



lodging supply and demand conditions used to make forecasting decisions as discussed in this book. The guidance is as follows:

- In general, the assumption that the build-up occupancy period for new hotels is three years is supported by this research. In recent years, the average US hotel stabilized in 3.08 years, and 61.9% of hotels stabilized in two to four years.
- Luxury, upper-upscale, and independent hotels generally appear to stabilize significantly more slowly than upscale hotels.
- Extended-stay hotels stabilize significantly more quickly than conventional hotels. In addition, extended-stay hotels stabilize at significantly higher occupancy rates than conventional hotels.
- Hotels located in downtown areas stabilize at a significantly slower rate than those located close to airports.
- Hotels located in the populated Mid-Atlantic region stabilize significantly more quickly than hotels in the Midwest region. Hotels in the Midwest stabilize significantly more slowly than hotels in virtually every other US region. Furthermore, properties located in major metropolitan areas stabilize more rapidly than those in less populated areas.
- Hotel size (number of guest rooms) and service level (whether or not it has food and beverage outlets) appear to be unrelated to the period of time it takes the property to stabilize.
- Hotels stabilizing relatively quickly (or slowly for that matter) do not appear to stabilize at relatively higher occupancy levels. Hotels stabilizing in three to six years report the highest stabilized occupancy rates.
- Hotels priced at both the upper and lower ends of the spectrum of guest room prices within their markets stabilize at significantly higher occupancy rates than those in the middle of that spectrum.

As with all general rules, there are many exceptions, but this guidance provides a basis for a quick “go or no go” decision before proceeding to the next step in the analysis.

Case Study		
Market-Wide Occupancy	Exhibit 4.28 Market-Wide Occupancy	
The market-wide occupancy for the base year and each of the projection years is set forth in Exhibit 4.28.	Year	Market-Wide Occupancy Rate
	2012 (Base year)	69.5%
Market-wide occupancy levels are expected to decline significantly beginning in 2014, as the new wave of inventory enters the market and absorbs all of the latent demand. Market-wide occupancy is expected to reach a low of 63.2% in 2016. Thereafter, as supply levels stabilize and demand continues to grow, market-wide occupancy levels are expected to improve and return to levels in excess of 69% by 2019.	2013	72.2
	2014	65.2
	2015	67.8
	2016	63.2
	2017	65.3
	2018	67.3
	2019	69.1

## Allocate Area Demand to All Competitive Hotels

Once the relationship between supply and demand has been quantified with the estimate of market-wide occupancy, all the competitive hotels are evaluated to quantify their relative competitiveness. Evaluating each hotel's competitive characteristics helps the appraiser fit any new properties into the market and calculate how much of the room night demand each hotel is likely to attract.

The percentage of the market captured by an individual lodging facility is called its *market share*; the market shares of all competing properties, including the subject, should total 100% for each market segment.

The allocation of the area's total room night demand among the lodging facilities in the area can be accomplished through an analysis of customer preference items or competitive indices.

### Demand Allocation Based on an Analysis of Customer Preference Items

Demand allocation based on an analysis of customer preference items generally begins once the final market area is defined and the sources of transient visitation are identified, surveyed, and quantified. The first step is to identify the area's competing lodging facilities by type and class. As described previously, hotels and motels can be categorized by type (commercial, convention, resort, etc.), and each type can be further divided into classes or scales (luxury, standard, economy). Interviews with area hotel managers and a review of published room rate information can facilitate categorization.

The second step is to allocate the demand among the subject property and the other area hotels based on the characteristics of the demand and the relative competitiveness of the supply. This allocation is based on customer preference items.

Each customer preference item represents a specific characteristic guests consider in choosing one hotel over another. Six of the most prominent customer preference items are shown in Exhibit 4.29.

Ranking the six customer preference items in order of importance establishes a basis for predicting how guests will choose among several lodging facilities in a particular market area. Exhibit 4.30 ranks the preference items listed in Exhibit 4.29.

### Demand Allocation Based on an Analysis of Competitive Indices

Demand allocation based on an analysis of competitive indices is usually employed in conjunction with the build-up approach based on an analysis of lodging activity. The approach assumes that the accommodated room night demand for each competitive

Exhibit 4.29 Customer Preferences and Considerations	
Item	Consideration
Price	Economic
Travel distance	Time, convenience
Quality of facilities	Comfort, status, atmosphere
Amenities	Comfort, status, recreation, convenience, atmosphere
Management	Comfort, atmosphere
Image	Status

Exhibit 4.30 Customer Preference Items by Market Segment			
	Economy	Standard	Luxury
<b>Commercial</b>			
Most important	1 Price	Travel time	Image
	2 Travel time	Quality	Quality
	3 Quality	Price	Management
	4 Management	Image	Travel time
	5 Amenities	Management	Amenities
Least important	6 Image	Amenities	Price
<b>Meeting &amp; Group</b>			
Most important	1 Price	Amenities	Image
	2 Amenities	Quality	Amenities
	3 Quality	Price	Quality
	4 Management	Image	Management
	5 Travel time	Management	Travel time
Least important	6 Image	Travel time	Price
<b>Leisure</b>			
Most important	1 Price	Amenities	Image
	2 Amenities	Quality	Amenities
	3 Quality	Price	Quality
	4 Management	Image	Management
	5 Travel time	Management	Travel time
Least important	6 Image	Travel time	Price

Source: HVS



hotel has been quantified and allocated among the appropriate market segments. To calculate new market shares for area hostelries when another lodging facility is added to the market, a rating factor known as the *competitive index* is used.

Competitive indices show how well each property in the market area competes for a particular market segment. The competitive index is calculated by dividing a given hotel's market share by its fair share. Market share represents that portion of total demand accommodated by a given property. Fair share represents that portion of total supply accounted for by the same property. A 100-room hotel in a 1,000-room market has a fair share of 10%. If that same hotel accommodates 12% of the market's total demand, then its competitive index is 120% (12% / 10%). When a new hotel enters the market, the projection of future competitive indices is somewhat complicated and requires the use of a market share adjuster.

**Example of Demand Allocation Using Competitive Indices**

The following example demonstrates the use of competitive indices to calculate a hotel's market share and room nights captured.

Exhibit 4.31 Competitive Indices							
Hotel	Number of Rooms	Yearly Occupancy	Percent Commercial Demand	Commercial Room Nights Per Year	Market Share	Fair Share	Competitive Index
A	300	80%	50%	43,800	52.24%	44.44%	117.55%
B	250	75	30	20,531	24.49	37.04	66.12
C	125	95	45	19,505	23.27	18.52	125.63
Total	675			83,836	100.00%	100.00%	

Exhibit 4.31 shows a market consisting of three hotels: Hotel A, Hotel B, and Hotel C. The second column shows the room count for each hotel, which totals 675 rooms. The next column shows the annual occupancy for each hotel. This example will analyze the commercial demand segment only; however, all segments in the market need to be evaluated in this manner. The fourth column shows the percentage of the total demand that the commercial segment represents for a particular hotel. This figure is the hotel's market segmentation percentage. For Hotel A, commercial demand represents 50% of its total demand. This percentage was developed earlier in the case study. The column labeled "Commercial Room Nights per Year" is calculated by multiplying each hotel's room count by its occupancy by its market segmentation percentage by 365 days per year. The calculation for Hotel A is:

$300 \text{ Rooms} \times 80\% \text{ Occupancy} \times 50\% \text{ Commercial segment percentage} \times 365 \text{ Days} = 43,800 \text{ Room nights}$

The market share for each hotel is calculated by dividing the commercial room nights captured by the total of all the commercial room nights in the market. This calculation for Hotel A is:

$43,800 / 83,836 = 52.24\%$

The fair share (or average market share) for each hotel is calculated by dividing its room count by the total number of rooms in the market. This calculation for Hotel A is:

$300 / 675 = 44.44\%$

The competitive index for each hotel in the market is calculated by dividing the hotel's market share by its fair share. This calculation for Hotel A is:

$$52.24\% / 44.44\% = 117.55\%$$

Based on the competitive indices calculated for the three hotels in the market, the following observations can be made about the relative competitiveness of each hotel:

- The most competitive hotel for the commercial segment is Hotel C, with a commercial competitive index of 125.63%. The least competitive is Hotel B, with a commercial competitive index of 66.12%, almost half that of Hotel C. Hotel A has a commercial competitive index of 117.55%, which makes it almost as competitive as Hotel C.
- The algebra also shows that the market share percentage can also be calculated by multiplying the hotel's competitive index by its fair share. For Hotel A, the market share can be calculated as follows:

$$117.55\% \times 44.44\% = 52.24\%$$

Now let's assume a new 200-room hotel (Hotel D) is going to open in the same market in Year 2, and you want to estimate how much of the commercial demand this hotel will capture as well as its impact on the other three hotels. Assume that the commercial demand in the market remains level at 83,836 room nights. It is obvious that Hotel D will dilute the market with 200 additional rooms; however, its impact on the other hotels will depend on its relative competitiveness compared to these other properties. This relative competitiveness will be quantified using the competitive indices. Exhibit 4.32 shows the market with the addition of Hotel D in Year 2.

In Year 2, Hotel D adds 200 more rooms to the market, bringing the total market room count to 875. The competitive indices remain the same for the three existing hotels. This assumption that the competitive indices will generally remain at the same level over a normal projection period will be discussed later. Hotel D needs to be fit into the market based on its anticipated relative competitiveness in relation to the other three hotels. Based on its location, brand affiliation, and management, Hotel D is expected to be highly competitive in the commercial segment. Hotel D is expected to stabilize just below the competitiveness of Hotel C (which has a competitive index of 125.63%)

Exhibit 4.32 Hotel Market, Years 1 and 2						
Hotel	Number of Rooms	Commercial Competitive Index	Fair Share	Market Share Adjuster	Market Share	Commercial Room Nights Captured
Year One						
A	300	117.55%	44.44%		52.24%	43,800
B	250	66.12	37.04		24.49	20,531
C	125	125.63	18.52		23.27	19,505
Total	675		100.00%		100.00%	83,836
Year Two						
A	300	117.55%	34.29%	40.30%	40.58%	34,022
B	250	66.12	28.57	18.89	19.02	15,948
C	125	125.63	14.29	17.95	18.07	15,150
D	200	97.00	22.86	22.17	22.32	18,716
Total	875		100.00%	99.31%	100.00%	83,836



and just above Hotel A (which has a competitive index of 117.55%), probably around 120%. Hotel D is expected to build up to this competitive level over the first three years of operation, starting in the first year with a competitive index of 97%. Based on this projected competitive index for Hotel D, the commercial room night demand will be reallocated in the following manner for Year 2.

With 200 new rooms added to the market, the fair share must be recalculated for the four hotels. The fair share for Hotel A declines from 44.44% to 34.29%.

We saw that market share can be calculated by multiplying a property's competitive index by its fair share. The market share for Hotel A can be determined with the following calculation:

$$117.55\% \times 34.29\% = 40.30\%$$

However, when this calculation is made for all four hotels (fifth column) and the percentages are added, they total only 99.31% instead of the 100% one would expect as the market share. This result is due to the fact that the competitive index for Hotel D is 97%. If it were 100%, then the total in the fifth column would be 100%. Since the total of all market shares cannot be anything but 100%, this fifth column cannot be called "market share." Instead, it becomes what will be called the *market share adjuster*. To calculate the actual market share in the sixth column, the market share adjuster for a hotel is divided by the total of all market share adjusters. The market share for Hotel A is calculated as follows:

$$40.30\% / 99.31\% = 40.58\%$$

The total of all the individual market shares in the sixth column equals 100%. The total commercial room nights captured is then allocated among the four hotels based on the individual market share percentages. The commercial room nights captured for Hotel A is calculated as follows:

$$40.58\% \times 83,836 = 34,022$$

The key to this example is the use of a competitive index and market share adjuster in the derivation of a property's market share. This unique factor allows an analyst to compare many competitive aspects of a lodging establishment on a segment-by-segment basis regardless of the property's room count or changes in the overall supply of accommodations.

This example assumes that the relative competitiveness of the original three hotels remains constant while the new hotel is expected to become more competitive. The competitive index represents the relative competitiveness of each of the various hotels in a given market. Competitive indices are property specific: Changes in the relative competitiveness of one property does not affect the relative competitiveness of another property. If a hotel becomes more competitive, it does not mean that another hotel will become less competitive. It will probably lose demand to the other hotel, but it will not become less competitive. The following are reasons why the competitive index of a hotel might change over a period of time:

- An upward change may be the result of a newly opened hotel, a new renovation, or the addition of new facilities such as meeting rooms, a restaurant, a spa, a golf course, and so on.
- A downward change may be the result of deferred maintenance.
- A change in either direction may be the result of new management, a change in chain affiliation, or external factors affecting specific properties.



The previous example illustrates demand allocation based on an analysis of competitive indices for the commercial market segment. The same procedure would be used to allocate meeting and group demand, leisure demand, or any other quantifiable source of visitation within the market area. The ultimate result is a total room night capture estimate for the subject property, which can be converted into a projection of occupancy by dividing the total projected room nights captured by the number of rooms available.

Case Study

Competitive Indices

In an appraisal assignment involving estimating the market value of the various assets comprising the business, the relative competitiveness of the existing area hotels will be compared using competitive indices. The competitive indices for each hotel in the market are calculated by dividing the properties' market share by their fair share in each market segment. Exhibit 4.33 shows the calculation of the competitive indices for each hotel's commercial segment for the base year.

Exhibit 4.34 summarizes the base year competitive indices for each of the four market segments for the hotels included in the market analysis.

Competitive indices must now be assigned to each new lodging facility as it enters the market. Moreover, if the relative competitiveness of any area hotel is expected to change, its competitive indices need to be adjusted. Assigning competitive indices to new properties or adjusting the indices of existing properties is largely based on judgment; the indices of similar hotels operating within the market can be used as a basis for these judgments.

The following factors should be considered when assigning competitive indices:

- A new hotel generally becomes increasingly competitive in its initial years of operation, as it builds toward a stabilized occupancy rate.

Exhibit 4.33Calculation of Base Year Competitive Index for Commercial Segment

	Commercial Room Nights Captured	Commercial Market Share		Fair Share		Competitive Index
InterContinental	28,908	22.5%	÷	19.1%	=	118%
Hilton	28,908	22.5%	÷	26.2%	=	86%
Sheraton	27,923	21.7%	÷	23.8%	=	91%
Hyatt	5,931	4.6%	÷	11.9%	=	39%
Secondary competition	36,974	28.7%	÷	19.0%	=	152%
Total	128,643	100.0%		100.0%		

Exhibit 4.34Base Year Competitive Index by Segment

Competitive Index - Base Year

Hotel	Commercial	Meeting and Group	Leisure	Airline	Total
InterContinental	118.0%	100.0%	33.0%	54.0%	94.9%
Hilton	86.0	128.0	107.0	118.0	103.6
Sheraton	91.0	86.0	101.0	168.0	97.8
Hyatt	39.0	164.0	161.0	53.0	93.5
Secondary competition	152.0	39.0	117.0	65.0	107.0

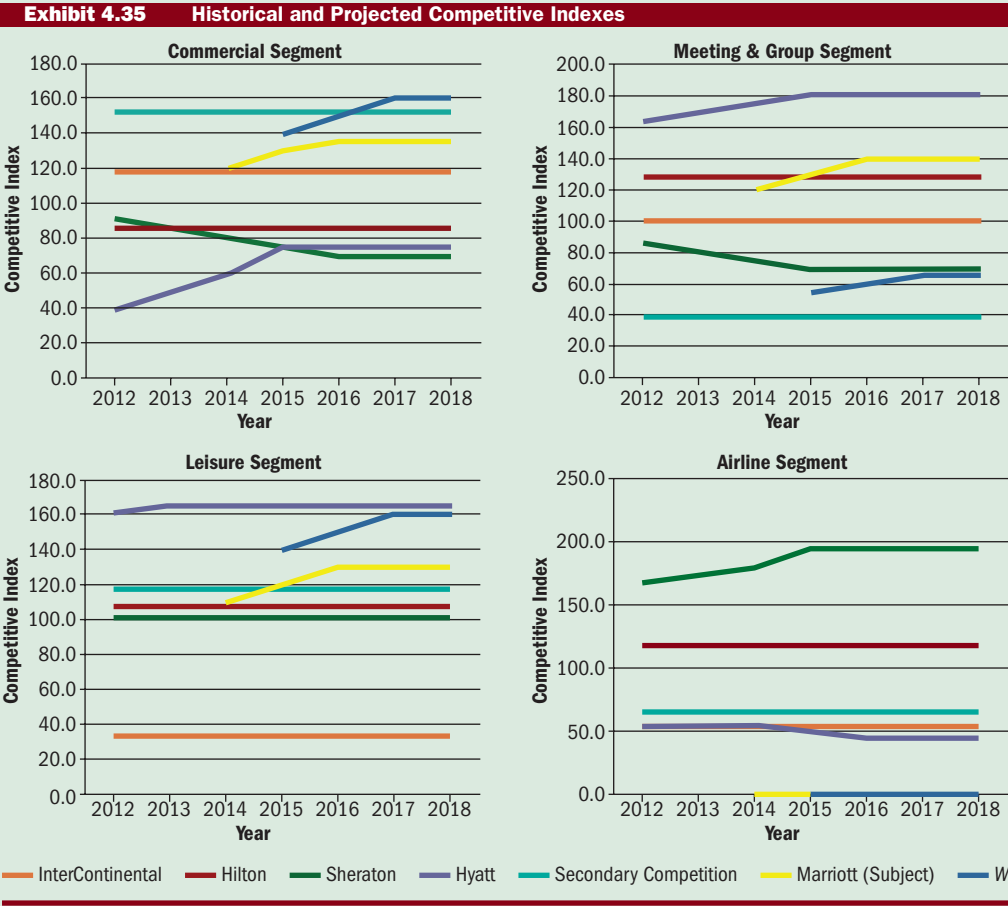
- Factors that could alter the competitive indices of an existing hotel include:
  - A major renovation or addition
  - A change in management or franchise
  - A change in market orientation
  - Growing levels of physical or functional obsolescence
- Hotels with particularly high competitive indices in one market segment generally have a relatively low competitive index in another.

After reviewing the various factors that affect the relative competitiveness of all the hotels within the market area, the following graphs presented in Exhibit 4.35

were developed and used as a visual basis for projecting each hotel's competitive indices into the future.

The following discussion provides a descriptive rationale for the projection of competitive indices for each hotel.

The InterContinental opened six years ago and is therefore a relatively new product. Its location just outside the main commercial area in a developing part of the city is considered a secondary location with respect to the Hilton and proposed Marriott. It is commercially oriented, and its competitive position in the market is fairly strong and stable. The InterContinental is currently the market leader in the commercial segment, with a competitive index of 118%. Its facilities are a little tired and require a



soft-good renovation. Management operates the property in a competent manner, and the InterContinental brand name is well recognized among frequent travelers. The competitive indices presently achieved by the InterContinental are expected to continue at similar levels into the future.

The Hilton Hotel was constructed ten years ago as a convention-oriented hotel and is currently the largest hotel in the market. Its extensive meeting and banquet space, along with aggressive group marketing and skilled management, makes this property the second most competitive product in the meeting and group market after the new Hyatt. With so much emphasis directed toward meeting and group demand, the Hilton is less competitive in the commercial market. Essentially, most of the Hilton's commercial demand has been purposely displaced by meeting and group patronage. A recent renovation has brought this property up to first-class condition, and it should remain as one of the meeting and group leaders into the future. The competitive indices presently achieved by the Hilton Inn are expected to continue into the future.

The secondary competitors represent well-maintained stable properties. The competitive indices presently achieved by the secondary competitors are expected to continue into the future.

The Sheraton Hotel is the oldest hotel in the market, having been constructed 25 years ago. Frequent changes in ownership along with indifferent management have adversely affected the operating results of this property over the past five years. The Sheraton's franchise expires this year and will not be renewed by Starwood because of its physical condition. Without national identification, a reservation system, or

sufficient revenue to maintain this property at an attractive level, it is likely that the Sheraton's competitive position will decline over the coming years. As a result, the competitive indices presently achieved in the commercial and meeting/group segments are expected to decline in the future. Through rate-cutting, the Sheraton should remain competitive in the leisure segment so that the competitive indices for this segment will remain at the same level. Management plans to become more aggressive in the airline segment, for which it has always been the most competitive, so the competitive indices for this segment will increase over the projection period. Based on this analysis, the projected competitive indices for the Sheraton are set forth in Exhibit 4.36.

The new 250-room Hyatt Hotel opened halfway through the base year (2012). Like the Hilton hotel, this property was designed with extensive state-of-the art meeting and convention space, which is far superior to any hotel in the market. Hyatt management has done an excellent job of preselling meeting and group business. As a result, Hyatt dominated this segment during its first six months of operation and achieved a competitive index of 164%, the highest in the market. Because of the focus on capturing meeting and group business, the Hyatt has not pushed the commercial segment. It would rather keep its meeting space full to generate the resulting food and beverage revenue from the meeting and group attendees. The Hyatt is also the market leader in the leisure segment during the base year. This is attributed to a huge water park that occupies the atrium lobby of the Hyatt. This water feature not only drives weekend leisure business but is an excel-

Exhibit 4.36 Competitive Index—Sheraton							
Segment	Year						
	Base 2012	2013	2014	2015	2016	2017	2018
Commercial	91.0%	85.0%	80.0%	75.0%	70.0%	70.0%	70.0%
Meeting & group	86.0	80.0	75.0	70.0	70.0	70.0	70.0
Leisure	101.0	101.0	101.0	101.0	101.0	101.0	101.0
Airline	168.0	175.0	180.0	195.0	195.0	195.0	195.0

lent amenity for the meeting and group segment. To augment slow periods, the Hyatt has entered into some lower-rated airline contracts. Airline crews enjoy staying at the Hyatt because of its water park, so the contracted room rates are somewhat higher than the other hotels in the market. Hyatt's management plans to shed some of its airline contracts as it achieves more occupancy, so the hotel's competitive indices in this segment will decline.

Exhibit 4.37 shows the projected competitive indices for the Hyatt Hotel. The commercial segment is expected to reach a competitive index of just below the Hilton, stabilizing at 75% compared to the Hilton's 86%. Both the Hilton and Hyatt are focused on capturing the meeting and group market and will continue to focus less on the commercial traveler. With newer facilities, the Hyatt should dominate the meeting and group market and achieve a stabilized competitive index of 180. In the leisure segment, the Hyatt's water park has already attracted weekend and holiday vacationers, so the competitive index in this segment should grow slightly and stabilize at 165%. The Hyatt will further decrease its participation in the airline segment, with the competitive index stabilizing at 45%, the lowest level in the market.

The composition and competitiveness of the secondary competition is not expected to change over the projection period, so the consolidated market penetration factors presently achieved by these properties should continue at the current levels into the future. In addition to these existing hotels, two new hotels are expected to enter the competitive set over the near term.

The proposed Marriott hotel is expected to open at the beginning of 2014, the second projection year. It is located near

all the major businesses and the convention center. The Marriott will reportedly be designed as a commercial/convention-oriented hotel, with approximately the same amount of meeting space as the existing Hilton Hotel but less than the new Hyatt Hotel. Its management plans to go after both the meeting/group and commercial segments in a manner that will maximize rooms revenue by not displacing as much of the higher-rated commercial demand with lower-priced meeting and group patronage. Its competitive indices in the commercial segment are expected to stabilize above the InterContinental Hotel. With its new meeting facilities, the Marriott should be more competitive than the Hilton for meeting and group business. It should also perform well in the leisure segment, since it is also located within walking distance of several museums and tourist attractions. Marriott management has no plans to pursue the lower-rated airline segment. Based on this analysis, the market penetration factors projected for the proposed Marriott hotel are set forth in Exhibit 4.38.

The *W* Hotel is expected to open on June 2, 2015 (midway through the third projection year), and to cater to the high-end commercial and leisure traveler. Plans call for limited meeting space. The *W* has an excellent location near the proposed Marriott hotel and is expected to be highly competitive in both the commercial and leisure segments. It will derive some meeting and group business but will not go after any airline contracts. Based on this analysis, the competitive indices projected for the *W* Hotel are set forth in Exhibit 4.39.

Exhibit 4.40 shows the competitive indices forecasted for each existing and new hotel by market segment, over the projection period.

Exhibit 4.37 Competitive Index—Hyatt							
Segment	Year						
	Base 2012	2013	2014	2015	2016	2017	2018
Commercial	39.0%	50.0%	60.0%	75.0%	75.0%	75.0%	75.0%
Meeting & group	164.0	170.0	175.0	180.0	180.0	180.0	180.0
Leisure	161.0	165.0	165.0	165.0	165.0	165.0	165.0
Airline	53.0	53.0	55.0	50.0	45.0	45.0	45.0

**Exhibit 4.38 Competitive Index—Proposed Marriott**

Segment	Year						
	Base 2012	2013	2014	2015	2016	2017	2018
Commercial	—	—	120.0%	130.0%	135.0%	135.0%	135.0%
Meeting & group	—	—	120.0	130.0	140.0	140.0	140.0
Leisure	—	—	110.0	120.0	130.0	130.0	130.0
Airline	—	—	0.0	0.0	0.0	0.0	0.0

**Exhibit 4.39 Competitive Index—Proposed W**

Segment	Year						
	Base 2012	2013	2014	2015	2016	2017	2018
Commercial	—	—	—	140.0%	150.0%	160.0%	160.0%
Meeting & group	—	—	—	55.0	60.0	65.0	65.0
Leisure	—	—	—	140.0	150.0	160.0	160.0
Airline	—	—	—	0.0	0.0	0.0	0.0

**Exhibit 4.40 Historical and Projected Competitive Index by Segment**

	Year						
	Base 2012	2013	2014	2015	2016	2017	2018
<b>Commercial Segment</b>							
InterContinental	118.0%	118.0%	118.0%	118.0%	118.0%	118.0%	118.0%
Hilton	86.0	86.0	86.0	86.0	86.0	86.0	86.0
Sheraton	91.0	85.0	80.0	75.0	70.0	70.0	70.0
Hyatt	39.0	50.0	60.0	75.0	75.0	75.0	75.0
Secondary competition	152.0	152.0	152.0	152.0	152.0	152.0	152.0
<b>New Hotels</b>							
Marriott (subject)	—	—	120	130	135	135	135
W	—	—	—	140	150	160	160
<b>Meeting and Group Segment</b>							
InterContinental	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Hilton	128.0	128.0	128.0	128.0	128.0	128.0	128.0
Sheraton	86.0	80.0	75.0	70.0	70.0	70.0	70.0
Hyatt	164.0	170.0	175.0	180.0	180.0	180.0	180.0
Secondary competition	39.0	39.0	39.0	39.0	39.0	39.0	39.0
<b>New Hotels</b>							
Marriott (subject)	—	—	120	130	140	140	140
W	—	—	—	55	60	65	65
<b>Leisure Segment</b>							
InterContinental	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
Hilton	107.0	107.0	107.0	107.0	107.0	107.0	107.0
Sheraton	101.0	101.0	101.0	101.0	101.0	101.0	101.0
Hyatt	161.0	165.0	165.0	165.0	165.0	165.0	165.0
Secondary competition	117.0	117.0	117.0	117.0	117.0	117.0	117.0
<b>New Hotels</b>							
Marriott (subject)	—	—	110	120	130	130	130
W	—	—	—	140	150	160	160
<b>Airline Segment</b>							
InterContinental	54.0%	54.0%	54.0%	54.0%	54.0%	54.0%	54.0%
Hilton	118.0	118.0	118.0	118.0	118.0	118.0	118.0
Sheraton	168.0	175.0	180.0	195.0	195.0	195.0	195.0
Hyatt	53.0	53.0	55.0	50.0	45.0	45.0	45.0
Secondary competition	65.0	65.0	65.0	65.0	65.0	65.0	65.0
<b>New Hotels</b>							
Marriott (subject)	—	—	0	0	0	0	0
W	—	—	—	0	0	0	0



The competitive indices form the basis for calculating the market share of each hotel within the market. Once the market share is known, the number of room nights captured by each hotel can be projected, which then leads to an estimate of occupancy.

The process of converting the competitive indices projections into an occupancy forecast includes the following steps:

1. Fair share calculations are performed to determine the fair share for each hotel in the market over the projection period. Because the market-wide inventory commonly changes year to year due to the opening of new hotels, fair share levels generally shift over the projection period.
2. For each hotel, the market competitive index is multiplied by its appropriate fair share, resulting in the market share adjuster. The market share adjuster is then divided by the total of all the market share adjusters for the area's competitive hotels. This calculation results in each property's market share percentage. These calculations are performed separately for each segment, by year.
3. The segmented market share percentages are then multiplied by the total market demand for each segment. This step produces the actual room nights captured by each hotel in each market segment.

4. The room nights captured by segment are added to obtain the total room night capture for each hotel.
5. Each property's occupancy rate is then determined by dividing the total room nights captured by the hotel's number of available rooms per year (room count  $\times$  365).

Exhibit 4.41 sets forth the fair share factors calculated for each of the hotels in the competitive market. Note that the sum of all the fair share factors always equals 100%.

Exhibit 4.42 demonstrates the calculation of the market share adjuster associated with the InterContinental, by segment, for each projection year. The competitive index is multiplied by the fair share factor to produce the market share adjuster.

In Exhibit 4.43, the market share adjusters for each segment and for each competitive hotel are set forth. Note that the sum of the market share adjusters is generally in the range of, but not equal to, 100%.

Exhibit 4.44 demonstrates how the InterContinental's market share adjusters are converted into market share percentages. In each segment and in each year, the InterContinental's market share adjuster is divided by the sum of all market share adjusters.

In Exhibit 4.45, the market share percentages for each segment and for each competitive hotel are set forth. In this portion of the analysis, the sum of the market share percentages is always 100%.

**Exhibit 4.41 Historical and Projected Fair Share Factors**

Hotel	Year						
	Base 2012	2013	2014	2015	2016	2017	2018
InterContinental	19.1%	17.0%	14.6%	13.7%	13.1%	13.1%	13.1%
Hilton	26.2	23.4	20.0	18.8	18.0	18.0	18.0
Sheraton	23.8	21.3	18.2	17.1	16.4	16.4	16.4
Hyatt	11.9	21.3	18.2	17.1	16.4	16.4	16.4
Secondary	19.0	17.0	14.5	13.6	13.1	13.1	13.1
<b>New Hotels</b>							
Marriott (subject)	—	—	14.6	13.7	13.1	13.1	13.1
W	—	—	—	6.0	9.8	9.8	9.8
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%





**Exhibit 4.42 Market Share Adjusters—InterContinental**

	Year					
	2013	2014	2015	2016	2017	2018
<b>Competitive Index</b>						
Commercial	118.0%	118.0%	118.0%	118.0%	118.0%	118.0%
Meeting & group	100.0	100.0	100.0	100.0	100.0	100.0
Leisure	33.0	33.0	33.0	33.0	33.0	33.0
Airline	54.0	54.0	54.0	54.0	54.0	54.0
<b>Fair Share Factor</b>						
Commercial	17.0%	14.6%	13.7%	13.1%	13.1%	13.1%
Meeting & group	17.0	14.6	13.7	13.1	13.1	13.1
Leisure	17.0	14.6	13.7	13.1	13.1	13.1
Airline	17.0	14.6	13.7	13.1	13.1	13.1
<b>Market Share Adjuster</b>						
Commercial	20.11%	17.18%	16.15%	15.49%	15.49%	15.49%
Meeting & group	17.04	14.56	13.68	13.13	13.13	13.13
Leisure	5.62	4.80	4.52	4.33	4.33	4.33
Airline	9.20	7.86	7.39	7.09	7.09	7.09
Example: Commercial segment	118.0%	Competitive index				
	× <u>17.0</u>	Fair share factor				
	20.11%	Market share adjuster				

**Exhibit 4.43 Market Share Adjusters by Segment**

	Year					
	2013	2014	2015	2016	2017	2018
<b>Commercial Segment</b>						
InterContinental	20.1%	17.2%	16.1%	15.5%	15.5%	15.5%
Hilton	20.1	17.2	16.2	15.5	15.5	15.5
Sheraton	18.1	14.6	12.8	11.5	11.5	11.5
Hyatt	10.6	10.9	12.8	12.3	12.3	12.3
Secondary	25.8	22.0	20.7	19.9	19.9	19.9
<b>New Hotels</b>						
Marriott (subject)	—	17.5	17.8	17.7	17.7	17.7
W	—	—	8.4	14.8	15.8	15.8
Total	94.8%	99.4%	104.9%	107.1%	108.1%	108.1%
<b>Meeting and Group Segment</b>						
InterContinental	17.0%	14.6%	13.7%	13.1%	13.1%	13.1%
Hilton	30.0	25.6	24.1	23.1	23.1	23.1
Sheraton	17.0	13.6	12.0	11.5	11.5	11.5
Hyatt	36.2	31.8	30.8	29.5	29.5	29.5
Secondary	6.6	5.6	5.3	5.1	5.1	5.1
<b>New Hotels</b>						
Marriott (subject)	—	17.5	17.8	18.4	18.4	18.4
W	—	—	3.3	5.9	6.4	6.4
Total	106.9%	108.8%	106.9%	106.6%	107.1%	107.1%
<b>Leisure Segment</b>						
InterContinental	5.6%	4.8%	4.5%	4.3%	4.3%	4.3%
Hilton	25.1	21.4	20.1	19.3	19.3	19.3
Sheraton	21.5	18.4	17.3	16.6	16.6	16.6
Hyatt	35.1	30.0	28.2	27.1	27.1	27.1
Secondary	19.8	16.9	15.9	15.3	15.3	15.3
<b>New Hotels</b>						
Marriott (subject)	—	16.0	16.4	17.1	17.1	17.1
W	—	—	8.4	14.8	15.8	15.8
Total	107.2%	107.6%	110.9%	114.4%	115.4%	115.4%
<b>Airline Segment</b>						
InterContinental	9.2%	7.9%	7.4%	7.1%	7.1%	7.1%
Hilton	27.6	23.6	22.2	21.3	21.3	21.3
Sheraton	37.3	32.8	33.4	32.0	32.0	32.0
Hyatt	11.3	10.0	8.6	7.4	7.4	7.4
Secondary	11.0	9.4	8.8	8.5	8.5	8.5
<b>New Hotels</b>						
Marriott (subject)	—	0.0	0.0	0.0	0.0	0.0
W	—	—	0.0	0.0	0.0	0.0
Total	96.4%	83.7%	80.3%	76.2%	76.2%	76.2%



**Exhibit 4.44 Market Share Percentages—InterContinental**

	Year					
	2013	2014	2015	2016	2017	2018
Commercial						
Market share adjuster	20.11%	17.18%	16.15%	15.49%	15.49%	15.49%
÷ Total of all market share adjusters	<u>94.8</u>	<u>99.4</u>	<u>104.9</u>	<u>107.1</u>	<u>108.1</u>	<u>108.1</u>
Market share	21.21	17.29	15.39	14.46	14.32	14.32
Meeting & group						
Market share adjuster	17.04%	14.56%	13.68%	13.13%	13.13%	13.13%
÷ Total of all market share adjusters	<u>106.9</u>	<u>108.8</u>	<u>106.9</u>	<u>106.6</u>	<u>107.1</u>	<u>107.1</u>
Market share	15.94	13.38	12.80	12.31	12.25	12.25
Leisure						
Market share adjuster	5.62%	4.80%	4.52%	4.33%	4.33%	4.33%
÷ Total of all market share adjusters	<u>107.2</u>	<u>107.6</u>	<u>110.9</u>	<u>114.4</u>	<u>115.4</u>	<u>115.4</u>
Market share	5.25	4.47	4.07	3.79	3.75	3.75
Leisure						
Market share adjuster	9.20%	7.86%	7.39%	7.09%	7.09%	7.09%
÷ Total of all market share adjusters	<u>96.4</u>	<u>83.7</u>	<u>80.3</u>	<u>76.2</u>	<u>76.2</u>	<u>76.2</u>
Market share	9.54	9.40	9.20	9.30	9.30	9.30

**Exhibit 4.45 Market Share Percentages by Segment**

	Year					
	2013	2014	2015	2016	2017	2018
Commercial Segment						
InterContinental	21.21%	17.29%	15.39%	14.46%	14.32%	14.32%
Hilton	21.26	17.33	15.43	14.49	14.36	14.36
Sheraton	19.10	14.65	12.23	10.72	10.62	10.62
Hyatt	11.24	10.99	12.23	11.49	11.38	11.38
Secondary	27.2	22.2	19.7	18.5	18.4	18.4
New Hotels						
Marriott (subject)	—	17.6	17.0	16.5	16.4	16.4
W	—	0.0	8.0	13.8	14.6	14.6
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Meeting and Group Segment						
InterContinental	15.94%	13.38%	12.80%	12.31%	12.25%	12.25%
Hilton	28.06	23.55	22.52	21.67	21.57	21.57
Sheraton	15.94	12.55	11.20	10.77	10.72	10.72
Hyatt	33.88	29.27	28.79	27.70	27.57	27.57
Secondary	6.2	5.2	5.0	4.8	4.8	4.8
New Hotels						
Marriott (subject)	—	16.1	16.6	17.2	17.2	17.2
W	—	0.0	3.1	5.5	6.0	6.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Leisure Segment						
InterContinental	5.25%	4.47%	4.07%	3.79%	3.75%	3.75%
Hilton	23.39	19.91	18.15	16.88	16.74	16.74
Sheraton	20.07	17.08	15.57	14.49	14.36	14.36
Hyatt	32.79	27.91	25.44	23.67	23.46	23.46
Secondary	18.5	15.8	14.4	13.4	13.2	13.2
New Hotels						
Marriott (subject)	—	14.9	14.8	14.9	14.8	14.8
W	—	0.0	7.6	12.9	13.7	13.7
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Airline Segment						
InterContinental	9.54%	9.40%	9.20%	9.30%	9.30%	9.30%
Hilton	28.67	28.23	27.63	27.93	27.93	27.93
Sheraton	38.65	39.15	41.51	41.96	41.96	41.96
Hyatt	11.71	11.96	10.64	9.68	9.68	9.68
Secondary	11.43	11.25	11.01	11.13	11.13	11.13
New Hotels						
Marriott (subject)	—	0.00	0.0	0.0	0.0	0.0
W	—	—	0.0	0.0	0.0	0.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



## Room Nights Captured

In an appraisal assignment involving estimating the market value of the various assets comprising the business, the projected room nights captured by any hotel can be calculated by multiplying the hotel's market share percentage by the total room night demand for the corresponding segment. This process is repeated for each market segment, and the results are totaled to yield the number of room nights captured.

### Case Study

#### Room Nights Captured

Exhibit 4.46 demonstrates how the market share percentages calculated for the InterContinental are converted into an estimate of room nights captured by segment. In each year and by each segment, the InterContinental's market share ratio is multiplied by the segmented market-wide demand levels.

In Exhibit 4.47, the segmented room night capture levels for each of the competitive hotels are set forth. In the final table in this exhibit, the segmented demand levels are summed and presented as total room night capture.

In the case of the InterContinental, the occupancy rate is calculated in Exhibit 4.48. The total capture is divided by the number of room nights available per year. This table also identifies the demand segmentation and the overall penetration factor projected

for the hotel. Demand segmentation calculations are based on the property's segmented demand forecast. The overall penetration factor is calculated by dividing the overall market share by the hotel's fair share.

Exhibit 4.49 sets forth the same set of data and conclusions as Exhibit 4.48, although this table pertains to the projections for the proposed Marriott. As indicated, the Marriott is expected to realize an overall penetration factor of approximately 98% in its initial year of operation, improving to approximately 109% in its third year of operation. These penetration factors reflect a normal occupancy buildup for new properties like the proposed Marriott.

Demand capture levels for each competitive hotel have been divided by their respective supply levels, rendering a forecast of occupancy over the projection period. The results are set forth in Exhibit 4.50.

**Exhibit 4.46 Room Nights Captured—InterContinental**

	Year					
	2013	2014	2015	2016	2017	2018
<b>Commercial</b>						
Market-wide demand	144,893	153,176	159,303	165,675	170,645	175,764
Market share	21.21%	17.29%	15.39%	14.46%	14.32%	14.32%
Room nights captured	30,737	26,484	24,521	23,951	24,445	25,178
<b>Meeting &amp; Group</b>						
Market-wide demand	81,469	85,099	109,354	93,822	98,513	102,454
Market share	15.94%	13.38%	12.80%	12.31%	12.25%	12.25%
Room nights captured	12,987	11,387	13,993	11,550	12,072	12,555
<b>Leisure</b>						
Market-wide demand	40,400	41,521	42,766	44,263	45,812	47,186
Market share	5.25%	4.47%	4.07%	3.79%	3.75%	3.75%
Room nights captured	2,119	1,854	1,741	1,676	1,720	1,771
<b>Airline</b>						
Market-wide demand	42,569	47,239	50,509	47,705	48,199	48,703
Market share	9.54%	9.40%	9.20%	9.30%	9.30%	9.30%
Room nights captured	4,062	4,439	4,645	4,434	4,480	4,527
Total capture	49,906	44,164	44,900	41,611	42,717	44,031



**Exhibit 4.47 Room Nights Captured by Segment**

	Year					
	2013	2014	2015	2016	2017	2018
<b>Commercial Segment</b>						
InterContinental	30,737	26,484	24,521	23,951	24,445	25,178
Hilton	30,802	26,540	24,573	24,002	24,497	25,231
Sheraton	27,677	22,444	19,482	17,760	18,126	18,670
Hyatt	16,280	16,833	19,482	19,029	19,421	20,004
Secondary	39,396	33,944	31,429	30,698	31,331	32,271
<b>New Hotels</b>						
Marriott (subject)	—	26,932	27,015	27,401	27,966	28,805
W	—	—	12,801	22,835	24,859	25,605
Total	144,893	153,176	159,303	165,675	170,645	175,764
<b>Meeting and Group Segment</b>						
InterContinental	12,987	11,387	13,993	11,550	12,072	12,555
Hilton	22,857	20,042	24,627	20,328	21,246	22,096
Sheraton	12,987	10,676	12,244	10,106	10,563	10,985
Hyatt	27,598	24,910	31,484	25,988	27,162	28,248
Secondary	5,040	4,419	5,430	4,482	4,684	4,872
<b>New Hotels</b>						
Marriott (subject)	—	13,665	18,191	16,170	16,901	17,577
W	—	—	3,386	5,198	5,885	6,120
Total	81,469	85,099	109,354	93,822	98,513	102,454
<b>Leisure Segment</b>						
InterContinental	2,119	1,854	1,741	1,676	1,720	1,771
Hilton	9,449	8,266	7,762	7,472	7,668	7,898
Sheraton	8,108	7,093	6,660	6,412	6,580	6,777
Hyatt	13,246	11,588	10,881	10,475	10,749	11,071
Secondary	7,477	6,540	6,142	5,912	6,067	6,249
<b>New Hotels</b>						
Marriott (subject)	—	6,180	6,331	6,602	6,775	6,978
W	—	—	3,250	5,714	6,254	6,441
Total	40,400	41,521	42,766	44,263	45,812	47,186
<b>Airline Segment</b>						
InterContinental	4,062	4,439	4,645	4,434	4,480	4,527
Hilton	12,204	13,337	13,957	13,324	13,462	13,603
Sheraton	16,454	18,495	20,967	20,017	20,224	20,435
Hyatt	4,983	5,651	5,376	4,619	4,667	4,716
Secondary	4,865	5,316	5,563	5,311	5,366	5,422
<b>New Hotels</b>						
Marriott (subject)	—	0	0	0	0	0
W	—	—	0	0	0	0
Total	42,569	47,239	50,509	47,705	48,199	48,703
<b>Total Room Night Capture</b>						
InterContinental	49,906	44,164	44,900	41,611	42,717	44,031
Hilton	75,313	68,185	70,919	65,126	66,872	68,828
Sheraton	65,227	58,708	59,353	54,295	55,493	56,868
Hyatt	62,108	58,982	67,223	60,111	61,999	64,039
Secondary	56,777	50,220	48,564	46,403	47,448	48,814
<b>New Hotels</b>						
Marriott (subject)	—	46,777	51,536	50,174	51,642	53,360
W	—	—	19,437	33,746	36,998	38,167
Total	309,331	327,035	361,932	351,465	363,169	374,107



**Exhibit 4.48 Projected Occupancy, Segmentation, Overall Penetration—InterContinental**

	Year					
	2013	2014	2015	2016	2017	2018
Commercial	30,737	26,484	24,521	23,951	24,445	25,178
Meeting & group	12,987	11,387	13,993	11,550	12,072	12,555
Leisure	2,119	1,854	1,741	1,676	1,720	1,771
Airline	4,062	4,439	4,645	4,434	4,480	4,527
Total capture	49,906	44,164	44,900	41,611	42,717	44,031
Available room nights	73,000	73,000	73,000	73,000	73,000	73,000
Occupancy rate	68.36%	60.50%	61.51%	57.00%	58.52%	60.32%
Rounded	68%	60%	62%	57%	59%	60%
<b>Demand Segmentation</b>						
Commercial	62%	60%	55%	58%	57%	57%
Meeting & group	26%	26%	31%	28%	28%	29%
Leisure	4%	4%	4%	4%	4%	4%
Airline	8%	10%	10%	11%	10%	10%
Total	100%	100%	100%	100%	100%	100%
Subject capture	49,906	44,164	44,900	41,611	42,717	44,031
÷ Market-wide demand	309,331	327,035	361,932	351,465	363,169	374,107
Subject market share	16.13%	13.50%	12.41%	11.84%	11.76%	11.77%
Subject room count	200	200	200	200	200	200
÷ Market-wide supply	1,174	1,374	1,462	1,524	1,524	1,524
Subject fair share	17.04%	14.56%	13.68%	13.13%	13.13%	13.13%
Overall penetration	94.68%	92.76%	90.67%	90.20%	89.61%	89.67%

**Exhibit 4.49 Projected Occupancy, Segmentation, and Overall Penetration—Proposed Marriott**

	Year					
	2013	2014	2015	2016	2017	2018
Commercial	—	26,932	27,015	27,401	27,966	28,805
Meeting & group	—	13,665	18,191	16,170	16,901	17,577
Leisure	—	6,180	6,331	6,602	6,775	6,978
Airline	—	0	0	0	0	0
Total capture	—	46,777	51,536	50,174	51,642	53,360
Available room nights	—	73,000	73,000	73,000	73,000	73,000
Occupancy rate	—	64.08%	70.60%	68.73%	70.74%	73.10%
Rounded	—	64%	71%	69%	71%	73%
<b>Demand Segmentation</b>						
Commercial	—	58%	52%	55%	54%	54%
Meeting & group	—	29%	35%	32%	33%	33%
Leisure	—	13%	12%	13%	13%	13%
Airline	—	0%	0%	0%	0%	0%
Total	—	100%	100%	100%	100%	100%
Subject capture	—	46,777	51,536	50,174	51,642	53,360
÷ Market-wide demand	—	327,035	361,932	351,465	363,169	374,107
Subject market share	—	14.30%	14.24%	14.28%	14.22%	14.26%
Subject room count	—	200	200	200	200	200
÷ Market-wide supply	—	1,374	1,462	1,524	1,524	1,524
Subject fair share	—	14.56%	13.68%	13.13%	13.13%	13.13%
Overall penetration	—	98.25%	104.07%	108.76%	108.34%	108.67%



## Exhibit 4.50 Occupancy Projections—All Hotels

Hotel	Year							
	2013	2014	2015	2016	2017	2018	2019	2020
InterContinental	68.4%	60.5%	61.5%	57.0%	58.5%	60.3%	62.0%	63.7%
Hilton	75.0	67.9	70.7	64.9	66.6	68.6	70.3	72.1
Sheraton	71.5	64.3	65.0	59.5	60.8	62.3	63.7	65.2
Hyatt	68.1	64.6	73.7	65.9	67.9	70.2	72.1	74.1
Secondary	78.2	69.1	66.9	63.9	65.3	67.2	69.0	70.9
<b>New Hotels</b>								
Marriott (subject)	—	64.1	70.6	68.7	70.7	73.1	75.2	77.4
W	—	—	60.5	61.6	67.6	69.7	71.7	73.8

## Hotel Valuation Software

Continuing where we left off with the RNAADR software, the competitive indices for each segment for each hotel are entered in the Competitive Indices Input screen. The following screenshot shows the initial view for the commercial segment. The hotels are listed on the left side with their respective competitive indices as of the base year (2012). The white input cells are used to enter the competitive indices for future years.

**Competitive Indices Input**

Adjustments can be made to the subsequent years by manually changing the value in the cells. If changes are made you must click the 'Save Input' button. To revert the segment to the original values click the 'Reset Sheet' button. This button will seed the values in the first column. If you want to keep those values you must SAVE them.

Please Select The Market Segment You Wish To View: **Commercial**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>Secondary Competitors</b>	132%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
InterContinental	118%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Hilton	86%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Sheraton	91%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Hyatt	39%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Marriott	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Long Term Supply Growth</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

[Reset Sheet](#) [Save Input](#) [Go Back](#) [Continue](#)

The following screenshot shows that by clicking the “Reset Sheet” button on the right side of the screen, each hotel’s competitive indices in the green cells are spread across the white cells for the projection period.

**Competitive Indices Input**

Adjustments can be made to the subsequent years by manually changing the value in the cells. If changes are made you must click the 'Save Input' button. To revert the segment to the original values click the 'Reset Sheet' button. This button will seed the values in the first column. If you want to keep those values you must SAVE them.

Please Select The Market Segment You Wish To View: **Commercial**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>Secondary Competitors</b>	132%	132%	132%	132%	132%	132%	132%	132%	132%	132%	132%
InterContinental	118%	118%	118%	118%	118%	118%	118%	118%	118%	118%	118%
Hilton	86%	86%	86%	86%	86%	86%	86%	86%	86%	86%	86%
Sheraton	91%	91%	91%	91%	91%	91%	91%	91%	91%	91%	91%
Hyatt	39%	39%	39%	39%	39%	39%	39%	39%	39%	39%	39%
Marriott	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Long Term Supply Growth</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

[Reset Sheet](#) [Save Input](#) [Go Back](#) [Continue](#)

The next screenshot shows the adjustments for any changes in the competitive indices for a specific property. For example, the 118% commer-



cial competitive index for the InterContinental stays the same throughout the projection period, so no change is required to the InterContinental’s white cells. The same applies for the secondary competitors and the Hilton.

The Hyatt hotel is projected to increase its commercial competitive indices as follows: by 50% in 2013, by 60% in 2014, and by 75% in 2015. These values are entered into the appropriate white cells. Each time a new competitive index is entered, the software assumes that it will become the stabilized competitive index and automatically spreads that value to the white cells to the right. If that is not the stabilized competitive index, the analyst simply keeps adding new indices until stabilization is reached. The Hyatt’s stabilized commercial competitive index is 75%.

The Sheraton will experience declining competitive indices over the projection period, so its competitive index needs to be adjusted for the appropriate years.

The Marriott Hotel will open during 2014, and the *W* is expected to open in 2015. The analyst should input their competitive indices on those years.

Once all of the competitive indices have been entered, *click on the “Save Input” button*. This step is important because if the inputs are not saved, everything that was entered will be lost and will need to be re-entered. Click on the “Reset Sheet” button to go back to having the competitive indices for the base year spread across all the white cells.

Competitive Indices Input

Adjustments can be made to the subsequent years by manually changing the value in the cells. If changes are made you must click the 'Save Input' button. To revert the segment to the original values click the 'Reset Sheet' button. This button will seed the values in the first column. If you want to keep those values you must SAVE them.

Please Select The Market Segment You Wish To View:

Commercial

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Secondary Competitors	152%	152%	152%	152%	152%	152%	152%	152%	152%	152%	152%
InterContinental	118%	118%	118%	118%	118%	118%	118%	118%	118%	118%	118%
Hilton	86%	86%	86%	86%	86%	86%	86%	86%	86%	86%	86%
Sheraton	91%	85%	80%	75%	70%	70%	70%	70%	70%	70%	70%
Hyatt	39%	50%	60%	75%	75%	75%	75%	75%	75%	75%	75%
Marriott	0%	0%	120%	130%	135%	135%	135%	135%	135%	135%	135%
W	0%	0%	0%	140%	150%	160%	160%	160%	160%	160%	160%
Long Term Supply Growth	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Reset Sheet

Save Input

Go Back

Continue >

Once the competitive indices have been saved, click on the right side of the “Commercial” market segment box to reveal a down arrow tab; click this tab to show the other market segments (see the following screenshot). Highlight the next segment, which is where the competitive indices will be entered.

Wish To View:

Commercial

Commercial

Meeting & Group

Leisure

Airline

2015

152%

118%

86%

2019

152%

118%

86%

The following screenshot shows how the competitive indices for the meeting and group segment are entered. It is important to click the “Save Input” button once all the competitive indices are entered.



Competitive Indices Input

Adjustments can be made to the subsequent years by manually changing the value in the cells. If changes are made you must click the 'Save Input' button.  
To revert the segment to the original values click the 'Reset Sheet' button. This button will seed the values in the first column. If you want to keep those values you must SAVE them.

Please Select The Market Segment You Wish To View:

Meeting & Group

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Secondary Competitors	39%	39%	39%	39%	39%	39%	39%	39%	39%	39%	39%
InterContinental	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Hilton	128%	128%	128%	128%	128%	128%	128%	128%	128%	128%	128%
Sheraton	86%	86%	76%	76%	70%	70%	70%	70%	70%	70%	70%
Hyatt	164%	170%	175%	180%	180%	180%	180%	180%	180%	180%	180%
Marriott	0%	0%	120%	130%	140%	140%	140%	140%	140%	140%	140%
W	0%	0%	0%	55%	60%	65%	65%	65%	65%	65%	65%
Long Term Supply Growth	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Reset Sheet

Save Input

Go Back

Continue >

The next screenshot shows how the competitive indices for the leisure segment are entered. It is important to click the “Save Input” button once all the competitive indices are entered.

Competitive Indices Input

Adjustments can be made to the subsequent years by manually changing the value in the cells. If changes are made you must click the 'Save Input' button.  
To revert the segment to the original values click the 'Reset Sheet' button. This button will seed the values in the first column. If you want to keep those values you must SAVE them.

Please Select The Market Segment You Wish To View:

Leisure

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Secondary Competitors	117%	117%	117%	117%	117%	117%	117%	117%	117%	117%	117%
InterContinental	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%
Hilton	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%
Sheraton	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%
Hyatt	161%	165%	165%	165%	165%	165%	165%	165%	165%	165%	165%
Marriott	0%	0%	110%	120%	130%	130%	130%	130%	130%	130%	130%
W	0%	0%	0%	140%	150%	160%	160%	160%	160%	160%	160%
Long Term Supply Growth	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Reset Sheet

Save Input

Go Back

Continue >

The next screenshot shows how the competitive indices for the airline segment are entered. Again, it is important to click the “Save Input” button once all the competitive indices are entered.

Competitive Indices Input

Adjustments can be made to the subsequent years by manually changing the value in the cells. If changes are made you must click the 'Save Input' button.  
To revert the segment to the original values click the 'Reset Sheet' button. This button will seed the values in the first column. If you want to keep those values you must SAVE them.

Please Select The Market Segment You Wish To View:

Airline

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Secondary Competitors	63%	63%	63%	63%	63%	63%	63%	63%	63%	63%	63%
InterContinental	54%	54%	54%	54%	54%	54%	54%	54%	54%	54%	54%
Hilton	118%	118%	118%	118%	118%	118%	118%	118%	118%	118%	118%
Sheraton	168%	175%	180%	195%	195%	195%	195%	195%	195%	195%	195%
Hyatt	53%	53%	55%	50%	45%	45%	45%	45%	45%	45%	45%
Marriott	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Long Term Supply Growth	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Reset Sheet

Save Input

Go Back

Continue >

Once all the competitive indices have been entered for all the segments, the Final Output screens can be reviewed.

The following screenshot shows the Final Output screen for the Marriott. The first row is the projected occupancy for each year. When the Marriott opens in 2014, its occupancy is projected to be 64% for that year. The next row, labeled “Market Share,” represents 14.3% for 2014. This market share is the total room nights captured by the Marriott for all market segments, divided by the total room nights of demand in the market. The “Fair Share” row shows the room count of the Marriott divided by the total number of rooms in the market, which for the Marriott is 14.56% in 2014. The “Penetration” row shows the market share divided by the fair share, which for the Marriott is 98.25% in 2014, showing that in its first year the Marriott’s share



of the market is slightly below that of the average hotel in the market. For the first year of operation, a 98% penetration is very good. By its third year of operation, the Marriott is projected to achieve a 108% penetration rate.

The next group of numbers is labeled “Room Nights by Segment,” which shows the number of room nights captured by the Marriott for each segment. The next group of numbers is the “Breakdown by Segment,” showing the Marriott’s market share, fair share, and penetration for each market segment. This data show that, in its third year of operation, the Marriott is projected to have the highest penetration in the meeting and group segment, with the penetration stabilizing around 131%. Its commercial segment penetration is also a strong 126%. Leisure penetration is over 115%, and it is anticipated that the Marriott management will decide not to pursue the airline segment. The last row, labeled “Market Occupancy,” can be used for comparison purposes.

Hospitality Valuation Software		Final Output											
Contents		Property Analysis											
Info		Subject Property Name: Marriott (Proposed Property)											
Project Information		Subject Property Projections											
Market Segments		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Primary Competitors		N/A	N/A	64.08%	0.60%	45.73%	70.74%	9.10%	75.24%	77.45%	79.72%	82.06%	
Primary Prop. Data		N/A	0.00%	14.30%	14.24%	14.28%	14.22%	14.26%	14.30%	14.33%	14.37%	14.40%	
Estimated Market Segmentation		N/A	0.00%	14.50%	13.68%	13.13%	13.13%	13.13%	13.13%	13.13%	13.13%	13.13%	
Primary Room Nights		N/A	0.00%	98.21%	104.07%	108.76%	108.34%	108.67%	108.93%	109.20%	109.43%	109.70%	
Secondary Competitors		Room Nights by Segment											
Secondary Property Data		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Secondary Market Segmentation		0	0	15,932	27,013	27,401	27,966	28,603	29,870	30,560	31,476	32,421	
Demand Base Year		0	0	13,665	18,191	16,170	16,901	17,577	18,104	18,647	19,206	19,781	
Competitive Indices		0	0	6,180	6,331	6,602	6,775	6,978	7,153	7,331	7,511	7,693	
Accommodated Demand		0	0	0	0	0	0	0	0	0	0	0	
Latent Demand		0	0	0	0	0	0	0	0	0	0	0	
Historical Market Growth Rates		TOTAL											
Demand Growth Rates		0	0	46,777	51,338	50,174	51,642	53,300	54,926	56,538	58,198	59,900	
Proposed Hotels		Breakdown by Segment											
Proposed Data		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Additions To Supply		Commercial											
Competitive Indices Input		Market Share	0.00%	17.58%	16.96%	16.54%	16.39%	16.39%	16.39%	16.39%	16.39%	16.39%	
Final Output		Fair Share	N/A	0.00%	14.50%	13.68%	13.13%	13.13%	13.13%	13.13%	13.13%	13.13%	
Launch ADR Module		Penetration		120.77%	123.94%	126.01%	124.86%	124.86%	124.86%	124.86%	124.86%	124.86%	
		Meeting & Group											
		Market Share	0.00%	16.06%	16.63%	17.23%	17.16%	17.16%	17.16%	17.16%	17.16%	17.16%	
		Fair Share	N/A	0.00%	14.56%	13.68%	13.13%	13.13%	13.13%	13.13%	13.13%	13.13%	
		Penetration		110.30%	121.58%	131.33%	130.71%	130.71%	130.71%	130.71%	130.71%	130.71%	
		Leisure											
		Market Share	0.00%	0.00%	14.80%	14.92%	14.79%	14.79%	14.79%	14.79%	14.79%	14.79%	
		Fair Share	N/A	0.00%	14.56%	13.68%	13.13%	13.13%	13.13%	13.13%	13.13%	13.13%	
		Penetration			102.24%	108.19%	113.64%	112.67%	112.67%	112.67%	112.67%	112.67%	
		Airline											
		Market Share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
		Fair Share	N/A	0.00%	14.56%	13.68%	13.13%	13.13%	13.13%	13.13%	13.13%	13.13%	
		Penetration			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
		TOTAL	N/A	N/A	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
		Market Occupancy											
		69.51%	72.20%	65.22%	67.84%	63.19%	63.30%	67.27%	69.07%	70.93%	72.84%	74.80%	

To switch to another hotel’s output screen, see the following box. Clicking on the right side of the box with the Marriott name will show a down arrow. Clicking on the down arrow will reveal the competitive hotels. Highlighting the desired hotel will display it on the output screen.

Marriott	
InterContinental	
Hilton	
Sheridan	
Marriott	
W	

The following is the Final Output screen for the InterContinental Hotel.



## Final Output

### Property Analysis Subject Property Name:

		Marriott (Proposed Property)										
Subject Property Projections		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Occupancy	N/A	N/A	64.08%	70.60%	68.73%	70.74%	73.10%	75.24%	77.45%	79.72%	82.06%	
Market Share	N/A	0.00%	14.30%	14.24%	14.28%	14.22%	14.26%	14.30%	14.33%	14.37%	14.40%	
Fair Share	N/A	0.00%	14.56%	13.68%	13.13%	13.13%	13.13%	13.13%	13.13%	13.13%	13.13%	
Penetration	N/A	0.00%	98.25%	104.07%	108.76%	108.34%	108.67%	108.93%	109.20%	109.45%	109.70%	
Room Nights By Segment		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Commercial	0	0	26,932	27,015	27,401	27,966	28,805	29,670	30,560	31,476	32,421	
Meeting & Group	0	0	13,665	18,191	16,170	16,901	17,577	18,104	18,647	19,206	19,783	
Leisure	0	0	6,180	6,331	6,602	6,773	6,978	7,153	7,331	7,515	7,702	
Airline	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	0	46,777	51,536	50,174	51,642	53,360	54,926	56,538	58,198	59,906	
Breakdown by Segment		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Commercial	Market Share	0.00%	0.00%	17.58%	16.96%	16.54%	16.39%	16.33%	16.39%	16.39%	16.39%	
	Fair Share	N/A	0.00%	14.56%	13.68%	13.13%	13.13%	13.13%	13.13%	13.13%	13.13%	
	Penetration			120.77%	123.94%	126.01%	124.86%	124.86%	124.86%	124.86%	124.86%	
Meeting & Group	Market Share	0.00%	0.00%	16.06%	16.63%	17.23%	17.16%	17.16%	17.16%	17.16%	17.16%	
	Fair Share	N/A	0.00%	14.56%	13.68%	13.13%	13.13%	13.13%	13.13%	13.13%	13.13%	
	Penetration			110.30%	121.58%	131.31%	130.71%	130.71%	130.71%	130.71%	130.71%	
Leisure	Market Share	0.00%	0.00%	14.88%	14.80%	14.92%	14.79%	14.79%	14.79%	14.79%	14.79%	
	Fair Share	N/A	0.00%	14.56%	13.68%	13.13%	13.13%	13.13%	13.13%	13.13%	13.13%	
	Penetration			102.24%	108.19%	113.64%	112.67%	112.67%	112.67%	112.67%	112.67%	
Airline	Market Share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
	Fair Share	N/A	0.00%	14.56%	13.68%	13.13%	13.13%	13.13%	13.13%	13.13%	13.13%	
	Penetration			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
TOTAL	N/A	N/A	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
Market Occupancy		69.51%	72.20%	65.22%	67.84%	63.19%	65.30%	67.27%	69.07%	70.93%	72.84%	74.80%

## Stabilized Occupancy

When projecting a property's room nights captured and occupancy rates into the future, the assumptions of continued growth and no new additions to the competitive supply will usually produce unreasonably high capture and occupancy levels. As a result, appraisers use the concept of a stabilized occupancy.

A property's stabilized occupancy level reflects the anticipated level of occupancy over its remaining economic life, given any or all periods of build-up, plateau, and decline in its life cycle. The concept of stabilized occupancy excludes from consideration any abnormal relationship between supply and demand as well as any transitory or nonrecurring conditions, whether favorable or unfavorable, that may result in unusually high or low levels of occupancy. Although it is common for a hotel to operate at occupancies above its stabilized level for a period of time, it is equally possible that new competition and temporary downturns in the economy could force actual occupancy below stabilized occupancy.

Projections become more uncertain the further into the future they are made. The use of a single stabilized occupancy rate produces comparable results as a forecast that attempts to reflect the inevitable upward and downward occupancy cycles experienced by a typical lodging facility. Furthermore, discounting future economic benefits tends to smooth out the cycle, providing additional support for using a stabilized level of occupancy.

For new hotels like the proposed Marriott described in the case study, a two- to five-year buildup in occupancy is generally factored into the projection. Only 6.3% of hotels stabilize in their initial year of operation. Since the initial years tend to generate operating losses, the build-up period must be included in the projection to illustrate the actual start-up cash requirements.

Many factors influence the selection of a stabilized level of occupancy. The following list identifies several key considerations.

Market-specific considerations:

- Market area demand trends
- Composition of local demand



- Supply and competitive trends
- Historic occupancy cycles

Property-specific considerations:

- Location-specific factors
- Competitiveness
- Age
- Management and image
- Obsolescence

The nature of the local hotel demand is probably the best indicator to analyze in establishing a stabilized level of occupancy. Different types of travelers have different travel patterns (in terms of days of travel, length of stay, and seasonality), so the mix of visitor types within a given market will influence the area’s overall level of occupancy.

For example, assume a market has a very strong business base that generates a significant room night demand Monday through Thursday nights. However, the local area has no leisure attractions, so very few people use the local hotels and motels on Friday and Saturday nights. Some commercial demand is experienced Sunday night as business travelers try to get a head start on Monday’s activities. Because of this occupancy pattern, the maximum market-wide occupancy would be approximately 67%, assuming near sellouts every Monday through Thursday. Exhibit 4.51 illustrates how this maximum occupancy level was established.

Considering market conditions and the nature of the existing lodging demand, a stabilized occupancy rate higher than 67% could not be justified unless the property has competitive or physical attributes that enable it to capture more than its fair share of weekday demand as well as the existing weekend demand.

The historic occupancy cycles experienced in the market area also provide an indication of where the stabilized occupancy rate should fall. Exhibit 4.52 shows the 20-year occupancy cycle of three different hypothetical cities.

Statistical data relating to the 20-year occupancy cycles are shown in Exhibit 4.53. The stabilized occupancy for each of these cities should approximate the average occupancy, which is generally the midpoint between the highest and lowest occupancy levels recorded

Exhibit 4.51 Maximum Occupancy	
Day	Percentage of Occupancy
Monday	80%
Tuesday	85
Wednesday	90
Thursday	80
Friday	30
Saturday	45
Sunday	60
Weekly average	67%

Exhibit 4.52 Twenty-Year Occupancy History			
Year	City A	City B	City C
1	71.0%	72.0%	57.0%
2	66.0	74.0	68.0
3	63.0	76.0	62.0
4	69.0	75.0	56.0
5	60.0	69.0	50.0
6	61.0	68.0	47.0
7	63.0	69.0	49.0
8	66.0	70.0	51.0
9	64.0	69.0	46.0
10	66.0	64.0	57.0
11	68.0	71.0	59.0
12	69.0	71.0	61.0
13	72.0	77.0	63.0
14	72.0	78.0	60.0
15	69.0	76.0	63.0
16	66.0	72.0	62.0
17	59.0	68.0	61.0
18	65.0	68.0	60.0
19	69.0	70.0	57.0
20	70.0	69.0	60.0
Average	66.4%	71.3%	57.5%
Standard deviation	3.8	3.6	5.8

Exhibit 4.53 Occupancy Cycles			
Year	City A	City B	City C
Average occupancy	66.4%	71.3%	57.5%
Highest occupancy	72.0	78.0	68.0
Lowest occupancy	59.0	64.0	46.0
Difference	13.0 pts.	14.0 pts.	22.0 pts.
Standard deviation	3.8	3.6	5.8

during the 20-year period. The following case study illustrates the estimation of stabilized occupancy.

### Case Study

#### Estimating Stabilized Occupancy

The end result of the supply and demand analysis is a yearly estimate of occupancy over a given period of time. The appraiser must now evaluate each yearly occupancy estimate and determine whether it is appropriate for use in the projection of income and expense. This evaluation also includes determination of the subject's stabilized level of occupancy. Exhibit 4.54 shows the yearly occupancy projections for the market at large, the existing InterContinental Hotel, and the proposed Marriott.

Exhibit 4.54      Occupancy Projections			
Year	Market Area	InterContinental	Proposed Marriott
Base 2012	70%	66%	—
2013	72	68	—
2014	65	60	64%
2015	68	62	71
2016	63	57	69
2017	65	59	71
2018	67	60	73
2019	69	62	75
2020	71	64	77

The occupancy for the market area is projected to peak in 2013 at 72% and then decline to a low of approximately 63% in 2016 due to the increase in new supply. Thereafter, market-wide occupancy levels are expected to improve.

Projected occupancy levels for the InterContinental are projected to rise to 68%

Exhibit 4.55      Projected Stabilized Occupancy—InterContinental	
Year	Occupancy Rate
2013	68%
2014	60
2015	62
2016	57
2017	59
2018	60
Stabilized	65

in 2013, then decline substantially to 57% in 2016. Based on the InterContinental's stable market presence, a stabilized occupancy rate of 65% in 2019 is considered to be appropriate. Exhibit 4.55 sets forth the projection of occupancy through the stabilized year for the InterContinental Hotel.

For the proposed Marriott, the new hotel may be expected to reach a stabilized occupancy of 74% as of 2018, its fifth year of operation. Exhibit 4.56 sets forth the projection of occupancy through the stabilized year for the proposed Marriott.

Exhibit 4.56      Projected Stabilized Occupancy—Proposed Marriott	
Year	Occupancy Rate
2014	64%
2015	71
2016	69
2017	71
Stabilized	74

### Average Daily Rate

After occupancy has been estimated, the *average daily rate* (ADR), also known as the *average daily room rate* or *average daily rate per occupied room*, is needed to forecast a hotel's rooms revenue in an appraisal assignment involving estimating the market value of the various assets comprising the business. Like occupancy, the projected average daily rate is derived through market analysis. The ability of a hotel to achieve a satisfactory



average daily rate can affect both its financial feasibility and its market value. Appraisers must understand the definition of average daily rate, how it is estimated, and what factors can affect its future movement.

## Definition

The *average daily rate* (ADR) is defined as the net rooms revenue derived from the sale of guest rooms divided by the number of paid occupied rooms. The *Uniform System of Accounts for Hotels* defines the components of this formula as follows:

- **Net rooms revenue**  
The total rooms revenue less allowances.
- **Allowances**  
Rebates and overcharges or revenue not known at the time of sale but adjusted at a subsequent date. Allowances may also include revenue foregone as a result of hotel promotions or complimentary services.
- **Paid rooms occupied**  
Rooms occupied by hotel guests on a paid basis. It should be noted that the overall ADR does not include any occupancy derived from complimentary rooms.

Since most hotels have many different rate categories depending on the size of the accommodations, view, location, age, condition, and types of travelers served, the ADR represents the weighted average of all these rate categories. Several of the rate categories used by hotels are described as follows.

- **Rack rate**  
An undiscounted room rate generally given to anyone who does not qualify or ask for a special discounted rate. The term is derived from the room rack, a front desk feature that is now less commonly found in the computer age. When a hotel is expected to be full during a certain period or a guest arrives without a reservation, the rack rate is often the only rate available. The ADR is always less than the rack rate.
- **Published rate**  
The rate listed in directories and Internet websites. This rate is usually quoted as a range (for example, \$70-\$100 for a room with a single bed) and represents the various rack rates for specific types of accommodations. Published room rates usually set the upper limits of ADRs, and ADRs tend to be closer to published rates for single rooms than for double rooms.
- **Commercial rate**  
A discounted room rate available to certain commercial travelers. Some hotels will charge any commercial traveler a commercial rate upon request, while others offer it only to established accounts based on their projected volume of hotel usage. Commercial rates often differ because they are individually negotiated between the commercial business and the hotel. Commercial rates are always below the rack and published rates and, depending on the market mix, will often approximate the property's ADR.
- **Contract rate**  
A discounted room rate available to specific high-volume users such as airlines, convention groups, and bus tours. Contract rates are negotiated



by the user and the hotel and often apply to a block of rooms that are reserved on an ongoing basis and paid for whether or not they are used. For example, an airline may contract for 35 rooms per night for a full year. Two crews may use these rooms in a 24-hour period, if scheduling permits, or they may not be used at all if a flight is delayed or canceled. Depending on the amount and timing of the usage, a contract rate may be heavily discounted and fall significantly below both the ADR and the commercial rate.

The mix of business attracted in various rate categories affects the ADR of a hotel. A hotel that caters to a large number of airline crews or convention groups will generally have a lower ADR than a property used primarily by commercial travelers.

Hotel operators continually attempt to maximize their room rates. With computer software that can perform yield management, hotel management can coordinate projected future usage by market segment and employ a continuously sliding scale of room charges to achieve the highest possible room rates. The ability to adjust room rates constantly to maximize the yields produced by changes in room night demand is one of the advantages of hotel investment.

### Forecasting the Average Daily Rate

Different procedures are used to forecast the ADR for existing and proposed hotels. An existing hotel has an operating history that establishes an actual ADR, which serves as a starting point for forecasting future rates. Proposed hotels have no operating history, so the initial ADR rate must be estimated by analyzing the competitive rates actually achieved by local hotels with comparable facilities. The various procedures for forecasting ADRs for existing and proposed hotels are outlined in the following sections.

#### Forecasting Average Daily Rates for Existing and Proposed Hotels

In forecasting ADRs for an existing hotel, the property's operating history is used as a starting point, and future rate changes are forecasted based on market conditions and the property's relative competitiveness. Seven steps are involved in this process.

1. Compile the subject's overall ADRs by month for the past three to five years.
2. Analyze historical trends in the subject's ADRs.
3. Consider the historical relationship between the ADR and occupancy.
4. Research the ADRs for the subject property's primary and secondary competition.
5. Compare the ADRs of the subject and the competition.
6. Project future changes in ADRs.
7. Project the subject property's ADR.

First, the subject's overall ADRs are compiled month by month for the last three to five years. A monthly analysis is used to highlight any seasonality in the property's ability to charge desirable rates.

Next, historical trends in the subject's ADRs are studied, and the compounded annual growth rate is calculated. If sufficient data are available, growth trends should be evaluated on a monthly basis and by individual market segments.





Since ADR and occupancy are often related, the historic relationship between these two components should be analyzed. ADR can be affected by changes in occupancy. In markets with declining occupancies, for example, ADRs will usually soften and sometimes even fall. In markets with increasing hotel patronage, ADRs will often show real growth in excess of inflation. These fluctuations can be attributed to competitiveness and price sensitivities. When a market experiences a decrease in lodging demand or an increase in the supply of hotel rooms, occupancy levels tend to decline. Management of individual properties react to this erosion of patronage by becoming more competitive and rate-conscious or by holding a hard rate policy when negotiating for new business or contracts. As market-wide occupancy levels fall further, management may feel increased pressure to cut rates even more to hold on to their market share. By understanding the historic occupancy pattern experienced by the subject property, the appraiser is better able to explain past movements in ADRs based on this room rate-occupancy relationship.

In addition to the external market factors that influence ADRs, an individual hotel will generally experience an increase in its ADR as a result of increased occupancy. This increase can be attributed to the fact that as a hotel approaches 100% occupancy, management is able to sell more of the property's higher-priced rooms and is less willing to offer discounts and other incentives to promote occupancy. A potential customer making a reservation at a hotel with one room remaining will probably pay the full or rack rate. By selling out its higher-priced rooms, a hotel can generally increase its ADR faster than either inflation or local market conditions would allow.

The appraiser's next task is to research the ADRs of the subject property's primary and secondary competitors. This information is usually gathered during competitive interviews. The appraiser should be sure that the data represent recent ADRs rather than published or rack rates.

The subject's ADR is compared with the rates exhibited by the competition. Some differences can be attributed to factors such as location, the scope of the physical facilities, management, image, quality, and the market segments served. If the ADR comparison reveals differences that cannot be adequately explained, further investigation is needed.

To project future changes in ADR, many factors must be considered. The ability of a hotel to increase room rates over time is influenced by supply and demand, inflation, competitive standards, and specific property improvements.

As discussed previously, the relationship between the local supply of transient accommodations and the demand for lodgings is a determining factor contributing to future trends in hotel occupancy and ADR. A market that is overbuilt or losing demand will probably not experience any significant increases in ADR. In fact, as this situation becomes more severe, room rates may even start to decline.

Price increases caused by inflation also affect room rates, but in an indirect manner. When a hotel operator sees profits being eroded by increased operating costs, there is a natural tendency to raise room rates to offset higher expenses. If other hotels in the market are in the same situation, the competitive environment will probably allow them all to increase their rates.

Room rates can also increase due to an improvement in the competitive standard. In established hotel markets where the stock of existing lodging facilities shows obvious physical and functional obsolescence, room rates may tend to lag behind inflation. This trend is often reversed when a new, upscale property is introduced. The new hotel must quickly achieve a higher-than-typical



room rate to be economically justified. Most existing hotels in the same market benefit from the introduction of the higher-priced competition because it exerts upward pressure on room rates and enables all operators to raise their rates.

Changes in the subject property that make the property more or less desirable to transient visitors can affect future trends in ADRs. The expansion, renovation, upgrading, or addition of facilities and amenities, new management, or a different franchise affiliation can allow management to increase room rates more rapidly than normal. Similarly, the lack of periodic maintenance and replacement can make a property less competitive and cause room rates to decline.

After evaluating all the room rate data available and forming appropriate conclusions, the appraiser is ready to forecast the subject's ADR over the projection period. Up to the point when the subject property reaches stabilized occupancy, movement in the ADR is generally attributed to the previously described property-specific and market-specific factors. After the hotel achieves stable occupancy, most forecasters assume that room rates will continue to increase at the anticipated rate of inflation over the remainder of the projection period.

Forecasting the ADR for a proposed hotel is similar to the procedure applied to an existing property except that the appraiser does not have an operating history and a benchmark rate from which to project room rates into the future. The appraiser should begin by compiling a complete database of information relative to the room rates actually achieved by competitive properties in the area. In addition to collecting room rate data (by market segment if possible), the appraiser should examine the relative competitiveness of each property to identify the reasons for any room rate differentials. This information is then used to project ADRs for the proposed subject property.

## **Methods for Forecasting Average Daily Rates**

Three methods can be used to forecast average daily rates:

- Competitive positioning method
- Market segmentation method
- Rule-of-thumb method

### ***Competitive Positioning Method***

The competitive positioning method starts with an analysis of the ADRs currently achieved by local competitive hotels. These rates establish a range within which the room rate for a proposed hotel is likely to fall. The projected ADR rate for the subject property is then set close to the ADR of the hotel in the sample that is most similar to the subject in terms of quality, size, facilities, amenities, market orientation, location, management image, and affiliation. Upward and/or downward adjustments are then made to the ADR to reflect any differences between the comparable and the subject property.

The competitive positioning method works well if the local market contains a hotel that is relatively comparable to the proposed subject property. It can also be used to verify that the ADRs achieved by an existing hotel represent an optimum level for the market.

### ***Market Segmentation Method***

In applying the market segmentation method, the appraiser develops an ADR by individual market segments. This method starts with the previously developed demand forecast for the subject property, which includes a projection of



the number of room nights captured for each market segment (commercial, meeting and group, leisure, airline, etc.). Using the rates charged by competitive properties as a base, a room rate estimate is developed for each market segment. The estimated room rate for each market segment is multiplied by the projected number of room nights captured and the results are totaled to yield the total rooms revenue. An ADR is then calculated by dividing the total rooms revenue by the number of rooms occupied.

The advantage of the market segmentation method is its ability to adjust the projected ADR for changes in market mix. For example, a new, convention-oriented hotel is likely to experience a build-up of convention capture during its initial years as sales efforts become more effective and groups are drawn to the property. If convention rates are lower than the property's commercial rates, the change in the market mix away from commercial business and toward more convention patronage will probably slow the growth of the ADR. This room rate sensitivity can only be examined by assigning an individual rate to each market segment and using the market segmentation method.

### **Rule-of-Thumb Method**

In the hotel industry, there is a rule of thumb that states that for every \$1,000 of total development or acquisition cost (on a per-room basis), a hotel must achieve an ADR of \$1 to be financially feasible. Therefore, if it costs \$90,000 per room to construct a new hotel, the property must attempt to achieve an ADR of \$90. However, as the hospitality sector has broadened into different segments over the years, this minimum has shifted.

A study examining the rule of thumb's viability shows that it remains remarkably accurate. However, not all hotel segments conform to the \$1 per \$1,000 convention.

ADR is the overall best hotel sale price predictor, the study confirmed, even better than a property's net operating income.<sup>11</sup> Of course, investors purchase hotels as much for their net income potential as their actual historical net incomes, so using an achieved ADR as an indicator of a hotel's quality level and its ability to generate future revenue is critical to its selling price.

The study evaluated the ADR rule by hotel type—economy, midscale, full-service, all-suite without food and beverage, and all-suite with food and beverage—as well as in the aggregate. For all five categories, ADR remained a stronger price predictor than net operating income, occupancy percentage, and sale date. Property age was also not a significant factor. Although the data contained both capitalization rate and room-revenue multiplier information for each sales transaction, these variables were not analyzed as sale price predictors because both are actually a function of sale price.<sup>12</sup>

According to this study, the average US hotel generates \$1 in ADR per every \$809 in room value. While no hotel segment averages significantly more than \$1,000 in room value per dollar of ADR, some segments are much closer to the ADR rule than others.

Specifically, for all-suite hotels without food and beverage, such as Marriott's Residence Inn and Hilton's Homewood Suites, \$1 in ADR correlates with a mean of \$1,003 in room value. As a group, the mean value per room per ADR dollar has a relatively small standard deviation of \$205, indicating that the values of these types of hotels do not usually vary

11. John W. O'Neill, "ADR Rule-of-Thumb: Validity and Suggestions for Its Application," *Cornell Hotel and Restaurant Administration Quarterly* 44, no. 4 (2005): 7-16.

12. Ibid.



significantly from the \$1 per \$1,003 average. The relatively high value per room figures could be the result of the large, all-suite accommodations these hotels provide.

On the other hand, midscale hotels such as the Holiday Inn and Ramada are the furthest from the rule of thumb, with each dollar in ADR correlating with a mean of \$634 in value per room. Several factors may contribute to these relatively low valuations. These operations constitute the oldest median age of the five hotel market segments studied. Also, many midscale hotels are functionally and physically (due to age) obsolete because they are not built to current economies of space utilization. Many support a restaurant and a lounge—which typically generate modest, if any, profits—as well as meeting space that requires marketing and sales efforts, resulting in a relatively inefficient business model.

Full-service hotels, such as the Marriott, Hilton, Sheraton, and Four Seasons, are fairly close to the ADR rule of thumb; each dollar in ADR correlates with approximately \$948 in value per room. Similarly, each dollar of ADR at all-suite hotels with food and beverage, such as the Embassy Suites and Hyatt Suites, correlates with approximately \$910 in value per room. For economy properties, including Motel 6 and Super 8, each dollar in ADR correlates with approximately \$720 in value per room.

### Valuation Predictors by Hotel Type

For each hotel type, \$1 in ADR correlates with the amount shown in value per room. See Exhibit 4.57.

Exhibit 4.57 \$1 ADR Correlations					
Hotel Type	Median	Mean	Rounded	Standard Deviation	
All-suite with food and beverage	\$792	\$910	\$900	\$387	
All-suite without food and beverage	\$1,016	\$1,003	\$1,000	\$204	
Economy	\$711	\$720	\$700	\$205	
Full-service	\$932	\$948	\$900	\$343	
Midscale	\$571	\$634	\$600	\$293	
All hotels	\$792	\$809	\$800	\$325	

In addition, the hotels' ADR that corresponds with \$1,000 in value per room was calculated for each of the sales transactions. When analyzed by hotel type, the results are similar to those in Exhibit 4.57, except that mean figures are not exactly reciprocal (because the calculation of a mean, or average, is influenced more by some numbers, i.e., outliers, than other numbers), whereas median figures are reciprocal between the two analyses (because a median, or the middle number in a series of numbers, is not influenced by outliers as a mean would be). For example, while all-suite hotels without food and beverage generate a mean of \$1.05 in ADR per \$1,000 in value per room, midscale hotels must generate almost twice as much in ADR—\$1.99 per \$1,000 in value per room. Essentially, midscale hotels must achieve substantially higher room rates to generate values that are comparable to other hotel types.

In general, the study supports the continued use of the ADR rule to estimate hotel value. Brokers and investment specialists should evaluate the practicality of relying on a rule of thumb not only for its accuracy but also according to the ease with which they can remember and use it. Although the rounded-off numbers in this analysis are slightly less precise, they are easier to remember.

The ADR rule of thumb has validity when it is applied as shown to the five hotel types presented. However, real estate professionals must remember to apply this rule by hotel type and use it only as a sanity check for more sophisticated analyses (such as discounted



cash flow), during meetings, or in the field when sophisticated computer analyses may be difficult. For each hotel type, the ADR amount shown in Exhibit 4.58 correlates with \$1,000 in value per room.

<b>Exhibit 4.58      \$1,000 per room ADR Correlations</b>				
<b>Hotel Type</b>	<b>Median</b>	<b>Mean</b>	<b>Rounded</b>	<b>Standard Deviation</b>
All-suite with food and beverage	\$1.26	\$1.32	\$1.30	\$0.66
All-suite without food and beverage	\$0.99	\$1.05	\$1.00	\$0.33
Economy	\$1.41	\$1.50	\$1.50	\$0.44
Full-service	\$1.08	\$1.22	\$1.20	\$0.56
Midscale	\$1.75	\$1.99	\$2.00	\$1.12
All hotels	\$1.26	\$1.50	\$1.50	\$0.81

The rule-of-thumb method provides a target indicating where the ADR should be set; it is not a market-based approach and does not consider the various local competitive factors investigated in the other methods. However, in markets where several new properties have recently been added, the upward pressure on room rates generated by the economics inherent in this rule of thumb often causes the entire market ADR to increase.

Because the rule-of-thumb method is extremely simple, it must rely on numerous assumptions. Some of the many assumptions built into this method pertain to the subject's occupancy rate, the ratio of food and beverage revenue to rooms revenue, operating costs, fixed expenses, and capital costs. Properties that do not fit the national norms for these characteristics are apt to require more or less than \$1 of ADR to justify \$1,000 per room of development cost. For example, assume that this rule of thumb works for hotels with an occupancy rate of 72%. If the subject property is projected to achieve only a 68% stabilized occupancy, then it will take more than \$1 of ADR to cover \$1,000 per room in development costs. In this case, an adjusted rule of thumb of \$1.25 to \$1.50 of ADR might be needed to justify each \$1,000 of cost per room.

**Room Rate Discounts**

It is not unusual for new hotels to discount their room rates during the initial years of operation in an attempt to increase the hotel's market share and generate occupancy. If this strategy is likely to be used, the appraiser should adjust the ADRs established by the previously described methods downward to reflect appropriate room rate discounts. In the following case study, ADRs are projected for the proposed Marriott Hotel.

## Case Study

### Projecting Average Daily Rates

The ADRs for the proposed Marriott Hotel will be estimated for each projection year until the hotel achieves stabilized occupancy.

Since hotel room rates depend greatly on the local competitive market, it is necessary to survey the ADRs achieved by the competition. Exhibit 4.59 shows the ADRs for the primary competition in the base year. The weighted average of the ADRs is also presented; it accounts for the size and base year occupancy level of the properties.

**Exhibit 4.59** Average Room Rates—Base Year

Hotel	Average Rate per Occupied Room
InterContinental	\$220.00
Hilton	190.00
Sheraton	180.00
Hyatt	200.00
Weighted average	\$197.50

In the base year, the InterContinental posted the strongest ADR at \$220 compared to a market average of \$197.50. The new Hyatt hotel achieved an ADR of \$200 during the base year, which was slightly above the market average. The older Hilton and the declining Sheraton had ADRs of \$190 and \$180, somewhat below the market average.

To project the ADR of the proposed Marriott, we will present the market segmentation method. Because we have access to the historical segmented ADR results realized by the InterContinental, the data may be used as a basis for estimating the subject property's segmented ADRs. Exhibit 4.60 identifies the InterContinental's data as well as the projections for the proposed Marriott as of the base year. Because of the InterContinental's strong commercial orientation, the Marriott's ADR is expected to be lower than that of the InterContinental in the commercial and meeting/group demand segments. The Marriott's ADR will be slightly higher than the InterContinental's in the leisure segment.

**Exhibit 4.60** Segmented ADR—InterContinental

Market Segment	InterContinental		Proposed Marriott	
	No. of Room Nights	% of Total	Average Rate	Average Rate
Commercial	28,908	63.2%	\$232.00	\$224.00
Meeting & group	14,454	31.6	200.00	194.00
Leisure	2,409	5.3	196.00	199.00
Total	45,771	100.0%	\$220.00	

To project future changes in the segmented rates selected for the proposed Marriott, Exhibit 4.61 sets forth the appraiser's estimate of future changes in market-wide ADR. Variation in the overall pricing trends may be reflected in a given market segment. However, in the case of the subject market area, we have projected uniform increases of 3% in 2013, 2% in 2014, and 5.5% in 2015. The underlying hotel room inflation rate appears to be about 3% per year, which has been used to project room rate growth in 2013. When the Marriott is expected to open in 2014 and the market occupancy is projected to drop from 72% to 65%, downward pressure on room rates is anticipated. Therefore, a 2% market-wide growth rate has been projected for 2014. The rebound in occupancy projected for 2015, coupled with the large convention group expected that year, resulted in a projected 5.5% increase in ADR.

**Exhibit 4.61** Projected Average Rate Growth—Market

Year		Projected Increase in Market-Wide ADR
Base 2012	70%	—
2013	72	2% to 4%
2014	65	1% to 3%
2015	68	5% to 6%
2016	63	3% to 4%
2017	65	3% to 4%
2018	67	4% to 6%
2019	69	3% to 4%



Exhibit 4.62 sets forth the basis for the segmented ADR forecast for the proposed Marriott.

In Exhibit 4.63, the projected segmented ADRs are multiplied by the proposed Marriott's segmented demand forecast

**Exhibit 4.62 Segmented Rate and Rate Growth Factors—Proposed Marriott**

Year	Commercial	Percent Change	Meeting & Group	Percent Change	Leisure	Percent Change
Base 2012	\$224.00	—	\$194.00	—	\$199.00	
2013	230.72	3.00%	199.82	3.0%	204.97	3.0%
2014	235.33	2.00	203.82	2.0	209.07	2.0
2015	248.28	5.50	215.03	5.5	220.57	5.5
2016	256.35	3.25	221.48	3.0	227.19	3.0
2017	266.60	4.00	229.23	3.5	236.27	4.0
2018	279.93	5.00	240.69	5.0	248.09	5.0
2019	288.33	3.00	247.91	3.0	255.53	3.0

**Exhibit 4.63 Average Rate Calculation—Proposed Marriott**

	Room Nights	Average Rate	Rooms Revenue
<b>2014</b>			
Commercial	26,932	\$235.33	\$6,338,129
Meeting & group	13,665	\$203.82	\$2,785,139
Leisure	6,180	\$209.07	\$1,292,061
Airline	0		\$0
Total	46,777	\$222.66	\$10,415,330
<b>2015</b>			
Commercial	27,015	\$248.28	\$6,707,212
Meeting & group	18,191	\$215.03	\$3,911,451
Leisure	6,331	\$220.57	\$1,396,352
Airline	0		\$0
Total	51,536	\$233.14	\$12,015,014
<b>2016</b>			
Commercial	27,401	\$256.35	\$7,024,264
Meeting & group	16,170	\$221.48	\$3,581,314
Leisure	6,602	\$227.19	\$1,499,951
Airline	0		\$0
Total	50,174	\$241.27	\$12,105,529
<b>2017</b>			
Commercial	27,966	\$266.60	\$7,455,872
Meeting & group	16,901	\$229.23	\$3,874,104
Leisure	6,775	\$236.27	\$1,600,765
Airline	0		\$0
Total	51,642	\$250.39	\$12,930,741
<b>2018</b>			
Commercial	28,805	\$279.93	\$8,063,510
Meeting & group	17,577	\$240.69	\$4,230,542
Leisure	6,978	\$248.09	\$1,731,214
Airline	0		\$0
Total	53,360	\$262.84	\$14,025,265
<b>2019</b>			
Commercial	29,670	\$288.33	\$8,554,577
Meeting & group	18,104	\$247.91	\$4,488,182
Leisure	7,153	\$255.53	\$1,827,729
Airline	0		\$0
Total	54,926	\$270.74	\$14,870,488





beginning as of year two (2014), the hotel’s expected first year of operation. The revenue in each year is totaled and divided by the total demand, resulting in a forecast of weighted ADR.

Since the projected ADRs for the proposed Marriott were estimated through comparison with the ADRs achieved by similar but more established hotels in the market, the initial years’ rates must be adjusted downward to account for factors such as discounting, occupancy buildup, and customer acceptance. Most new hotels discount their room rates during the first year or two to offer a competitive advantage and build occupancy. As occupancy builds up, room rates tend to increase because the hotel is selling more of its higher-priced rooms and suites. Management can usually begin to be less flexible in offering discounts and acquire more

experience in maximizing yield. Finally, customer acceptance becomes more established as a hotel matures, and this loyalty often allows the operator to push room rates upward.

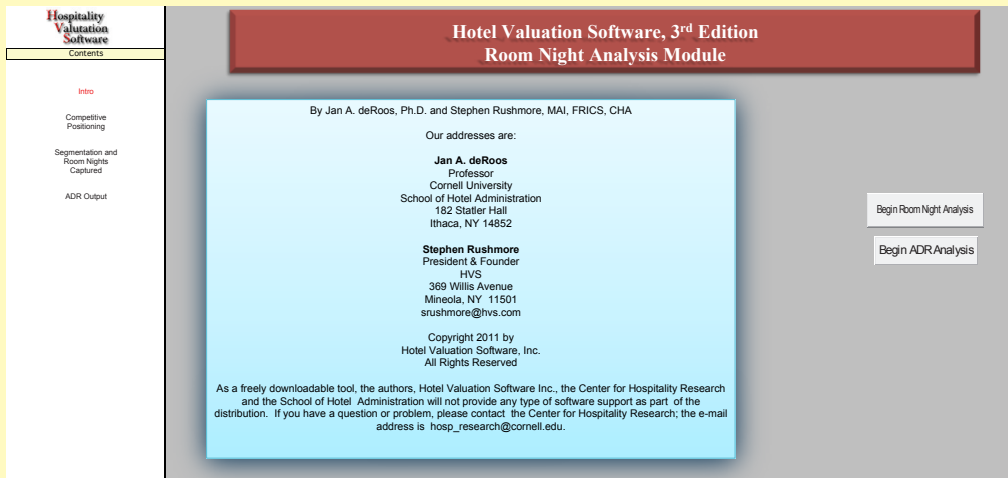
To account for all the factors that tend to depress room rates during the initial years of operation, an appropriate discount must be applied to the projected ADRs derived from comparable hotels. Generally, the size of this discount is inversely proportional to the hotel’s overall competitiveness. The discount may also be related to the general health of the local hotel market, which might suggest deeper discounts when occupancy levels are depressed.

Based on the appraiser’s analysis, the discounts of 10% and 5% as shown in Exhibit 4.64 were applied to the proposed Marriott’s ADR during its first two years of operation.

Exhibit 4.64 Proposed Occupancy and Average Rate—Proposed Marriott				
Year	Occupancy Rate	Undiscounted Average Rate	Discount Factor	Average Rate
2014	64%	\$222.66	10%	\$200.00
2015	71%	\$233.14	5%	\$221.00
2016	69%	\$241.27		\$241.00
2017	71%	\$250.39		\$250.00
2018	74%	\$262.84		\$263.00
2019	74%	\$270.74		\$271.00
2020	74%	\$278.86		\$279.00
2021	74%	\$287.22		\$287.00
2022	74%	\$295.84		\$296.00
2023	74%	\$304.72		\$305.00

Hotel Valuation Software

The second module in the Room Night Analysis software is the Average Daily Rate Module used to project the ADR for Existing Hotel 1 and Proposed Hotel 1. The software utilizes the market segmentation method to project the ADR. The following screenshot shows the Intro page for this module. Click on the “Begin ADR Module” box on the right side of the screen to start entering the required data.



The next screenshot shows the Competitive Positioning screen. The primarily competitive hotels are listed on the left side of the top table, along with their room counts and occupancies in the adjacent green cells. The lower green boxes show the aggregate numerical ADR and the weighted ADR for the primary competitors. The weighted ADR takes into account the number of rooms for each property and represents the market-wide ADR.

**Competitive Positioning**

The room counts and occupancies below are for the hotels considered Primary Competitors. Enter the relevant ADR for each property listed.

Hotel	Room Count	Occupancy	Base Year ADR
InterContinental	200	66%	
Hilton	275	72%	
Sheraton	250	68%	
Hyatt	250	65%	

Numerical Average	68%	\$0.00
Weighted Average	68%	\$0.00

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The next screenshot shows the estimated base year ADR entered for each hotel in the market. The market leader in ADR is the InterContinental, which has a \$220 ADR as of the base year. The resulting numerical market-wide ADR is \$197.50, and the weighted ADR is \$196.15.

## Competitive Positioning

The room counts and occupancies below are for the hotels considered Primary Competitors. Enter the relevant ADR for each property listed.

Hotel	Room Count	Occupancy	Base Year ADR
InterContinental	200	66%	\$ 220.00
Hilton	275	72%	\$ 190.00
Sheraton	250	68%	\$ 180.00
Hyatt	250	65%	\$ 200.00
Numerical Average		68%	\$197.50
Weighted Average		68%	\$196.15

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The next screenshot shows the Segmentation & Room Nights Captured screen. This page is used to input the base year ADR for each segment. As of the base year, the Marriott is projected to have a \$224 ADR for the commercial segment, \$194 for the meeting and group segment, and \$199 for the leisure segment. The overall base year ADR for the Marriott is calculated as \$211.93.

## Segmentation & Room Nights Captured For The First Primary and Proposed Competitors

The information below shows the market segmentation for InterContinental & Marriott. Enter the segment ADR data for each hotel.

InterContinental				Marriott			
	Segment %	Segment ADR	Extension		Segment %	Segment ADR	Extension
Commercial	60.00%		\$0.00	Commercial	57.58%	\$224.00	\$128.97
Meeting & Group	30.00%		\$0.00	Meeting & Group	29.21%	\$194.00	\$56.67
Leisure	5.00%		\$0.00	Leisure	13.21%	\$199.00	\$26.29
Airline	5.00%		\$0.00	Airline	0.00%		\$0.00
Total:			\$0.00	Total:			\$211.93

The table in the following screenshot is derived from the preceding room night analysis. It shows the Marriott's projected occupancy and the room nights by market segment. This information is used in the projection of ADR.

The information below provides a summary of occupancy and room nights sold for Marriott

	Base Yr	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Occupancy	N/A	N/A	64.08%	70.60%	68.73%	70.74%	73.10%	75.24%	77.45%	79.72%	82.06%
Overall Room Nights Sold	0	0	46,777	51,336	50,174	51,642	53,360	54,926	56,538	58,198	59,906
Commercial Room Nights	0	0	26,932	27,015	27,401	27,966	28,805	29,670	30,560	31,476	32,421
Meeting & Group Room Nights	0	0	13,665	18,191	16,170	16,901	17,577	18,104	18,647	19,206	19,783
Leisure Room Nights	0	0	6,180	6,331	6,602	6,775	6,978	7,153	7,331	7,515	7,702
Airline Room Nights	0	0	0	0	0	0	0	0	0	0	0
Total Room Nights	0	0	46,777	51,336	50,174	51,642	53,360	54,926	56,538	58,198	59,906

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The next screenshot shows the input screen for the projected room rate inflation rates. These are entered by segment by year. As with the previous yearly input screens, the software assumes that each input represents the stabilized level and will populate the cells to the right of the input number, continuing to add the inflation rates until the stabilized rate is reached.

ADR Inflation, ADR by Segment & ADR Calculations										
Enter expected ADR inflation rates for each segment below										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Commercial	3.00%	2.00%	3.00%	3.25%	4.00%	5.00%	3.00%	3.00%	3.00%	3.00%
Meeting & Group	3.00%	2.00%	5.50%	3.00%	3.50%	5.00%	3.00%	3.00%	3.00%	3.00%
Leisure	3.00%	2.00%	5.50%	3.00%	4.00%	5.00%	3.00%	3.00%	3.00%	3.00%
Airline	3.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%

The following screenshot shows the inflated ADR for each year by segment.

Marriott	Base Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Commercial	\$ 224.00	\$ 230.72	\$ 235.33	\$ 248.28	\$ 256.35	\$ 266.60	\$ 279.93	\$ 288.33	\$ 296.98	\$ 305.89	\$ 315.06
Meeting & Group	\$ 194.00	\$ 199.82	\$ 203.82	\$ 215.03	\$ 221.48	\$ 229.23	\$ 240.69	\$ 247.91	\$ 255.35	\$ 263.01	\$ 270.30
Leisure	\$ 199.00	\$ 204.87	\$ 209.07	\$ 220.37	\$ 227.18	\$ 236.27	\$ 246.09	\$ 255.53	\$ 263.10	\$ 271.09	\$ 279.22
Airline	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

The next screen shows the multiplication of the yearly ADR for each segment by the room nights captured per segment to produce the total rooms revenue per segment. The overall ADR for each year is then calculated in the last row. This number is used in developing the projection of income and expense described in the next chapter.

Marriott	Base Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Commercial Room Revenues	\$ -	\$ -	\$ 6,338,129	\$ 6,707,212	\$ 7,024,264	\$ 7,455,872	\$ 8,063,510	\$ 8,354,581	\$ 9,075,550	\$ 9,628,249	\$ 10,214,616
Meeting & Group Room Revenues	\$ -	\$ -	\$ 2,785,139	\$ 3,911,451	\$ 3,581,314	\$ 3,874,104	\$ 4,230,542	\$ 4,488,155	\$ 4,761,492	\$ 5,051,477	\$ 5,359,129
Leisure Room Revenues	\$ -	\$ -	\$ 1,292,061	\$ 1,396,352	\$ 1,499,951	\$ 1,600,765	\$ 1,731,214	\$ 1,827,704	\$ 1,929,594	\$ 2,037,155	\$ 2,150,713
Airline Room Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Room Revenues	\$ -	\$ -	\$ 10,415,330	\$ 12,015,014	\$ 12,105,529	\$ 12,930,741	\$ 14,025,265	\$ 14,870,441	\$ 15,766,635	\$ 16,716,880	\$ 17,724,458
ADR	#N/D!	#N/D!	\$ 222.66	\$ 233.14	\$ 241.27	\$ 250.39	\$ 262.80	\$ 270.74	\$ 276.80	\$ 287.24	\$ 295.87

### Case Study Conclusion

The room night analysis discussed in this case study illustrates the appropriate procedure for projecting hotel occupancy and ADR in any part of the world. Sometimes it may be challenging to obtain market data regarding local competitive occupancies, demand growth rates, latent demand, and the other inputs necessary to perform this procedure, but that is the role of a hotel appraiser and the value of an appraisal organization that has access to the required data.

As we develop this case study further in the next chapter, we will use the projected occupancy and ADR of the proposed Marriott in forecasting the property's future revenues and expenses in the five regions of the world covered in this book—North America, South America, Europe, India, and China. This approach will demonstrate the local revenue and expense differences that need to be considered and incorporated into the projections for each of these regions.







# Forecasting Revenues and Expenses



Chapter

5

To develop a supportable estimate of value using the income capitalization approach, the appraiser must make forecasts of revenues and expenses that reflect the outlook of typical hotel investors. Hotels and motels are unique forms of real estate with many unusual characteristics, including intensive use of labor, cost-of-goods-sold expense categories, and a retail product identity. Special knowledge and data are required to estimate a hotel's future income. This chapter describes step-by-step procedures for projecting revenues and expenses using data sources available to all appraisers.

## Full-Service Facility vs. Focused-Service Facility

Valuing a focused-service hotel generally requires lesser analyses than valuing a full-service facility. In the case of a full-service hotel, the appraiser must analyze more operating departments such as food, beverage, banquets, recreational facilities (potentially including golf courses, retail shop operations or rentals, health club operations, and spa operations). The final income and expense estimate for a full-service or focused-service hotel should be a blend of past operating results and future expectations.

## Existing Facility vs. Proposed Facility

Valuing an existing hotel generally requires less fieldwork than valuing a proposed facility. In the case of an existing hotel, the appraiser first reviews the local supply and demand situation and projects the subject's future revenues. The appraiser then estimates various expense categories using the property's operating ratios obtained from previous years' financial statements. These estimates should be compared to the operating results of similar properties, if available, or to national averages; any differences should be resolved. Discrepancies may occur for several reasons, including:

- **Unusual property characteristics**  
Some hotels are more costly to operate than others. For example, beach-front hotels have higher maintenance expenses, properties in the Northeast United States pay more for energy, commercial hotels have more credit card commissions, and airport hotels incur shuttle bus expenses.
- **Assumed competent management**  
Projected expenses reflect competent management, while the actual management may be better than, equal to, or less capable than is usual.

- Different levels of occupancy and average daily rate (ADR)  
When comparing expense ratios for two properties, the appraiser must ascertain that the properties operate at similar levels of occupancy and have similar ADRs. Lodging facilities generally experience more efficient operations as their rates and occupancies increase.

The final income and expense estimate for an existing hostelry should be a blend of past operating results and future expectations. Assembling sufficient market information and comparable data for a proposed facility requires more research. The primary objective of market analysis is to accumulate enough information to formulate estimates of occupancy and ADR. Once these two factors have been established, rooms revenue and other sources of income may be computed.

Because a proposed hotel has no operating history on which to base an expense projection, the appraiser must either obtain data from existing comparable properties or use industry averages. Statistics from either of these sources can be processed to project revenues and expenses for the proposed subject property. Because industry averages are generally available to all appraisers, they are used here to demonstrate the projection procedure. However, actual operating performance data from a comparable property are generally preferred.

## Industry Averages

Each year, several hotel consulting firms compile operating statistics and ratios for hundreds of hotels in various regions of the world. This information is generally categorized according to property size, room rate, geographical location, and other characteristics. The data represent average operating results and typical management ability and may be used to evaluate an existing operation or to project revenues and expenses for a proposed facility. The selection and use of this type of data will be demonstrated later in this text.

## Uniform System of Accounts for the Lodging Industry

The data found in most hotel financial statements are arranged in accordance with the *Uniform System of Accounts for the Lodging Industry* (USALI). This system was established by the Hotel Association of New York City in 1926 and later adopted by the American Hotel and Lodging Association. The tenth revised edition of the format, designed to conform to evolving accounting practices, was issued in 2006.<sup>1</sup>

The USALI provides a simple formula for classifying the accounts used by hotels of all types and sizes. The universality of the system allows appraisers to compare individual properties or groups of properties with similar characteristics. Today, the USALI is used by most major hotel chains around the world as well as many independent properties. Because hotels are using the same chart of accounts for revenues and expenses, hotel financial statements and operating ratios can be compared from one hotel to another. This enables hotel owners, operators, and consultants to quickly evaluate a hotel's financial operations and pinpoint problems. The analysis of hotel operating statements will be discussed later in this chapter.

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1. Copies of the *Uniform System of Accounts for the Lodging Industry* can be obtained from the American Hotel and Lodging Educational Institute at [www.ahlei.org](http://www.ahlei.org) or (517) 372-8800/(800) 752-4567.





A complete set of financial statements for a hotel or motel should include a balance sheet, a statement of revenues and expenses, a statement of changes in financial position, and any disclosures needed to comply with generally accepted accounting principles. The appraiser is primarily interested in the data contained in the statement of income and expense.

It is important to understand the overall structure of the USALI and how it affects a hotel's statement of revenues and expenses. Exhibit 5.1 shows a typical statement of income and expense for a hotel set forth in accordance with the USALI.

<b>Exhibit 5.1      Sample USALI Income and Expense Statement</b>			
<b>STR Host—Full-Service—US</b>			
Occupancy	67.4%		
Average rate	\$164.31		
	305 rooms		
<b>Revenues</b>	<b>\$/Avail. Rm.</b>	<b>Percent</b>	<b>\$/Occ. Rm.</b>
Rooms	\$40,137	62.7%	\$164.31
Food	\$15,679	24.5%	\$64.19
Beverages	\$3,077	4.8%	\$12.60
Telephone	\$382	0.6%	\$1.56
Rentals and other income	\$4,753	7.4%	\$19.45
Total revenue	\$64,028	100.0%	\$262.11
<b>Departmental Expenses</b>			
Rooms	\$10,212	25.4%	\$41.80
Food & beverages	\$13,706	73.1%	\$56.10
Telephone	\$449	117.5%	\$1.84
Rentals and other income	\$2,345	49.3%	\$9.60
Total departmental expenses	\$26,712	41.7%	\$109.34
Departmental income	\$37,316	58.3%	\$152.77
<b>Undistributed Operating Expenses</b>			
Administrative & general	\$5,411	8.5%	\$22.15
Marketing	\$4,275	6.7%	\$17.50
Franchise fees		0.0%	
Prop. oper. & maintenance	\$2,946	4.6%	\$12.06
Energy costs	\$2,715	4.2%	\$11.11
Total UDOEs	\$15,347	24.0%	\$62.82
Income before fixed charges	\$21,969	34.3%	\$89.95
<b>Fixed Charges</b>			
Management fee	\$1,921	3.0%	\$7.80
Property tax	\$2,080	3.2%	\$8.52
Insurance	\$755	1.2%	\$3.09
Reserve for replacement	\$2,561	4.0%	\$10.41
Total fixed charges	\$7,317	11.4%	\$29.82
Net income	\$14,652	22.9%	\$60.13

On the left side of the income and expense statement are the various accounts (line items) that are typical for a hotel. The first column of numbers shows revenues and expenses on a dollars-per-available-room basis. The

second column of numbers provides percentages of various types of revenue. The third column of numbers displays the data on a dollars-per-occupied-room basis. These three units of comparison are typically used when analyzing a hotel's financial statement.

The first set of accounts is the revenues, which typically include rooms, food, beverages, telephone, and rentals and other income. In recent years, as hotel telephone revenues have significantly declined due to guests using cell phones, many operators have ceased to include the telephone department and categorize these revenues and expenses as rentals and other income. The latest edition of the USALI allows for the telephone department to be handled as such. If the hotel is limited service, the food and beverage department would be omitted as well. The USALI evolves over time, so appraisers should keep up to date with the latest version. Other categories that might be included as separate line items are spa, golf, parking, shop rentals, and so on. All revenue departments have a corresponding departmental expense.

The next set of accounts is for the departmental expenses, which are expenses associated with a specific department. For example, the labor cost associated with the housekeepers and the front desk personnel would be included in the rooms department expense. These workers devote all their time to working on the hotel's guest rooms, either cleaning them or checking guests in and out of the hotel. On the other hand, the salary of the hotel's general manager would be expensed in the undistributed operating expenses section of the financial statement under the administrative and general expense category. The general manager works throughout the hotel in all the departments, and it would be difficult to allocate the salary among the various departments. Thus, the undistributed operating expenses consist of all the hotel's expenses that cannot be easily allocated to a specific department. Credit card commissions for the entire hotel fall under administrative and general expenses. The hotel's website would fall under marketing. Repairs to the hotel fall under property operations and maintenance. The cost of heating and electricity for the entire hotel fall under energy costs.

The fixed charges section of the financial statement is for the nonoperational expenses that the management of the hotel has little control over. These include management fees, property taxes, insurance, and reserve for replacement. It should be noted that the USALI does not have a reserve for replacement expense account. This is more of a hotel management company/ownership term that is present in many hotel management contracts. It is a reserve account for the future replacement of furniture, fixtures, and equipment that hotel management companies use to ensure that there are sufficient funds to keep the property's furnishings in good condition. Hotel reserves for replacement are unlike the reserves for replacement accounts used by appraisers for other types of real estate, including reserves for mechanical and structural repair and replacement. Hotel investors do not usually include reserves for mechanical and structural repair and replacement when they are pricing hotel acquisitions.

The column labeled "Percent" represents a percentage of specific revenue. The percentages contained for the revenue accounts are all percentages of total revenue. The percentages contained in the departmental expenses are percentages of the corresponding department in the revenue accounts. Thus, the rooms department expense of 25.4% is the percentage of rooms revenue rather than total revenue. The 73.1% food and beverage departmental expense is the percentage of food and beverage revenue.



# Financial Analysis Techniques

The various ratios and units of comparison become important benchmarks when performing a financial analysis of a hotel in an appraisal assignment involving estimating the market value of the hotel. The three units of comparison typically used in an analysis are dollars per available room, percent of revenue, and dollars per occupied room. Each item of revenue and expense has one primary and possibly a secondary unit of comparison that can be used to evaluate that particular revenue or expense item.

Exhibit 5.2 shows an income and expense statement that points out the expense items that are best evaluated by dollars per available room. These expenses tend to have a high fixed expense component, so there is little fluctuation in the amount of the expense based on the hotel’s occupancy or room rate. For example, energy cost can be up to 70% fixed and 30% vari-

Exhibit 5.2      Dollars per Available Room			
STR Host—Full-Service—US			
Occupancy	67.4%		
Average rate	\$164.31		
	305 rooms		
Revenues	\$/Avail. Rm.	Percent	\$/Occ. Rm.
Rooms	\$40,137	62.7%	\$164.31
Food	\$15,679	24.5%	\$64.19
Beverages	\$3,077	4.8%	\$12.60
Telephone	\$382	0.6%	\$1.56
Rentals and other income	\$4,753	7.4%	\$19.45
Total revenue	\$64,028	100.0%	\$262.11
Departmental Expenses			
Rooms	\$10,212	25.4%	\$41.80
Food & beverages	\$13,706	73.1%	\$56.10
Telephone	\$449	117.5%	\$1.84
Rentals and other income	\$2,345	49.3%	\$9.60
Total departmental expenses	\$26,712	41.7%	\$109.34
Departmental income	\$37,316	58.3%	\$152.77
Undistributed Operating Expenses			
Administrative & general	\$5,411	8.5%	\$22.15
Marketing	\$4,275	6.7%	\$17.50
Franchise fees		0.0%	
Prop. oper. & maintenance	\$2,946	4.6%	\$12.06
Energy costs	\$2,715	4.2%	\$11.11
Total UDOEs	\$15,347	24.0%	\$62.82
Income before fixed charges	\$21,969	34.3%	\$89.95
Fixed Charges			
Management fee	\$1,921	3.0%	\$7.80
Property tax	\$2,080	3.2%	\$8.52
Insurance	\$755	1.2%	\$3.09
Reserve for replacement	\$2,561	4.0%	\$10.41
Total fixed charges	\$7,317	11.4%	\$29.82
Net income	\$14,652	22.9%	\$60.13

Units of Comparison

\$ per Available Room

Percentage of Revenue

\$ per Occupied Room

able. The only energy savings is the usage when the guest room is actually occupied, which might be the heat and air conditioning, lights, and television. The high-energy areas, such as public space, outdoor lights, kitchens, and restaurants represent fixed costs because they always need to be available to the guests and staff in the hotel. Property operations and maintenance expenses also have a large fixed component. Property tax and insurance is, of course, totally fixed. A full discussion of the fixed and variable components of a hotel's revenues and expenses will be covered later in this chapter.

The following set of three statements (Exhibits 5.3 through 5.6) shows the revenue and expense items that are analyzed based on a percentage of revenue. Exhibit 5.3 points out revenue and expense items that are analyzed based on a percentage of rooms revenue. Rooms department expense varies

<b>Exhibit 5.3 Percentage of Rooms Revenue</b>			
<b>STR Host—Full-Service—US</b>			
Occupancy	67.4%		
Average rate	\$164.31		
	305 rooms		
Revenues	\$/Avail. Rm.	Percent	\$/Occ. Rm.
Rooms	\$40,137	62.7%	\$164.31
Food	\$15,679	24.5%	\$64.19
Beverages	\$3,077	4.8%	\$12.60
Telephone	\$382	0.6%	\$1.56
Rentals and other income	\$4,753	7.4%	\$19.45
Total revenue	\$64,028	100.0%	\$262.11
Departmental Expenses			
Rooms	\$10,212	25.4%	\$41.80
Food & beverages	\$13,706	73.1%	\$56.10
Telephone	\$449	117.5%	\$1.84
Rentals and other income	\$2,345	49.3%	\$9.60
Total departmental expenses	\$26,712	41.7%	\$109.34
Departmental income	\$37,316	58.3%	\$152.77
Undistributed Operating Expenses			
Administrative & general	\$5,411	8.5%	\$22.15
Marketing	\$4,275	6.7%	\$17.50
Franchise fees		0.0%	
Prop. oper. & maintenance	\$2,946	4.6%	\$12.06
Energy costs	\$2,715	4.2%	\$11.11
Total UDOEs	\$15,347	24.0%	\$62.82
Income before fixed charges	\$21,969	34.3%	\$89.95
Fixed Charges			
Management fee	\$1,921	3.0%	\$7.80
Property tax	\$2,080	3.2%	\$8.52
Insurance	\$755	1.2%	\$3.09
Reserve for replacement	\$2,561	4.0%	\$10.41
Total fixed charges	\$7,317	11.4%	\$29.82
Net income	\$14,652	22.9%	\$60.13

<b>Units of Comparison</b>	
\$ per Available Room	
Percentage of Revenue	
\$ per Occupied Room	
Percentage of Rooms Revenue	
Percentage of Total Revenue	
Percentage of Dept. Revenue	



directly with rooms revenue, which is composed of occupancy and room rate. Rooms department expense is approximately 50% fixed and 50% variable, so the proper unit of comparison is on a percentage basis. Franchise fees are normally calculated as a percentage of rooms revenue.

Exhibit 5.4 points out revenue and expense items that are analyzed based on a percentage of total revenue. These expenses tend to also be more variable and less fixed. Since management fees and reserves for replacement are generally calculated on a percentage of total revenue, these also should be analyzed on the same basis. The preferred measure for administrative and general expenses as well as marketing expenses is a percentage of total revenue. The statement notes that property operations and maintenance can

Exhibit 5.4      Percentage of Total Revenue			
STR Host—Full-Service—US			
Occupancy	67.4%		
Average rate	\$164.31		
	305 rooms		
Revenues	\$/Avail. Rm.	Percent	\$/Occ. Rm.
Rooms	\$40,137	62.7%	\$164.31
Food	\$15,679	24.5%	\$64.19
Beverages	\$3,077	4.8%	\$12.60
Telephone	\$382	0.6%	\$1.56
Rentals and other income	\$4,753	7.4%	\$19.45
Total revenue	\$64,028	100.0%	\$262.11
Departmental Expenses			
Rooms	\$10,212	25.4%	\$41.80
Food & beverages	\$13,706	73.1%	\$56.10
Telephone	\$449	117.5%	\$1.84
Rentals and other income	\$2,345	49.3%	\$9.60
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Departmental income	\$37,316	58.3%	\$152.77
Undistributed Operating Expenses			
Administrative & general	\$5,411	8.5%	\$22.15
Marketing	\$4,275	6.7%	\$17.50
Franchise fees		0.0%	
Prop. oper. & maintenance	\$2,946	4.6%	\$12.06
Energy costs	\$2,715	4.2%	\$11.11
Total UDOEs	\$15,347	24.0%	\$62.82
Income before fixed charges	\$21,969	34.3%	\$89.95
Fixed Charges			
Management fee	\$1,921	3.0%	\$7.80
Property tax	\$2,080	3.2%	\$8.52
Insurance	\$755	1.2%	\$3.09
Reserve for replacement	\$2,561	4.0%	\$10.41
Total fixed charges	\$7,317	11.4%	\$29.82
Net income	\$14,652	22.9%	\$60.13

Units of Comparison

\$ per Available Room

Percentage of Revenue

\$ per Occupied Room

Percentage of Rooms Revenue

Percentage of Total Revenue

Percentage of Dept. Revenue

also be analyzed in terms of the percentage of total revenue, but that is a secondary unit of comparison; the primary unit is dollars per available room.

Exhibit 5.5 points out revenue items that are analyzed based on a percentage of departmental revenue. These include food and beverage, telephone, and rental and other income expenses. Since these departmental expenses are directly related to the volume of their respective departmental revenue, they should be analyzed as a percentage of departmental revenue. The most notable is the food and beverage department expense, for which costs such as food and beverage and variable labor are directly related to the volume of food and beverages sold.

The last unit of comparison is dollars per occupied room, as shown in Exhibit 5.6. Revenues such as food, beverage, and telephone are often analyzed

<b>Exhibit 5.5 Percentage of Department Revenue</b>			
<b>STR Host—Full-Service—US</b>			
Occupancy	67.4%		
Average rate	\$164.31		
	305 rooms		
<b>Revenues</b>	<b>\$/Avail. Rm.</b>	<b>Percent</b>	<b>\$/Occ. Rm.</b>
Rooms	\$40,137	62.7%	\$164.31
Food	\$15,679	24.5%	\$64.19
Beverages	\$3,077	4.8%	\$12.60
Telephone	\$382	0.6%	\$1.56
Rentals and other income	\$4,753	7.4%	\$19.45
Total revenue	\$64,028	100.0%	\$262.11
<b>Departmental Expenses</b>			
Rooms	\$10,212	25.4%	\$41.80
Food & beverages	\$13,706	73.1%	\$56.10
Telephone	\$449	117.5%	\$1.84
Rentals and other income	\$2,345	49.3%	\$9.60
Total departmental expenses	\$26,712	41.7%	\$109.34
Departmental income	\$37,316	58.3%	\$152.77
<b>Undistributed Operating Expenses</b>			
Administrative & general	\$5,411	8.5%	\$22.15
Marketing	\$4,275	6.7%	\$17.50
Franchise fees		0.0%	
Prop. oper. & maintenance	\$2,946	4.6%	\$12.06
Energy costs	\$2,715	4.2%	\$11.11
Total UDOEs	\$15,347	24.0%	\$62.82
Income before fixed charges	\$21,969	34.3%	\$89.95
<b>Fixed Charges</b>			
Management fee	\$1,921	3.0%	\$7.80
Property tax	\$2,080	3.2%	\$8.52
Insurance	\$755	1.2%	\$3.09
Reserve for replacement	\$2,561	4.0%	\$10.41
Total fixed charges	\$7,317	11.4%	\$29.82
Net income	\$14,652	22.9%	\$60.13

**Units of Comparison**  
\$ per Available Room  
**Percentage of Revenue**  
\$ per Occupied Room  
Percentage of Rooms Revenue  
Percentage of Total Revenue  
Percentage of Dept. Revenue



on a dollars-per-occupied-room basis. This unit of comparison is also a good measure for energy costs. Dollars per occupied room is similar to dollars per available room but blends in the occupancy component. It is a good measure of energy costs at limited-service hotels that don't have restaurants and kitchens.

The following discussion demonstrates how to perform a hotel financial analysis using the previously described units of comparison.

Marriott is one of the best hotel operators in the world. They have the ability to maximize long-term revenues while minimizing long-term expenses, which is one of the measures of a good hotel management company. To verify Marriott's operating ability, a comparison is made of Marriott's financial operating ratios to those representing industry averages from STR Global. The two side-by-side statements of income and expense in Exhibit 5.7 show the three units of comparison (dollars per available room, percent of revenue, and

<b>Exhibit 5.6      Dollars per Occupied Room</b>			
<b>STR Host—Full-Service—US</b>			
Occupancy	67.4%		
Average rate	\$164.31		
	305 rooms		
<b>Revenues</b>	<b>\$/Avail. Rm.</b>	<b>Percent</b>	<b>\$/Occ. Rm.</b>
Rooms	\$40,137	62.7%	\$164.31
Food	\$15,679	24.5%	\$64.19
Beverages	\$3,077	4.8%	\$12.60
Telephone	\$382	0.6%	\$1.56
Rentals and other income	\$4,753	7.4%	\$19.45
Total revenue	\$64,028	100.0%	\$262.11
<b>Departmental Expenses</b>			
Rooms	\$10,212	25.4%	\$41.80
Food & beverages	\$13,706	73.1%	\$56.10
Telephone	\$449	117.5%	\$1.84
Rentals and other income	\$2,345	49.3%	\$9.60
Total departmental expenses	\$26,712	41.7%	\$109.34
Departmental income	\$37,316	58.3%	\$152.77
<b>Undistributed Operating Expenses</b>			
Administrative & general	\$5,411	8.5%	\$22.15
Marketing	\$4,275	6.7%	\$17.50
Franchise fees		0.0%	
Prop. oper. & maintenance	\$2,946	4.6%	\$12.06
Energy costs	\$2,715	4.2%	\$11.11
Total UDOEs	\$15,347	24.0%	\$62.82
Income before fixed charges	\$21,969	34.3%	\$89.95
<b>Fixed Charges</b>			
Management fee	\$1,921	3.0%	\$7.80
Property tax	\$2,080	3.2%	\$8.52
Insurance	\$755	1.2%	\$3.09
Reserve for replacement	\$2,561	4.0%	\$10.41
Total fixed charges	\$7,317	11.4%	\$29.82
Net income	\$14,652	22.9%	\$60.13

**Units of Comparison**  
 \$ per Available Room  
 Percentage of Revenue  
 \$ per Occupied Room





dollars per occupied room) for a typical Marriott hotel and industry averages for a similar full-service hotel. This data came from the HVS database, which contains hundreds of actual financial statements for Marriott hotels along with an aggregate financial statement comprised of other similar full-service branded hotels. Note that this data represents the operation of hotels in the United States. In other parts of the world, these ratios and units of comparison often differ greatly. This will be demonstrated later in this chapter, when projections of income and expense will be made for other regions of the world.

Exhibit 5.7 Marriott Hotel and Industry Averages						
	Marriott Hotel			Industry Averages		
Occupancy	73.0%			67.4%		
Average rate	\$156.00			\$164.31		
REVPAR	\$113.88			\$110.74		
<b>Revenues</b>	<b>\$/Avail. Rm.</b>	<b>Percent</b>	<b>\$/Occ. Rm.</b>	<b>\$/Avail. Rm.</b>	<b>Percent</b>	<b>\$/Occ. Rm.</b>
Rooms	\$41,700	55.7%	\$156.50	\$40,137	62.7%	\$164.31
Food	\$23,700	31.7%	\$88.95	\$15,679	24.5%	\$64.19
Beverages	\$3,100	4.1%	\$11.63	\$3,077	4.8%	\$12.60
Telephone	\$500	0.7%	\$1.88	\$382	0.6%	\$1.56
Rentals and other income	\$5,800	7.8%	\$21.77	\$4,753	7.4%	\$19.45
Total revenue	\$74,800	100.0%	\$280.73	\$64,028	100.0%	\$262.11
<b>Departmental Expenses</b>						
Rooms	\$8,900	21.3%	\$33.40	\$10,212	25.4%	\$41.80
Food & beverages	\$17,500	65.3%	\$65.68	\$13,706	73.1%	\$56.10
Telephone	\$700	140.0%	\$2.63	\$449	117.5%	\$1.84
Rentals and other income	\$4,000	69.0%	\$15.01	\$2,345	49.3%	\$9.60
Total departmental expenses	\$31,100	41.6%	\$116.72	\$26,712	41.7%	\$109.34
Departmental income	\$43,700	58.4%	\$164.01	\$37,316	58.3%	\$152.77
<b>Undistributed Operating Expenses</b>						
Administrative & general	\$6,200	8.3%	\$23.27	\$5,411	8.5%	\$22.15
Marketing	\$4,200	5.6%	\$15.76	\$4,275	6.7%	\$17.50
Prop. oper. & maintenance	\$2,600	3.5%	\$9.76	\$2,946	4.6%	\$12.06
Energy costs	\$2,800	3.7%	\$10.51	\$2,715	4.2%	\$11.11
Total UDOEs	\$15,800	21.1%	\$59.30	\$15,347	24.0%	\$62.82
Income before fixed charges	\$27,900	37.3%	\$104.71	\$21,969	34.3%	\$89.95
<b>Fixed Charges</b>						
Management fee	\$2,244	3.0%	\$8.42	\$1,921	3.0%	\$7.80
Property tax	\$2,000	2.7%	\$7.51	\$2,080	3.2%	\$8.52
Insurance	\$800	1.1%	\$3.00	\$755	1.2%	\$3.09
Reserve for replacement	\$2,992	4.0%	\$11.23	\$2,561	4.0%	\$10.41
Total fixed charges	\$8,036	10.7%	\$30.16	\$7,317	11.4%	\$29.82
Net income	\$19,864	26.6%	\$74.55	\$14,652	22.9%	\$60.13

The occupancy of the Marriott hotel is 73%, compared to 67.4% for the industry average hotel. Unless the industry average hotel is situated in the same market as the Marriott hotel, there is no way to determine whether the Marriott hotel is performing above, equal to, or below the market. With the overall US hotel occupancy averaging in the low 60% range, it appears that

the Marriott hotel is doing well compared to the US average, but it is necessary to analyze the occupancies of the local competitive set to make a final determination. The same type of local analysis needs to be made to determine whether the \$156 ADR of the Marriott compared to the \$164.31 ADR for the industry average hotel is positive or negative. Occupancy and ADR are affected by the management's operating ability; however, they are also driven by local market conditions. For example, this occupancy and rate might represent exceptional management in a depressed market like Detroit or poor management in a strong market like New York City. The resulting revenue per available room (RevPAR) for both hotels is very similar, showing only a 2.7% difference, which provides an excellent basis to compare the rest of the financial statement.

The big difference between the two hotels is found in the line item for food revenue. The Marriott hotel shows a food revenue per available room of \$23,700, more than 50% higher than the industry average hotel of \$15,679 per room. In addition, Marriott's food revenue per occupied room is \$88.95, while the industry average is \$64.19. This difference is significant and requires additional analysis. It is not likely that this relatively large volume of food revenue would have been generated by guests staying at the hotel even if it were an all-inclusive resort hotel where everyone used the food service for all three meals each day. A more logical reason for such a high food volume would be the presence of an active local banquet and catering business for which the hotel had the appropriate facilities to host weddings, parties, banquets, social events, corporate retreats, and other events that draw patronage from the local community. Also, a good hotel restaurant that attracts patrons from the surrounding area could provide some (but probably not all) of this high level of food revenue. In fact, Marriott hotels are known for their banquet and catering expertise, and it is not unusual for their properties (with the right facilities) to be highly competitive in this market. Keep in mind that Marriott was in the restaurant business long before they got into the hotel business.

The beverage revenue per available room of the Marriott (\$3,100) is similar to the industry average (\$3,077). This is somewhat surprising, since the food revenue for the Marriott is so much higher. It would be logical to assume that the beverage revenue would track the food revenue a little closer. Perhaps the Marriott lacks an active bar or lounge or is situated in a geographic area where beverage consumption is lower than normal. Further investigation is necessary to determine the reason for this aberration.

The Marriott's telephone revenue is \$500 per available room. This is more than the industry average hotel, but the difference is insignificant. With the use of cell phones, Skype, and other means of communication, the telephone departments of hotels are no longer a profit center or an important department in a hotel's income and expense statement.

Rentals and other income revenues are driven by the local area and the rental facilities (shops, display cases) of the property. Like occupancy and ADR, rentals and other income cannot really be evaluated against the industry average hotel.

The total revenue per available room for the Marriott was \$74,800, just \$10,000 over the industry average of \$64,028, which can mostly be attributed to Marriott's high food volume. The keys to evaluating the competence of a hotel operator are the units of comparison for the departmental expenses. It is these expense ratios that show whether the manager can control the financial operations of the property. Marriott is doing an exceptional job in this regard.



The Marriott's rooms expense percentage ratio of 21.3% is significantly below the industry average hotel of 25.4% and demonstrates the manager's ability to properly staff the hotel and operate the rooms department in an efficient manner. Rooms expense ratios below 22% are generally considered very good. When rooms department expenses exceed 27%, there could be reason for concern and further investigation may be necessary. High rooms expense ratios can often be attributed to unionized hotels, with strict work rules governing staffing levels. In countries like Bermuda, rooms expenses can be very high because government work laws do not permit laying off workers during the off-season.

The Marriott hotel also shows an exceptionally low food and beverage departmental expense of 65.3% compared to the industry average of 73.1%. Actually, a very low food and beverage departmental expense ratio was expected because of the high amount of banquet and catering business predicted by the food revenue. Banquet business can be exceptionally profitable because it is easy to control food and labor costs when serving a group of people eating together at the same time with a limited menu. The food is quickly prepared and served with little waste.

The expense ratio for the telephone department shows that both hotels are operating at a loss. The Marriott has an expense ratio of 140%, which is high compared to the industry average of 117.5%. Years ago, the telephone department was normally a profit center in a hotel. Today, it usually loses money because telephone revenue has fallen so much. Further investigation is needed to determine why Marriott's telephone expense is higher than that of the industry average hotel. The Marriott also shows a higher than average rental and other income expense ratio, which should be investigated.

The next line in the income and expense statement is the departmental income, which represents the cumulated profit for the hotel's various departments. What is interesting about the profit ratio on this line is that the Marriott hotel had a slightly higher rooms revenue and a significantly higher food revenue, which produced a much higher total revenue than the industry average hotel. The Marriott also had a much lower rooms department expense ratio and food and beverage expense ratio than the industry average hotel. Following this line of thought, one would think that combining the Marriott's higher revenues with lower expenses would result in a higher-than-average departmental profit ratio. In fact, the departmental profit ratios of the Marriott and the industry average are almost equal. The departmental profit percentage for the Marriott is 58.4%, compared to 58.3% for the industry average hotel. On the surface, this does not appear to make any sense. However, the reason why these profit ratios are identical has to do with the nature of the rooms and food and beverage revenue and profit and how it impacts profit ratios. For every dollar of rooms revenue, the Marriott makes almost 79 cents. For every dollar of food and beverage revenue, the Marriott makes almost 35 cents. Thus, a hotel with a very high food and beverage revenue volume will have a lower total departmental profit percentage compared to a hotel with a low food and beverage revenue volume. This illustrates that it is difficult to predict what the departmental income percentage or what the net income percentage should be without first knowing the ratio of food and beverage revenue to rooms revenue. A limited-service hotel with no food and beverage service might have a net income ratio of 40%, while a full-service hotel with significant food and beverage revenue might have a net income ratio of 20%. With these ratios, both hotels may be well managed.



Focusing on the dollars per room rather than the percentage shows that the departmental income for the Marriott (\$43,700) is actually higher (as expected) than the industry average of \$37,316 per room.

All the units of comparison for the undistributed operating expenses for the Marriott seem to be in line with the industry average hotel. The Marriott's administrative and general expenses are a little higher than average on a per-available-room basis (\$6,200 compared to \$5,411), but the ratio to total revenue is a little lower (8.3% compared to 8.5%). This difference would be expected, since the Marriott's total revenue is higher. The Marriott seems to be controlling its property operations and maintenance cost a little better than the industry average hotel at \$2,600 versus \$2,946. Energy costs are very localized and should not be compared with hotels outside the immediate area.

The fixed expenses also tend to be very localized, particularly the property taxes and insurance. Evaluating property taxes will be discussed later in this chapter. A 3% base management fee and a 4% reserve for replacement are normal for properties of this type.

The resulting net income line shows the Marriott's units of comparison at \$19,864 per room, 26.6% of total revenue, and \$74.55 per occupied room. The industry average hotel's units of comparison were \$14,652 per room, 22.9% of total revenue, and \$60.13 per occupied room. The Marriott significantly outperformed the industry average hotel by all measures. In fact, even with a much higher food and beverage volume, the Marriott had a higher profit percentage.

This type of in-depth financial analysis is possible because hotels are following the USALI, and the resulting financial units of comparison contain the same revenue and expense components that enable the financial comparison among different hotels. Since this book is meant for global distribution, we stress the importance of everyone adopting this system of accounting. It not only makes a hotel easier to evaluate from a financial perspective but even makes a hotel more salable on the global market.

## Forecasting Revenues and Expenses

The next step in the hotel appraisal process is the forecast of revenue and expense using the occupancy and ADR derived from the previously described market study and room night analysis. This forecast of revenue and expense begins by converting the occupancy and ADR projections into an estimate of rooms revenue. Using data collected in the market and industry statistics, the appraiser then develops a forecast of other revenue items such as food, beverage, telephone, and other income, as well as normal hotel operating expenses (in accordance with the USALI). Combining all this information produces a highly documented forecast of revenue and expense, which becomes a key component in estimating market value and evaluating the economics of the investment. This chapter will demonstrate how all types of hotel revenues and expenses are forecasted.

### Rooms Revenue Defined

The primary components of rooms revenue—occupancy and ADR—were discussed and projected in Chapters 3 and 4. A projection of rooms revenue is derived using the following formula:

$$\text{Occupancy} \times \text{Average Room Rate} \times \text{Room Count} \times 365 = \text{Annual Rooms Revenue}$$

The following case study demonstrates the projection of rooms revenue.



## Case Study

### Rooms Revenue Projection

The rooms revenue projection for the proposed Marriott hotel is calculated in Exhibit 5.8. The occupancy rate is multiplied by the number of rooms in the hotel

per year (room count  $\times$  365) to generate an estimate of the number of occupied rooms. Rooms revenue is then calculated as the product of occupied rooms multiplied by the ADR.

<b>Exhibit 5.8 Rooms Revenue Projection—Proposed Marriott</b>						
	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>Stabilized</b>
No. of rooms	200	200	200	200	200	200
$\times$ days/year	365	365	365	365	365	365
No. of rooms/year	73,000	73,000	73,000	73,000	73,000	73,000
$\times$ occupancy rate	64.0%	71.0%	69.0%	71.0%	74.0%	74.0%
No. of occupied rooms	46,720	51,830	50,370	51,830	54,020	54,020
$\times$ average rate	\$200.00	\$221.00	\$241.00	\$250.00	\$263.00	\$271.00
Rooms revenue (in thousands)	\$9,344	\$11,454	\$12,139	\$12,958	\$14,207	\$14,639

## Fixed and Variable Component Approach to Forecasting Revenues and Expenses

Before projecting individual items of hotel revenue and expense, appraisers must understand the fixed and variable component approach to forecasting. This approach produces one of the most accurate models of a hotel's future financial performance; it forms the basis for many computerized hotel forecasting programs used by hotel appraisal firms, hotel companies, investors, lenders, and developers.

### Theoretical Basis

The fixed and variable component approach is based on the premise that hotel revenues and expenses have one component that is fixed and another component that varies directly with the occupancy and use of the facility. A projection can therefore be made by examining a known level of revenue or expense and calculating the portion that is fixed and the portion that is variable. The fixed component is then held at a constant level, while the variable component is adjusted to reflect the percentage change between the projected occupancy and facility utilization and the actual occupancy and facility utilization that produced the known revenue or expense. This process is demonstrated in the following example.

### Example

A 200-room commercial hotel operated last year with an occupancy of 68%, an ADR of \$200, and a rooms department expense of \$2,493,000. This actual operating data is known as the *base* and will be used as an established reference point for future projections. A projection for this year indicates that the subject's occupancy is expected to fall to 64% because several new hotels will open in the area during the year. This year's rooms department expense can be calculated using the procedure described as follows.

First, last year's rooms department expense is expressed in this year's dollars by applying a 3% inflation rate. This is called *inflating the base*.



$\$2,493,000 \times 1.03 = \$2,568,000$  (rounded)

The appraiser has determined that 60% of the rooms expense for this hotel is fixed and the remaining 40% varies with occupancy. Thus, fixed and variable components of this year’s rooms expense are estimated as follows:

Fixed:  $0.6 \times \$2,568,000 = \$1,541,000$  (rounded)  
Variable:  $0.4 \times \$2,568,000 = \$1,027,000$  (rounded)

Next, the variable component is adjusted for the decline in occupancy from 68% to 64%. The percentage decline in occupancy (occupancy adjustment) is calculated by dividing the projected occupancy by the known occupancy:

$0.64 \div 0.68 = 0.94$

Multiplying the occupancy adjustment by the variable component yields the adjusted variable component:

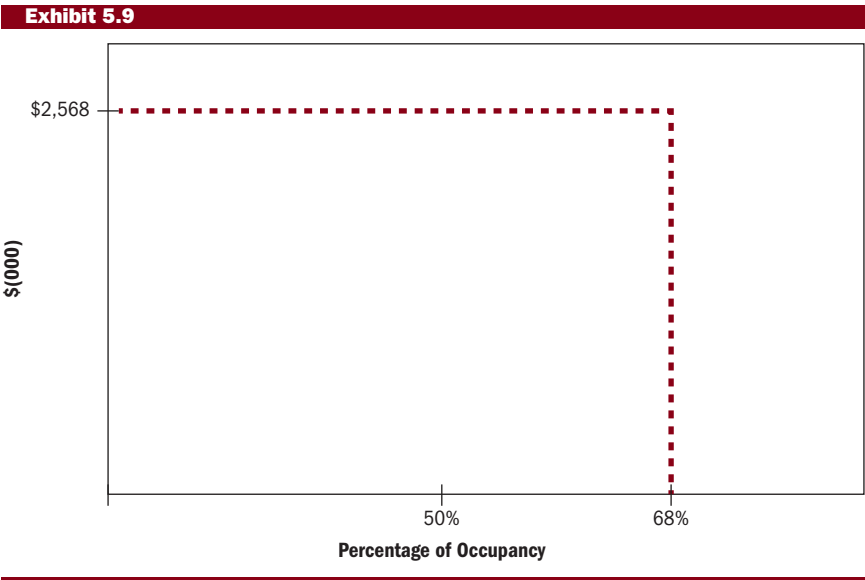
$0.94 \times \$1,027,000 = \$966,000$  (rounded)

Finally, the fixed component and the adjusted variable component are combined to produce the estimated rooms department expense at 64% occupancy.

Fixed component	\$1,541,000
Adjusted variable component	966,000
Projected rooms department expense	\$2,507,000

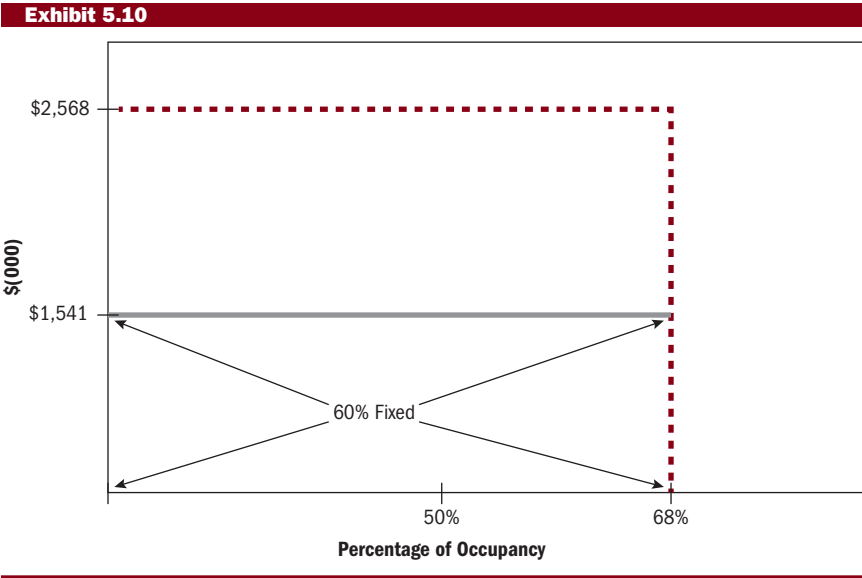
The fixed component of rooms expense represents items such as front desk salaries and the cost of cleaning public areas that must be maintained whether the hotel is operating at 0% or 100% occupancy. The variable component is made up of items such as housekeeper’s salaries and guest supplies, which vary directly with the level of occupancy.

The following set of graphs (Exhibits 5.9 through 5.12) illustrates the fixed and variable forecasting procedure. In this set of graphs, the horizon-

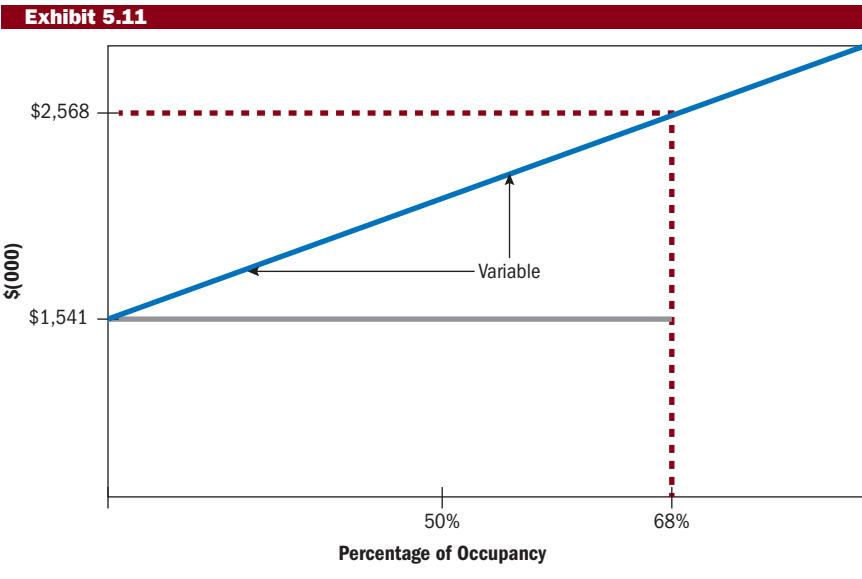


tal axis is for hotel occupancy and the vertical axis is for rooms department expense expressed in dollars (\$000). The dotted line shows the base rooms expense, which is \$2,568,000 at 68% occupancy.

We have estimated that the rooms department expense is 60% fixed and 40% variable. The solid horizontal line shows the fixed component at \$1,541,000. All expenses under the solid line are fixed.



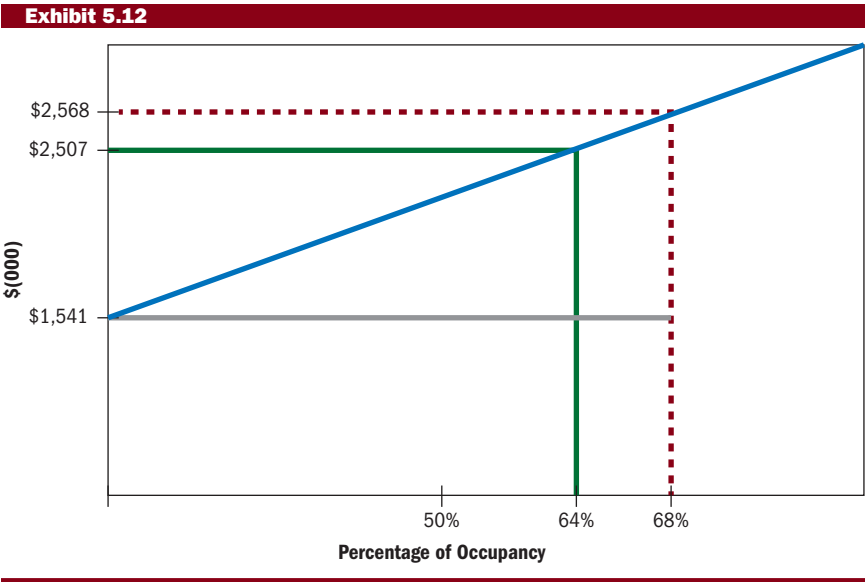
The third line added in Exhibit 5.11 represents the variable expense line, which is drawn on the diagonal from the intersection of the solid line at 0%





occupancy up through the 90 degree turn of the dotted line. All expenses below the diagonal line and above the solid line are variable expenses.

With this base information established, the rooms department expense for any level of occupancy can be estimated. For example, assume that occupancy drops to 64%. The rooms department expense can be estimated by drawing a fourth line vertically from the 64% horizontal axis up to the variable diagonal line and then over to the vertical rooms department expense line. This technique results in an estimated rooms department expense of \$2,507,000.



One of the key elements of the fixed and variable component approach to forecasting revenue and expense is the estimate of how much each item of revenue and expense is fixed and how much is variable. While updating this book, we performed a new analysis of the percentage relationship between fixed and variable for each line item in the hotel’s revenue and expense statement and found some significant changes since the previous edition of this work. The following is a description of our findings.

### Latest Research on the Fixed and Variable Components of Hotel Revenues and Expenses

When conducting a financial forecast for a hotel, each line item of revenue and expense must be projected for the holding period (typically 10 years). The fixed and variable forecasting approach yields the most accurate results because our experience indicates that revenue and expense items tend to vary with such items as occupancy, food and beverage revenue, other income, or total revenue.

A fixed and variable component model to project hotel revenue and expense levels is based on the premise that hotel revenues and expenses have one component that is fixed and another that varies directly with occupancy or a revenue source. A projection can be made by taking a known level of revenue or expense and calculating its fixed and variable components. The fixed component is then increased in tandem with the underlying rate of

inflation, while the variable component is adjusted for a specific measure of volume, such as total revenue.

The following example demonstrates the fixed and variable methodology with the assumption that rooms expenses are linked to occupancy:

	Year 0	Year 1
Occupancy	60%	70%
Rooms expense	\$1,000,000	?

Adding 3% inflation to the first projected year:

Year 0 rooms expense	\$1,000,000
Inflation	3%
Inflated rooms expense	\$1,030,000

Calculating the fixed and variable portions of the inflated rooms expense using a 60/40 allocation:

Fixed	60%	×	\$1,030,000	=	\$618,000
Variable	40%	×	\$1,030,000	=	\$412,000

Dividing the first projected occupancy from the previous year to calculate an index of variability:

Year 1 Occupancy		Year 0 Occupancy		Index of Variability
70%	/	60%	=	116.7% (rounded)

Applying the index of variability to the variable component to project the rooms department expense:

	Allocation		Adjustment		
Fixed	\$618,000	×	100.0%	=	\$618,000
Variable	\$412,000	×	116.7% (rounded)	=	\$480,667
Projected rooms department expense					\$1,098,667

This methodology would continue for each of the line items on the financial projections for all the years of the holding period (typically 10 years).

### Methodology Overview

Over the past 20 years appraisal literature has made various assumptions as to the ratio between fixed and variable expenses for each line item of hotel revenue and expense and the appropriate index of variability. The authors of this text thought it was necessary to perform new research to estimate the latest ratios and indices of variability. Stephen Rushmore, Jr., took on this task and performed the following research.

Two different approaches were used to develop a recommendation for the fixed and variable allocation for financial projections. The first approach analyzed hotel operating histories on a monthly basis because independent variables like occupancy and rooms revenue generally fluctuate throughout the year, which provided enough information to analyze the relationship between the independent and dependent variables. The second approach analyzed annual operating histories over a period of at least seven consecutive



years. Hotel room rates and occupancies have changed considerably during the past five years because of the economic recession and recovery, and the fluctuations should be enough to analyze the variability in the relationships between the independent and dependent variables.

Franchise fees, management fees, property taxes, insurance, and reserve for replacement were not regression tested because they are either 100% fixed or totally variable. All properties analyzed were located in the United States.

### **Monthly Operating History Regression Methodology**

Three years of consecutive monthly hotel operating histories were also acquired. All the operating statements were examined, and distressed or poorly performing properties were discarded to ensure consistency across the data set. The result was a shortlist of 48 properties with monthly operating statements between 2008 and 2011 over a period of 36 to 48 months. Exhibit 5.13 presents a list of the properties that were used for study.

<b>Exhibit 5.13 Hotels Selected for Study</b>	
Algonquin Hotel	Fullerton Marriott
Atlanta Marriott Norcross	Hilton Indianapolis Hotel
Atlanta Marriott Northwest	Hilton Long Beach
Best Western High Point	Hilton Newark Penn Station
Clarion Deland	Hilton San Diego Mission Valley
Crowne Plaza	Holiday Inn Harrisburg Hershey
Crowne Plaza San Antonio Riverwalk	Holiday Inn Utica
DoubleTree Berkeley Marina	La Posada de Santa Fe Resort & Spa
DoubleTree Hotel Los Angeles Commerce	Las Ventanas al Paraíso
DoubleTree Hotel Syracuse	Le Meridien San Francisco
DoubleTree Boise Riverside	Loews Philadelphia
Doubletree Modesto	Marriott Boca Raton
DoubleTree Omaha Downtown	Marriott Buffalo Niagara
DoubleTree Park Place Minneapolis	Marriott Detroit Metro Airport
DoubleTree Portland Lloyd Center	Marriott Detroit Southfield
DoubleTree Sacramento	Marriott Hunt Valley
DoubleTree San Antonio Airport	Renaissance Fort Lauderdale
Doubletree Suites New York City Times Square	Sheraton Arlington
DoubleTree Tallahassee	Sheraton Crystal City
Embassy Suites Detroit Southfield	Sheraton Detroit Novi Hotel
Embassy Suites Irvine	Sheraton Fort Lauderdale Airport
Embassy Suites Lake Buena Vista	Sheraton Music City
Embassy Suites Philadelphia City Center	Sheraton Salt Lake City Center
Fairfield Inn & Suites Savannah Airport	Westin Philadelphia

The hotels were a mix of full service, focused-service, and limited-service properties located throughout the country. In total, 25 regressions were run for each of the properties using the following dependent and independent variables:

- Dependent variables
  - Food revenue
  - Beverage revenue



- Other income
- Rooms expenses
- Food and beverage expenses
- Other expenses
- Administrative and general (A&G) expenses
- Marketing expenses
- Property operations and maintenance (PO&M) expenses
- Utility expenses
- Independent variables
  - Rooms revenue
  - Total revenue
  - Occupancy
  - Food revenue
  - Total food and beverage revenue
  - Other income

For each of the regressions, the following data were collected and placed into a spreadsheet:

- Dependent variable
- Independent variable
- Observations
- $R$ -squared
- Adjusted  $R$ -squared
- $F$
- Significance  $F$  ( $p$ -value)
- Dependent intercept

Regressions with a  $p$ -value of greater than 5% were discarded along with outliers. The remaining records were statistically significant and used as the foundation for the analysis and recommendation.

The final calculation took the intercept of the dependent variable and divided it by its mean to establish the fixed component of the property. The filtered results were analyzed in a pivot table, and the mean  $R$ -squared, fixed component, and standard deviation of the summed results were considered for the fixed and variable conclusions.

### **Annual Operating History Regression Methodology**

The second approach analyzed a much larger data set to consider whether property characteristics such as function space and brand affiliation influenced dependent variables. Initially, it was hypothesized that these properties could be segmented by hotel type, such as economy, limited service, select service, full service, luxury, and extended stay. However, it was determined that these definitions were too vague upon further investigation of the data set. While the industry uses these terms, no universal standard exists for their naming convention. As a result, a more precise approach was taken by segmenting by brand, location, number of rooms, meeting space, food and beverage facilities, and so on.



Annual operating histories generally are more readily available in the industry than monthly histories, and 586 properties with a minimum of seven consecutive years of reporting between 2001 and 2011 were obtained. Within the data set, 516 of these properties were branded, and the remaining 70 were independent. Exhibit 5.14 lists each brand and the respective number of properties selected.

<b>Exhibit 5.14 Selected Hotel Brands and Number of Properties Selected</b>			
Americas Best Value Inn	1	InterContinental	2
AmeriSuites	4	JW Marriott	1
Best Western	5	Langham Hotels	1
Chase Suites	2	La Quinta Inns & Suites	5
Clarion	2	Le Meridien	1
Comfort Inn	15	Loews	3
Comfort Suites	8	MainStay Suites	1
Country Inn & Suites	7	Mandarin Oriental	2
Courtyard	40	Marriott	16
Crowne Plaza	9	Orient Express Hotel	1
Doral	1	Outrigger	1
DoubleTree Hotels	30	Park Hyatt	1
Embassy Suites	11	Radisson	4
Fairfield Inn	42	Ramada	1
Fairfield Inn & Suites	6	Red Lion	1
Fairmont Hotel	5	Renaissance	5
Four Points	2	Residence Inn	96
Four Seasons	2	Ritz-Carlton	4
Hampton Inn	20	Sheraton Hotel	15
Hawthorn Suites	2	Shilo Inn	5
Hilton Garden Inn	1	Sleep Inn	3
Hilton Hotels	16	SpringHill Suites	8
Holiday Inn	22	Staybridge Suites	1
Holiday Inn Express	14	Summerfield Suites	2
Homewood Suites	30	TownePlace Suites	5
Hotel Sofitel	6	W Hotels	1
Hyatt	9	Westin	9
Hyatt House	1	Wingate Inn	1
Hyatt Place	2	Wyndham Garden Hotel	1
		Wyndham Hotels	4

These hotels were a diverse mix of full-service, select-service, and limited-service properties located throughout the country. The variables analyzed included the following:

- Dependent variables
  - Food revenue
  - Beverage revenue
  - Other income
  - Rooms expenses



- Food and beverage (F&B) expenses
- Other expenses
- A&G expenses
- Marketing expenses
- PO&M expenses
- Utility expenses
- Independent variables
  - Rooms revenue
  - Total revenue
  - Occupancy
  - Food revenue
  - Total F&B revenue
  - Other income
  - Brand
  - Room count
  - Meeting space size–square footage
  - Number of meeting rooms
  - Number of F&B outlets
  - F&B outlet type
  - Corridor type
  - Location

For each of the regressions, the following data were collected and placed into a spreadsheet:

- Dependent variable
- Independent variable
- *R*-squared
- Dependent intercept

Outliers whose ranges were determined by the previous analysis were discarded. The remaining records were statistically significant and used as the foundation for the analysis and recommendations. The final calculations used the intercept of the dependent variable and divided it by its mean to calculate the fixed component of the property.

The filtered data set was analyzed in a pivot table, and the mean *R*-squared, mean fixed component, and standard deviation of the summed results were used to interpret the results. Since 586 properties were included in the data set, more granular independent variables could be analyzed than the monthly regression methodology. More specifically, the following additional property characteristics were analyzed in a pivot table to determine whether they yielded statistically different results from the larger data set:

- Brand affiliation
- Room count
- Meeting space size–square footage
- Number of meeting rooms



- Number of food and beverage outlets
- F&B outlet type
- Corridor type
- Location

### Methodology—Final Steps

After the monthly and annual regressions were completed, the average *R*-squared (regression coefficient) for each of the independent and dependent variable combinations was sorted in a table to identify the most accurate predictor for the dependent variable. The monthly or annual approach with the highest average *R*-squared was used as the basis for the recommended fixed and variable allocation.

### Monthly Operating History Regression Results

Exhibit 5.15 details the results from the regression analysis.

Exhibit 5.15 Regression Analysis Monthly Results				
Revenues		Mean <i>R</i> -Squared	Standard Deviation	Mean Fixed
Food	Rooms revenue	0.37	16%	36%
Food	Occupancy	0.19	16%	36%
Beverage	Rooms revenue	0.26	16%	37%
Beverage	Food revenue	0.44	17%	34%
Beverage	Occupancy	0.11	15%	39%
Other income	Rooms revenue	0.24	22%	41%
Other income	Occupancy	0.18	18%	36%
Departmental Expenses				
Rooms	Total revenue	0.50	14%	54%
Rooms	Occupancy	0.50	17%	40%
Food and beverage	Food and beverage	0.71	10%	41%
Food and beverage	Food revenue	0.72	14%	43%
Food and beverage	Total revenue	0.53	16%	41%
Other Income	Other income	0.26	25%	64%
Other Income	Total revenue	0.50	16%	36%
Undistributed Operating Expenses				
A&G	Total revenue	0.24	14%	62%
A&G	Occupancy	0.16	20%	58%
Marketing	Total revenue	0.25	20%	53%
Marketing	Occupancy	0.20	20%	52%
PO&M	Occupancy	0.18	17%	62%
PO&M	Total revenue	0.21	18%	68%
Utilities	Total revenue	0.26	15%	65%
Utilities	Occupancy	0.22	20%	52%

### Annual Operating History Regression Results

Exhibit 5.16 details the results from the regression analysis.



**Exhibit 5.16 Regression Analysis Annual Results**

Revenues		Mean <i>R</i> -Squared	Standard Deviation	Mean Fixed
Food	Rooms revenue	0.50	26%	41%
Food	Occupancy	0.31	27%	37%
Beverage	Rooms revenue	0.56	22%	38%
Beverage	Food revenue	0.48	26%	45%
Beverage	Occupancy	0.34	27%	43%
Other income	Rooms revenue	0.20	26%	46%
Other Income	Occupancy	0.10	28%	54%
Departmental Expenses				
Rooms	Total revenue	0.56	24%	46%
Rooms	Occupancy	0.36	25%	48%
Rooms	Rooms revenue	0.57	21%	48%
Food and beverage	Food and beverage	0.73	23%	35%
Food and beverage	Food revenue	0.75	23%	36%
Food and beverage	Total revenue	0.62	23%	38%
Other income	Other income	0.45	28%	40%
Other Income	Total revenue	0.20	29%	46%
Undistributed Operating Expenses				
A&G	Total revenue	0.43	25%	46%
A&G	Occupancy	0.24	27%	51%
Marketing	Total revenue	0.33	27%	50%
Marketing	Occupancy	0.25	28%	48%
PO&M	Occupancy	0.39	26%	52%
PO&M	Total revenue	0.25	27%	51%
PO&M-high F&B	Occupancy	0.40	28%	51%
PO&M-high F&B	Total revenue	0.56	25%	49%
Utilities	Total revenue	0.41	27%	50%
Utilities	Occupancy	0.23	27%	55%

### Regression Results by Segments

Since the data set with annual operating statements resulted in higher regression coefficients than the monthly results, the properties were grouped by various property characteristics, such as brand affiliation, size of meeting space, number of rooms, and so on. These characteristics were segmented to determine whether the mean *R*-squared (regression coefficient) between the dependent and independent variables would be higher than the larger data set.

The more precise segmented approach was expected to yield a higher *R*-squared in some scenarios, but no meaningful or statistically stronger results were produced, with the exception of the food and beverage facilities' impact on property operations and maintenance expenses. Therefore, it may be concluded that the fixed ratios applied in the annual regression analysis can apply to a wide variety of hotels. The details of the segmentations are discussed in the following section.

### Food and Beverage Facilities

Properties with food revenue, beverage revenue, and combined food and beverage revenue were analyzed. Segmenting properties with three or more food and beverage outlets led to a higher *R*-squared-to-total revenue instead of



occupancy for the property operations and maintenance dependent variable. Digging further, the same results applied to properties with a food and beverage revenue that was 30% or more of the rooms revenue. While the recommended independent variable switched based on the number of facilities and food and beverage revenue volume, the fixed ratio remained intact.

F&B Outlets	Count
1	270
2	168
3	45
4	23
5	11
6	8
7	3
9	2
10	1

### Food and Beverage Service

Properties with food revenue, beverage revenue, and combined food and beverage revenue were analyzed. Filtering the results by the food and beverage services offered did not yield statistically stronger results. It may be concluded that food and beverage services do not influence the fixed and variable parameter recommendations.

Food and Beverage Type	Count
3 meals	29
3 meals, bar/lounge	226
Bar/lounge	5
Breakfast only	225
Breakfast only, bar/lounge	79

### Corridor Type

For security reasons, many of the hotels built today are constructed with interior corridors. Filtering the data set by corridor type did not yield statistically stronger results for the dependent variables. It may be concluded that corridor types do not influence the fixed and variable parameter recommendations.

Corridor Type	Count
Exterior	40
Interior	524

### Location

Filtering the data set by location did not yield statistically stronger results for the dependent variables. It may be concluded that the location type of a property does not influence the fixed and variable parameter recommendations.

Location	Count
Airport	57
Highway	79
Resort	49
Suburban	263
Urban	131

### Brand Affiliation

Each of the brands with more than 10 properties in the data set was separately filtered. These brands represented extended-stay, economy, limited-service, select-service, full-service, and luxury properties. Filtering the data set by location did not yield stronger results for the dependent variables. It may be concluded that neither the brand nor property type influenced the fixed and variable parameter recommendations:

Brand	Count
Comfort Inn	15
Courtyard	40
DoubleTree Hotels	30
Embassy Suites	11
Fairfield Inn	42
Hampton Inn	20
Hilton Hotels	16
Holiday Inn	22
Holiday Inn Express	14
Homewood Suites	30
Marriott	16
Residence Inn	96
Sheraton Hotel	15

### Room Count

The properties in the data set were grouped and filtered by the number of guest rooms using the ranges in the following table. Filtering the data set by room count did not yield statistically stronger results for the dependent variables. It may be concluded that room count did not influence the fixed and variable parameter recommendations.

Number of Rooms	Count
<50	8
50-100	176
100-200	225
200-300	82
300-400	56
400-500	23
500+	31

### Meeting Space Size–Square Footage

The properties in the data set were grouped and filtered by the square footage of the meeting space using the ranges in the following table. Filtering the data set by meeting space did not yield statistically stronger results for the dependent variables. It may be concluded that meeting space did not influence the fixed and variable parameter recommendations.

Square Footage	Count
100-500	75
500-1,000	105
1,000-5,000	90
5,000-10,000	54
10,000-50,000	129
50,000+	27



## Number of Meeting Rooms

The properties in the data set were grouped and filtered by the number of meeting rooms using the ranges in the following table. Filtering the data set by meeting room count did not yield statistically stronger results for the dependent variables. It may be concluded that the number of meeting rooms did not influence the fixed and variable parameter recommendations.

Number of Meeting Rooms	Count
None	144
1	154
2-5	115
6-10	65
>10	108

## Analysis of the Regression

Exhibit 5.17 shows a side-by-side comparison of the monthly and annual regression results:

<b>Exhibit 5.17</b>		<b>Monthly and Annual Regression Results</b>			
		<b>Monthly Mean R-Squared</b>	<b>Annual Mean R-Squared</b>	<b>Monthly Mean Fixed</b>	<b>Annual Mean Fixed</b>
<b>Revenues</b>					
Food	Rooms revenue	0.37	0.50	36%	41%
Food	Occupancy	0.19	0.31	36%	37%
Beverage	Rooms revenue	0.26	0.56	37%	38%
Beverage	Food revenue	0.44	0.48	34%	45%
Beverage	Occupancy	0.11	0.34	39%	43%
Other income	Rooms revenue	0.24	0.20	41%	46%
Other income	Occupancy	0.18	0.10	36%	54%
<b>Departmental Expenses</b>					
Rooms	Total revenue	0.50	0.56	54%	46%
Rooms	Occupancy	0.50	0.36	40%	48%
Rooms	Rooms revenue		0.57		48%
Food and Beverage	Food and beverage	0.71	0.73	41%	35%
Food and Beverage	Food revenue	0.72	0.75	43%	36%
Food and Beverage	Total revenue	0.53	0.62	41%	38%
Other Income	Other income	0.26	0.45	64%	40%
Other Income	Total revenue	0.50	0.20	36%	46%
<b>Undistributed Operating Expenses</b>					
A&G	Total revenue	0.24	0.43	62%	46%
A&G	Occupancy	0.16	0.24	58%	51%
Marketing	Total revenue	0.25	0.33	53%	50%
Marketing	Occupancy	0.20	0.25	52%	48%
PO&M	Occupancy	0.18	0.39	62%	52%
PO&M	Total revenue	0.21	0.25	68%	51%
PO&M (for high F&B)	Total revenue		0.56		49%
Utilities	Total revenue	0.26	0.41	65%	50%
Utilities	Occupancy	0.22	0.23	52%	55%



Before embarking on the research project, it was hypothesized that the monthly regression analysis would produce more statistically valid results because of the minimum 36 points on the trend compared with the seven points on the annual analysis. However, the outcome was actually the opposite. When examining the highest *R*-squared (regression coefficient) for each of the regression scenarios, the annual regression gave the most favorable results, with the only exception being the “other income revenue” and “other income expense” line items. Since the annual results were the most statistically valid, they became the basis for all of the recommended fixed ratios.

One of the interesting outcomes of the study is that all of the recommended fixed percentages for the expense items were lower than what was recommended in earlier texts by Stephen Rushmore. Assuming that the previous percentages had validity at the time of the recommendation, it may be concluded that hotel operators are more adept at controlling expenses with the ebb and flow of seasonality and other hotel demand cycles. Revenue and yield management tools are becoming increasingly sophisticated and more widely used, and this trend certainly could cause a reduction in fixed expenses over the past 10 years.

Another insight was that all sources of revenue, including food, beverage, and other income, were more statistically aligned to rooms revenue instead of occupancy, which is commonly accepted in the industry.

**Financial Statement Breakdown**

The following section is a more detailed breakdown of the regression analysis and an interpretation of the results. The description of the operating statement line items were referenced from the USALI, which is the standard used to aggregate revenues and expenses.

**Food Revenue**

Food revenue is derived from food sales, including nonalcoholic beverages. When rooms and food are sold at an inclusive price, the appropriate amount is allocated to the food revenue line item. The results of the regression analysis on the independent variables are shown in the following table:

	Monthly Mean Fixed	Annual Mean Fixed	Annual Spread	Monthly Standard Deviation (Std. Dev.)	Annual Std. Dev.	Monthly R-Squared	Annual R-Squared	Annual Fixed
Rooms revenue	36%	41%	5%	16%	26%	0.37	0.50	41%
Occupancy	36%	37%	1%	16%	27%	0.19	0.31	

Contrary to what is commonly accepted in the industry, there was a significant difference in *R*-squared between the rooms revenue and occupancy independent variables.

**Beverage Revenue**

Beverage revenue is derived from alcoholic beverages from restaurants, lounges, mini-bars, room service, and other outlets. Nonalcoholic beverages are included in beverage revenue when the outlet serves no food. The results of the regression analysis on the independent variables are shown in the following table:

	Monthly Mean Fixed	Annual Mean Fixed	Spread	Monthly Std. Dev.	Annual Std. Dev.	Monthly R-Squared	Annual R-Squared	Annual Fixed
Rooms revenue	37%	38%	1%	16%	22%	0.26	0.56	38%
Food revenue	34%	45%	11%	17%	26%	0.44	0.48	
Occupancy	39%	43%	4%	15%	27%	0.11	0.34	

It is not surprising to see similar results as with the food revenue, since the two are usually paired together.

### Other Income Revenue

Other income revenue is revenue not obtained from rooms, food, or beverages. It can consist of a variety of different sources, including but not limited to:

- Gift shop
- Business center services
- Telephone
- In-room movie and game changes
- Vending areas
- Space rentals
- Commissions received from other services

The results of the regression analysis on the independent variables are shown in the following table:

	Monthly Mean Fixed	Annual Mean Fixed	Spread	Monthly Std. Dev.	Annual Std. Dev.	Monthly R-Squared	Annual R-Squared	Annual Fixed
Rooms revenue	41%	46%	5%	22%	26%	0.24	0.20	46%
Occupancy	36%	54%	18%	18%	28%	0.18	0.10	

The results were consistent with food revenue and beverage revenue in that other income revenue is most tightly correlated with rooms revenue.

### Rooms Expense

Rooms expense consists of items related to the sale and upkeep of guest rooms and public space. According to the USALI, rooms expense includes the following:

- Salaries and wages, including leased labor
- Employee benefits, including payroll taxes, payroll-related insurance, pensions, and other payroll-related expenses applicable to the rooms department
- Cable and satellite television
- Commissions and remuneration paid to travel agents
- Complimentary food and beverages for guests
- Contracted services that were normally charged to the department but now outsourced
- Relocation costs for guests who need to be moved to another property because of a lack of available rooms
- Guest transportation



- Laundry, dry cleaning, and linen
- Operating supplies, including guest amenities in the room, cleaning supplies, printing, and stationary
- Reservation services and a central reservation system
- Telecommunication expenditures directly attributed to the rooms department
- Training materials, supplies, and instructor fees
- The cost of the rental, purchase, and cleaning of uniforms
- Other rooms expenses that do not apply to any of the above

The results of the regression analysis on the independent variables are shown in the following table:

	Monthly Mean Fixed	Annual Mean Fixed	Spread	Monthly Std. Dev.	Annual Std. Dev.	Monthly R-Squared	Annual R-Squared	Annual Fixed
Total revenue	54%	46%	8%	14%	24%	0.50	0.56	
Occupancy	40%	48%	8%	17%	25%	0.50	0.36	
Rooms revenue		48%			21%		0.57	48%

### Food and Beverage Expense

Food and beverage expense is associated with the generation of food and beverage revenue in a hotel's restaurant and lounge outlets as well as its banquet and meeting facilities. The results of the regression analysis on the independent variables are shown in the following table:

	Monthly Mean Fixed	Annual Mean Fixed	Spread	Monthly Std. Dev.	Annual Std. Dev.	Monthly R-Squared	Annual R-Squared	Annual Fixed
Total revenue	54%	46%	8%	14%	24%	0.50	0.56	46%
Occupancy	40%	48%	8%	17%	25%	0.50	0.36	

It was expected that the *R*-squared for food and beverage revenue and food revenue were going to be nearly identical given their similarities. Since some properties have accounting challenges separating food revenue from beverage revenue, it would be more practical to use the combined food and beverage revenue as a predictor of food and beverage expenses.

### Other Income Expense

Other income expense consists of costs associated with other income and is dependent on the nature of the revenue. For example, if a hotel leases its gift shop to an outside operator, the gift shop expenses are limited to items such as rental fees and commissions. Conversely, if the property operates its own gift shop, expenses would consist of the cost of goods sold, payroll, and so on. The results of the regression analysis on the independent variables are shown in the following table:

	Monthly Mean Fixed	Annual Mean Fixed	Spread	Monthly Std. Dev.	Annual Std. Dev.	Monthly R-Squared	Annual R-Squared	Annual Fixed
Total revenue	54%	46%	8%	14%	24%	0.50	0.56	46%
Occupancy	40%	48%	8%	17%	25%	0.50	0.36	



### Administrative and General Expense

Administrative and general expense includes the salaries and wages of all administrative personnel who are not directly associated with a particular department. Expense items related to the management and operation of the property are also allocated to this category. The results of the regression analysis on the independent variables are shown in the following table:

	Monthly Mean Fixed	Annual Mean Fixed	Spread	Monthly Std. Dev.	Annual Std. Dev.	Monthly R-Squared	Annual R-Squared	Annual Fixed
Total revenue	62%	46%	16%	14%	25%	0.24	0.43	46%
Occupancy	58%	51%	7%	20%	27%	0.16	0.24	

### Utilities

The utilities consumption of a lodging facility takes several forms: electricity, gas, oil, steam, water, sewer, other fuels, and utility taxes. The results of the regression analysis on the independent variables are shown in the following table:

	Monthly Mean Fixed	Annual Mean Fixed	Spread	Monthly Std. Dev.	Annual Std. Dev.	Monthly R-Squared	Annual R-Squared	Annual Fixed
Total revenue	65%	50%	15%	15%	27%	0.26	0.41	50%
Occupancy	52%	55%	3%	20%	27%	0.22	0.23	

Heating, cooling, and lighting are usually the biggest expenses of a hotel's utilities. Over the past 10 years, the hospitality industry has increasingly implemented sophisticated energy-efficient climate control systems in guest rooms, meeting rooms, and public spaces. Additionally, many hotels have instituted opt-in policies for cleaning linens over multi-night stays to reduce the amount of laundry, which in return lowers utility consumption.

### Marketing Expense

Marketing expense consists of all costs associated with advertising, sales, and promotion; these activities are intended to attract and retain customers. The results of the regression analysis on the independent variables are shown in the following table:

	Monthly Mean Fixed	Annual Mean Fixed	Spread	Monthly Std. Dev.	Annual Std. Dev.	Monthly R-Squared	Annual R-Squared	Annual Fixed
Total revenue	53%	50%	3%	20%	27%	0.25	0.33	50%
Occupancy	52%	48%	4%	20%	28%	0.20	0.25	

Marketing expenses, with the exception of fees and commissions, are controllable and accurately budgeted, unlike other line items on the operating statement. This budget is often calculated with the marketing expenses as a percentage of revenue, which explains why total revenue is the strongest independent variable.

### Property Operations and Maintenance Expense

Property operations and maintenance expense includes the salaries and wages of all maintenance personnel who assist in preventative maintenance and repairs. Expense items related to property operations and maintenance include waste removal, landscaping, snow removal, repairs, light bulbs, and



so forth. The results of the regression analysis on the independent variables are shown in the following table:

	Monthly Mean Fixed	Annual Mean Fixed	Spread	Monthly Std. Dev.	Annual Std. Dev.	Monthly R-Squared	Annual R-Squared	Annual Fixed
Occupancy	62%	52%	10%	17%	26%	0.18	0.39	52%
Total revenue	68%	51%	17%	18%	27%	0.21	0.25	

The results of the regression analysis with three or more food and beverage outlets or when food and beverage revenue is greater than 30% of rooms revenue are shown in the following table:

	Monthly Mean Fixed	Annual Mean Fixed	Spread	Monthly Std. Dev.	Annual Std. Dev.	Monthly R-Squared	Annual R-Squared	Annual Fixed
Occupancy		50%			28%		0.40	
Total revenue		49%			25%		0.56	49%

For most properties, the data suggest that occupancy is more tightly correlated to property operations and maintenance than total revenue. It is a logical conclusion, because a less occupied hotel will experience a reduction in heating and cooling, telecommunications, plumbing, usage, and so on, which leads to higher maintenance and operational support.

Segmenting properties with three or more food and beverage outlets led to a higher *R*-squared to total revenue instead of occupancy for the property operations and maintenance dependent variable. Digging deeper, the same results applied to properties for which food and beverage revenue is greater than 30% of rooms revenue. It may be inferred that these properties have significant meeting, catering, or restaurant operations that attract revenue from non-guests, explaining the lower relationship to occupancy.

### Franchise Fees

Franchise fees include all fees charged by the franchise company. They are calculated as a percentage of rooms revenue or total revenue. No regression analysis was performed because franchise fees are 100% variable and the terms are known ahead of projecting income and expenses.

### Management Fees

Management fees consist of base fees and incentive fees. Base fees are computed as a fixed amount or a percentage of revenues or profit. Incentive fees are triggered upon reaching a predefined set of financial goals, which usually include a profit component. Since management contract terms are known ahead of projecting income and expenses, no regression analysis was performed.

### Property Taxes

Depending on the taxing policy of the municipality, property taxes can be based on the value of the real property or the value of the personal property and the real property. Since property taxes are known ahead of projecting income and expenses and are 100% fixed, no regression analysis was performed.

### Insurance

Insurance for a hotel consists of protection against fire, earthquakes, weather, flooding, theft, liability, and so on. The insurance rates are calculated by a



number of factors, none of which is a variable measure. Since insurance expenses are always a 100% fixed expense, no regression analysis was performed.

**Reserve for Replacement**

The industry standard for reserve for replacement is 3-5% of total revenue. Since this is a 100% variable expense, no regression analysis was performed.

**Conclusions**

The fixed and variable regression research project delivered a significant discovery that will impact hotel financial projections and, as a result, hotel values. The new fixed/variable parameters show a decrease in fixed costs for all expense items as compared to previous analyses. A reduction in fixed costs means that hotel investments may be less risky than previously thought, which could translate to lower capitalization rates, equity yields, interest rates, and loan-to-value ratios.

Lastly, these new parameters should be applicable to a wide variety of hotel properties, with the only exception being properties with a high proportion of food and beverage revenue. The final results of the study are shown in Exhibit 5.18.

Exhibit 5.18 Final Results					
Revenues	Index of Variability	Fixed	Variable	Percent Fixed Range	Percent Variable Range
Food	Rooms revenue	41%	59%	15% to 67%	33% to 85%
Beverage	Rooms revenue	38%	62%	16% to 60%	40% to 84%
Other income	Rooms revenue	46%	54%	20% to 72%	28% to 80%
Departmental Expenses					
Rooms	Rooms revenue	48%	52%	27% to 69%	31% to 73%
Food and beverage	Food & bev. revenue	35%	65%	12% to 58%	42% to 88%
Other Income	Other income	40%	60%	12% to 68%	32% to 88%
Undistributed Operating Expenses					
A&G	Total revenue	46%	54%	21% to 71%	29% to 79%
Marketing	Total revenue	50%	50%	23% to 77%	23% to 77%
PO&M	Occupancy	52%	48%	26% to 78%	22% to 74%
PO&M (for high F&B)	Total revenue	49%	51%	24% to 74%	26% to 76%
Utilities	Total revenue	50%	50%	23% to 77%	23% to 77%
Other Expenses					
Franchise fee	Rooms revenue	0%	100%		
Management fee	Total revenue	0%	100%		
Property taxes	Fixed	100%	0%		
Insurance	Fixed	100%	0%		
Reserve for replacement	Total revenue	0%	100%		

**Application of the Approach**

The process of forecasting hotel revenues and expenses by the fixed and variable component approach is accomplished in nine steps, which are outlined as follows.

**Step 1.** All items of revenue and expense are projected based on information found in the financial statements of the subject and/or comparable hotels. If the subject property is a focused-service hotel, it will have relatively fewer departmental revenue and expense line items than a full-service hotel.

If the subject property is an existing hotel, then its past operating performance is generally used to establish future projections. For proposed hotels, the appraiser must rely on the operating results of hotels considered to be comparable to the subject property or industry averages.

**Step 2.** Comparable financial statements must usually be adjusted or modified somewhat to reflect the unique characteristics of the subject property. These adjustments may include changing the ADR, modifying the income and expense ratios, and altering the fixed charges. These various adjustments and modifications are made to create a one-year financial statement that uses the first-year ADR of the subject property expressed in current dollars, prior to any initial year discounts, and the income and expense ratios that represent the level of occupancy actually experienced by the comparable. This profit and loss statement is called the *base* (or the *comparable base*) and forms a foundation for calculating fixed and variable component relationships.

**Step 3.** The revenue and expense figures that make up the base are revised (inflated or deflated) to reflect current dollars for each forecast year. The rate of change applied should reflect the anticipated price change for the individual line item in the income and expense statement. The ADR used in the base is derived from the ADR projection. Any discounting of ADRs is disregarded in developing the base for each projection year. The purpose of Step 3 is to put the comparable financial data that make up the base into the inflated dollars anticipated for that particular year.

**Step 4.** Fixed and variable percentages are estimated for each revenue and expense category. Exhibit 5.18 shows typical ranges of fixed and variable percentages and the index used to measure the amount of variable change.

These fixed and variable percentages were developed from a regression analysis that evaluated hundreds of financial statements to determine which portion of each revenue and expense category was fixed and which portion was variable.

The index of variability refers to the factor that controls the movement of the variable component. For example, the variable component of food revenue moves in response to changes in rooms revenue or occupancy. Food and beverage expense levels are largely dependent on changes in food and beverage revenue. The variable components of undistributed operating expenses seem to move in relation to total revenue.

**Step 5.** Each individual line item in a hotel's financial statement is projected separately using the fixed and variable calculations. The fixed component is estimated by multiplying the appropriate fixed percentage by the base revenue or expense line item for the corresponding projection year. The variable component is estimated in Steps 6 through 8.

**Step 6.** Variable components are assumed to vary directly with the index of variability established in Step 4. The amount of variable change is quantified by dividing the appropriate projected index of variability by the index of variability for the base. For example, assume that the projected occupancy percentage for the subject property in Year 1 is 62% and the occupancy of the base is 73%. Dividing the projected occupancy by the base occupancy results in the following variable percentage change:

$$\frac{\text{Projected Occupancy}}{\text{Base Occupancy}} = \frac{0.62}{0.73} = 0.849, \text{ or } 84.9\%$$

Basically, this calculation shows that, as of that projected year, the subject's occupancy is estimated to be 84.9% of the occupancy percentage found in the comparable base data.



**Step 7.** The unadjusted variable component is calculated by multiplying the appropriate base revenue or expense item for the projected year by the variable percentage estimated in Step 4. Note that the total of the fixed and variable percentages for each line item must equal 100%.

**Step 8.** The unadjusted variable component must now be adjusted for variability in the index by multiplying the results of Step 7 by the variable percentage change calculated in Step 6. The product is known as the *adjusted variable component*.

**Step 9.** The forecast for the revenue or expense category is the total of the fixed component calculated in Step 5 and the adjusted variable component calculated in Step 8.

### **Step 1: Obtain Comparable Financial Statements**

Obtaining operating information on hotels and motels is relatively simple for firms that regularly appraise existing lodging facilities. For those who only perform this type of assignment occasionally, comparable financial data can be much more difficult to obtain.

The key to selecting financial data for use in projecting hotel income and expense is to rely on only recent financial statements from properties that are truly comparable to the subject. Employing the financial comparable selection procedure facilitates this process. Lodging facilities vary in many respects, including differences attributable to location, size, facilities, class, management, occupancy, and ADR. Each of these factors can impact a hotel's financial operating results in a unique way. When a number of financial statements are available, the financial comparable selection procedure indicates the order in which factors should be considered to screen out the statements of hotels that are less similar to the subject.

#### **Financial Comparable Selection Order**

1. Average daily rate (class)
2. Facilities
3. Room count
4. Management (image and service)
5. Occupancy
6. Geographic location

In evaluating several financial statements, the appraiser should first look for income and expense data from hotels that are similar to the subject property in terms of ADR. The class or rate structure of a hotel has a direct impact on both income and expense ratios, particularly fixed expenses that are measured on a per-available-room basis. Generally, hotel operating data should not be compared unless the properties are either in the same class or no more than one class away.

After the appraiser has accumulated financial statements from other properties with similar room rates, attention is focused on hotels with facilities that are most comparable to those of the subject property. The term “facilities” is first used in a broad sense. Hotels can be classified by the types of facilities offered, such as commercial, convention, resort, conference, health spa, suite, or extended stay. Within these broad classifications, financial comparability can be further refined by matching properties with similar physical components. For example, the term “convention hotel” can include a wide range of properties, from a 250-room suburban hotel to a 2,000-room con-



vention center facility. Some resort hotels may just offer rooms on a beach, while others may provide a full resort complex with all types of recreational amenities. The age and condition of the facility should also be considered. Financial comparability can be enhanced by using the financial statements of properties with similar facilities, particularly if these facilities generate large amounts of revenue (food and beverage) or operating expenses (golf courses).

Room count is the next consideration in the financial comparable selection order. The financial data used in projecting income and expense are generally more reliable when they come from comparable properties that are similar in size to the subject property. In assessing comparability, size can be defined in broad terms. A small hotel might be defined as one with 0 to 150 rooms. A mid-sized property would range from 150 to 300 rooms, and properties of 300 to 1,000 rooms would be considered large. A mega-property would be a hotel of 1,000 rooms or more. These categories can overlap, so size must be evaluated on a case-by-case basis.

When the future management of a hotel is known, it is often appropriate to use the financial operating ratios exhibited by other properties managed by this particular operator as a basis for forecasting income and expense. Although more weight should be given to the previous considerations in the financial comparable selection order (i.e., ADR, facilities, and room count), the obvious strengths and weaknesses of the contemplated management should be factored into the analysis, particularly if the property is subject to a long-term management contract.

Occupancy is one of the least important considerations in the evaluation of comparability. When the fixed and variable income and expense forecasting model is used, differences in occupancy levels between the comparable and the subject property are adjusted. Nevertheless, appraisers should avoid using financial data from hotels that exhibit widely divergent occupancies because the properties may possess other characteristics, making them dissimilar.

Geographic considerations are generally given minimal weight in selecting comparable financial data. Most hotel operating expenses are not dependent on the property's geographic location. However, two specific expense categories—energy cost and property taxes—are strongly affected by local factors. In addition, data from markets such as New York City, Washington, D.C., London, and Paris, which are burdened by unusually high labor costs, should not be compared with properties that are not similarly affected.

Appraisers should recognize that the financial comparable selection order provides a quick method for identifying financial data that may be comparable to the subject property. In certain situations, it may be appropriate to use data that do not fall within the process described so long as the desired effect—i.e., a proper base for projecting income and expense—is ultimately obtained.

Case Study	
<b>Financial Comparable Selection Order</b> The comparable hotel detailed in Exhibit 5.19 was found using the financial comparable selection order. This comparable shows	a good match with the proposed Marriott in all the relevant comparison areas. The accompanying statement of income and expense (Exhibit 5.20) was obtained from this comparable hotel.

**Exhibit 5.19**

	Comparable Hotel	Proposed Marriott
Average rate	\$205	\$212
Facilities	Full-service—convention	Full-service—convention
Number of rooms	200	200
Management	Global chain	Marriott
Occupancy	68%	Various
Geographic location	United States	Northeast United States

**Exhibit 5.20 Comparable Statement of Income and Expense**

Number of rooms:	200			
Occupancy rate:	68%			
Occupied rooms:	49,640			
Average rate:	\$205.00			
	Total \$ (in thousands)	Percent of Gross	Per Available Room (PAR)	Per Occupied Room (POR)
<b>Revenue</b>				
Rooms	\$10,176	55.8%	\$50,881	\$205.00
Food	5,882	32.3	29,410	118.49
Beverage	1,176	6.5	5,880	23.69
Telephone	81	0.4	407	1.64
Rental & other income	712	3.9	3,560	14.34
Health spa	200	1.1	1,000	4.03
Total revenue	\$18,228	100.0%	\$91,138	\$367.20
<b>Departmental Expenses*</b>				
Rooms	\$2,412	23.7%	\$12,059	\$48.59
Food & beverage	4,764	67.5	23,820	95.97
Telephone	120	148.0	602	2.43
Other income	206	29.0	1,032	4.16
Health spa	150	75.0	750	3.02
Total dept. expense	\$7,653	42.0%	\$38,264	\$154.16
<b>Departmental Income</b>	\$10,575	58.0%	\$52,874	\$213.03
<b>Undistributed Operating Expenses (UDOE)</b>				
Administrative & general	\$1,406	7.7%	\$7,032	\$28.33
Marketing	1,096	6.0	\$5,481	\$22.08
Property operations & maint.	610	3.3	\$3,049	12.28
Energy	600	3.3	3,000	12.09
Total UDOE	\$3,712	20.4%	\$18,562	\$74.79
<b>Income before Fixed Charges</b>	\$6,862	37.6%	\$34,312	\$138.25
<b>Fixed Charges</b>				
Management fee	\$547	3.0%	\$2,734	\$11.02
Property taxes	400	2.2	2,000	8.06
Insurance	200	1.1	1,000	4.03
Reserve for replacement	911	5.0	4,557	18.36
Total fixed charges	\$2,058	11.3%	\$10,291	\$41.46
<b>Net Income</b>	\$4,804	26.4%	\$24,021	\$96.78

\* Departmental expense ratios expressed as a ratio to departmental revenues



Several adjustments will be made to these financial data to make them comparable to the physical, operational, and

location-specific characteristics contemplated for the proposed Marriott.

**Step 2. Adjust Comparable Financial Statements**

Comparability among hotels is never precise, so adjustments must be made to individual categories (line items) of income and expense to bring the actual operating results of the comparable property closer to the expectations for the subject.

Comparable financial data are adjusted in two stages. In Stage 1, the comparable operating data for a particular income or expense category are projected for the subject property using an appropriate unit of comparison. This projection produces a general estimate of each income and expense category. In Stage 2, each of the subject’s projected revenue and expense categories is fine-tuned by factoring the property’s unique physical, operational, and location-specific attributes into the final projection. Both of these stages are described in this chapter.

When making a projection of income and expense using comparable financial data, it is first necessary to break down the comparable income and expense statement into specific units of comparison. For hotels, these units of comparison include:

- Percent of total revenue
- Percent of rooms revenue
- Percent of food and beverage revenue
- Dollars per available room
- Dollars per occupied room

Applying units of comparison puts the financial data on a common basis so that the operating results of the comparable can be analyzed and projected for the subject. A given unit of comparison may be better suited to some revenue and expense categories than to others. Certain units are more applicable because of specific volume relationships, which cause individual revenue and expense categories to react differently to changes in a hotel’s occupancy, ADR, and food and beverage volume. If, for example, a revenue or expense category varies in relation to changing occupancy levels or ADRs, the appropriate unit of comparison would be the percentage of rooms revenue or total revenue. If the category is primarily fixed, then greater emphasis should be placed on the dollars per available room unit of comparison. A category that is food and beverage sensitive would be expressed as a percentage of food and beverage revenue.

Exhibit 5.21 shows the primary units of comparison applied in projecting each category of hotel income and expense from a comparable financial statement.

Each of the five units of comparison in the first column is sensitive to the various factors shown in the second column. For example, the percentage of total revenue is sensitive to a hotel’s occupancy, ADR, and food and beverage revenue. The last column shows which income and expense categories are best projected by a specific unit of comparison. Since most items of income and expense have both a fixed component and a variable component, it is sometimes appropriate to use more than one unit of comparison.



<b>Exhibit 5.21 Units of Comparison Applied</b>		
<b>Unit of Comparison</b>	<b>Sensitivity Factors</b>	<b>Used to Project the Following Income and Expense Categories</b>
Percent of total revenue	Occupancy	Administrative and general
	Average room rate	Management fee
	Food & beverage revenue	Marketing
Percent of rooms revenue		Property operation and maintenance
	Occupancy	Food revenue
	Average room rate	Telephone revenue
		Other income
Percent of food and beverage revenue	Food & beverage revenue	Rooms expense
Per available room	Fixed categories	Food and beverage expense
		Administrative and general
		Marketing
		Property operation and maintenance
		Energy
		Insurance
Per occupied room	Occupancy	Property taxes
		Food revenue
		Beverage revenue
		Telephone revenue
		Other income
		Rooms expense
		Energy

Once a projection for a category of income and expense is made using the units of comparison described, it is often necessary to fine-tune the projection to account for the physical, operational, and location-specific differences between the comparable and subject property. Primary differences that should be adjusted for include:

- Differences in ADR, particularly if the subject property is in a higher or lower class (e.g., economy, mid-rate, first, luxury) than the comparable
- Substantial differences in size (room count)
- Differences in food and beverage volume, particularly if one property has significantly more or less beverage or banquet revenue
- Location-specific differences, which generally affect energy costs and property tax expenses

Since fixed and variable analysis adjusts for differences in occupancy between the comparable and the subject property, no specific adjustment is needed to account for a variance in occupancy at this point in the projection process.

When fine-tuned adjustments are required to account for differences between properties, the unit of comparison used in the projection is adjusted either upward or downward in the manner described as follows.

### **Percent of Total Revenue**

Adjusting the percentage of total revenue units of comparison upward for an expense item causes the dollar amount of that expense to increase.





### **Average Daily Rate**

When the comparable has an ADR that is higher than the subject property's, its operating expense ratios based on a percentage of total revenue tend to be lower. If such an unadjusted percentage were to be applied to the subject property, it would be understated; therefore, the unit of comparison should be fine-tuned upward.

### **Room Count**

It is difficult to determine how to adjust the percentage of total revenue based on the size of the property. In general, if the comparable is slightly larger than the subject property, its operating expense ratios, which use a percentage of total revenue, tend to be lower because some of the fixed expenses (such as payroll) can be spread out over a greater amount of revenue. This advantage ends at the point when added costs must be incurred to handle the additional rooms. For example, a single general manager might operate a 100-room hotel efficiently. That same individual could probably handle an additional 75 rooms, which would decrease the management payroll expressed as a percentage of total revenue. Once the room count exceeds 175, however, it may be necessary to hire an assistant manager to take over some of the operational responsibilities. This extra expense quickly increases the expense ratio.

### **Food and Beverage Revenue**

When the comparable has more food and beverage revenue than the subject property, its operating expense ratios, based on a percentage of total revenue, tend to be lower and should be fine-tuned upward when projecting expenses for the subject property. Such an analysis is not usually relevant for a focused-service hotel.

### **Percent of Rooms Revenue**

The fine-tuned adjustments for this unit of comparison are the same as those just described for the percentage of total revenue.

### **Percent of Food and Beverage Revenue**

This unit of comparison is used primarily to project food and beverage department expenses. As the volume of food and beverage business increases, the food and beverage expense ratio usually decreases. If the comparable property has more food and beverage revenue than the subject property, its food and beverage expense ratio would be lower and should be adjusted upward to project the subject's food and beverage department expenses. An even greater upward adjustment is needed if the comparable has a considerable amount of beverage or banquet business, which tends to operate at a greater profit margin. Such an analysis is not usually relevant for a focused-service hotel.

### **Dollars per Available Room**

Adjusting the dollars per available room unit of comparison upward for an expense item causes the dollar amount of that expense to increase.

### **Average Daily Rate**

When the comparable has an ADR that is higher than the subject property's, it is likely to be providing a superior level of service. This difference would tend to suggest an increase in the cost of operations for the subject on a per-available-room basis. In this instance, the unit of comparison used to project expenses for the subject property should be adjusted downward.



## Room Count

The preceding discussion of an efficient room count also applies to the dollars per available room unit of comparison. If the comparable has a room count that is less efficient than the subject's, its operating expenses, expressed on a per-available-room basis, could be overstated and may have to be adjusted downward when making a projection for the subject property.

## Food and Beverage Revenue

If the comparable has a greater amount of food and beverage revenue than the subject property, its operating expenses will probably be higher when expressed on a per-available-room basis. In this case, the unit of comparison used to project expenses for the subject property should be adjusted downward. Such an analysis is not usually relevant for a focused-service hotel.

## Dollars per Occupied Room

Since the occupancy level used for the subject property's base profit and loss statement will be the same as the occupancy of the comparable, the adjustments made to this unit of comparison should be identical to those used for dollars per available room.

## Case Study

### Adjusting Comparable Financial Data Revenue

The process of adjusting comparable financial data will be illustrated for the proposed Marriott Hotel. First, each income and expense category is projected using an appropriate unit of comparison (Stage 1) and then the results are fine tuned (Stage 2). Each category of income and expense is analyzed and adjusted separately using the comparable statement of income and expense (Exhibit 5.20), which was selected for the proposed Marriott through application of the financial comparable selection order. This process will result in a one-year financial statement that incorporates the subject's base year ADR expressed in current dollars (before initial year discounting) and income and expense ratios that reflect the level of occupancy actually experienced by the comparable. This profit and loss statement, which is called the base or comparable base, will form a foundation for calculating the fixed and variable component relationships.

### Rooms Revenue

The base rooms revenue is calculated by multiplying the occupancy rate by the ADR, the room count, and 365. Since the

fixed and variable component approach will automatically adjust for differences in occupancy, the comparable property's occupancy level will be used for the subject property. The Marriott's ADR was projected at \$212 as of the base year (2012). The base rooms revenue is therefore calculated as follows:

$$0.68 \times \$212 \times 200 \times 365 = \$10,524,000 \text{ (rounded)}$$

### Food and Beverage Revenue

Food and beverage revenue is generated by a hotel's restaurants, lounges, coffee shops, snack bars, banquet rooms, and room service. These outlets are both revenue sources and necessary amenities for the sale of guest rooms in a full-service hotel. Although some hotels have active lounges and banquet facilities that draw local residents, guests represent a substantial portion of the food and beverage patrons for most hotels. Such an analysis is not usually relevant for a focused-service hotel.

In the *Uniform System of Accounts for the Lodging Industry*, food revenue is defined as "revenue derived from the sale of food, including coffee, milk, tea, and soft drinks. Food sales do not include meals charged on employees' (staff) checks."



Beverage revenue is “derived from the sale of beverages.” In addition to the revenue generated through the sale of food and beverages, hotels normally produce other related income derived from meeting room rental, cover charges, service charges, and miscellaneous banquet revenue. The combination of food income, beverage income, and other food and beverage income equals total food and beverage revenue.

Exhibit 5.22 shows the various revenue categories that make up the food and beverage department within a hotel as well as each category’s classification as fixed, occupancy sensitive, rate sensitive, or food-and-beverage sensitive.

The comparable statement of income and expense (Exhibit 5.20) provides the following data, which will be used to project the base food revenue for the proposed Marriott.

Total food revenue	\$5,882,000
Food revenue per available room	\$29,410
Food revenue per occupied room	\$118.49
Ratio of food revenue to rooms revenue	58%
Ratio of food revenue to total revenue	32%

The description of the comparable hotel provided in Exhibit 5.20 indicates that this hotel has larger, more elaborate food and beverage facilities than those planned for the proposed Marriott. Specifically, the comparable has 50 square feet of meeting and banquet space per room compared to the subject’s 42 square feet—a difference of

about 16%. In addition, the Marriott will have a lower concentration of restaurant and lounge space.

These differences between the food facilities of the comparable and those planned for the subject indicate that the food revenue per available room unit of comparison should be adjusted downward. Offsetting this downward adjustment would be a slight upward adjustment to reflect the Marriott’s new facilities and higher ADR, which could have a positive impact on menu prices. Based on this analysis, the comparable property’s food revenue per available room will be adjusted downward by 15%. When this adjustment is applied, the following base food revenue is produced:

$$\$29,410 \times 0.85 \times 200 \text{ rooms} = \$5,000,000 \text{ (rounded)}$$

The ratio of food revenue to rooms revenue would also be an appropriate unit of comparison. This unit of comparison would be adjusted downward to compute the subject’s food base. However, the ratio of food revenue to total revenue is generally a less reliable unit of comparison.

Beverage revenue is derived from the sale of alcoholic beverages in a hotel’s restaurants and banquet rooms and from the sale of both alcoholic and nonalcoholic beverages in the hotel’s bars and lounges. Beverage revenue can be projected in a manner similar to food revenue using either the build-up cover approach or the fixed and variable component method. Appraisers should recognize that much of

Exhibit 5.22 Food and Beverage Revenue					
Category	Percent of Category	Fixed Revenue	Variable Revenue		
			Occupancy Sensitive	Rate Sensitive	Food and Beverage Sensitive
Food	60-85	—	Moderately	—	Highly
Beverage	15-40	—	Moderately	—	Highly
Other income					
Public room rentals	0-2	—	Moderately	—	Slightly
Cover and minimum charges	0-3	—	Moderately	—	Highly
Sundry banquet income	0-4	—	Slightly	—	Highly
Total	100	—	Moderately	—	Highly

the beverage revenue generated by a hotel usually comes from its lounge outlet(s). Lounge customers tend to be very fickle, however, frequenting a spot one year and not returning the next. Since management plays an important role in the ultimate success of a hotel's beverage operation, it is often wise to use comparable beverage revenue data that reflect the same level of beverage management expertise that will be present at the subject property. Such an analysis is not usually relevant for a focused-service hotel.

Beverage revenue tends to be highly variable, changing directly with food revenue. The most appropriate unit of comparison, generally, is a percentage of food revenue. The ratio of beverage revenue to food revenue for the comparable is approximately 20%. While the proposed Marriott will have a similar ratio of beverage facilities to food facilities as the comparable, a downward adjustment to the unit of comparison is appropriate to account for the comparable property's successful lounge. Using a ratio of beverage revenue to food revenue of 16%, the following calculation shows the base beverage revenue for the subject property.

$$\$5,000,000 \times 0.16 = \$800,000 \text{ (rounded)}$$

### Telephone Revenue

Telephone revenue is generated from hotel guests charging local and long-distance calls to their rooms and from out-of-town patrons using the hotel's public telephones. Before the deregulation of the

telephone industry in the early 1980s, hotels were limited to a 15% commission on long-distance calls. This mark-up was generally too low to generate a profit for most hotels' telephone departments, which typically ran at a loss. Later, the mark-up at which hotels could resell telephone services to guests was not regulated. Because of this freedom and the development of sophisticated call accounting equipment, the telephone department was generally able to make some profit. State-of-the-art telephone equipment can provide functions as sophisticated as least-cost routing, automatic identification of outward dialing, automatic price billing, and post telephone charging to guest folios. Moreover, hotels can select among various providers of long-distance services and can work with any one of a number of alternative operator services (AOS), which route and price calls and may also provide additional telephone-related guest services.

In recent years, the hotel industry has seen large declines with respect to telephone revenue due to the use of cell phones and Internet phone services such as Skype. The number of long-distance calls billed per occupied room has decreased dramatically. As a result of this decrease in volume, the profitability of this department has declined as well.

Exhibit 5.23 shows the various accounts that fall under telephone revenue according to the USALI. Telephone revenue varies directly with changes in occupancy. The small portion of this

Exhibit 5.23 Telephone Revenue					
Category	Percent of Category	Fixed Revenue	Variable Revenue		
			Occupancy Sensitive	Rate Sensitive	Food and Beverage Sensitive
Local	25-60	—	Highly	—	—
Long distance	35-60	—	Highly	—	—
Service charges	0-10	—	Highly	—	—
Commissions—local	0-10	—	Highly	—	—
Commissions—long-distance	0-10	—	Highly	—	—
Total	100	—	Highly	—	—

revenue category that is fixed represents pay station revenue generated by unregistered patrons using the hotel's food and beverage outlets and meeting rooms. The appropriate units of comparison would be revenue per occupied room and revenue per available room.

The comparable statement of income and expense shows the following data, which provide a basis for projecting the base telephone revenue for the proposed Marriott.

Total telephone revenue	\$81,000
Telephone revenue per available room	\$407
Telephone revenue per occupied room	\$1.64
Ratio of telephone revenue to rooms revenue	0.8%
Ratio of telephone revenue to total revenue	0.4%

Because the comparable property has about 15% more meeting, banquet, restaurant, and lounge facilities than the proposed Marriott, it probably attracts 15% more unregistered food and beverage patrons who would use the pay telephones. If outside usage represents 10% of the total telephone revenue (the fixed component), then the comparable data should be adjusted downward by approximately 1.5% ( $15\% \times 10\% = 1.5\%$ ). Based on this analysis, the comparable property's telephone revenue per occupied room is adjusted downward by 1.5%. With this adjustment, the base telephone revenue is calculated as follows:

$$\$1.64 \times 0.985 \times 200 \times 0.68 \times 365 = \$80,000 \text{ (rounded)}$$

The same base telephone revenue could have been calculated using the telephone revenue per available room. The ratios of telephone revenue to rooms revenue and telephone revenue to total revenue are considered secondary units of comparison because small changes in a hotel's ADR generally have little effect on the charges for telephone service. If the comparable were a different class of hotel, then the potential difference in telephone rates charged would have been taken into consideration.

### Other Income

Other income represents revenue derived from sources other than the sale of guest rooms, food and beverages, and telephone service. Depending on the type of hotel and the facilities and amenities offered, other income may include the following revenue items:

- Rent charged for stores, office space, concession space, clubs, and storage
- Commissions from auto rental, photography, telegrams, and vending services
- Concession revenue paid by others for the privilege of operating departments that might otherwise be operated by the hotel itself (Gift shops, barbers, and beauty shops are typically concessions.)
- Revenue derived from in-room movie charges
- Cash discounts earned from creditors' accounts for payment within the discount period (Trade discounts, which are deducted from the cost of goods sold, are not considered other income)
- Electronic games and pinball machines
- Forfeited advance deposits and guaranteed no-shows
- Service charges added to customers' accounts for service that does not have to be paid to service personnel
- Interest income from house accounts
- Salvage revenue from the sale of old and obsolete items

Other income is usually highly sensitive to occupancy and slightly sensitive to food and beverage use, so the appropriate units of comparison would be either a percentage of rooms revenue adjusted for any unusual food and beverage volume or revenue per occupied room. When a hotel has extensive retail or office rental space, recreational amenities, or other signifi-



cant sources of other income, a separate revenue category may be used to show the extent of this income.

The following data from the comparable statement provides a basis for projecting the base other income for the proposed Marriott.

Total other income	\$712,000
Other income per available room	\$3,560
Other income per occupied room	\$14.34
Ratio of other income to rooms revenue	7.0%
Ratio of other income to total revenue	3.9%

Using the ratio of other income to rooms revenue as the unit of comparison, several fine-tuned adjustments would be appropriate. A downward adjustment is needed to reflect the comparable property's more extensive restaurant and banquet space, which should generate more other income than the subject. A slight upward adjustment should also be applied to reflect the subject's higher ADR, newer facilities, and greater ability to use these advantages to generate proportionately more other income than the comparable.

Based on this analysis, the comparable property's 7% ratio of other income to rooms revenue will be adjusted downward to 6.6%. When this adjustment is applied, the following base other income is produced:

$$0.066 \times \$10,524,000 = \$700,000 \text{ (rounded)}$$

**Health Spa Revenue**

The proposed Marriott will have a small health spa with six treatment rooms. The spa will be operated by the hotel and will cater to both the guests of the hotel as well as local patronage. The comparable also has a similar spa with five treatment rooms. It is projected that both spas will generate a similar level of revenue, so \$200,000 will be used as the base spa revenue. Such an analysis is not usually relevant for a focused-service hotel.

**Total Revenue**

The base total revenue is calculated by adding the six revenue components:

Rooms	\$10,524
Food	5,000
Beverage	800
Telephone	80
Rental and other income	700
Health spa	200
Total revenue	\$17,304

**Expenses**

**Rooms Expense**

Rooms expenses consist of items relating to the sale and upkeep of guest rooms and public space. Exhibit 5.24 outlines the components of the rooms department expense category according to the USALI.

Most of the categories that fall under rooms expenses appear to be moderately occupancy sensitive and slightly rate sensitive, which indicates that a portion of the category is fixed and the remainder is occupancy variable.

Salaries, wages, and employee benefits account for a substantial portion of the rooms expenses. Although a portion of the payroll expense is occupancy variable in that management can schedule maids, bell personnel, and house cleaners to work only when occupancy requires, much of the rooms payroll is fixed. Front desk personnel, public area cleaners, housekeepers, and other supervisory staff are needed regardless of the level of occupancy. As a result, salaries, wages, and employee benefits are only moderately occupancy sensitive.

Commissions represent remuneration to online and traditional travel agents for booking rooms. Since these charges are usually based on a percentage of rooms revenue, they are highly occupancy and rate sensitive. Similarly, reservation expenses normally reflect the cost of a franchise reservation system, which typically charges a percentage of rooms revenue. Other rooms expenses such as laundry, linen, supplies, and uniforms are also somewhat affected by volume and are therefore slightly occupancy sensitive.

Because rooms expenses are greatly influenced by changes in occupancy and



## Exhibit 5.24 Rooms Expense

Category	Percent of Category	Fixed Expenses	Variable Expenses		
			Occupancy Sensitive	Rate Sensitive	Food and Beverage Sensitive
Salaries and wages	50-70	—	Moderately	—	—
Employee benefits	5-15	—	Moderately	—	—
Cost of employee meals	1-4	—	Moderately	—	—
Cable/satellite television	1-5	—	Moderately	—	—
Commissions	0-3	—	Highly	Highly	—
Complimentary guest services	1-5	—	Moderately	—	—
Contract cleaning	1-3	Moderately	—	—	—
Guest relocation	1-4	—	Moderately	—	—
Guest transportation	1-4	—	Moderately	—	—
Laundry and dry cleaning	7-12	—	Slightly	—	—
Linen	3-8	—	Very slightly	—	—
Operating supplies	1-4	—	Very slightly	—	—
Other operating expenses	1-4	—	Very slightly	—	—
Reservation expenses	0-8	—	Highly	Highly	—
Telecommunications	1-4	—	Moderately	—	—
Training	1-4	—	Moderately	—	—
Uniforms	1-3	—	Very slightly	—	—
Total	100	Very slightly	Moderately	Slightly	—

ADR, the applicable unit of comparison would be either a percentage of rooms revenue or an amount per occupied room.

The comparable statement of income and expense shows the following data, which can be used to project the base rooms expense for the proposed Marriott:

Total rooms expense	\$2,412,000
Rooms expense per available room	\$12,059
Rooms expense per occupied room	\$48.59
Ratio of rooms expense to rooms revenue	23.7%

The percentage of rooms expense to rooms revenue was selected as the appropriate unit of comparison for the proposed Marriott. A fine-tuned adjustment is required because the proposed Marriott has an estimated ADR of \$212 in the base year compared to the comparable property's current ADR of \$205. This slight difference should enable the Marriott to achieve a rooms expense ratio that is somewhat lower than the comparable property's. The amount of the downward adjustment can

be based on the percentage relationship between the ADRs of the comparable and the Marriott. The ADR of the comparable divided by the ADR of the Marriott shows that the comparable property's rate is 97% of the Marriott's. Multiplying this percentage by the comparable property's ratio of rooms expense to rooms revenue quantifies the downward adjustment.

$$0.237 \times 0.97 = 0.23, \text{ or } 23\%$$

The base rooms expense is calculated by multiplying the subject's base rooms revenue by the rooms expense ratio:

$$\$10,524,000 \times 0.23 = \$2,420,000 \text{ (rounded)}$$

### Food and Beverage Expense

The food and beverage department expense consists of costs incurred for the operation of a hotel's food, beverage, and banquet facilities. Although food revenue and beverage revenue are normally projected separately and each has its own categories on a hotel's income and expense statement, the expenses for these revenue sources are



combined into a single expense category called food and beverage expense. Exhibit 5.25 outlines the components of the food and beverage department expense category. Such an analysis is not usually relevant for a focused-service hotel.

The costs of sales, salaries, and wages make up the major portion of food and beverage expenses. These components are moderately to highly food and beverage sensitive in that they vary directly with changes in food and beverage volume. Associated costs for china, glassware, and linen; operating supplies; other operating expenses; and uniforms tend to be either slightly food and beverage sensitive or moderately fixed. Based on this analysis, the appropriate unit of comparison is a percentage of food and beverage revenue. When using this unit of comparison, care must be taken to select comparable

properties with similar ratios of beverage-to-food sales.

Since the profit margin from the sale of beverages is considerably higher than the profit from the sale of food, a hotel with a higher ratio of beverage-to-food sales should have a lower food and beverage departmental expense ratio. The expense ratio increases as the ratio of beverage to food sales declines.

To quantify the effect of different ratios of beverage to food sales, it is sometimes helpful to analyze the cost of food sold and the cost of beverages sold separately. The three cost components that comprise the comparable property’s food and beverage expense category are shown in the following table. This information can be obtained from the supporting schedules shown in Exhibit 5.26, which are normally part of a hotel’s financial statements.

Exhibit 5.25 Food and Beverage Expense					
Category	Percent of Category	Fixed Expenses	Variable Expenses		
			Occupancy Sensitive	Rate Sensitive	Food and Beverage Sensitive
Cost of food consumed	35-45	—	—	—	Highly
Cost of employee meals	1-4	—	—	—	Moderately
Cost of beverage sales	20-30	—	—	—	Highly
Salaries and wages	25-35	—	—	—	Moderately
Employee benefits	2-9	—	—	—	Very slightly
Contract cleaning	0-3	Moderately	—	—	—
Kitchen fuel	1-2	Moderately	—	—	—
Laundry and dry cleaning	1-2	—	—	—	Slightly
Licenses	1-2	Moderately	—	—	—
Music and other entertainment	2-7	Moderately	—	—	—
Operating supplies	1-3	—	—	—	Very slightly
Other operating expenses	1-	—	—	—	Very slightly
Uniforms	1-2	—	—	—	Very slightly
Total	100	Slightly	—	—	Moderately

Exhibit 5.26 Food and Beverage Expense—Comparable Hotel					
	Expense Ratios		Projected Revenue		Food & Beverage Base Expense
Cost of food sold	0.33	×	\$5,882,000	=	\$1,941,000
Cost of beverages sold	0.18	×	1,176,000	=	212,000
All other food and beverage expenses	0.37	×	7,058,000	=	2,611,000
Total					\$4,764,000



The comparable data indicate a food cost of 33% of food revenue, a beverage cost of 18% of beverage revenue, and all other expenses totaling 37% of total food and beverage revenue.

The comparable hotel shows a ratio of beverage revenue to food revenue of approximately 20% as compared to the proposed Marriott's base ratio of 16%. Because of this difference, one would expect the Marriott's food and beverage department expense ratio to be higher than the comparable property's ratio of 67.5%. The comparable also has higher food and beverage volume on a per-room basis, indicating stronger banquet capture, which tends to increase food and beverage profits due to lower costs.

Dollars per available room:

	Comparable	Proposed Sheraton
Food revenue	\$29,410	\$25,000
Beverage revenue	\$5,880	\$4,000

Based on this analysis, an upward adjustment to the comparable property's food and beverage expense ratios is warranted. The adjusted expense ratios that will be used to project the base food and beverage expense for the proposed Marriott Hotel are shown as follows:

Cost of food sold	34%
Cost of beverages sold	19%
All other food and beverage expense	38%

The base food and beverage expense for the proposed Marriott is calculated in Exhibit 5.27.

The ratio of the Marriott's total food and beverage base expense to its total base food and beverage revenue (\$5,800,000) is

70%, which appears to be well supported by the comparable data and data from other, similar hotels.

Telephone Expense

Telephone expenses consist of all costs associated with the operation of a hotel's telephone department. For smaller hotels with automated phone systems, the telephone department may simply be an additional responsibility for the front desk personnel. In most large properties, the telephone department has one or more full-time telephone operators to provide the necessary phone service to guests. Exhibit 5.28 illustrates the various accounts that make up telephone expenses.

The bulk of the telephone expense is attributable to the cost of local and long-distance calls billed by the telephone companies providing this service. Since in-house guests make most of these calls, these expenses are moderately occupancy sensitive. Unless a particular department has unusually heavy telephone usage, normal telephone usage by hotel employees is also charged to this account. The remaining costs—such as salaries, wages, other expenses, and printing—are all moderately fixed. Note that according to the USALI, the rental of telephone equipment is categorized as a fixed charge under the rent, taxes, and insurance item. Care should be taken to determine exactly how the hotel accounts for telephone equipment rental or leasing.

Based on this analysis of the components of telephone expenses and considering that the cost of telephone service is largely driven by in-house usage that generates telephone revenue, the appropriate unit of comparison would be a percentage of telephone revenue.

Exhibit 5.27 Food and Beverage Expense—Proposed Marriott

	Expense Ratios		Projected Revenue		Food & Beverage Base Expense
Cost of food sold	0.34	×	\$5,000,000	=	\$1,700,000
Cost of beverages sold	0.19	×	800,000	=	152,000
All other food and beverage expenses	0.38	×	5,800,000	=	2,208,000
Total					\$4,060,000



**Exhibit 5.28 Telephone Expense**

Category	Percent of Category	Fixed Expenses	Variable Expenses		
			Occupancy Sensitive	Rate Sensitive	Food and Beverage Sensitive
Local calls	20-60	—	Moderately	—	—
Long distance calls	20-60	—	Moderately	—	—
Rental of equipment	0-30	Moderately	—	—	—
Salaries and wages	0-10	Moderately	—	—	—
Employee benefits	0-4	Moderately	—	—	—
Equipment charges	0-10	Moderately	—	—	—
Other operating expenses	0-5	Moderately	—	—	—
Printing and stationary	0-5	Moderately	—	—	—
Uniforms	0-2	Moderately	—	—	—
Total	100	Moderately	Slightly	—	—

The comparable statement of income and expense provides the following data as a basis for projecting the base telephone expense for the proposed Marriott:

Total telephone expense	\$120,000
Telephone expense per available room	\$602
Telephone expense per occupied room	\$2.43
Ratio of telephone expense to telephone revenue	148%

The telephone department in the comparable property operates at a loss. Using the ratio of telephone expense to telephone revenue as the unit of comparison, a slight upward adjustment is needed because the comparable property's telephone department will probably generate less of a loss than the proposed Marriott's. This difference can be attributed to the comparable property's higher concentration of meeting and banquet space, which attracts somewhat more outside capture and therefore more telephone usage than is expected for the Marriott. Slightly greater telephone usage is indicated by the comparable property's telephone revenue per available room, which is \$407 as compared to the Marriott's base of \$400.

Based on this analysis, the comparable property's ratio of telephone expense to telephone revenue is adjusted upward very slightly, from 148% to 150%. With this

adjustment, the following base telephone expense is produced:

$$150\% \times \$80,000 = \$120,000 \text{ (rounded)}$$

**Other Income Expense**

The other income expense category covers all the expenses associated with other income revenue. The extent of these expenses depends on the nature of the revenue. For example, if a hotel leases a gift shop to an operator (tenant), the expenses of the hotel will be minimal, consisting only of items such as rental fees and commissions. If, on the other hand, the hotel operates the gift shop, both the revenue and expenses will be higher; the products sold will generate revenue; and the cost of goods sold, payroll, and other expenses will be incurred. The appropriate unit of comparison is a percentage of other income (revenue).

The comparable statement of income and expense shows the following data, which provide a basis for projecting the base other income expense for the proposed Marriott.

Total other income expense	\$206,000
Other income expense per available room	\$1,032
Other income expense per occupied room	\$4.16
Ratio of other income expense to other income revenue	29.0%



Using the ratio of other income expense to other income revenue as a unit of comparison, a fine-tuned upward adjustment is required to reflect the slight premium in the comparable property's other income revenue expressed on a per-available-room basis, relative to the subject property.

Other income revenue per available room:

Comparable	\$3,560
Proposed Marriott	\$3,499

Based on this analysis, the comparable property's ratio of other income expense to other income revenue is adjusted upward slightly from 29% to 30%. The following calculation shows the base other income expense for the proposed Marriott:

$$0.3 \times \$700,000 = \$210,000 \text{ (rounded)}$$

**Health Spa Expense**

The health spa at the comparable hotel is very similar to the health spa at the proposed Marriott. The 75% expense ratio experienced at the comparable will be used for the proposed Marriott. The following calculation shows the base health spa expense for the proposed Marriott. Such an analysis is not usually relevant for a focused-service hotel.

$$0.75 \times \$200,000 = \$150,000 \text{ (rounded)}$$

**Administrative and General Expense**

The administrative and general expenses of a hotel include all the managerial and operational expenses that cannot be attributed to a particular department. For example, the general manager might work part of the day solving a problem in the rooms department and spend the remainder of the day booking an important food and beverage function. It would be difficult to allocate the manager's salary to the individual departments served, so the administrative and general category is used. Exhibit 5.29 outlines the components of the administrative and general expense category according to the USALI.

Many administrative and general expenses are relatively fixed. The exceptions

are cash overages and shortages; credit card commissions; provisions for doubtful accounts that are moderately affected by the quantity of transactions or total revenue; and salaries, wages, benefits, and security, which are slightly influenced by volume.

In recent years, several new categories have been added to administrative and general expenses. The human resources account includes the cost of recruiting, relocating, and training employees. Security expenses cover the cost of contract security for the property and other related expenses. General insurance (also known as liability insurance) was recently moved out of the administrative and general expense category and into the insurance category. Insurance expenses previously consisted of only building and building contents insurance. The elements of the newly defined insurance expense category will be detailed later in this section.

Considering the components of administrative and general expenses, the appropriate unit of comparison is the amount per available room, supported by the percentage of total revenue.

The following data from the comparable statement of income and expense provide a basis for projecting the base administrative and general expense for the proposed Marriott:

Total administrative and general expense	\$1,406,000
Administrative and general expense per available room	\$7,032
Administrative and general expense per occupied room	\$28.33
Ratio of administrative and general expense to total revenue	7.7%

Using the administrative and general expense per available room as a unit of comparison, with support from the ratio of administrative and general expense to total revenue, several fine-tuned adjustments are needed to compensate for various differences between the comparable and the subject property.

As Exhibit 5.30 indicates, the comparable hotel's total rooms, food and beverage,



**Exhibit 5.29 Administrative and General Expense**

Category	Percent of Category	Fixed Expenses	Variable Expenses		
			Occupancy Sensitive	Rate Sensitive	Food and Beverage Sensitive
Salaries and wages	15-35	—	Very slightly	—	Very slightly
Employee benefits	1-8	—	Very slightly	—	Very slightly
Bank charges	0-3	Moderately	Very slightly	—	Very slightly
Cash overages and shortages	0-3	—	Moderately	Moderately	Moderately
Communication systems	0-3	Moderately	—	—	—
Contract services	0-3	Moderately	—	—	—
Credit and collection	0-3	Moderately	Moderately	Moderately	—
Credit card commissions	3-10	—	Highly	Highly	Highly
Donations	0-2	Moderately	—	—	—
Dues and subscriptions	1-4	Moderately	—	—	—
Head office	3-10	Moderately	—	—	—
Human resources	3-10	—	—	—	—
Information systems	3-10	—	—	—	—
Internal audit	1-3	—	Moderately	—	—
Internal communications	0-2	—	Moderately	—	—
Loss and damage	0-1	—	Moderately	—	—
Meals and entertainment	3-10	—	Moderately	—	—
Operating supplies and equipment	3-10	—	Moderately	—	—
Postage	2-8	Moderately	—	—	—
Printing and stationary	3-10	Moderately	—	—	—
Professional fees	2-5	Moderately	—	—	—
Provision for doubtful accounts	1-3	—	Moderately	Moderately	Moderately
Security	3-10	—	Moderately	Moderately	Moderately
Telecommunications	3-10	—	Moderately	Moderately	Moderately
Training	3-10	—	Moderately	Moderately	Moderately
Transportation	3-10	—	Moderately	Moderately	Moderately
Travel	1-8	Moderately	—	—	—
Other	1-4	Moderately	—	—	Highly
Total	100	Moderately	Slightly	Slightly	Slightly

**Exhibit 5.30 Revenue—Dollars per Available Room**

Revenue	Comparable	Proposed Marriott
Rooms	\$50,881	\$52,618
Food	29,410	25,000
Beverage	5,880	4,000
Telephone	407	400
Other income	3,560	3,500
Health spa	1,000	1,000
Total	\$91,138	\$86,518



telephone, and other income revenue expressed in dollars per available room is 5.3% higher than that of the proposed Marriott.

The difference between the total revenue per available room of the comparable and the Marriott is  $\$91,138 - \$86,518 = \$4,620$ . The comparable property's ratio of administrative and general expense to the total revenue of 7.7%, the additional administrative and general expense incurred by the comparable is estimated to be  $\$4,620 \times 0.077 = \$356$ . Since the administrative and general expense category is 45% fixed and 55% variable, a slight upward adjustment in the total revenue ratio is needed to account for only the additional variable expenses.

Based on this analysis, the comparable property's administrative and general expense of 7.7% of total revenue is adjusted upward to 8.0%. This adjustment of approximately 3.75% takes into account the fixed and variable components of this expense category. The following calculation shows the base administrative and general expense for the proposed Marriott:

$$\$17,304,000 \times 0.08 = \$1,384,000 \text{ (rounded)}$$

This estimated base administrative and general expense equates to 8% of the Marriott's total revenue. Relative to the comparable, this increase in the expense ratio appears normal and provides support for the previous per-available-room calculation.

### Marketing Expense

Marketing expense includes all the expenses associated with the advertising, sales, and promotion of a lodging facility. These marketing activities are designed to obtain new customers and retain existing ones. Marketing efforts attempt to create an image for the hotel, develop customer awareness, and stimulate patronage for the property and its facilities. Unlike most expense categories, marketing is controlled almost completely by management. Most hotel operators develop annual marketing plans that detail the expenditures for the coming year. If such a budget is followed, total marketing expenses can be projected accurately.

In establishing a marketing budget, a hotel operator considers many factors. The results of marketing expenditures are not always realized immediately. Depending on the type of advertising and promotion used, the increased patronage generated may not be seen for several months or years. One advantage of this lag period is that the benefits of a successful marketing campaign tend to continue after the marketing program has ended.

Hotels have unique operating characteristics that must be considered in developing a marketing plan or reviewing the effectiveness of an established marketing effort. Some significant characteristics are outlined as follows:

- New hotels, especially those catering to the meeting and group segment, need a preopening marketing plan that begins before the hotel opens. Most groups book hotels several months to several years prior to their meetings. For business meetings and conferences, accommodations are typically engaged three to six months in advance, while large national conventions may choose their sites as many as five years in advance. If a meeting-oriented hotel is not active in the marketplace in time to obtain this prebooked business, it will lose out to the established competition and suffer from low occupancy during its initial years of operation.
- Marketing efforts tend to be cumulative, so the initial marketing budget for a new hotel should allow for greater expenditures, which may be needed to generate the desired impact.
- If an existing property has neglected its marketing efforts for the past several years, a higher-than-normal marketing budget may be needed to maintain or increase current revenues. However, if an aggressive marketing program has been in effect, marketing expenses may be reduced without adversely affecting revenues.



- The marketing budget should be tailored to the specific property and nature of the local supply and demand for transient accommodations. Characteristics such as location, visibility, chain affiliation, class, and the types of market segments served can affect the type and amount of marketing expenditures required. The local competitive environment can also influence the amount of money needed to capture the necessary market demand.
- Newly opened hotels generally spend 10% to 20% more on sales and marketing than established hotels in order to quickly capture market share.

Exhibit 5.31 shows the various accounts that make up marketing expenses according to the USALI.

Marketing expenses can be divided into five subcategories: sales, reservations, advertising and merchandising, fees and commissions, and other marketing activities. Together these activities describe the entire marketing effort of the property, incorporating both internal staff and outside operators.

Costs related to the marketing of guest rooms—such as reservations, travel agency fees, and commissions—have traditionally been charged to rooms department expense. The USALI states that “there is a growing recognition that these costs are elements of the overall marketing activity

... and hotels which recognize these functions as marketing responsibilities should charge these expenses to marketing.”

Exhibit 5.31 shows that all categories are budgeted as fixed expenses except for fees and commissions, which are occupancy and rate sensitive because they are generally based on a percentage of rooms revenue.

Considering the components of marketing expenses, it appears that the appropriate unit of comparison is the amount per available room. Note that in most cases, franchise fee costs are calculated separately. These costs are generally 100% variable and dependent on rooms revenue.

The proposed Marriott is expected to implement an extensive preopening marketing effort focusing on meetings and convention patrons who typically book their functions in advance.

The comparable property’s marketing expenditures are currently \$5,481 per available room, or approximately 6.0% of total revenue. Since the total revenue per available room of the comparable property is approximately 5.3% higher than the projected base total revenue per available room of the proposed Marriott, it is logical to assume that the marketing budget for the subject will be somewhat lower than the comparable property’s \$5,481 per available room. Based on this consideration, we have adjusted the comparable

Exhibit 5.31 Marketing Expense					
Category	Percent of Category	Fixed Expenses	Variable Expenses		
			Occupancy Sensitive	Rate Sensitive	Food and Beverage Sensitive
Salaries and wages	10-60	Budgeted	—	—	—
Employee benefits	2-10	Budgeted	—	—	—
Sales	20-60	Budgeted	—	—	—
Advertising	20-60	Budgeted	—	—	—
Merchandising	5-40	Budgeted	—	—	—
Public relations and publicity	5-30	Budgeted	—	—	—
Research	0-15	Budgeted	—	—	—
Fees and commissions	0-50	—	Highly	Highly	Highly
Other selling and promotion	5-20	Budgeted	—	—	—
Total	100	Budgeted	Slightly	Slightly	Slightly



expense ratio downward by 5.3%. The calculations for the comparable property's base marketing expenses are:

$$\begin{aligned} \$5,481 \times 0.947 &= \$5,191 \\ \$5,191 \times 200 \text{ rooms} &= \$1,038,000 \text{ (rounded)} \end{aligned}$$

A \$1,038,000 base marketing expense budget, which equates to 6% of base total revenue, should be adequate for this type of hotel.

(A new hotel generally requires a larger marketing budget during its initial years of operation to penetrate the market effectively, capture its market share, and build occupancy. In the case of the subject property, this particular competitive market is approaching a point of saturation. In this competitive environment, a greater-than-normal marketing effort will be required to capture a sufficient level of patronage. This adjustment will be addressed later in the case study.)

**Franchise Fee**

A number of fees are commonly charged as part of a given hotel's affiliation with a hotel chain. The most common ongoing expenses are reservation fees, marketing assessments, and royalties. Reservation fees are categorized as a rooms department expense, while the marketing assessment is categorized as a marketing department expense. The royalty portion of the franchise expense represents the fees paid for the use of the company's name, trademarks, and service marks. The royalty is typically considered the equivalent of the franchise fee. The royalty is generally charged as a percentage of rooms revenue. The proposed Marriott will be operated under a management contract with the Marriott company, and the management fee charged by Marriott will include the royalty for use of the company's name, trademarks, and service marks.

**Property Operations and Maintenance Expense**

Property operations and maintenance (PO&M), which was formerly known as "repair and maintenance," is another

expense that is largely controlled by management. Except for essential repairs needed to keep the facility open and prevent damage, most maintenance items can be deferred for varying lengths of time. Maintenance is an accumulating expense. If a necessary repair is postponed, it does not go away; it becomes deferred maintenance, which ultimately must be cured at a later date. When an appraiser projects the income and expenses of an existing lodging facility, the property operations and maintenance expenses over the past several years should be investigated to determine if adequate expenditures were made to keep the facilities in good condition. This investigation should be conducted in conjunction with the physical inspection of the property to ensure that the funds expended took care of the required repairs.

Several factors influence the level of maintenance required for a lodging facility:

- **The age of the hotel**  
Most new hotels are protected for several years by the manufacturer's warranties on new equipment, which reduce PO&M costs during the initial years of operation. As hotels age, maintenance costs tend to escalate rapidly.
- **Use of a preventive maintenance system**  
Some hotel operators adopt preventive maintenance programs, periodically checking and maintaining all the important components of the lodging facility. Preventive maintenance allows management to anticipate possible maintenance problems and correct them early with minor repairs rather than major overhauls.
- **Quality of facilities**  
The quality and type of the initial construction can have a direct impact on future maintenance requirements. The use of quality building materials and sound construction methods generally reduces maintenance expenditures over the long term. During the physical inspection, the appraiser should



investigate the physical condition and quality of the original construction.

Property operations and maintenance are considered an operating expense and, as such, must only contain components that can be expensed rather than capitalized under IRS regulations. For example, if a table leg breaks, repairing the leg would be considered an expense chargeable to property operations and maintenance. If the table is replaced, it becomes a capital expenditure that would not fall into the property operations and maintenance cat-

egory. Appraisers account for the capital replacement of items such as furniture and equipment in the reserve for replacement account, which will be discussed in a later section of this chapter.

Exhibit 5.32 outlines the components of the property operations and maintenance expense category. The items in the property operations and maintenance category are either fixed or very slightly influenced by changes in occupancy and food and beverage usage. Because PO&M is mostly fixed, the appropriate unit of

**Exhibit 5.32 Property Operations and Maintenance Expense**

Category	Percent of Category	Fixed Expenses	Variable Expenses		
			Occupancy Sensitive	Rate Sensitive	Food and Beverage Sensitive
Salaries and wages	20-40	—	Very slightly	—	Very slightly
Employee benefits	3-10	—	Very slightly	—	Very slightly
Building supplies	3-10	—	Very slightly	—	Very slightly
Contract services					
Curtains and draperies	1-7	—	Very slightly	—	Very slightly
Electrical and mechanical equipment	5-25	—	Very slightly	—	Very slightly
Elevators	0-5	Moderately	—	—	—
Engineering supplies	2-7	—	Very slightly	—	Very slightly
Floor covering	1-10	—	Very slightly	—	Very slightly
Furniture	1-20	—	Very slightly	—	Very slightly
Grounds and landscaping	1-10	Budgeted	—	—	—
Heating, ventilation, and air conditioning equipment	1-5	Moderately	—	—	—
Kitchen equipment	1-5	Moderately	—	—	—
Laundry equipment	1-5	Moderately	—	—	—
Life/safety	1-5	Moderately	—	—	—
Light bulbs	0-3	—	Very slightly	—	Very slightly
Locks and keys	0-4	—	Very slightly	—	Very slightly
Operating supplies	1-10	—	Very slightly	—	Very slightly
Painting and decorating	4-25	—	Very slightly	—	Very slightly
Removal of waste matter	2-8	Moderately	—	—	—
Swimming pool	1-5	Moderately	—	—	—
Telecommunications	1-5	Moderately	—	—	—
Training	0-5	Moderately	Very slightly	—	Very slightly
Uniforms	0-5	Moderately	Very slightly	—	Very slightly
Vehicle maintenance	0-5	Moderately	Very slightly	—	Very slightly
Other	2-8	Moderately	Very slightly	—	Very slightly
Total	100	Moderately	Slightly	—	Slightly





comparison for this expense category is the amount per available room supported by the percentage of total revenue.

The property operations and maintenance expense for the comparable is currently \$3,049 per available room. A downward adjustment to the comparable property's per-room PO&M unit of comparison is needed to reflect the 5.3% higher total revenue per available room of the comparable, relative to the base year projections for the proposed Marriott. As with previous per-available-room adjustments, the variable component must be factored into the calculation. It is therefore estimated that the total base property operation and maintenance expense for the proposed Marriott would be approximately \$3,000 per available room.

The total base property operation and maintenance expense for the proposed Marriott is calculated as follows:

$$\$3,000 \times 200 = \$600,000$$

(As with the marketing expense, an adjustment is generally warranted in the initial years of a maintenance expense forecast for a new hotel. Because wear and tear accrues gradually and a new hotel has the benefit of warranties for the first one to three years of operation, maintenance expense tends to require a discount in the first two to three projection years. The basis for this adjustment is set forth later in the case study.)

Energy Cost

Energy consumption within a lodging facility typically takes several forms: water and space heating, air conditioning, light-

ing, cooking fuel, and other miscellaneous power requirements. The most common sources of hotel energy are electricity, natural gas, fuel oil, and steam. The energy cost account also includes the cost of water and sewer service.

Exhibit 5.33 illustrates the various accounts that make up energy expenses according to the USALI. The total cost of energy varies with the source and quantity of fuel used. Electricity tends to be the most expensive source, followed by oil and gas. Although all hotels consume a sizable amount of electrical energy, most properties supplement less expensive sources such as gas and oil for heating and cooking.

The cost of electrical energy is a function of the amount of energy consumed and the size of the peak demand. The unit of electrical consumption is the kilowatt hour (kWh), which is measured with a watt-hour meter. To calculate the monthly electric bill, the utility company reads the electric meter and determines the number of kilowatt hours of electricity consumed since the last reading. This amount is multiplied by the appropriate rate schedule to determine the usage charge. The peak demand charge reflects the highest number of kilowatts required by the property during a specific short time period. The demand is also read monthly from the utility meter, with the additional charge added to the electric bill based on a demand rate schedule.

Utility charges for other sources of energy such as gas and oil are generally calculated based entirely on usage, with no additional expense for demand. The unit for gas consumption is the therm, which is

Exhibit 5.33      Energy Expense					
Category	Percent of Category	Fixed Expenses	Variable Expenses		
			Occupancy Sensitive	Rate Sensitive	Food and Beverage Sensitive
Electric current	—	—	Very slightly	—	Very slightly
Fuel	—	—	Very slightly	—	Very slightly
Steam	—	—	Very slightly	—	Very slightly
Water	—	—	Very slightly	—	Very slightly
Total	—	—	Very slightly	—	Very slightly

measured by a gas meter. Oil is delivered to the property and stored in tanks. Bills are rendered upon delivery, and the unit of measurement used is the gallon.

A large portion of a hotel's energy consumption is relatively fixed and varies little with changes in occupancy. Restaurants, kitchens, public areas, and corridors must be continually lighted and heated or air-conditioned whether the hotel is full or nearly empty. The energy costs of an additional occupied room (i.e., the cost of a few hours of light, television, heat, or air-conditioning) are minimal.

To forecast the energy costs of a hotel, estimate the total energy consumption, the sources of energy used, and utility rates. This can be done by either building up the estimated total energy usage or looking at the energy costs for comparable hotels in the same market. Based on the energy expense of the InterContinental, it is estimated that the proposed Marriott's energy cost as of the base year would be \$2,400 per available room. The total base energy expense for the proposed Marriott is calculated as follows:

$$\$2,400 \times 200 = \$480,000 \text{ (rounded)}$$

### Management Fee

The management fee expense category covers the basic fee paid to the type of hotel management company that is anticipated to operate the subject property. Some hotel management companies provide management services only, while others offer both management services and a brand-name affiliation. When a management company has no brand affiliation, the property owner can often acquire a franchise to provide the necessary image and recognition. Although most hotel management companies use a fee structure that includes both a basic fee (usually a percentage of total revenue) plus an incentive fee (usually a percentage of a defined profit), the incentive portion is generally subordinated to debt service and does not appear in a forecast of net income before debt service. Although the incentive

fee does not lessen the cash flow available for debt service, it does reduce the potential cash flow to equity and therefore must be considered in the valuation process.

Generally, the most appropriate way to account for the impact of the incentive fee on the equity component of the investment is to use the net income forecasted before the debt service and incentive fee but to adjust the equity dividend or yield rate upward to reflect this added cost of management.

Basic hotel management fees are almost always based on a percentage of total revenue, which means that they are 100% variable. The proper unit of comparison is therefore a percentage of total revenue.

The proposed Marriott hotel will be operated by the Marriott company. Marriott has agreed to operate the subject property for a basic management fee of 3% of total revenue, which is considered typical for this type of operator.

Applying this management fee structure to the base total revenue for the proposed Marriott hotel produces the following base management fee estimate:

$$0.03 \times \$17,304,000 = \$519,000$$

### Property Taxes

Property taxes are the taxes paid to local municipalities for government services such as highways, schools, parks, and sanitation service. The purpose of property taxes is to allocate the municipal tax burden on the basis of property value. The higher the value of the property owned, the larger the proportion of the tax burden the owner must assume. The legal term for property tax is *ad valorem tax*, or tax "in proportion to value."

Depending on the taxing policy of the municipality, property taxes may be based on the value of the real property alone (real estate tax) or the value of the personal property (personal property tax.)

To properly allocate the tax burden, municipalities employ assessors who value all the taxable real estate within their jurisdictions. Theoretically, the assessment bears a definite relationship to



market value, so properties with similar market values will have similar assessments, and properties with higher or lower values will have proportionately larger or smaller assessments.

Projecting property taxes for an existing hotel is relatively simple. The assessed value is normally a matter of public record and can be obtained by contacting the local taxing authority. Multiplying the assessed value by the anticipated tax rate produces the estimated property tax. However, care must be taken to determine whether the assessed value may escalate at some future time due to increasing real estate values in the local market or a new assessment of the subject property triggered by a recent sales transaction.

Projecting property taxes for a proposed lodging facility is generally more difficult. Since the objective of property assessment is to maintain a specific value relationship among all the properties in a taxing jurisdiction, the best way to estimate the assessed value of a proposed hotel is to use the actual assessed values of comparable hotels. This procedure is similar to the sales comparison approach. The assessed value of the subject property is estimated by comparing it with the assessed values of similar hotels in the market area. The estimate is then adjusted to reflect dissimilarities between the comparable data and the subject.

It is advisable to compare and adjust the assessed values of property improvements only and not the combined value of the land and improvements. Taxing jurisdictions provide separate assessed values for land and improvements. The combination of the two equates to the total property value, which forms the basis for calculating the real estate tax burden.

The assessed value of the land is developed from actual land sales within the jurisdiction. Based on these known land sales, the assessor forms a grid of land values in the jurisdiction indicating where the best parcels with the highest values are located. Values decline as one moves away from this

prime area toward less desirable sites. Since each parcel is assessed based on its desirability relative to the surrounding parcels, assessors are extremely reluctant to change one land assessment because this could alter the assessment grid for all the other parcels in the jurisdiction. Consequently, when estimating the assessed value of a proposed hotel, the actual assessed value of the land should be considered unchangeable; only the value of the improvements should be compared and adjusted.

Since only the value of the improvements is to be adjusted, any location-specific advantages or disadvantages of the property should be disregarded because they have theoretically been accounted for in the land assessment. Moreover, the value of hotel improvements does not include consideration of non-real estate components such as decor, management, franchise, and business value.

If the local taxing jurisdiction uses a personal property assessment, the appraiser must also estimate the value of the facility's furniture and equipment. Since personal property assessment procedures vary widely, assistance from the local assessor is often helpful. In many instances the assessed value of furniture and equipment is based on their actual cost minus the depreciation specified by a mandated depreciation schedule. It is important to have a clear definition of what is considered personal property and what is considered real property.

The taxing jurisdiction in which the proposed Marriott is located assesses only real property. The current land assessment for the subject property is \$7,600,000, or \$38,000 per room for the 200-room hotel. Information on the assessed values of competitive hotels in the subject's taxing jurisdiction is presented in Exhibit 5.34.

In Exhibit 5.34, the unit of comparison is the assessed value per room, the key variable tracked by hotel investors and consultants. Depending on the taxing jurisdiction, some assessor's office personnel use value per square foot as the basis for com-



**Exhibit 5.34 Assessed Values and Property Taxes**

Hotel	Number of Rooms	Assessed Value			Value per Room		
		Land	Improvements	Total	Land	Improvements	Total
InterContinental	200	\$4,800,000	\$44,000,000	\$48,800,000	\$24,000	\$220,000	\$244,000
Hilton Hotel	275	8,800,000	55,000,000	63,800,000	32,000	200,000	\$232,000
Sheraton Hotel	250	6,000,000	43,750,000	49,750,000	24,000	175,000	\$199,000
Hyatt Hotel	250	8,250,000	47,500,000	55,750,000	33,000	190,000	\$223,000
Proposed Marriott	200	\$7,600,000	\$43,000,000	\$50,600,000	\$38,000	\$215,000	\$253,000
<b>Proposed Marriott's Assessment</b>		<b>Assessed Value</b>					
Land assessment			\$7,600,000			<b>Tax</b>	<b>Property</b>
Improvements	200 × \$215,000 =		43,000,000			<b>Rate</b>	<b>Taxes</b>
Total			\$50,600,000			0.0086957	\$440,000

parison. In either case, the findings rely on the same basic notion of comparison and would likely result in similar findings.

The hotel with facilities most comparable to the proposed Marriott is the Hilton hotel, which has an improvements assessment of \$200,000 per available room. The proposed Marriott will be newer than the Hilton and will feature a more modern design. Based on this comparison, an improvements assessment of \$215,000 per available room will be used for the proposed Marriott. This per-room assessed value equates to a total improvements assessment for the proposed Marriott of \$43,000,000 (\$215,000 × 200). Thus, the total base year assessment for the proposed Marriott—assuming it is fully constructed and operational—is estimated as follows:

Land	\$7,600,000
Improvements	\$43,000,000
Total	\$50,600,000

The current tax rate is \$8.69 per \$1,000 of assessed value. Based on this rate, the base property tax for the proposed Marriott would be:

$$\begin{aligned} \$50,600,000 / 1,000 &= \$50,600 \\ \$50,600 \times \$8.69 &= \$440,000 \text{ (rounded)} \end{aligned}$$

These estimated base property taxes for the proposed Marriott equate to \$2,200 per available room. Any comparison of the

Marriott's property tax burden with that of the comparable is not appropriate because the comparable is located in another taxing jurisdiction.

### Insurance Expense

The insurance expense category consists of the cost of insuring the hotel and its contents against damage or destruction from fire, weather, sprinkler leakage, boiler explosion, plate glass breakage, and other accidents. Furthermore, as of the latest revision of the USALI, it also includes general (or liability) coverage.

Insurance rates for contents insurance are based on many factors, including building design and construction, fire detection and extinguishing equipment, the fire district, the distance from the firehouse, and the area's fire experience. Sometimes an estimate of insurance cost can be obtained from a local insurance agent familiar with the project and area insurance rates. If this is not possible, the appraiser should use insurance expenses derived from comparable lodging facilities expressed on a per-available-room basis.

General (or liability) insurance covers third-party actions involving bodily injury and personal property and is typically based on rooms receipts, meeting and banquet revenue, and food and beverage revenue. Some of the factors that can affect a hotel's liability insurance expense include the size of the meeting, banquet, or restau-



rant facility, the amount of alcohol served as a percentage of total food and beverage sales, and the presence of a dance floor in the lounge. Factors that can increase a hotel's liability insurance expense include a high-rise structure, a swimming pool, life safety support systems, and any transportation services provided by the hotel.

The comparable statement of income and expense shows an insurance expense of \$1,000 per available room. A slight downward adjustment is appropriate to reflect the fact that the proposed Marriott will have a somewhat smaller array of public facilities.

Based on this analysis, the comparable hotel's insurance expense, expressed as a dollar amount per available room, is adjusted downward to \$900 per room. The following calculation shows the base insurance expense for the proposed Marriott:

$$\$900 \times 200 = \$180,000 \text{ (rounded)}$$

**Reserve for Replacement Expense**

Furniture, fixtures, and equipment are essential to the operation of a lodging facility, and their quality often influences the class of a property. Included in the reserve for replacement expense category are all non-real estate items that are normally capitalized rather than expensed.

The furniture, fixtures, and equipment in a hotel are exposed to heavy use and must be replaced at regular intervals. The useful lives of these items are determined by their quality and durability as well as the amount of guest traffic and use.

Periodic replacement of furniture, fixtures, and equipment is essential to maintain the quality, image, and income

of the lodging facility. Capitalized expenditures are not included in the operating statement, but they do affect an owner's cash flow. Therefore, an appraisal should reflect these expenses in an appropriate reserve for replacement.

Based on industry experience, a reserve for replacement ranging from 3% to 5% of total revenue is generally sufficient to provide for the timely replacement of furniture, fixtures, and equipment.

A reserve for replacement equal to 5% of total revenue was determined to be sufficient to provide for the periodic replacement of the furniture, fixtures, and equipment of the proposed Marriott. The following calculation shows the base reserve for replacement expense:

$$\$17,304,000 \times 0.05 = \$865,000 \text{ (rounded)}$$

**Base Statement of Income and Expense**

Exhibit 5.35 shows two statements of income and expense. The first is the comparable statement that was selected through the financial comparable selection order. (These figures were shown in Exhibit 5.20.) The second is the base statement of income and expense for the proposed Marriott, which has been developed in this case study through category-by-category analysis. This one-year base financial statement uses the subject's stabilized ADR, deflated to current base year dollars, and income and expense ratios that reflect the level of occupancy actually experienced by the comparable. This profit and loss statement provides the basis for the fixed and variable component relationships developed in the subsequent steps of the analysis.



# Exhibit 5.35 Comparable Statement of Income and Expense

Number of rooms:	200
Occupancy rate:	68%
Occupied rooms:	49,640
Average rate:	\$205.00

	Total \$ (in thousands)	Percent of Gross	Per Available Room (PAR)	Per Occupied Room (POR)
<b>Revenue</b>				
Rooms	\$10,176	55.8%	\$50,881	\$205.00
Food	5,882	32.3	29,410	118.49
Beverage	1,176	6.5	5,880	23.69
Telephone	81	0.4	407	1.64
Rental & other income	712	3.9	3,560	14.34
Health spa	200	1.1	1,000	4.03
Total revenue	\$18,228	100.0%	\$91,138	\$367.20

<b>Departmental Expenses*</b>				
Rooms	\$2,412	23.7%	\$12,059	\$48.59
Food & beverage	4,764	67.5	23,820	95.97
Telephone	120	148.0	602	2.43
Other income	206	29.0	1,032	4.16
Health spa	150	75.0	750	3.02
Total dept. expense	\$7,653	42.0%	\$38,264	\$154.16
<b>Departmental Income</b>	\$10,575	58.0%	\$52,874	\$213.03

<b>Undistributed Operating Expenses (UDOE)</b>				
Administrative & general	\$1,406	7.7%	\$7,032	\$28.33
Marketing	1,096	6.0	\$5,481	\$22.08
Property operations & maintenance	610	3.3	\$3,049	12.28
Energy	600	3.3	3,000	12.09
Total UDOE	\$3,712	20.4%	\$18,562	\$74.79

<b>Income before Fixed Charges</b>	\$6,862	37.6%	\$34,312	\$138.25
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<b>Fixed Charges</b>				
Management fee	\$547	3.0%	\$2,734	\$11.02
Property taxes	400	2.2	2,000	8.06
Insurance	200	1.1	1,000	4.03
Reserve for replacement	911	5.0	4,557	18.36
Total fixed charges	\$2,058	11.3%	\$10,291	\$41.46

<b>Net Income</b>	\$4,804	26.4%	\$24,021	\$96.78
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\* Departmental expense ratios expressed as a ratio to departmental revenues

Base Year—2012 Proposed Marriott				
Number of rooms:	200			
Occupancy rate:	68%			
Occupied rooms:	49,640			
Average rate:	\$212.00			

	Total \$ (in thousands)	Percent of Gross	Per Available Room (PAR)	Per Occupied Room (POR)
<b>Revenue</b>				
Rooms	\$10,524	60.8%	\$52,618	\$212.00
Food	5,000	28.9	25,000	100.73
Beverage	800	4.6	4,000	16.12
Telephone	80	0.5	400	1.61
Rental & other income	700	4.0	3,500	14.10
Health spa	200	1.2	1,000	4.03
Total revenue	\$17,304	100.0%	\$86,518	\$348.58

<b>Departmental Expenses*</b>				
Rooms	\$2,420	23.0%	\$12,102	\$48.76
Food & beverage	4,060	70.0	20,300	81.79
Telephone	120	150.0	599	2.42
Other income	210	30.0	1,050	4.23
Health spa	150	75.0	750	3.02
Total dept. expense	\$6,960	40.2%	\$34,802	\$140.22
<b>Departmental Income</b>	\$10,343	59.8%	\$51,716	\$208.37

<b>Undistributed Operating Expenses (UDOE)</b>				
Administrative & general	\$1,384	8.0%	\$6,921	\$27.89
Marketing	1,038	6.0	\$5,191	\$20.91
Property operations & maintenance	600	3.5	3,000	12.09
Energy	480	2.8	2,400	9.67
Total UDOE	\$3,503	20.2%	\$17,513	\$70.56

<b>Income before Fixed Charges</b>	\$6,841	39.5%	\$34,204	\$137.81
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<b>Fixed Charges</b>				
Management fee	\$519	3.0%	\$2,596	\$10.46
Property taxes	440	2.5	2,200	8.86
Insurance	180	1.0	900	3.63
Reserve for replacement	865	5.0	4,326	17.43
Total fixed charges	\$2,004	11.6%	\$10,021	\$40.38

<b>Net Income</b>	\$4,836	28.0%	\$24,182	\$97.43
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### Step 3. Revise the Base

The base revenue and expense categories must be revised (inflated or deflated) to reflect current dollars for each forecast year and the anticipated rate fluctuations resulting from other, nonfinancial variables (general inflation).

The purpose of Step 3 is to adjust the comparable operating data that make up the subject property's base to reflect forecasted costs stated in the current dollars anticipated for each particular year. To compute the fixed and variable operating data and forecast relationships for each projected year, an assumed rate or rates of inflation are applied to each operating category.

Each revenue and expense category can be affected by different factors that increase or decrease associated costs. For example, future changes in the ADR are largely influenced by local supply and demand conditions, which may modify general inflation assumptions. Energy costs are usually tied to the prices of fuels, which often move in erratic cycles. Changes in property taxes are often correlated to changes in the local tax base, which means that the rate assumption may be negative in an area that is experiencing rapid new development. Labor costs can change radically if a new union contract is implemented.

The appraiser should look at each revenue and expense category and project an individualized assumption that reflects the market's current view of pricing for the components within the stated category or the category as a whole. It is often appropriate to apply a single inflation factor to all categories of revenue and expense data, particularly for the years projected after the property reaches a stabilized level of occupancy. This assumes that all other cost-influencing variables remain stable.

## Case Study

### Revising the Base

After analyzing the local market for the proposed Marriott, the appraiser has developed the following change assumptions:

- **Property taxes**  
The market area has recently experienced rapid growth in new commercial and residential development, which has significantly increased the local tax base. Assuming efficient government spending, property taxes are expected to increase, as shown in Exhibit 5.36.
- **All other categories**  
An overall inflation assumption of 3% per year will be used to project other categories of revenue and expense. In practice, such an assumption should be supported with adequate market data.

**Exhibit 5.36 Property Tax Projection**

Projection Year	Percent Change from Previous Year
Base 2012	—
2013	3.0%
2014	4.0
2015	5.0
2016	5.0
2017	4.0
2018	3.0
2019	3.0

Exhibit 5.37 shows the subject property's base year income and expenses projected out at the rate of inflation forecast for each revenue and expense category. After the stabilized year, all revenue and expenses are assumed to increase at the annual rate of 3%.





**Exhibit 5.37      Inflating the Base**

	2012		2013		2014		2015		2016		2017
	Base Year	Inflation	Year 1	Inflation	Year 2	Inflation	Year 3	Inflation	Year 4	Inflation	Stabilized
<b>Marriott's Operational Year</b>					<b>Year 1</b>		<b>Year 2</b>		<b>Year 3</b>		<b>Year 4</b>
<b>Revenue</b>											
Rooms	\$10,524	3.0%	\$10,839	2.0%	\$11,056	5.0%	\$11,609	3.5%	\$12,015	4.0%	\$12,496
Food	5,000	3.0	5,150	3.0	5,305	3.0	5,464	3.0	5,628	3.0	5,796
Beverage	800	3.0	824	3.0	849	3.0	874	3.0	900	3.0	927
Telephone	80	3.0	82	3.0	85	3.0	87	3.0	90	3.0	93
Other income	700	3.0	721	3.0	743	3.0	765	3.0	788	3.0	811
Health spa	200	3.0	206	3.0	212	3.0	219	3.0	225	3.0	232
Total revenue	17,304		17,805		17,121		18,379		19,594		20,270
<b>Expenses</b>											
Rooms	2,420	3.0	2,493	3.0	2,568	3.0	2,645	3.0	2,724	3.0	2,806
Food & beverage	4,060	3.0	4,182	3.0	4,307	3.0	4,436	3.0	4,570	3.0	4,707
Telephone	120	3.0	124	3.0	127	3.0	131	3.0	135	3.0	139
Other income	210	3.0	216	3.0	223	3.0	229	3.0	236	3.0	243
Health spa	150	3.0	155	3.0	159	3.0	164	3.0	169	3.0	174
Administrative & general	1,384	3.0	1,426	3.0	1,469	3.0	1,513	3.0	1,558	3.0	1,605
Marketing	1,038	3.0	1,069	3.0	1,101	3.0	1,134	3.0	1,169	3.0	1,204
Property oper. & maint.	600	3.0	618	3.0	637	3.0	656	3.0	675	3.0	696
Energy	480	3.0	494	3.0	509	3.0	525	3.0	540	3.0	556
Management fee	519	3.0	535	3.0	551	3.0	567	3.0	584	3.0	602
Property taxes	440	3.0	453	4.0	471	5.0	495	5.0	520	4.0	540
Insurance	180	3.0	185	3.0	191	3.0	197	3.0	203	3.0	209
Reserve for replacement	865	3.0	891	3.0	918	3.0	945	3.0	974	3.0	1,003

#### Step 4. Estimate Fixed and Variable Percentages for Each Revenue and Expense Category

As discussed previously, each category of revenue and expense has a component that is fixed and one that varies directly with occupancy and facility usage. To apply the fixed and variable component approach to forecasting, the fixed and variable percentage of each revenue and expense category must be determined. The ranges of fixed and variable percentages for each revenue and expense category presented as Exhibit 5.18 and subsequent descriptions of the composition of each category can be used as general parameters. Specific fixed and variable percentages are developed by evaluating the operating characteristics of the subject property. The total of the fixed and variable components of each category should equal 100.





## Case Study

### Estimating Fixed and Variable Percentages

Exhibit 5.38 shows the fixed and variable percentages selected for each revenue and expense category of the proposed Marriott Hotel.

The fixed food revenue percentage for the proposed Marriott was set at 15%.

This portion of food revenue is generally composed of outside patronage, which includes local banquets and diners in the restaurants. All fixed and variable percentages have been selected to be in line with established ranges (see the previous discussion of the recent hotel fixed and variable revenue and expense research).

**Exhibit 5.38 Fixed and Variable Percentages**

Proposed Marriott		
Category	Fixed	Variable
<b>Revenue</b>		
Food	15%	85%
Beverage	10	90
Telephone	10	90
Other income	50	50
Health spa	10	90
<b>Expense</b>		
Rooms	50	50
Food & beverage	35	65
Telephone	60	40
Other income	40	60
Health spa	50	50
Administrative and general	45	55
Marketing	50	50
Franchise fee	0	100
Property operations & maintenance	50	50
Energy	50	50
Management fee	0	100
Property taxes	100	0
Insurance	100	0
Reserve for replacement	0	100

### Steps 5 through 9: Final Revenue and Expense Projection

The actual projection of each revenue and expense category using the fixed and variable calculations is accomplished in Steps 5 through 9. The elements of each step are outlined as follows:

- **Step 5.** The fixed component is estimated by multiplying the appropriate fixed percentage by the base revenue or expense category.
- **Step 6.** The amount of variable change is quantified based on the appropriate index of variability.
- **Step 7.** The unadjusted variable component is calculated by multiplying the appropriate base revenue or expense category by the variable percentage.



- **Step 8.** The unadjusted variable component calculated in Step 7 is multiplied by the amount of variable change calculated in Step 6 to produce the adjusted variable component.
- **Step 9.** The fixed component calculated in Step 5 is added to the adjusted variable component calculated in Step 6 to yield the forecast for the revenue or expense category.

## Case Study

### Final Forecast of Revenue and Expense—Proposed Marriott Hotel

The process outlined in Steps 5 to 9 will be applied to forecast the revenue and expense of the proposed Marriott Hotel. Each revenue and expense category will be illustrated separately.

#### Food Revenue

The fixed component of the food revenue is calculated by multiplying the base food revenue in each projected year by the 15% fixed percentage of food revenue (see the following table). Such an analysis is not usually relevant for a focused-service hotel.

	2014	2015	2016	2017
Base food revenue	\$5,035	\$5,464	\$5,628	\$5,796
Percent fixed	15%	15%	15%	15%
Food revenue—fixed component	\$796	\$820	\$844	\$869

Food revenue is occupancy variable in that any revenue above the fixed component is largely dependent on changes in occupancy. The variable change for each projected year is calculated by dividing the projected occupancy by the base occupancy, as shown in the following table:

	2014	2015	2016	2017
Projected occupancy	64.0%	71.0%	69.0%	71.0%
÷ Base occupancy	68.0	68.0	68.0	68.0
Variable percentage change	94.1%	104.4%	101.5%	104.4%

The unadjusted variable component is calculated by multiplying the base food revenue in each projected year by the 85% variable percentage (see the following table).

	2014	2015	2016	2017
Base food revenue	\$5,305	\$5,464	\$5,628	\$5,796
Percent variable	85.0%	85.0%	85.0%	85.0%
Unadjusted variable component	\$4,509	\$4,644	\$4,783	\$4,927

Multiplying the unadjusted variable component by the variable percentage of change attributed to differing levels of occupancy produces the adjusted variable component of food revenue (see the following table).

	2014	2015	2016	2017
Unadjusted variable component	\$4,509	\$4,644	\$4,783	\$4,927
Variable percentage change	94.1%	104.4%	101.5%	104.4%
Adjusted variable component	\$4,244	\$4,849	\$4,854	\$5,144

In the next table, the fixed and adjusted variable components of food revenue for each projected year are added together to estimate the total food revenue. The second table shows several pertinent units of comparison.



	2014	2015	2016	2017
Food revenue–fixed component	\$796	\$820	\$844	\$869
Food revenue–variable component	4,244	4,849	4,854	5,144
Total food revenue	\$5,039	\$5,669	\$5,698	\$6,014
	2014	2015	2016	2017
Percent of total revenue	31.1%	29.6%	28.7%	28.5%
Per available room	\$25,195	\$28,345	\$28,490	\$30,070
Per occupied room	\$107.86	\$109.38	\$113.12	\$116.03

### Beverage Revenue

Beverage revenue is assumed to be 10% fixed and 90% variable and directly tied

to changes in food revenue. Exhibit 5.39 shows the beverage revenue projection using the same fixed and variable methodology as described for food revenue. Such an analysis is not usually relevant for a focused-service hotel.

### Telephone Revenue

Telephone revenue is projected in a manner similar to food revenue (Exhibit 5.40). The variable percentage change is based on occupancy.

### Other Income

Other income is projected in Exhibit 5.41.

### Health Spa Revenue

A projection of health spa revenue is shown in Exhibit 5.42.

### Total Revenue

The total of all revenue sources is shown in Exhibit 5.43.

Exhibit 5.39 Beverage Revenue (in thousands)				
	2014	2015	2016	2017
Base beverage revenue	\$849	\$874	\$900	\$927
Percent fixed	10.0%	10.0%	10.0%	10.0%
Fixed component	\$85	\$87	\$90	\$93
Base beverage revenue	\$849	\$874	\$900	\$927
Percent variable	90.0%	90.0%	90.0%	90.0%
Unadjusted variable component	\$764	\$787	\$810	\$835
Variable change				
Projected food revenue	\$5,039	\$5,669	\$5,698	\$6,014
÷ Base food revenue	\$5,305	\$5,464	\$5,628	\$5,796
Variable percentage change	95.0%	103.8%	101.3%	103.8%
Unadjusted variable component	\$764	\$787	\$810	\$835
Variable percentage change	95.0%	103.8%	101.3%	103.8%
Adjusted variable component	\$726	\$816	\$820	\$866
Fixed component	\$85	\$87	\$90	\$93
Variable component	726	816	820	866
Total beverage revenue	\$811	\$904	\$911	\$959
Percent of total revenue	5.0%	4.7%	4.6%	4.5%
Per available room	\$4,050	\$4,520	\$4,555	\$4,795
Per occupied room	\$17.34	\$17.44	\$18.09	\$18.50



**Exhibit 5.40 Telephone Revenue (in thousands)**

	2014	2015	2016	2017
Base telephone revenue	\$85	\$87	\$90	\$93
Percent fixed	10.0%	10.0%	10.0%	10.0%
Fixed component	\$8	\$9	\$9	\$9
Base telephone revenue	\$85	\$87	\$90	\$93
Percent variable	90.0%	90.0%	90.0%	90.0%
Unadjusted variable component	\$76	\$79	\$81	\$83
Unadjusted variable component	\$76	\$79	\$81	\$83
Variable percentage change	94.1%	104.4%	101.5%	104.4%
Adjusted variable component	\$72	\$82	\$82	\$87
Fixed component	\$8	\$9	\$9	\$9
Variable component	72	82	82	87
Total telephone revenue	\$80	\$91	\$91	\$96
Percent of total revenue	0.5%	0.5%	0.5%	0.5%
Per available room	\$400	\$455	\$455	\$480
Per occupied room	\$1.71	\$1.76	\$1.81	\$1.85

**Exhibit 5.41 Other Income (in thousands)**

	2014	2015	2016	2017
Base other income	\$743	\$765	\$788	\$811
Percent fixed	50.0%	50.0%	50.0%	50.0%
Fixed component	\$371	\$382	\$394	\$406
Base other income	\$743	\$765	\$788	\$811
Percent variable	50.0%	50.0%	50.0%	50.0%
Unadjusted variable component	\$371	\$382	\$394	\$406
Unadjusted variable component	\$371	\$382	\$394	\$406
Variable percentage change	94.1%	104.4%	101.5%	104.4%
Adjusted variable component	\$349	\$399	\$400	\$424
Fixed component	\$371	\$382	\$394	\$406
Variable component	349	399	400	424
Total other income	\$721	\$782	\$794	\$829
Percent of total revenue	4.5%	4.1%	4.0%	3.9%
Per available room	\$3,605	\$3,910	\$3,970	\$4,145
Per occupied room	\$15.43	\$15.09	\$15.76	\$15.99

**Exhibit 5.42 Health Spa Revenue (in thousands)**

	2014	2015	2016	2017
Base health spa revenue	\$212	\$219	\$225	\$232
Percent fixed	10.0%	10.0%	10.0%	10.0%
Fixed component	\$21	\$22	\$23	\$23
Base health spa revenue	\$212	\$219	\$225	\$232
Percent variable	90.0%	90.0%	90.0%	90.0%
Unadjusted variable component	\$191	\$197	\$203	\$209
Unadjusted variable component	\$191	\$197	\$203	\$209
Variable percentage change	94.1%	104.4%	101.5%	104.4%
Adjusted variable component	\$180	\$205	\$206	\$218
Fixed component	\$21	\$22	\$23	\$23
Variable component	180	205	206	218
Total health spa revenue	\$201	\$227	\$228	\$241
Percent of total revenue	1.2%	1.2%	1.1%	1.1%
Per available room	\$1,005	\$1,135	\$1,140	\$1,205
Per occupied room	\$4.30	\$4.38	\$4.53	\$4.65



**Exhibit 5.43 Total Revenue (in thousands)**

	2014	2015	2016	2017
Rooms	\$9,344	\$11,454	\$12,139	\$12,958
Food	5,039	5,669	5,698	6,014
Beverage	810	904	911	959
Telephone	80	91	91	96
Other income	721	782	794	829
Health spa	201	227	228	241
Total revenue	\$16,195	\$19,127	\$19,861	\$21,097

**Rooms Expense**

The rooms expense for the proposed Marriott is calculated in Exhibit 5.44.

**Variable Percent Change for Expense Categories**

The variable percent change for expense categories is based on the change in corre-

sponding revenue levels. Exhibit 5.45 shows the bases for calculating the variable percent change for various expense categories.

In Exhibit 5.46, the variable percent change for each expense category is first calculated. The subsequent tables in Exhibit 5.46 show the estimated expenses for the proposed Marriott.

**Exhibit 5.44 Rooms Expense (in thousands)**

	2014	2015	2016	2017
Base rooms expense	\$2,568	\$2,645	\$2,724	\$2,806
Percent fixed	50.0%	50.0%	50.0%	50.0%
Fixed component	\$1,284	\$1,322	\$1,362	\$1,403
Base rooms expense	\$2,568	\$2,645	\$2,724	\$2,806
Percent variable	50.0%	50.0%	50.0%	50.0%
Unadjusted variable component	\$1,284	\$1,322	\$1,362	\$1,403
Unadjusted variable component	\$1,284	\$1,322	\$1,362	\$1,403
Variable percentage change	94.1%	104.4%	101.5%	104.4%
Adjusted variable component	\$1,208	\$1,381	\$1,382	\$1,465
Fixed component	\$1,284	\$1,322	\$1,362	\$1,403
Variable component	1,208	1,381	1,382	1,465
Total rooms expense	\$2,492	\$2,703	\$2,744	\$2,868
Percent of rooms revenue	26.7%	23.6%	22.6%	22.1%
Per available room	\$12,460	\$13,515	\$13,720	\$14,340
Per occupied room	\$53.34	\$52.15	\$54.48	\$55.33

**Exhibit 5.45 Variable Percentage Change Basis**

Expense Category	Basis for Calculating Variable Percent Change
Food & beverage	Food & beverage revenue
Telephone	Telephone revenue
Other income	Other income
Administrative & general	Total revenue
Marketing	Total revenue
Property operation & maintenance	Total revenue
Energy	Total revenue



**Exhibit 5.46 Projected Variable Change (in thousands)**

	2014	2015	2016	2017
<b>Food &amp; Beverage Expense</b>				
Projected food & beverage revenue	\$5,849	\$6,573	\$6,609	\$6,973
÷ Base food & beverage revenue	<u>6,153</u>	<u>6,338</u>	<u>6,528</u>	<u>6,724</u>
Variable percentage change	95.1%	103.7%	101.2%	103.7%
<b>Telephone Expense</b>				
Projected telephone revenue	\$80	\$91	\$91	\$96
÷ Base telephone revenue	<u>85</u>	<u>87</u>	<u>90</u>	<u>93</u>
Variable percentage change	94.7%	104.0%	101.3%	103.5%
<b>Other Income Expense</b>				
Projected other income	\$721	\$782	\$794	\$829
÷ Base other income	<u>743</u>	<u>765</u>	<u>788</u>	<u>811</u>
Variable percentage change	97.1%	102.2%	100.7%	102.2%
<b>Health Spa Expense</b>				
Projected health spa revenue	\$201	\$227	\$228	\$241
÷ Base health spa revenue	<u>212</u>	<u>219</u>	<u>225</u>	<u>232</u>
Variable percentage change	94.7%	103.9%	101.3%	103.9%
<b>All Other Expenses</b>				
Projected total revenue	\$16,195	\$19,127	\$19,861	\$21,097
÷ Base total revenue	<u>17,121</u>	<u>18,379</u>	<u>19,594</u>	<u>20,270</u>
Variable percentage change	94.6%	104.1%	101.4%	104.1%

**Food and Beverage Expense (in thousands)**

Base food & beverage expense	\$4,307	\$4,436	\$4,570	\$4,707
Percent fixed	<u>35.0%</u>	<u>35.0%</u>	<u>35.0%</u>	<u>35.0%</u>
Fixed component	\$1,508	\$1,553	\$1,599	\$1,647
Base food & beverage expense	\$4,307	\$4,436	\$4,570	\$4,707
Percent variable	<u>65.0%</u>	<u>65.0%</u>	<u>65.0%</u>	<u>65.0%</u>
Unadjusted variable component	\$2,800	\$2,884	\$2,970	\$3,059
Variable percentage change	<u>95.1%</u>	<u>103.7%</u>	<u>101.2%</u>	<u>103.7%</u>
Adjusted variable component	\$2,661	\$2,991	\$3,007	\$3,173
Fixed component	\$1,508	\$1,553	\$1,599	\$1,647
Variable component	<u>2,661</u>	<u>2,991</u>	<u>3,007</u>	<u>3,173</u>
Total food & beverage expense	\$4,169	\$4,543	\$4,606	\$4,820
Percent of food & beverage revenue	71.3%	69.1%	69.7%	69.1%
Per available room	\$20,845	\$22,715	\$23,030	\$24,100
Per occupied room	\$81.79	\$87.65	\$91.44	\$93.00

**Telephone Expense (in thousands)**

Base telephone expense	\$127	\$131	\$135	\$139
Percent fixed	<u>60.0%</u>	<u>60.0%</u>	<u>60.0%</u>	<u>60.0%</u>
Fixed component	\$76	\$79	\$81	\$83
Base telephone expense	\$127	\$131	\$135	\$139
Percent variable	<u>40.0%</u>	<u>40.0%</u>	<u>40.0%</u>	<u>40.0%</u>
Unadjusted variable component	\$51	\$52	\$54	\$56
Variable percentage change	<u>94.7%</u>	<u>104.0%</u>	<u>101.3%</u>	<u>103.5%</u>
Adjusted variable component	\$48	\$55	\$55	\$58
Fixed component	\$76	\$79	\$81	\$83
Variable component	<u>48</u>	<u>55</u>	<u>55</u>	<u>58</u>
Total telephone expense	\$125	\$133	\$136	\$141
Percent of telephone revenue	155.0%	146.2%	149.5%	146.9%
Per available room	\$620	\$665	\$680	\$705
Per occupied room	\$2.65	\$2.57	\$2.70	\$2.72



**Exhibit 5.46 (continued)****Other Income Expense (in thousands)**

	2014	2015	2016	2017
Base other income expense	\$223	\$229	\$236	\$243
Percent fixed	40.0%	40.0%	40.0%	40.0%
Fixed component	\$89	\$92	\$95	\$97
Base other income expense	\$223	\$229	\$236	\$243
Percent variable	60.0%	60.0%	60.0%	60.0%
Unadjusted variable component	\$134	\$138	\$142	\$146
Variable percentage change	97.1%	102.2%	100.7%	102.2%
Adjusted variable component	\$130	\$141	\$143	\$149
Fixed component	\$89	\$92	\$95	\$97
Variable component	130	141	143	149
Total other income expense	\$219	\$233	\$237	\$247
Percent of other income revenue	30.4%	29.8%	29.8%	29.8%
Per available room	\$1,095	\$1,165	\$1,185	\$1,235
Per occupied room	\$4.69	\$4.50	\$4.71	\$4.77

**Health Spa Expense (in thousands)**

Base health spa expense	\$159	\$164	\$169	\$174
Percent fixed	50.0%	50.0%	50.0%	50.0%
Fixed component	\$80	\$82	\$84	\$87
Base health spa expense	\$159	\$164	\$169	\$174
Percent variable	50.0%	50.0%	50.0%	50.0%
Unadjusted variable component	\$80	\$82	\$84	\$87
Variable percentage change	94.7%	103.9%	101.3%	103.9%
Adjusted variable component	\$75	\$85	\$86	\$90
Fixed component	\$80	\$82	\$84	\$87
Variable component	75	85	86	90
Total health spa expense	\$155	\$167	\$170	\$177
Percent of health spa revenue	77.1%	73.6%	74.6%	73.4%
Per available room	\$775	\$835	\$850	\$885
Per occupied room	\$3.32	\$3.22	\$3.38	\$3.42

**Administrative & General Expense (in thousands)**

Base adm. & general expense	\$1,469	\$1,513	\$1,558	\$1,605
Percent fixed	45.0%	45.0%	45.0%	45.0%
Fixed component	\$661	\$681	\$701	\$722
Base adm. & general expense	\$1,469	\$1,513	\$1,558	\$1,605
Percent variable	55.0%	55.0%	55.0%	55.0%
Unadjusted variable component	\$808	\$832	\$857	\$883
Variable percentage change	94.6%	104.1%	101.4%	104.1%
Adjusted variable component	\$764	\$866	\$869	\$919
Fixed component	\$661	\$681	\$701	\$722
Variable component	764	866	869	919
Total adm. & general expense	\$1,425	\$1,547	\$1,570	\$1,641
Percent of total revenue	8.8%	8.1%	7.9%	7.8%
Per available room	\$7,125	\$7,735	\$7,850	\$8,205
Per occupied room	\$30.50	\$29.85	\$31.17	\$31.66



### Marketing Expense

The proposed Marriott Hotel will be new when it opens in the second year of the projection. As a result, an upward adjustment to the market expense is warranted in the first two projection years in order to reflect the costs of establishing a new hotel's market position. In the first projection year, a premium factor of 1.15 is applied (reflecting an upward adjustment of 15%). In Year 2, the premium factor is estimated at 1.10. In Year 3, the expense is assumed to stabilize with no premium factor. Exhibit 5.47 identifies the associated calculations.

### Property Operations and Maintenance Expense

The proposed Marriott Hotel will be new when it opens in Year 2 of the projection, so its property operation and maintenance expense during the initial years should be lower than the comparable expenses used to develop the base. These savings are reflected by adjusting the property operation and maintenance expense downward for the first two years of operation. In the first two years of operation, downward adjustments of 20% and 10% will be applied respectively. No adjustments will be made after the second projection year. Exhibit 5.48 identifies the associated calculations.

**Exhibit 5.47 Marketing Expense (in thousands)**

	2014	2015	2016	2017
Base marketing expense	\$1,101	\$1,134	\$1,169	\$1,204
Percent fixed	50.0%	50.0%	50.0%	50.0%
Fixed component	\$551	\$567	\$584	\$602
Base marketing expense	\$1,101	\$1,134	\$1,169	\$1,204
Percent variable	50.0%	50.0%	50.0%	50.0%
Unadjusted variable component	\$551	\$567	\$584	\$602
Variable percentage change	94.6%	104.1%	101.4%	104.1%
Adjusted variable component	\$521	\$590	\$592	\$626
Fixed component	\$551	\$567	\$584	\$602
Variable component	521	590	592	626
Total	\$1,072	\$1,158	\$1,176	\$1,228
Initial year's premium factor	1.15	1.10	1.00	1.00
Total marketing expense	\$1,232	\$1,273	\$1,176	\$1,228
Percent of total revenue	7.6%	6.7%	5.9%	5.8%
Per available room	\$6,162	\$6,367	\$5,880	\$6,140
Per occupied room	\$26.38	\$24.57	\$23.35	\$23.69

**Exhibit 5.48 Property Operations and Maintenance Expense (in thousands)**

	2014	2015	2016	2017
Base property op. & maint. expense	\$637	\$656	\$675	\$696
Percent fixed	50.0%	50.0%	50.0%	50.0%
Fixed component	\$318	\$328	\$338	\$348
Base property op. & maint. expense	\$637	\$656	\$675	\$696
Percent variable	50.0%	50.0%	50.0%	50.0%
Unadjusted variable component	\$318	\$328	\$338	\$348
Variable percentage change	94.6%	104.1%	101.4%	104.1%
Adjusted variable component	\$301	\$341	\$342	\$362
Fixed component	\$318	\$328	\$338	\$348
Variable component	301	341	342	362
Total	\$619	\$669	\$680	\$710
Discount for new facilities	80.0%	90.0%	100.0%	100.0%
Total property op. & maint. expense	\$495	\$602	\$680	\$710
Percent of total revenue	3.1%	3.1%	3.4%	3.4%
Per available room	\$2,477	\$3,010	\$3,400	\$3,550
Per occupied room	\$10.60	\$11.62	\$13.50	\$13.70





**Exhibit 5.48 Property Operations and Maintenance Expense (in thousands) (continued)****Energy Expense (in thousands)**

	2014	2015	2016	2017
Base energy expense	\$509	\$525	\$540	\$556
Percent fixed	50.0%	50.0%	50.0%	50.0%
Fixed component	\$255	\$262	\$270	\$278
Base energy expense	\$509	\$525	\$540	\$556
Percent variable	50.0%	50.0%	50.0%	50.0%
Unadjusted variable component	\$255	\$262	\$270	\$278
Variable percentage change	94.6%	104.1%	101.4%	104.1%
Adjusted variable component	\$241	\$273	\$274	\$290
Fixed component	\$255	\$262	\$270	\$278
Variable component	241	273	274	290
Total energy expense	\$495	\$535	\$544	\$568
Percent of total revenue	3.1%	2.8%	2.7%	2.7%
Per available room	\$2,475	\$2,675	\$2,720	\$2,840
Per occupied room	\$10.60	\$10.32	\$10.80	\$10.96

**Management Fees (in thousands)**

Total revenue	\$16,195	\$19,127	\$19,861	\$21,097
Management fee ratio	3.0%	3.0%	3.0%	3.0%
Management fees	\$486	\$574	\$596	\$633
Per available room	\$2,430	\$2,870	\$2,980	\$3,165
Per occupied room	\$10.40	\$11.07	\$11.83	\$12.21

**Property Taxes (in thousands)**

Property taxes	\$471	\$495	\$520	\$540
Percent of total revenue	2.9%	2.6%	2.6%	2.6%
Per available room	\$2,355	\$2,475	\$2,600	\$2,700
Per occupied room	\$10.08	\$9.55	\$10.32	\$10.42

**Insurance Expense (in thousands)**

Insurance	\$191	\$197	\$203	\$209
Percent of total revenue	1.2%	1.0%	1.0%	1.0%
Per available room	\$955	\$985	\$1,015	\$1,045
Per occupied room	\$4.09	\$3.80	\$4.03	\$4.03

**Reserve for Replacement**

Because the proposed Marriott will be new when it opens, the need for a 5% reserve for replacement during the initial years of operation is not as critical. The operator is willing to use a step-up reserve for replacement, which is 3% in Year 1, 4% in Year 2, and 5% thereafter (see Exhibit 5.49).

Exhibit 5.50 shows the results of the individual fixed and variable calculations for each item of income and expense. The forecast of income and expenses for the proposed Marriott hotel covers the first four years of operation as well as the stabilized year.

**Exhibit 5.49 Reserve for Replacement (in thousands)**

	2014	2015	2016	2017
Total revenue	\$16,195	\$19,127	\$19,861	\$21,097
Reserve for replacement ratio	3.0%	4.0%	5.0%	5.0%
Reserve for replacement	\$486	\$765	\$993	\$1,055
Per available room	\$2,429	\$3,825	\$4,965	\$5,274
Per occupied room	\$10.40	\$14.76	\$19.71	\$20.36



Exhibit 5.50 Proposed Marriott: Forecast of Income and Expense													
Calendar Year End:													

## Forecast of Revenue and Expense—Global Perspective

The previous chapter showed that the techniques and software for performing a hotel supply and demand analysis are applicable throughout the world. The techniques and software for forecasting revenue and expense are also applicable throughout the world, but the inputs, ratios, and line items can be quite different. To demonstrate these differences and show the impact on net income, the following is a side-by-side comparison of the revenue and expense for the proposed 200-room Marriott hotel, assuming it is located in the following five regions: China, Europe, India, South America, and the United States. The projected occupancy and average daily rate will be the same as was developed in the case study's preceding chapters, which will produce identical rooms revenues for each region. The rest of the revenue and expense items will be projected based on how this Marriott hotel will be designed and operated in each particular region. For example, a Marriott hotel in India would typically have significantly more food, beverage, and banquet outlets, thereby generating more food and beverage revenue than a Marriott hotel in the United States.

Exhibit 5.51's statement of revenue and expense shows the side-by-side comparison for the five regions as of the Marriott's fourth year of operation in 2017.

Based on the financial statements set forth here, it is apparent that there are many similarities and differences in the mode of operation and the resulting impact on revenues and expenses for hotels in various parts of the world. The following is a discussion of the reasons for these similarities and differences.

### Rooms Revenue

The underlying assumption for all five markets is that the subject property is a 200-room Marriott hotel in its fourth year of operation in the year 2014. The occupancy is 71% and the average daily rate is

\$250, which produces a rooms revenue of \$12,958,000.

### Food and Beverage Revenue

India shows the highest food and beverage revenue at \$9,517,000. China's food and beverage revenue is the lowest at \$6,312,000. Indian hotels typically have extensive food and beverage outlets, usually consisting of several restaurants and large banquet rooms. Some of the best restaurants in India are located in hotels. Large Indian weddings are often held in hotel banquet rooms. Travelers also appreciate dining in hotels, since driving in the large cities can be challenging and time consuming. Hotels in China also attract banquet business, but their restaurants do not cater to as many locals as Indian hotels. The European Marriott is second to the Indian Marriott in terms of food and beverage revenue, with a volume of \$7,390,000. Locals in Europe often frequent hotel restaurants and use their banquet facilities. South American hotels and hotels in the United States derive similar levels of food and beverage revenue.

### Telephone Revenue

India and South America show the highest telephone revenues, with a volume of \$630,000 and \$466,000, respectively. The United States' telephone revenue is \$96,000, and Europe is a low \$22,000. China does not separately account for telephone revenue but instead categorizes it under other income.

### Rentals and Other Income

South America and the United States have the highest rentals and other income at \$932,000 and \$829,000, respectively. China is the lowest at \$371,000.

### Spa Revenue

India's spa revenue of \$950,000 is the highest of the five regions. Upscale Indian hotels typically have extensive spa facilities that cater to both hotel guests and the local community. Spa revenue for China, Europe, and the United States ranged from \$241,000 to \$413,000. South America does not show



## Exhibit 5.51

	China Year 4				Europe Year 4				India Year 4				S. America Year 4				USA Year 4			
	200	Percent	\$/Avail.	\$/Occ.	200	Percent	\$/Avail.	\$/Occ.	200	Percent	\$/Avail.	\$/Occ.	200	Percent	\$/Avail.	\$/Occ.	200	Percent	\$/Avail.	\$/Occ.
Number of Rooms	200				200				200				200				200			
Occupancy	71.0%				71.0%				71.0%				71.0%				71.0%			
Average Rate	\$250.00				\$250.00				\$250.00				\$250.00				\$250.00			
Days Open	365				365				365				365				365			
Rooms Occupied	51,830				51,830				51,830				51,830				51,830			
Reserves																				
Rooms	\$12,958				\$12,958				\$12,958				\$12,958				\$12,958			
Food & beverage	\$6,312	31.0%	\$64,788	\$250.00	\$12,958	60.2%	\$64,788	\$250.00	\$12,958	52.8%	\$64,788	\$250.00	\$12,958	61.6%	\$64,788	\$250.00	\$12,958	61.4%	\$64,788	\$250.00
Telephone rentals																				
and other income	\$371	1.8%	\$1,855	\$7.16	\$768	3.6%	\$3,840	\$14.82	\$505	2.1%	\$2,525	\$9.74	\$932	4.4%	\$4,660	\$17.98	\$829	3.3%	\$4,145	\$15.99
Spa	\$413	2.0%	\$2,065	\$7.97	\$372	1.7%	\$1,860	\$7.18												
Garage	\$307	1.5%	\$1,535	\$5.92																
Total revenue	\$20,361	100.0%	\$101,803	\$392.83	\$21,510	100.0%	\$107,548	\$415.00	\$24,560	100.0%	\$122,798	\$473.85	\$21,042	100.0%	\$105,208	\$405.97	\$21,097	100.0%	\$105,483	\$407.03
Departmental Expenses																				
Rooms	\$2,931	22.6%	\$14,655	\$56.55	\$3,881	30.0%	\$19,405	\$74.88	\$1,345	10.4%	\$6,725	\$25.95	\$2,836	21.9%	\$14,180	\$54.72	\$2,868	22.1%	\$14,340	\$55.33
Food & beverage	\$4,040	64.0%	\$20,200	\$77.95	\$5,012	67.8%	\$25,060	\$36.70	\$4,332	45.5%	\$21,660	\$33.58	\$4,531	67.8%	\$22,655	\$87.42	\$4,820	69.1%	\$24,100	\$93.00
Telephone rentals																				
and other income	\$244	60.4%	\$1,120	\$4.32	\$150	19.5%	\$750	\$2.89	\$206	40.8%	\$1,030	\$3.97	\$617	45.7%	\$1,065	\$4.11	\$141	146.3%	\$705	\$2.72
Spa	\$231	55.9%	\$1,155	\$4.46	\$283	76.1%	\$1,415	\$5.46	\$389	40.9%	\$1,945	\$7.51		66.2%	\$3,085	\$11.90	\$177	73.4%	\$885	\$3.42
Garage	\$78	25.4%	\$390	\$1.50																
Total departmental expenses	\$7,504	36.9%	\$37,520	\$144.78	\$9,345	43.4%	\$46,725	\$180.30	\$6,752	27.5%	\$33,760	\$130.27	\$8,197	39.0%	\$40,985	\$158.15	\$8,253	39.1%	\$41,265	\$159.23
Departmental income	\$12,857	63.1%	\$64,283	\$248.05	\$12,165	56.6%	\$60,823	\$234.70	\$17,808	72.5%	\$89,038	\$343.58	\$12,845	61.0%	\$64,233	\$247.82	\$12,844	60.9%	\$64,218	\$247.80
Undistributed Operating Expense																				
Administrative & general	\$1,440	7.1%	\$7,200	\$27.78	\$1,795	8.3%	\$8,975	\$34.63	\$1,426	5.8%	\$7,130	\$27.51	\$2,388	11.3%	\$11,940	\$46.07	\$1,641	7.8%	\$8,205	\$31.66
Marketing	\$743	3.6%	\$3,715	\$14.34	\$898	4.2%	\$4,490	\$17.33	\$604	2.5%	\$3,020	\$11.65	\$1,086	5.2%	\$5,430	\$20.95	\$1,228	5.8%	\$6,140	\$23.69
Brand marketing fee																				
Prop. oper. & maintenance	\$674	3.3%	\$3,370	\$13.00	\$673	3.1%	\$3,365	\$12.98	\$991	4.0%	\$4,955	\$19.12	\$651	3.1%	\$3,255	\$12.56	\$709	3.4%	\$3,545	\$13.68
Energy costs	\$1,371	6.7%	\$6,855	\$26.45	\$785	3.6%	\$3,925	\$15.15	\$1,933	7.9%	\$9,665	\$37.30	\$543	2.6%	\$2,715	\$10.48	\$567	2.7%	\$2,835	\$10.34
Total UDDEs	\$4,228	20.8%	\$21,140	\$81.57	\$4,151	19.3%	\$20,755	\$80.09	\$5,280	21.5%	\$26,400	\$101.87	\$4,668	22.2%	\$23,340	\$30.06	\$4,145	13.6%	\$20,725	\$79.97
Income before fixed charges	\$8,629	42.4%	\$43,143	\$166.48	\$8,014	37.3%	\$40,068	\$154.61	\$12,528	51.0%	\$62,638	\$241.70	\$8,177	38.9%	\$40,883	\$157.76	\$8,699	41.2%	\$43,493	\$167.83
Fixed Charges																				
Management fee	\$508	2.5%	\$2,540	\$9.80	\$646	3.0%	\$3,230	\$12.46	\$739	3.0%	\$3,695	\$14.26	\$633	3.0%	\$3,165	\$12.21	\$633	3.0%	\$3,165	\$12.21
Property tax	\$433	2.1%	\$2,165	\$8.35	\$424	2.0%	\$2,120	\$8.18	\$252	1.0%	\$1,260	\$4.86	\$110	0.5%	\$550	\$2.12	\$540	2.6%	\$2,700	\$10.42
Insurance	\$107	0.5%	\$535	\$2.06	\$159	0.7%	\$795	\$3.07	\$126	0.5%	\$630	\$2.43	\$66	0.3%	\$330	\$1.27	\$209	1.0%	\$1,045	\$4.03
Reserves for replacement	\$813	4.0%	\$4,065	\$15.69	\$861	4.0%	\$4,305	\$16.61	\$985	4.0%	\$4,925	\$19.00	\$844	4.0%	\$4,220	\$16.28	\$1,054	5.0%	\$5,270	\$20.34
Business tax	\$1,117	5.5%	\$5,585	\$21.55																
Incentive mgmt. fee	\$565	2.8%	\$2,825	\$10.90	\$652	3.0%	\$3,260	\$12.58	\$949	3.9%	\$4,745	\$18.31	\$565	2.7%	\$2,825	\$10.90				
Turnover tax																				
Bank credits & debits tax																				
Total fixed charges	\$3,543	17.4%	\$17,715	\$68.36	\$2,742	12.7%	\$13,710	\$52.90	\$3,051	12.4%	\$15,255	\$58.87	\$3,273	15.6%	\$16,365	\$63.15	\$2,436	11.5%	\$12,180	\$47.00
Net income	\$5,086	25.0%	\$25,428	\$98.12	\$5,272	24.5%	\$26,358	\$101.71	\$9,477	38.6%	\$47,383	\$182.84	\$4,904	23.3%	\$24,518	\$34.61	\$6,263	23.7%	\$31,313	\$120.83

spa revenue because hotels of this size typically have very small spas in this region, and the income from them is insignificant.

### **Garage Revenue**

In China, hotels typically have garage revenue. Garage revenue for the proposed Marriott in China was estimated to be \$307,000. The other regions do not count garage revenue as a specific item but instead include it with other income.

### **Total Revenue**

The resulting total revenue ranges from \$24,560,000 for India down to \$20,361,000 for China. Europe, South America, and the United States have similar total revenues at approximately \$21,000,000 for each region.

### **Rooms Department Expense**

Major financial operating differences among the different regions become apparent when the rooms department expense percentage is compared. India has the lowest at 10.4%, and Europe is the highest at 30%. China, South America, and the United States are similar at around 22%. India's extremely low labor cost is the primary reason why its rooms department expense is so low. Indian hotels appear to be overstaffed and usually provide a high level of service. However, wages are extremely low in India, resulting in a highly profitable department. Europe's labor costs are very high. Unions, government regulations, vacations, benefits, and high health care and social security expenses contribute to staffing costs and a high rooms department expense.

### **Food and Beverage Department Expense**

India, with its low labor costs, has a low food and beverage departmental expense ratio of 45.5%. The other regions are fairly consistent, with costs ranging from 64% in China to 69.1% in the United States. It appears that Europe's higher food and beverage volume helps control the food and beverage expense ratio at 67.8%. Food and beverage labor is not as large a component in the food and beverage department as it is in the rooms department.

### **Telephone Expense**

The telephone department makes a small profit in all areas of the world except for the United States, where it loses money. This can be attributed to the low telephone revenue in the United States.

### **Spa Expense**

India has the lowest spa expense at 40.9%, while China's expense is 55.9%. Europe and the United States have spa expenses of 76.1% and 73.4%, respectively. Again, these differences are typically related to labor costs.

### **Garage Expense**

Good profit is made in the hotel garages of China, which has an expense ratio of 25.4%.

### **Administrative and General Expense**

On a per-available-room basis, South America has the lowest administrative and general costs at \$11,940 per room. Europe is the next most expensive at \$8,975 per room, followed by the United States at \$8,205 per room. Comparatively, India is not as low as might be expected, operating at \$7,130 per room. Administrative and general expenses are not as labor intensive as rooms and food and beverage, so India's labor advantage does not show up as much in this expense item.

### **Marketing Expense**

The United States has the highest marketing expense at \$6,140 per room, followed by South America at \$5,430 per room. India's marketing expense is the lowest at \$3,020 per room. The competitive environment in the United States is particularly difficult and requires higher expenditures in marketing.

### **Brand Marketing Fee**

Note that chain-affiliated hotels in India typically charge a separate marketing fee.

### **Property Operations and Maintenance Expense**

India pays the most for property operations and maintenance at \$4,955 per room. This can be attributed to the high cost of replacement equipment parts and the wear and tear of operating a hotel in India. The



property operations and maintenance in the other areas of the world are similar at a rate of about \$3,500 per room.

### **Energy Costs**

India has the highest energy costs at \$9,665 per room, followed by China at \$6,885 per room and Europe at \$3,925 per room. South America and the United States are similar at approximately \$2,700 to \$2,800 per room.

### **Income before Fixed Charges**

With its high food and beverage income coupled with very low departmental expenses, the proposed Marriott in India generated an income before fixed charges of \$12,528,000, which was 51% of total revenue. The other four markets had a fairly tight range of income before fixed charges, ranging from \$8,014,000 for Europe up to \$8,699,000 for the United States. These profit ratios were about 40%.

### **Management Fees**

The base management fee for all the markets was 3% of total revenue except for China, where it was 2.5%. China is a particularly attractive market for international hotel companies who compete aggressively to obtain management contracts.

### **Property Taxes**

Based on our analyses, hotels in the United States pay the most (\$540,000) in property taxes. China is next at \$433,000, followed by Europe at \$424,000, India at \$252,000, and South America at only \$110,000. Note that South America also pays a turnover tax of \$844,000 and a bank credit-and-debit tax of \$211,000, making it much more expensive than the other regions from a total tax perspective.

### **Insurance**

Insurance ranges from a low of \$66,000 in South America to a high of \$209,000 in the United States.

### **Reserve for Replacement**

All the markets used a 4% of total revenue reserve for replacement except for the United States, which used 5%.

The following are several additional expenses that are deducted by typical buyers of hotels in the regions in which they operate. As appraisers, it is important to reflect the actions of typical buyers and sellers and include these expenses in the revenue and expense statement if they are deductions that are customarily used by market participants. For example, it is normal for buyers to deduct a business tax in China. This type of tax is not normally deducted in other regions of the world.

### **Business Tax**

An additional business tax is normally deducted in China, which amounts to \$1,117,000, or 5.5% of total revenue.

### **Incentive Management Fee**

Additional fees paid to hotel management companies are usually based on a percentage of net income. Marriott typically has an incentive management fee, which is traditionally deducted for valuation purposes in other areas of the world. However, as described previously, incentive management fees in the United States are usually subordinated to debt service and loaded into the equity yield rather than specifically deducted during the hotel appraisal process. Occasionally, it may be helpful to include incentive management fees for hotel appraisals in the United States, which is also proper methodology. Outside the United States, the incentive management fee ranges from 2.7% of total revenue in South America to 3.9% in India.

### **Turnover Tax and Bank Credits and Debits Tax**

As previously described, hotel appraisers in South America also deduct a turnover tax and a bank credit and debits tax.

### **Net Income**

The resulting income for the five regions is as follows:

- China: \$5,086,000
- Europe: \$5,272,000
- India: \$9,477,000



- South America: \$4,904,000
- United States: \$6,263,000

India leads the list by showing a net income of \$9,477,000, which is significantly higher than the other regions. South America is the lowest. Even if an incentive management fee were to be deducted for the United States, it would still be the

second highest. At least from a profit point of view, these results show why India has been getting so much attention from hotel companies looking to do business there. On the other hand, South America is not as active in new development compared to India, the United States, and China, despite the growth of Brazil.

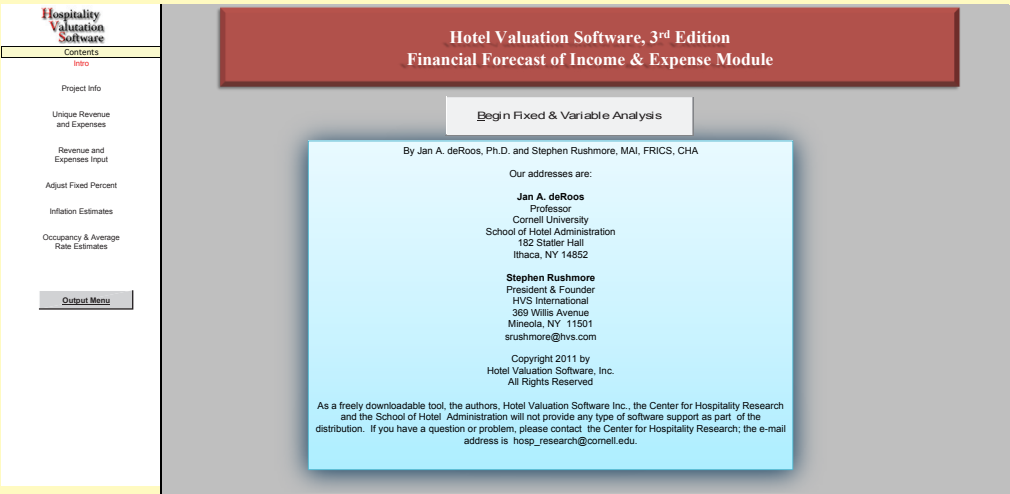
### Hotel Valuation Software

The next software module to be used for this market study and appraisal is the Financial Forecast of Income and Expense Module (FIXVAR). The key to any hotel market study and valuation is a supportable forecast of revenues and expenses. Hotel revenues and expenses are comprised of many different components that display certain fixed and variable relationships to each other. This program enables the appraiser to input comparable financial operating data and forecast a complete 11-year income and expense statement by defining the following inputs:

1. The projected future occupancy and average daily rate levels for the subject hotel.
2. Base year operating data from the subject property or a comparable hotel.
3. Expected inflation rates for revenues and expenses.

The output income and expense statement is formatted in accordance with the USALI.

The following is the Intro screen of the Financial Forecast of Income and Expense Module (FIXVAR).



To begin using FIXVAR, click on the “Begin Fixed & Variable Analysis” box or “Project Info” on the navigation bar.





**Hospitality Valuation Software**

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Inflation Estimates

Occupancy & Average Rate Estimates

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**Project Information & Base Year Inputs**

**Color Input Legend**

<b>Mandatory Input:</b>	
<b>Optional Input:</b>	
<b>Output Only:</b>	
<b>No User Input:</b>	
<b>No User Input:</b>	
<b>Information/Instructionals:</b>	

Enter the project information for this analysis below.  
These inputs will be used on the final reports.

<b>Job Title:</b>	
<b>Prepared By:</b>	
<b>Prepared For:</b>	
<b>Job ID:</b>	
<b>Base Year:</b>	
<b>Number of Rooms:</b>	
<b>Days Open Per Year:</b>	
<b>Occupancy</b>	
<b>Average Rate:</b>	

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The Project Information & Base Year Inputs screen contains a legend at the top and an area for general information at the bottom. The legend describes the color coding used for the input and output cells in the software. A white cell requires mandatory input. Orange cells are optional input. Green cells are for output only. The two light blue cells are no user input areas. The dark blue cells are for information or instructions.

General information identifying the project is entered at the bottom of this screen. These inputs will be used on the final reports, and they include the job title, the name of the preparer, who was it prepared for, and the job number. The base year also needs to be defined. The base year is usually the calendar year preceding the first projection year of the room night analysis. It is entered as a whole year rather than in the month/day/year format. In addition, the room count of the subject property and the number of days per year it is open are entered. Enter the base occupancy of the comparable being used in the projection. Note that this does not have to be the occupancy projected at any time for the subject property. Lastly, enter the average daily rate of the subject property as of the base year.



The following screenshot shows the case study data entered in the Project Information & Base Year Inputs screen.

Project Information & Base Year Inputs

Color Input Legend

Mandatory Input:	
Optional Input:	
Output Only:	
No User Input:	
No User Input:	
Information/Instructionals:	

Enter the project information for this analysis below.  
These inputs will be used on the final reports.

<b>Job Title:</b>	Proposed Marriott Hotel
<b>Prepared By:</b>	Steve Rushmore
<b>Prepared For:</b>	HEI Hospitality, LLC
<b>Job ID:</b>	4451
<b>Base Year:</b>	2012
<b>Number of Rooms:</b>	200
<b>Days Open Per Year:</b>	365
<b>Occupancy:</b>	68.00%
<b>Average Rate:</b>	\$212.00

Continue >

The next screen is for Other Revenue and Expenses. The software provides all the necessary revenue and expense accounts found in the USALI. If the subject property has unique revenues and/or expenses, this screen will add these to the revenue and expense statement. The top set of boxes is for entering additional operating departments, such as spa, garage, golf, and so on. When an account is entered in one of these boxes, the software will add both the departmental revenue and the corresponding departmental expense account into the revenue and expense statement.

The second set of boxes is for miscellaneous expenses that don't have revenue associated with them. These expenses will be added as an additional line item with the undistributed operating expenses. Some examples of these miscellaneous expenses are transportation or business center expenses.

The third section of this screen is for adding an incentive management fee to the revenue and expense statement. The incentive management fee can be entered either as a percentage of gross operating profit (GOP) or as a percentage of cash flow after the owner's priority return.

The percentage of the gross operating profit is calculated by taking the income before fixed charges and deducting the base management fee. This number is multiplied by the incentive management fee percentage to obtain the incentive management fee.

The incentive management fee based on a percentage of cash flow after the owner's priority return is calculated as follows. The owner's priority is a return that is given to the hotel owner prior to the calculation of the incentive management fee. It essentially subordinates the management company's incentive management fee to a minimum return for the owner. There are many ways to establish an owner's priority. The following is an example based on development cost.



Assume that the hotel is new and will cost \$250,000 per room. With a room count of 200, the total cost of the hotel would be \$50,000,000. The negotiated owner's return requirement was 8%, and the incentive management fee percentage is 15%. Thus, the owner's priority would be \$4,000,000. This amount should be sufficient to pay the mortgage and provide a return on the owner's equity.

Owner's Priority Calculation	
Development cost per room	\$250,000
# of rooms	200
Total development cost	\$50,000,000
Owner's return requirement	8.00%
Owner's priority	\$4,000,000

Using the \$4,000,000 owner's priority, the software calculates the incentive management fee. The base management fee, property tax, insurance, and reserve for replacement are deducted from the income before fixed charges, leaving a net net income of \$7,451. The owner's priority of \$4,000 is deducted, leaving \$3,451 in net income after the owner's priority. This number is then multiplied by the incentive management fee percentage of 15%, resulting in an incentive management fee of \$518. The following table shows the calculation for the incentive management fee:

Incentive Management Fee Calculation	
	2019
	(\$1,000)
Income before fixed charges	\$10,131
Less:	
Base management fee	\$707
Property tax	\$573
Insurance	\$221
Reserve for replacement	\$1,179
Total fixed charges	\$2,680
Net income	\$7,451
Less: owner's priority	\$4,000
Net income after owner's priority	\$3,451
Incentive management fee percentage	15%
Incentive management fee	\$518

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Other Revenues & Expenses

Enter names of additional operating departments. Both a Revenue and Expense category will be created.

Misc Oper. Dept 1:  
Misc Oper. Dept 2:  
Misc Oper. Dept 3:  
Misc Oper. Dept 4:  
Misc Oper. Dept 5:  
Misc Oper. Dept 6:

Enter names of Misc Expense which will appear under Undistributed Operating Expenses

Misc Expense 1:  
Misc Expense 2:  
Misc Expense 3:  
Misc Expense 4:  
Misc Expense 5:

Incentive Management Fee (IMF)  
Chose the IMF as a percentage of GOP or as a percentage of Cash Flow After Owner's Priority Return (CFAOP); the Owner's Priority Return is required if CFAOP is used.

Incentive Fee

GOP

OR

CFAOP

Owner's Priority

Go Back
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The proposed Marriott has a health spa, so this needs to be entered in the “Misc. Oper. Dept.” section. As discussed previously, the incentive management fee deduction will not be used. The following screenshot shows this information entered in the Other Revenues & Expenses screen.



## Other Revenues & Expenses

Enter names of additional operating departments. Both a Revenue and Expense category will be created.

Misc Oper. Dept 1:	Health Spa
Misc Oper. Dept 2:	
Misc Oper. Dept 3:	
Misc Oper. Dept 4:	
Misc Oper. Dept 5:	
Misc Oper. Dept 6:	

Enter names of Misc Expense which will appear under Undistributed Operating Expenses

Misc Expense 1:	
Misc Expense 2:	
Misc Expense 3:	
Misc Expense 4:	
Misc Expense 5:	

Incentive Management Fee (IMF)

Chose the IMF as a percentage of GOP or as a percentage of Cash Flow After Owner's Priority Return (CFAOP); the Owner's Priority Return is required if CFAOP is used.

<b>Incentive Fee</b> <div style="display: inline-block; text-align: center;"> <b>GOP</b>  <input style="width: 100px; height: 20px;" type="text"/> </div>	<b>OR</b>	<div style="display: inline-block; text-align: center;"> <b>CFAOP</b>  <input style="width: 100px; height: 20px;" type="text"/> </div>
<b>Owner's Priority</b> <input style="width: 200px; height: 20px;" type="text"/>		

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The next screen is for Revenue and Expense Inputs. This screen is where the operating data and ratios from the comparable financial statement(s) are entered. This information is referred to as either the base or the comparable base. The financial data can be entered as a dollar amount in thousands, as a percentage of revenue, as dollars per available room, or as dollars per occupied room. Be sure to enter the financial data only once on each line. The shaded area in the column furthest to the right shows the total dollar amount for each line item as well as the net net income as of the base year.



## Revenue and Expense Inputs

Please enter the appropriate revenue and expenses information in one of the four white cells below, for each revenue and expense line item, as appropriate.

	Base Year Inputs				Base Year Outputs (At A Glance)
	Amount In \$(000)	% of Revenue	\$ per Avail. Room	\$ per Occ Room	This column displays a real time view of how your inputs affect the output figures.
<b>Revenues</b>					
Rooms	\$ -				\$0
Food					
Beverages					
Telephone					
Rentals and Other Income					
Other Operated Departments					
<b>Total Revenue:</b>					<b>\$0</b>
<b>Expenses</b>					
<u>Departmental Expenses</u>					
Rooms					
Food & Beverages					
Telephone					
Rentals and Other Income					
Other Operated Departments					
<b>Total Departmental Expenses:</b>					<b>\$0</b>
<u>Undistributed Operating Expenses</u>					
Administrative & General					
Marketing					
Franchise Fees					
Prop. Oper. & Maintenance					
Energy Costs					
<b>Total Undistributed Operating Expenses:</b>					<b>\$0</b>
<u>Fixed Expenses</u>					
Base Management Fee					
Incentive Management Fee		0.0%			\$0
Property Tax					
Insurance					
Reserve for Replacement					
<b>Total Fixed Expenses:</b>					<b>\$0</b>
<b>Net Income:</b>					<b>\$0</b>

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The following screenshot shows the base financial information entered in the spreadsheet that will be used to project revenue and expense for the proposed Marriott.



## Revenue and Expense Inputs

Please enter the appropriate revenue and expenses information in one of the four white cells below, for each revenue and expense line item, as appropriate.

		Base Year Inputs				Base Year Outputs (At A Glance)
		Amount In \$(000)	% of Revenue	\$ per Avail. Room	\$ per Occ Room	This column displays a real time view of how your inputs affect the output figures.
<b>Revenues</b>						
	Rooms	\$ 10,524				\$10,524
	Food			\$25,000		\$5,000
	Beverages		16.0%			\$800
	Telephone			\$400		\$80
	Rentals and Other Income			\$3,500		\$700
	Other Operated Departments					
	Health Spa			\$1,000		\$200
<b>Total Revenue:</b>						<b>\$17,304</b>
<b>Expenses</b>						
<u>Departmental Expenses</u>						
	Rooms		23.0%			\$2,420
	Food & Beverages		70.0%			\$4,060
	Telephone		150.0%			\$120
	Rentals and Other Income		30.0%			\$210
	Other Operated Departments					
	Health Spa		75.0%			\$150
<b>Total Departmental Expenses:</b>						<b>\$6,960</b>
<u>Undistributed Operating Expenses</u>						
	Administrative & General		8.0%			\$1,384
	Marketing		6.0%			\$1,038
	Franchise Fees					
	Prop. Oper. & Maintenance			\$3,000		\$600
	Energy Costs			\$2,400		\$480
<b>Total Undistributed Operating Expenses:</b>						<b>\$3,503</b>
<u>Fixed Expenses</u>						
	Base Management Fee		3.0%			\$519
	Incentive Management Fee		0.0%			\$0
	Property Tax			\$2,200		\$440
	Insurance			\$900		\$180
	Reserve for Replacement		5.0%			\$865
<b>Total Fixed Expenses:</b>						<b>\$2,004</b>
<b>Net Income:</b>						<b>\$4,836</b>

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On the left side are all the normal hotel revenue and expense accounts. The health spa has been added as a departmental revenue account as well as a departmental expense account. The rooms revenue has been calculated from the information entered in the Project Information screen. Food revenue was entered as \$25,000 per room. In the shaded cells in the far-right column, the \$25,000 per room has been multiplied by 200 rooms, producing a base year food revenue of \$5,000 (\$000).



The software contains two types of comments that assist in entering data. The first type of comment is accessed by placing the cursor over the little triangles that appear on the screen. See the two comments as follows:

Base Year Inputs				
Amount in \$(000)	% of Revenue	\$		Occ n
\$ 10,524				

Entries in this column are not based on a percent of total revenue. Be certain to make note of the input instructions below.

Amount in \$(000)	% of Revenue	\$		Occ n

Entries in this column are not based on a percent of total revenue. Be certain to make note of the input instructions below.

The second type of comment is revealed by clicking on a cell. The following screenshots show the type of input comments contained in the software. These comments can help the user understand what revenue item each percent refers to.

	Amount in \$(000)	% of Revenue	\$ per Avail. Room	\$ per Occ Room	
Rooms	\$ 10,524				
Food			\$25,000		
Beverages					
Telephone			\$400		
er Income			\$3,500		
partments					
Health Spa			\$1,000		

Food revenues are calculated as a percent of Rooms Revenue.

	Amount in \$(000)	% of Revenue	\$ per Avail. Room	\$ per Occ Room	
Rooms	\$ 10,524				
Food			\$25,000		
Beverages		16.0%			
Telephone					
er Income			\$3,500		
partments					
Health Spa			\$1,000		

Beverage revenues are calculated as a percent of Food Revenue.



	Amount in \$(000)	% of Revenue	\$ per Avail. Room	\$ per Occ Room	
Rooms	\$ 10,524				
Food			\$25,000		
Beverages		16.0%			
Telephone			\$400		
Rental Income			\$3,500		
Other Departments					
Health Spa			\$1,000		

Telephone revenues  
are calculated as a  
percent of Rooms  
Revenue.

	Amount in \$(000)	% of Revenue	\$ per Avail. Room	\$ per Occ Room	
Rooms	\$ 10,524				
Food			\$25,000		
Beverages		16.0%			
Telephone			\$400		
Rental Income			\$3,500		
Other Departments					
Health Spa			\$1,000		
				Total Revenue:	

Rental and Other  
Income revenues  
are calculated as a  
percent of Rooms  
Revenue.

	Amount in \$(000)	% of Revenue	\$ per Avail. Room	\$ per Occ Room	
Rooms	\$ 10,524				
Food			\$25,000		
Beverages		16.0%			
Telephone			\$400		
Rental Income			\$3,500		
Other Departments					
Health Spa			\$1,000		
				Total Revenue:	
Amount in		%	Avail.	\$ per Occ	

Other Operated  
Departments revenues  
are calculated as a  
percent of Rooms  
Revenue.





	\$(000)	Revenue	Room	Room	
Rooms	\$ 10,524				
Food			\$25,000		
Beverages		16.0%			
Telephone			\$400		
Other Income			\$3,500		
Departments					
Health Spa			\$1,000		
				Total Revenue:	
Amount in \$(000)		% Rev	Unique Property Revenues are calculated as a percent of Rooms Revenue.		
			Trail.	\$ per Occ Room	

### Undistributed Operating Expenses

Administrative & General		8.0%
Marketing		6.0%
Franchise Fees		
Prop. Oper. & Maintenance		
Energy Costs		

You can only enter Franchise Fees as a percent of Rooms Revenue.

### Fixed Expenses

Base Management Fee		3.0%
---------------------	--	------

### Fixed Expenses

Base Management Fee		3.0%
Incentive Management Fee		
Property Tax		
Insurance		
Reserve for Replacement		

You can only enter Management Fee as a percent of Total Revenue.

### Fixed Expenses

Base Management Fee		3.0%
Incentive Management Fee		0.0%
Property Tax		
Insurance		
Reserve for Replacement		

This is linked to the input on the previous sheet.



## Fixed Expenses

Base Management Fee		3.0%
Incentive Management Fee		0.0%
Property Tax		
Insurance		
Reserve for Replacement		5.0%

You can only enter Reserve for Replacement as a percent of Total Revenues.

The following is the Adjustment of Percent Fixed by Line Item, by Year screen. This screen allows for the adjustment of the fixed and variable ratios for each line of revenue and expense and for each year. The sheet is pre-populated with suggested fixed percentages. Changing one percentage will change all the percentages to the right of it. To the far right is the index of variability, which shows the basis for the variable change.

The following table shows the fixed and variable percentages that will be used for each line item for the proposed Marriott:

Category	Proposed Marriott	
	Fixed	Variable
Revenue		
Food	15%	85%
Beverage	10	90
Telephone	10	90
Other income	50	50
Health spa	10	90
Expense		
Rooms	50	50
Food & beverage	35	65
Telephone	60	40
Other income	40	60
Health spa	50	50
Administrative and general	45	55
Marketing	50	50
Franchise fee	0	100
Property operations & maintenance	50	50
Energy	50	50
Management fee	0	100
Property taxes	100	0
Insurance	100	0
Reserve for replacement	0	100



This sheet contains a set of recommended inputs for "Percent Fixed". The "Percent Fixed" is the percent of any given line item that is invariant to changes in occupancy. You may change the values in the peach cells.

Revenues	Base Year	Base Year + 1 2013	Base Year + 2 2014	Base Year + 3 2015	Base Year + 4 2016	Base Year + 5 2017	Base Year + 6 2018	Base Year + 7 2019	Base Year + 8 2020	Base Year + 9 2021	Base Year + 10 2022	Base Year + 11 2023	Index of Variability
<b>Room Revenue</b>	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	Occupancy
<b>Food &amp; Beverage</b>	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	Food Revenue
<b>Telephone</b>	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	Occupancy
<b>Rentals and Other Income</b>	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	Occupancy
<b>Other Operated Departments</b>	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	Occupancy
<b>Health Spa</b>	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	Occupancy
<b>Expenses</b>													
<b>General Expenses</b>													
<b>Room</b>	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	Occupancy
<b>Food &amp; Beverage</b>	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	Food Revenue
<b>Telephone</b>	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	Occupancy
<b>Rentals and Other Income</b>	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	Rentals and Other Income Revenue
<b>Other Operated Departments</b>	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	Other Operated Departments Revenue
<b>Health Spa</b>	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	Occupancy
<b>Undistributed Operating Expenses</b>													
<b>Administrative</b>	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	Total Revenue
<b>General</b>	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	Total Revenue
<b>Insurance</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Total Revenue
<b>Franchise Fees</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Total Revenue
<b>Prop. Oper. &amp; Maintenance</b>	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	Total Revenue
<b>Energy Costs</b>	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	Total Revenue
<b>0</b>	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	Total Revenue
<b>0</b>	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	Total Revenue
<b>Fixed Expenses</b>													
<b>Base Management Fee</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Total Revenue
<b>Incentive Management Fee</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Total Revenue
<b>Property Tax</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	Total Revenue
<b>Insurance</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	Total Revenue
<b>Reserve for Replacement</b>	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	Total Revenue
<b>Land Rent</b>	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	Total Revenue

The next screen is where inflation estimates are entered for each item of revenue and expense. As with the other similar screens, when the inflation rate is entered in one cell it is automatically spread to the cells to its right.

The case study used an underlying inflation rate of 3%, except for the rooms revenue and property tax expense, which were projected to change as follows:

	Inflation Estimate				
	2013	2014	2015	2016	2017
Rooms revenue	3.0%	2.0%	5.0%	3.5%	4.0%
Property tax	3.0%	4.0%	5.0%	5.0%	4.0%
				3.0%	3.0%

The following screenshot shows the entered inflation rate information.



Enter inflation estimates below. A figure entered in the white cell will fill the table. Individual line items (rows) can be modified by an entry in the peach colored cells. The remaining individual cells can be modified directly.

The last data entry screen is the Occupancy and Average Rate Estimates screen. This information comes from the previously described room night analysis and average daily rate program.

The percentage of occupancy is entered in the year the property opens. The opening year is 2014 for the proposed Marriott, so the 64% first year's occupancy is entered in that cell. The inflated average daily rate line takes the base year average daily rate and inflates it based on the rooms revenue inflation rates entered in the previous screen. This line provides guidance as to how the average daily rate will actually be projected in the next line.

The figure entered on the average daily rate line is the average daily rate that will be used in the financial projection of revenue and expense. In the first year of operation (2014), the projected average daily rate was discounted by 10%. In the second year of operation, a 5% discount was made to the inflated average daily rate.

Occupancy and Average Rate Estimates

Enter the estimated occupancy percentage in the white cells below. The template will fill the occupancy in the remaining years, or these can be modified directly. The "Inflated Average Rate" information is calculated using the Base Year Average Rate and the Inflation Estimates entered previously. If the analyst wishes to override this information, enter this data in the appropriate purple cells on the "Average Rate" row.

	1	2	3	4	5	6	7	8	9	10	11	
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Analyst Estimate												
Occupancy Rate	68.00%		64.00%	71.00%	69.00%	71.00%	74.00%	74.00%	74.00%	74.00%	74.00%	74.00%
Inflated Average Rate	\$212.00	\$218.36	\$222.73	\$233.86	\$242.05	\$251.73	\$264.32	\$272.25	\$280.41	\$288.83	\$297.49	\$306.42
Average Rate	\$212.00	\$218.36	\$200.00	\$221.00	\$241.00	\$250.00	\$263.00	\$271.00	\$279.00	\$287.00	\$297.00	\$305.00
Annual Percent Change	0.0%	3.0%	-8.4%	10.5%	9.0%	3.7%	5.2%	3.0%	3.0%	2.9%	3.5%	2.7%

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Start-Up Adjustments

Before finalizing the projection of revenue and expense, it is necessary to make adjustments to the following three expense areas to reflect start-up economies and costs:

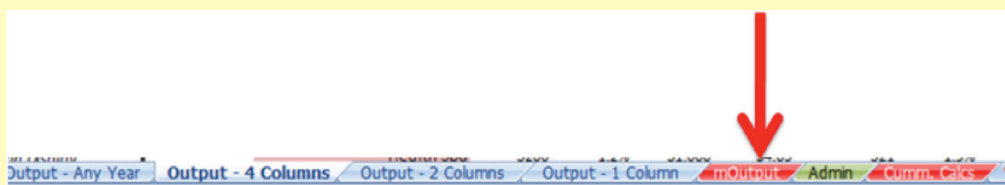
- Marketing  
In the first projection year, a premium factor of 1.15 is applied (reflecting an upward adjustment of 15%). In Year 2, the premium factor is estimated at 1.10. In Year 3, the expense is assumed to stabilize with no premium factor.
- Property operations and maintenance  
The proposed Marriott's property operations and maintenance expense during the initial years should be lower than the comparable expenses used to develop the base, as previously discussed. These savings are reflected by adjusting the property operation and maintenance expense downward for the first two years of operation. In the first two years of operation, downward adjustments of first 20% and then 10% will be applied. No adjustments will be made after the second projection year.
- Reserve for replacement  
Because the proposed Marriott will be new when it opens, the need for a 5% reserve for replacement during the initial years of operation is not critical. The operator is willing to use a step-up reserve for replacement, which is 3% in Year 1, 4% in Year 2, and 5% thereafter.

These adjustments are possible because the enhanced tabbed version of the Hotel Valuation Software is being used.

The following set of screenshots show how these start-up adjustments are made to marketing, property operations and maintenance expense, and reserve for replacement for the first two projection years, 2014 and 2015. The following table shows data for 2014 prior to making adjustments.

Undistributed Operating Expenses				
Administrative & General	\$1,425	8.8%	\$7,125	\$30.50
Marketing	\$1,072	6.6%	\$5,360	\$22.95
Franchise Fees	\$0	0.0%	\$0	\$0.00
Prop. Oper. & Maintenance	\$619	3.8%	\$3,095	\$13.25
Energy Costs	\$495	3.1%	\$2,475	\$10.60
<b>Total UDOE's</b>	<b>\$3,611</b>	<b>22.3%</b>	<b>\$18,055</b>	<b>\$77.29</b>
<b>Income before Fixed Charges</b>	<b>\$5,425</b>	<b>33.5%</b>	<b>\$27,125</b>	<b>\$116.12</b>
Fixed Charges				
Base Management Fee	\$486	3.0%	\$2,430	\$10.40
Incentive Management Fee	\$0	0.0%	\$0	\$0.00
Property Tax	\$471	2.9%	\$2,355	\$10.08
Insurance	\$191	1.2%	\$955	\$4.09
Reserve for Replacement	\$810	5.0%	\$4,050	\$17.34
Land Rent	\$0	0.0%	\$0	\$0.00
<b>Total Fixed Charges</b>	<b>\$1,958</b>	<b>12.1%</b>	<b>\$9,790</b>	<b>\$41.91</b>
<b>Net Income(Loss)</b>	<b>\$3,467</b>	<b>21.4%</b>	<b>\$17,355</b>	<b>\$74.21</b>

At the bottom of the screen are tabs. Click on the “mOutput” tab to get into the output area of the software. See the following screenshot for the location of this tab.



The “mOutput” area displays the current revenue and expense output for each year. The following screenshot shows the output for 2014.



2014

<b>Number of Rooms:</b>	200
<b>Occupancy:</b>	64.00%
<b>Average Rate:</b>	\$200.00
<b>Days Open:</b>	365
<b>Rooms Occupied:</b>	46,720

Revenues		\$ (000)	Percent	\$/Avail Rm	\$/Occ Rm
	Rooms	9344	57.70%	46720	200
	Food	5039	31.11%	25195	107.8553082
	Beverages	810	5.00%	4050	17.33732877
	Telephone	80	0.49%	400	1.712328767
	Rentals and Other Income	721	4.45%	3605	15.43236301
	Other Operated Departments	0	0.00%	0	0
	Health Spa	201	1.24%	1005	4.302226027
	✓ 0	0	0.00%	0	0
	✓ 0	0	0.00%	0	0
	✓ 0	0	0.00%	0	0
	✓ 0	0	0.00%	0	0
	✓ 0	0	0.00%	0	0

The first adjustment is to be made to marketing expense in the first year of operation (2014). This expense needs to be increased by 15%, or 1.15 times. To make this adjustment, click on the marketing expense cell Y46 and then press the F2 key. This will reveal the formula contained in the cell. To increase the amount of this cell by 15%, add “\*1.15” to the formula in the cell. The following two screenshots show this process. For the 2015 marketing expense, add “\*1.1” to the formula.

### Undistributed Operating Expenses

Administrative & General	1425	8.80%	7125	30.50085616
Marketing	=Cumm . Calcs!E231*1.15		6164	26.3869863
Franchise Fees	0	0.00%	0	0
Prop. Oper. & Maintenance	495.2	3.06%	2476	10.59931507
Energy Costs	495	3.06%	2475	10.59503425
✓ 0	0	0.00%	0	0
✓ 0	0	0.00%	0	0
✓ 0	0	0.00%	0	0
✓ 0	0	0.00%	0	0
✓ 0	0	0.00%	0	0
<b>Total UDOE's</b>	<b>\$3,648.00</b>	<b>22.53%</b>	<b>\$18,240.00</b>	<b>\$78.08</b>
<b>Income before Fixed Charges</b>	<b>\$5,388.00</b>	<b>33.27%</b>	<b>\$26,940.00</b>	<b>\$115.33</b>

Property operations and maintenance expense needs to be reduced by 20% in the first year of operation (2014). The adjustment is performed in the same manner as described previously, except that the formula to be added to the existing formula is “\*.8”. See the following two screenshots. The reduction in 2015 is 10%, so the added formula would be “\*.9”.



## Undistributed Operating Expenses

Administrative & General	1425	8.80%	7125	30.50085616
Marketing	1232.8	7.61%	6164	26.3869863
Franchise Fees	0	0.00%	0	0
Prop. Oper. & Maintenance	=Cumm. Calcs!E233*0.8		2476	10.59931507
Energy Costs	495	3.06%	2475	10.59503425
✓ 0	0	0.00%	0	0
✓ 0	0	0.00%	0	0
✓ 0	0	0.00%	0	0
✓ 0	0	0.00%	0	0
✓ 0	0	0.00%	0	0
<b>Total UDOE's</b>	\$3,648.00	22.53%	\$18,240.00	\$78.08
<b>Income before Fixed Charges</b>	\$5,388.00	33.27%	\$26,940.00	\$115.33

The overall reserve for replacement was 5%. However, it was reduced to 3% in 2014, and it was 4% in 2015. The adjustment to the reserve for replacement requires the insertion of a new formula, which in 2014 is:

$$\text{Total Revenue} \times 3\% = \text{Reserve for Replacement}$$

The Total Revenue for 2014 is found in cell Y24. The new formula to put into the reserve for replacement cell (Y64) is “+Y24\*.03”. See the following two screenshots. The same process is done for 2015.

## Fixed Charges

Management Fee	486	3.00%	2430	10.40239726
Incentive Management Fee	0	0.00%	0	0
Property Tax	471	2.91%	2355	10.08133562
Insurance	191	1.18%	955	4.088184932
Reserve for Replacement	=+Y24*0.03	3.00%	2429.25	10.39918664
Land Rent	0	0.00%	0	0
<b>Total Fixed Charges</b>	\$1,633.85	10.09%	\$8,169.25	\$34.97
<b>NET INCOME(LOSS)</b>	\$3,754.15	23.18%	\$18,770.75	\$80.35

The next screenshot shows the revenue and expense statement for the proposed Marriott for 2014 and 2015 with these adjustments made.





## Final Output - 2 Column Output

4 Column Output

1 Column

Refresh Output

Job Title: Proposed Marriott Hotel

**Base Year + 2**  
**2014**

**Base Year + 3**  
**2015**

<b>Number of Rooms:</b>	200	200
<b>Occupancy:</b>	64.00%	71.00%
<b>Average Rate:</b>	\$200.00	\$221.00
<b>Days Open:</b>	365	365
<b>Rooms Occupied:</b>	46,720	51,830

Revenues	\$(000)	Percent	\$(000)	Percent
Rooms	\$9,344	57.7%	\$11,454	59.9%
Food	\$5,039	31.1%	\$5,669	29.6%
Beverages	\$810	5.0%	\$904	4.7%
Telephone	\$80	0.5%	\$91	0.5%
Rentals and Other Income	\$721	4.5%	\$782	4.1%
Health Spa	\$201	1.2%	\$227	1.2%
<b>Total Revenue</b>	<b>\$16,195</b>	<b>100.0%</b>	<b>\$19,127</b>	<b>100.0%</b>
<b>Departmental Expenses</b>				
Rooms	\$2,492	26.7%	\$2,703	23.6%
Food & Beverages	\$4,169	71.3%	\$4,543	69.1%
Telephone	\$124	155.0%	\$133	146.2%
Rentals and Other Income	\$219	30.4%	\$233	29.8%
Health Spa	\$155	77.1%	\$167	73.6%
<b>Total Departmental Exp.</b>	<b>\$7,159</b>	<b>44.2%</b>	<b>\$7,779</b>	<b>40.7%</b>
<b>Departmental Income</b>	<b>\$9,036</b>	<b>55.8%</b>	<b>\$11,348</b>	<b>59.3%</b>
<b>Undistributed Operating Expenses</b>				
Administrative & General	\$1,425	8.8%	\$1,547	8.1%
Marketing	\$1,233	7.6%	\$1,274	6.7%
Prop. Oper. & Maintenance	\$495	3.1%	\$602	3.1%
Energy Costs	\$495	3.1%	\$535	2.8%
<b>Total UDOE's</b>	<b>\$3,648</b>	<b>22.5%</b>	<b>\$3,958</b>	<b>20.7%</b>
<b>Income before Fixed Charges</b>	<b>\$5,388</b>	<b>33.3%</b>	<b>\$7,390</b>	<b>38.6%</b>
<b>Fixed Charges</b>				
Base Management Fee	\$486	3.0%	\$574	3.0%
Property Tax	\$471	2.9%	\$495	2.6%
Insurance	\$191	1.2%	\$197	1.0%
Reserve for Replacement	\$486	3.0%	\$765	4.0%
<b>Total Fixed Charges</b>	<b>\$1,634</b>	<b>10.1%</b>	<b>\$2,031</b>	<b>10.6%</b>
<b>Net Income(Loss)</b>	<b>\$3,754</b>	<b>23.2%</b>	<b>\$5,359</b>	<b>28.0%</b>

The next screen is the output screen that shows the projection of revenue and expense, which can be displayed in a number of formats:

- 1-Column Output- Total Dollar Amounts
- 2-Column Output- Total Dollar Amounts, Percentage of Revenue
- 4-Column Output- Total Dollar Amounts, Percentage of Revenue, Per Room, Per Occupied Room
- Any Given Year- Identify any of the projection years to display. Data is displayed in 4 Column Output

The following set of screenshots demonstrates the types of displays available.



## Final Output For Any Given Year

Job Title: Proposed Marriott Hotel

Please select the desired year from the drop  
down box to the right. Selecting this year will  
display it's relevant information.

Base Year + 2

2014

Number of Rooms: 200

Occupancy: 64.0%

Average Rate: \$200.00

Days Open: 365

Rooms Occupied: 46,720

1 Column Output

4 Column Output

2 Column Output

< Go Back

Revenues	\$(000)	Percent	\$/Avail Rm	\$/Occ Rm
Rooms	\$9,344	57.7%	\$46,720	\$200.00
Food	\$5,039	31.1%	\$25,195	\$107.86
Beverages	\$810	5.0%	\$4,050	\$17.34
Telephone	\$80	0.5%	\$400	\$1.71
Rentals and Other Income	\$721	4.5%	\$3,605	\$15.43
Health Spa	\$201	1.2%	\$1,005	\$4.30
<b>Total Revenue</b>	<b>\$16,195</b>	<b>100.0%</b>	<b>\$80,975</b>	<b>\$346.64</b>

Departmental Expenses	\$(000)	Percent	\$/Avail Rm	\$/Occ Rm
Rooms	\$2,492	26.7%	\$12,460	\$53.34
Food & Beverages	\$4,169	71.3%	\$20,845	\$89.23
Telephone	\$124	155.0%	\$620	\$2.65
Rentals and Other Income	\$219	30.4%	\$1,095	\$4.69
Health Spa	\$155	77.1%	\$775	\$3.32
<b>Total Departmental Exp.</b>	<b>\$7,159</b>	<b>44.2%</b>	<b>\$35,795</b>	<b>\$153.23</b>
<b>Departmental Income</b>	<b>\$9,036</b>	<b>55.8%</b>	<b>\$45,180</b>	<b>\$193.41</b>

Undistributed Operating Expenses	\$(000)	Percent	\$/Avail Rm	\$/Occ Rm
Administrative & General	\$1,425	8.8%	\$7,125	\$30.50
Marketing	\$1,233	7.6%	\$6,164	\$26.39
Prop. Oper. & Maintenance	\$495	3.1%	\$2,476	\$10.60
Energy Costs	\$495	3.1%	\$2,475	\$10.60
<b>Total UDOE's</b>	<b>\$3,648</b>	<b>22.5%</b>	<b>\$18,240</b>	<b>\$78.08</b>
<b>Income before Fixed Charges</b>	<b>\$5,388</b>	<b>33.3%</b>	<b>\$26,940</b>	<b>\$115.33</b>

Fixed Charges	\$(000)	Percent	\$/Avail Rm	\$/Occ Rm
Base Management Fee	\$486	3.0%	\$2,430	\$10.40
Property Tax	\$471	2.9%	\$2,355	\$10.08
Insurance	\$191	1.2%	\$955	\$4.09
Reserve for Replacement	\$486	3.0%	\$2,430	\$10.40
<b>Total Fixed Charges</b>	<b>\$1,634</b>	<b>10.1%</b>	<b>\$8,169</b>	<b>\$34.97</b>
<b>Net Income(Loss)</b>	<b>\$3,754</b>	<b>23.2%</b>	<b>\$18,771</b>	<b>\$80.35</b>

## Final Output - 1 Column Output

2 Column Output

Refresh Output

Job Title:

Proposed Marriott Hotel

**Base Year + 2**  
**2014**

**Base Year + 3**  
**2015**

**Base Year + 4**  
**2016**

**Base Year + 5**  
**2017**

<b>Number of Rooms:</b>	200	200	200	200
<b>Occupancy:</b>	64.00%	71.00%	69.00%	71.00%
<b>Average Rate:</b>	\$200.00	\$221.00	\$241.00	\$250.00
<b>Days Open:</b>	365	365	365	365
<b>Rooms Occupied:</b>	46,720	51,830	50,370	51,830

Revenues	\$(000)	\$(000)	\$(000)	\$(000)
Rooms	\$9,344	\$11,454	\$12,139	\$12,958
Food	\$5,039	\$5,669	\$5,698	\$6,014
Beverages	\$810	\$904	\$911	\$959
Telephone	\$80	\$91	\$91	\$96
Rentals and Other Income	\$721	\$782	\$794	\$829
Health Spa	\$201	\$227	\$228	\$241
<b>Total Revenue</b>	<b>\$16,195</b>	<b>\$19,127</b>	<b>\$19,861</b>	<b>\$21,097</b>
Departmental Expenses				
Rooms	\$2,492	\$2,703	\$2,744	\$2,868
Food & Beverages	\$4,169	\$4,543	\$4,606	\$4,820
Telephone	\$124	\$133	\$136	\$141
Rentals and Other Income	\$219	\$233	\$237	\$247
Health Spa	\$155	\$167	\$170	\$177
<b>Total Departmental Exp.</b>	<b>\$7,159</b>	<b>\$7,779</b>	<b>\$7,893</b>	<b>\$8,253</b>
<b>Departmental Income</b>	<b>\$9,036</b>	<b>\$11,348</b>	<b>\$11,968</b>	<b>\$12,844</b>
Undistributed Operating Expenses				
Administrative & General	\$1,425	\$1,547	\$1,570	\$1,641
Marketing	\$1,233	\$1,274	\$1,176	\$1,228
Prop. Oper. & Maintenance	\$495	\$602	\$680	\$710
Energy Costs	\$495	\$535	\$544	\$568
<b>Total UDDE's</b>	<b>\$3,648</b>	<b>\$3,958</b>	<b>\$3,970</b>	<b>\$4,147</b>
<b>Income before Fixed Charges</b>	<b>\$5,388</b>	<b>\$7,390</b>	<b>\$7,998</b>	<b>\$8,697</b>
Fixed Charges				
Base Management Fee	\$486	\$574	\$596	\$633
Property Tax	\$471	\$495	\$520	\$540
Insurance	\$191	\$197	\$203	\$209
Reserve for Replacement	\$486	\$765	\$993	\$1,055
<b>Total Fixed Charges</b>	<b>\$1,634</b>	<b>\$2,031</b>	<b>\$2,312</b>	<b>\$2,437</b>
<b>Net Income(Loss)</b>	<b>\$3,754</b>	<b>\$5,359</b>	<b>\$5,686</b>	<b>\$6,260</b>



## Final Output - 2 Column Output

4 Column Output

1 Column Output

Job Title: Proposed Marriott Hotel

Base Year + 2

2014

Base Year + 3

2015

Base Year + 4

2016

Base Year + 5

2017

Number of Rooms:

200

200

200

200

Occupancy:

64.00%

71.00%

69.00%

71.00%

Average Rate:

\$200.00

\$221.00

\$241.00

\$250.00

Days Open:

365

365

365

365

Rooms Occupied:

46,720

51,830

50,370

51,830

Revenues	\$(000)	Percent	\$(000)	Percent	\$(000)	Percent	\$(000)	Percent
Rooms	\$9,344	57.7%	\$11,454	59.9%	\$12,139	61.1%	\$12,958	61.4%
Food	\$5,039	31.1%	\$5,669	29.6%	\$5,698	28.7%	\$6,014	28.5%
Beverages	\$810	5.0%	\$904	4.7%	\$911	4.6%	\$959	4.5%
Telephone	\$80	0.5%	\$91	0.5%	\$91	0.5%	\$96	0.5%
Rentals and Other Income	\$721	4.5%	\$782	4.1%	\$794	4.0%	\$829	3.9%
Health Spa	\$201	1.2%	\$227	1.2%	\$228	1.1%	\$241	1.1%
<b>Total Revenue</b>	<b>\$16,195</b>	<b>100.0%</b>	<b>\$19,127</b>	<b>100.0%</b>	<b>\$19,861</b>	<b>100.0%</b>	<b>\$21,097</b>	<b>100.0%</b>
Departmental Expenses								
Rooms	\$2,492	26.7%	\$2,703	23.6%	\$2,744	22.6%	\$2,868	22.1%
Food & Beverages	\$4,169	71.3%	\$4,543	69.1%	\$4,606	69.7%	\$4,820	69.1%
Telephone	\$124	155.0%	\$133	146.2%	\$136	149.5%	\$141	146.9%
Rentals and Other Income	\$219	30.4%	\$233	29.8%	\$237	29.8%	\$247	29.8%
Health Spa	\$155	77.1%	\$167	73.6%	\$170	74.6%	\$177	73.4%
<b>Total Departmental Exp.</b>	<b>\$7,159</b>	<b>44.2%</b>	<b>\$7,779</b>	<b>40.7%</b>	<b>\$7,893</b>	<b>39.7%</b>	<b>\$8,253</b>	<b>39.1%</b>
<b>Departmental Income</b>	<b>\$9,036</b>	<b>55.8%</b>	<b>\$11,348</b>	<b>59.3%</b>	<b>\$11,968</b>	<b>60.3%</b>	<b>\$12,844</b>	<b>60.9%</b>
Undistributed Operating Expenses								
Administrative & General	\$1,425	8.8%	\$1,547	8.1%	\$1,570	7.9%	\$1,641	7.8%
Marketing	\$1,233	7.6%	\$1,274	6.7%	\$1,176	5.9%	\$1,228	5.8%
Prop. Oper. & Maintenance	\$495	3.1%	\$602	3.1%	\$680	3.4%	\$710	3.4%
Energy Costs	\$495	3.1%	\$535	2.8%	\$544	2.7%	\$568	2.7%
<b>Total UDDE's</b>	<b>\$3,648</b>	<b>22.5%</b>	<b>\$3,958</b>	<b>20.7%</b>	<b>\$3,970</b>	<b>20.0%</b>	<b>\$4,147</b>	<b>19.7%</b>
<b>Income before Fixed Charges</b>	<b>\$5,388</b>	<b>33.3%</b>	<b>\$7,390</b>	<b>38.6%</b>	<b>\$7,998</b>	<b>40.3%</b>	<b>\$8,697</b>	<b>41.2%</b>
Fixed Charges								
Base Management Fee	\$486	3.0%	\$574	3.0%	\$596	3.0%	\$633	3.0%
Property Tax	\$471	2.9%	\$495	2.6%	\$520	2.6%	\$540	2.6%
Insurance	\$191	1.2%	\$197	1.0%	\$203	1.0%	\$209	1.0%
Reserve for Replacement	\$486	3.0%	\$765	4.0%	\$993	5.0%	\$1,055	5.0%
<b>Total Fixed Charges</b>	<b>\$1,634</b>	<b>10.1%</b>	<b>\$2,031</b>	<b>10.6%</b>	<b>\$2,312</b>	<b>11.6%</b>	<b>\$2,437</b>	<b>11.6%</b>
<b>Net Income (Loss)</b>	<b>\$3,754</b>	<b>23.2%</b>	<b>\$5,359</b>	<b>28.0%</b>	<b>\$5,686</b>	<b>28.6%</b>	<b>\$6,260</b>	<b>29.7%</b>



Note that only a portion of the following screenshot appears below, due to space considerations.

Final Output - 4 Column Output									
Refresh Output									
Base Year + 2 2014					Base Year + 3 2015				
Job Title: <u>Proposed Marriott Hotel</u>									
Number of Rooms: 200					Number of Rooms: 200				
Occupancy: 64.0%					Occupancy: 71.0%				
Average Rate: \$200.00					Average Rate: \$221.00				
Days Open: 365					Days Open: 365				
Rooms Occupied: 46,720					Rooms Occupied: 51,830				
Revenues	\$(000)	Percent	\$/Avail Rm	\$/Occ Rm	\$(000)	Percent	\$/Avail Rm	\$/Occ Rm	
Rooms	\$9,344	57.7%	\$46,720	\$200.00	\$11,454	59.9%	\$57,270	\$220.99	
Food	\$5,039	31.1%	\$25,195	\$107.86	\$5,669	29.6%	\$28,345	\$109.38	
Beverages	\$810	5.0%	\$4,050	\$17.34	\$904	4.7%	\$4,520	\$17.44	
Telephone	\$80	0.5%	\$400	\$1.71	\$91	0.5%	\$455	\$1.76	
Rentals and Other Income	\$721	4.5%	\$3,605	\$15.43	\$782	4.1%	\$3,910	\$15.09	
Health Spa	\$201	1.2%	\$1,005	\$4.30	\$227	1.2%	\$1,135	\$4.38	
<b>Total Revenue</b>	<b>\$16,195</b>	<b>100.0%</b>	<b>\$80,975</b>	<b>\$346.64</b>	<b>\$19,127</b>	<b>100.0%</b>	<b>\$95,635</b>	<b>\$369.03</b>	
Departmental Expenses									
Rooms	\$2,492	26.7%	\$12,460	\$53.34	\$2,703	23.6%	\$13,515	\$52.15	
Food & Beverages	\$4,169	71.3%	\$20,845	\$89.23	\$4,543	69.1%	\$22,715	\$87.65	
Telephone	\$124	155.0%	\$620	\$2.65	\$133	146.2%	\$665	\$2.57	
Rentals and Other Income	\$219	30.4%	\$1,095	\$4.69	\$233	29.8%	\$1,165	\$4.50	
Health Spa	\$155	77.1%	\$775	\$3.32	\$167	73.6%	\$835	\$3.22	
<b>Total Departmental Exp.</b>	<b>\$7,159</b>	<b>44.2%</b>	<b>\$35,795</b>	<b>\$153.23</b>	<b>\$7,779</b>	<b>40.7%</b>	<b>\$38,895</b>	<b>\$150.09</b>	
<b>Departmental Income</b>	<b>\$9,036</b>	<b>55.8%</b>	<b>\$45,180</b>	<b>\$193.41</b>	<b>\$11,348</b>	<b>59.3%</b>	<b>\$56,740</b>	<b>\$218.95</b>	
Undistributed Operating Expenses									
Administrative & General	\$1,425	8.8%	\$7,125	\$30.50	\$1,547	8.1%	\$7,735	\$29.85	
Marketing	\$1,233	7.6%	\$6,164	\$26.39	\$1,274	6.7%	\$6,369	\$24.58	
Prop. Oper. & Maintenance	\$495	3.1%	\$2,476	\$10.60	\$602	3.1%	\$3,011	\$11.62	
Energy Costs	\$495	3.1%	\$2,475	\$10.60	\$535	2.8%	\$2,675	\$10.32	
<b>Total UDOE's</b>	<b>\$3,648</b>	<b>22.5%</b>	<b>\$18,240</b>	<b>\$78.08</b>	<b>\$3,958</b>	<b>20.7%</b>	<b>\$19,790</b>	<b>\$76.36</b>	
<b>Income before Fixed Charges</b>	<b>\$5,388</b>	<b>33.3%</b>	<b>\$26,940</b>	<b>\$115.33</b>	<b>\$7,390</b>	<b>38.6%</b>	<b>\$36,951</b>	<b>\$142.58</b>	
Fixed Charges									
Base Management Fee	\$486	3.0%	\$2,430	\$10.40	\$574	3.0%	\$2,870	\$11.07	
Property Tax	\$471	2.9%	\$2,355	\$10.08	\$495	2.6%	\$2,475	\$9.55	
Insurance	\$191	1.2%	\$955	\$4.09	\$197	1.0%	\$985	\$3.80	
Reserve for Replacement	\$486	3.0%	\$2,429	\$10.40	\$765	4.0%	\$3,825	\$14.76	
<b>Total Fixed Charges</b>	<b>\$1,634</b>	<b>10.1%</b>	<b>\$8,169</b>	<b>\$34.97</b>	<b>\$2,031</b>	<b>10.6%</b>	<b>\$10,155</b>	<b>\$39.19</b>	
<b>Net Income(Loss)</b>	<b>\$3,754</b>	<b>23.2%</b>	<b>\$18,771</b>	<b>\$80.35</b>	<b>\$5,359</b>	<b>28.0%</b>	<b>\$26,795</b>	<b>\$103.40</b>	

The software allows for the deletion of any column or row. For example, the output data for the first two years (2012 and 2013) were deleted from the financial statement displayed previously. Use the standard Excel column delete procedure. Rows can also be deleted. Since there is no data for other operated departments, the user may want to delete these two rows.



The following 10-year income and expense statement shows the projected income and expense for the proposed Marriott. Note that only a portion of the following screenshot appears below, due to space considerations.

	2014	2015	2016	2017	2018
<i>Number of Rooms:</i>	200	200	200	200	200
<i>Occupancy:</i>	64.00%	71.00%	69.00%	71.00%	74.00%
<i>Average Rate:</i>	\$200.00	\$221.00	\$241.00	\$250.00	\$263.00
<i>Days Open:</i>	365	365	365	365	365
<i>Rooms Occupied:</i>	46,720	51,830	50,370	51,830	54,020

Revenues	\$(000)	Percent	\$(000)	Percent	\$(000)	Percent	\$(000)	Percent	\$(000)	Percent
Rooms	\$9,344	57.7%	\$11,454	59.9%	\$12,139	61.1%	\$12,958	61.4%	\$14,207	62.1%
Food	\$5,039	31.1%	\$5,669	29.6%	\$5,698	28.7%	\$6,014	28.5%	\$6,418	28.1%
Beverages	\$810	5.0%	\$904	4.7%	\$911	4.6%	\$959	4.5%	\$1,020	4.5%
Telephone	\$80	0.5%	\$91	0.5%	\$91	0.5%	\$96	0.5%	\$103	0.5%
Rentals and Other Income	\$721	4.5%	\$782	4.1%	\$794	4.0%	\$829	3.9%	\$873	3.8%
Health Spa	\$201	1.2%	\$227	1.2%	\$228	1.1%	\$241	1.1%	\$258	1.1%
<b>Total Revenue</b>	<b>\$16,195</b>	<b>100.0%</b>	<b>\$19,127</b>	<b>100.0%</b>	<b>\$19,861</b>	<b>100.0%</b>	<b>\$21,097</b>	<b>100.0%</b>	<b>\$22,879</b>	<b>100.0%</b>
<b>Departmental Expenses</b>										
Rooms	\$2,492	26.7%	\$2,703	23.6%	\$2,744	22.6%	\$2,868	22.1%	\$3,018	21.2%
Food & Beverages	\$4,169	71.3%	\$4,543	69.1%	\$4,606	69.7%	\$4,820	69.1%	\$5,081	68.3%
Telephone	\$124	155.0%	\$133	146.2%	\$136	149.5%	\$141	146.9%	\$148	143.7%
Rentals and Other Income	\$219	30.4%	\$233	29.8%	\$237	29.8%	\$247	29.8%	\$257	29.4%
Health Spa	\$155	77.1%	\$167	73.6%	\$170	74.6%	\$177	73.4%	\$186	72.1%
<b>Total Departmental Exp.</b>	<b>\$7,159</b>	<b>44.2%</b>	<b>\$7,779</b>	<b>40.7%</b>	<b>\$7,893</b>	<b>39.7%</b>	<b>\$8,253</b>	<b>39.1%</b>	<b>\$8,690</b>	<b>38.0%</b>
<b>Departmental Income</b>	<b>\$9,036</b>	<b>55.8%</b>	<b>\$11,348</b>	<b>59.3%</b>	<b>\$11,968</b>	<b>60.3%</b>	<b>\$12,844</b>	<b>60.9%</b>	<b>\$14,189</b>	<b>62.0%</b>
<b>Undistributed Operating Expenses</b>										
Administrative & General	\$1,425	8.8%	\$1,547	8.1%	\$1,570	7.9%	\$1,641	7.8%	\$1,727	7.5%
Marketing	\$1,233	7.6%	\$1,274	6.7%	\$1,176	5.9%	\$1,228	5.8%	\$1,290	5.6%
Prop. Oper. & Maintenance	\$495	3.1%	\$602	3.1%	\$680	3.4%	\$710	3.4%	\$746	3.3%
Energy Costs	\$495	3.1%	\$535	2.8%	\$544	2.7%	\$568	2.7%	\$597	2.6%
<b>Total UDDE's</b>	<b>\$3,648</b>	<b>22.5%</b>	<b>\$3,958</b>	<b>20.7%</b>	<b>\$3,970</b>	<b>20.0%</b>	<b>\$4,147</b>	<b>19.7%</b>	<b>\$4,360</b>	<b>19.1%</b>
<b>Income before Fixed Charges</b>	<b>\$5,388</b>	<b>33.3%</b>	<b>\$7,390</b>	<b>38.6%</b>	<b>\$7,998</b>	<b>40.3%</b>	<b>\$8,697</b>	<b>41.2%</b>	<b>\$9,829</b>	<b>43.0%</b>
<b>Fixed Charges</b>										
Base Management Fee	\$486	3.0%	\$574	3.0%	\$596	3.0%	\$633	3.0%	\$686	3.0%
Property Tax	\$471	2.9%	\$495	2.6%	\$520	2.6%	\$540	2.6%	\$557	2.4%
Insurance	\$191	1.2%	\$197	1.0%	\$203	1.0%	\$209	1.0%	\$215	0.9%
Reserve for Replacement	\$486	3.0%	\$765	4.0%	\$993	5.0%	\$1,055	5.0%	\$1,144	5.0%
<b>Total Fixed Charges</b>	<b>\$1,634</b>	<b>10.1%</b>	<b>\$2,031</b>	<b>10.6%</b>	<b>\$2,312</b>	<b>11.6%</b>	<b>\$2,437</b>	<b>11.6%</b>	<b>\$2,602</b>	<b>11.4%</b>
<b>Net Income (Loss)</b>	<b>\$3,754</b>	<b>23.2%</b>	<b>\$5,359</b>	<b>28.0%</b>	<b>\$5,686</b>	<b>28.6%</b>	<b>\$6,260</b>	<b>29.7%</b>	<b>\$7,227</b>	<b>31.6%</b>

This completes the Financial Forecast of Income and Expense Module. The net income output from this module will be the basis for valuing the proposed Marriott by the income capitalization approach, which will be demonstrated in the next chapter.







# Market Value and the Valuation Process

Chapter

6

This chapter will illustrate how an appraiser or analyst can convert the data, information, and output from the previous chapters into an estimate of a hotel's market value. Hotels are income-producing, investment properties that are periodically bought, sold, financed, refinanced, condemned, assessed, and bequeathed. All of these activities usually require a professional appraisal.

## Definition of Market Value

A number of definitions of the term *market value* have been formed by the various authorities and entities involved in the practice of appraisal. The Appraisal Institute defines market value as:

The most probable price that the specified property interest should sell for in a competitive market after a reasonable exposure time, as of a specified date, in cash, or in terms equivalent to cash, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, for self-interest, and assuming that neither is under duress.<sup>1</sup>

The following definition is used by agencies that regulate federally insured financial institutions in the United States:

The most probable price that a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- Buyer and seller are typically motivated;
- Both parties are well informed or well advised, and acting in what they consider their best interests;
- A reasonable time is allowed for exposure in the open market;
- Payment is made in terms of cash in US dollars or in terms of financial arrangements comparable thereto; and
- The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale. (12 C.F.R. Part 34.42(g); 55 *Federal Register* 34696, August 24, 1990, as amended at 57 *Federal Register* 12202, April 9, 1992; 59 *Federal Register* 29499, June 7, 1994)<sup>2</sup>

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1. *The Dictionary of Real Estate Appraisal*, 5th ed. (Chicago: Appraisal Institute, 2010), 122.

2. *Ibid.*, 123.



The market value of a lodging facility may include the value of its various components, which consist of land; improvements (building); furniture, fixtures, and equipment; inventories; working capital; and any business value. Market value is estimated by applying the valuation process, and the opinion of value is usually communicated in a written appraisal report.

In appraising the market value of real estate, the appraiser considers three approaches:

1. The cost approach, which is sometimes referred to as the “summation approach.”
2. The sales comparison approach, which may also be called the “direct sales approach” or the “market data approach.”
3. The income capitalization approach, which is sometimes referred to as the “income approach.”

## Cost Approach

The cost approach is based on the assumption that an informed purchaser will pay no more for a property than the cost of producing a substitute property with equal utility. When the cost approach is applied, market value is estimated by calculating the current cost of replacing the subject improvements and subtracting an appropriate amount for depreciation.

The cost of replacing a property is generally estimated on either a per-room or square-foot basis using figures from a construction cost manual published by a recognized cost reporting service. The value of the land as if vacant and available for development is then added to the depreciated replacement cost estimate to yield the estimate of value.

*Depreciation* is defined as a loss in value caused by one or more of the following factors:

- Physical deterioration—the physical wearing out of the property
- Functional obsolescence—a superadequacy or a lack of desirability in the layout, style, and design of the property as compared to a new property serving the same function
- External obsolescence—a loss in value from causes outside the property itself

Appraisal literature recommends using the cost approach for new properties, which have not been affected by the various forms of depreciation, and for unique or specialized improvements such as schools and libraries that have no comparable market or income potential.

The cost approach is seldom used to value existing hotels because lodging facilities are particularly vulnerable to physical deterioration, functional changes, and uncontrollable external factors. A hotel may suffer from functional and external obsolescence before its construction is completed. As the building and other improvements age and depreciate, the resultant loss in value becomes difficult to quantify. Estimating the impact of even minor forms of obsolescence may require insupportable judgments that undermine the credibility of the cost approach.

A more significant reason why this approach is not applied to hotels is that its underlying assumptions do not reflect the investment rationale of typical hostelry buyers. Lodging facilities are income-producing properties



that are purchased to realize future profits. Replacement or reproduction cost has little bearing on an investment decision when the buyer is primarily concerned with the potential return on equity. Today's typical hotel investors are highly sophisticated and capable of applying the complicated market and financial analysis set forth in this text.

Looking at the use of the cost approach from a global perspective, it appears that the cost approach has been replaced by the income capitalization approach as the preferred method for valuing hotels in most regions of the world. This trend towards using the income capitalization approach seems to follow a certain pattern. For example, European appraisers seemed to prefer the cost approach for valuing hotels about 20 years ago. They considered these types of properties too complicated to analyze from an operational and financial perspective. As demonstrated by the previous five chapters of this book, utilizing the income capitalization approach for hotels requires specialized knowledge of hotel operations that many general appraisers do not possess. As a result, the easiest way for them to deal with hotel real estate was to simply apply the cost approach. Appraisers, particularly those with hotel school education or actual hotel operational experience, have learned hotel valuation methodology over time and can currently apply the proper financial analysis to utilize the income capitalization approach. In addition, sophisticated hotel companies, investors, and lenders have a more global perspective and have begun acquiring (or lending on) hotel properties around the world. These investors are looking to achieve an economic return on their investments, and the cost approach simply does not reflect the economic basis for pricing their acquisitions. They employ the income capitalization approach as set forth in this text. Appraisers in Europe currently use the income capitalization approach for their hotel appraisals. This same pattern of switching from the cost approach to the income capitalization approach occurred in India about 10 years ago.

Today, the only major country that has not fully adopted the income capitalization approach for valuing hotels is China. Many Chinese appraisers use the cost approach because they say that the income capitalization approach does not give them enough value. Based on the pattern observed in other parts of the world, the Chinese hotel investors and lenders will experience a downturn after the bubble bursts and realize that many of their hotels are not worth their replacement costs. At this point in time, the income capitalization approach should have many more supporters.

The cost approach can be useful in determining the feasibility of a proposed hotel. When applied in conjunction with the income capitalization approach, the cost approach can verify a project's economic feasibility. If the value obtained by applying the income capitalization approach is equal to or greater than the replacement cost plus the land value, the project is usually considered economically feasible. If, however, the value estimated by the income capitalization approach is less than the value derived by the cost approach, the investors should scrap the project, reduce capital costs, or lower their desired return. Moreover, if this is the case, an additional equity investment may be needed to secure sufficient financing. The data used to estimate the replacement cost of property improvements should come from a qualified source, such as a construction cost manual or an experienced hotel consultant, contractor, architect, or engineer. Land value is established by analyzing sales of comparable parcels or by capitalizing the ground rental.



## HVS Hotel Development Cost Survey

HVS has tracked hotel construction costs throughout the United States since 1976. The *HVS Hotel Development Cost Survey* considers data for six lodging types:

- Economy/budget motels
- Midscale hotels without food and beverage
- Extended-stay hotels
- Midscale hotels with food and beverage
- Full-service hotels
- Luxury hotels and independent resorts

By 2010, the construction industry in the United States was well into its third year of recession. Almost all segments of private construction were hit hard, but the greatest reduction in commercial construction occurred in the lodging sector. Exhibit 6.1 shows the overall spending on construction, including lodging, office, and commercial projects, that has occurred in recent years in the United States. These data show that while the value of hotel construction, as measured by the US Census Bureau, represents less than 4% of the value of all private construction, the rate of decline in lodging development spending has experienced greater velocity than that for other commercial property types.

<b>Exhibit 6.1 Construction Spending—Residential and Commercial (2002 through October 2010)</b>								
<b>Year</b>	<b>Residential % Change</b>		<b>Lodging % Change</b>		<b>Office % Change</b>		<b>Commercial % Change</b>	
2002	\$4,752,501		\$125,606		\$424,562		\$709,993	
2003	5,340,253	12%	119,162	(5)%	367,104	(14)%	689,930	(3)%
2004	6,378,884	19	143,783	21	393,527	7	757,475	10
2005	7,326,331	15	151,990	6	448,207	14	798,911	5
2006	7,399,983	1	211,482	39	548,052	22	879,775	10
2007	5,943,074	(20)	329,767	56	645,519	18	1,025,596	17
2008	4,215,134	(29)	424,547	29	682,507	6	979,647	(4)
2009	3,035,288	(28)	300,391	(29)	488,200	(28)	653,672	(33)
YTD 10-2009	2,516,498		264,753		424,590		565,188	
YTD 10-2010	2,441,989	(3)%	114,057	(57)%	246,719	(42)%	386,378	(32)%

Source: US Census Bureau

Representative of the recent real estate cycle, residential construction began to decline in 2007 and, as of the fourth quarter of 2010, has stabilized in many market areas. Lodging, office, and commercial construction experienced downward trends later in the cycle. When development restarts for hotels, it is likely to be after the resumption of new office and commercial construction. Without lease commitments to provide financial certainty for new construction, the financing for new hotels is often undertaken during the later part of a real estate recovery cycle, and other economic indicators are usually perceived by lenders to provide more assurance of a hotel's potential performance by this point in time. The slowdown in lodging construction has affected hotel product types from small budget properties to large destination resorts. When new hotel development resumes, it is likely to begin with product types that are easier to finance and develop, such as branded limited- and select-service hotels. Larger and more complex projects are expected to follow as the market strengthens.



## Development Cost Changes

During the prior lending cycle, land was a major form of collateral for construction lending and the price of well-located sites increased precipitously. In challenging real estate investment periods, land is often the development component that experiences the greatest decline. A 2010 publication of the Federal Reserve that analyzed land prices in 23 metropolitan statistical areas across the United States described composite residential and commercial land prices increasing nearly 130% from 2002 through the second half of 2007. Land prices have decreased by more than 40% since the peak in 2007. The evidence of hotel land value declines is often more anecdotal than based on market evidence. In recent years, we have seen few land transactions as owners have withdrawn property from the market and held on to sites, waiting for a time when development will once again generate financial returns.

HVS tracks the results of a number of construction surveys, including data from the Turner Construction Index, the Engineering News Record, and the US Bureau of Economic Analysis. Supply and demand trends continue to impact construction materials and labor costs. These sources report overall construction cost declines of 4% to 8% between 2008 and 2009. Industry sources vary regarding the change in construction costs in 2010. Some indicate declines of up to 4%, while others report increases of almost 4%. In 2009 and 2010, the cost of a number of materials used in private commercial construction fluctuated from month to month, with many categories showing above-inflation increases. Notably, the cost of structural steel increased 5.3%, lumber increased 15%, and plywood increased 7%. The increase in lumber pricing is attributed to the continued strong demand from China. Russia, China's former major source of lumber, increased the lumber tax by 25% beginning in mid-2008. Labor costs have been affected by different influences in the past 18 months. Union wage and benefit settlements have seen average increases of approximately 3%. However, contractors began diversifying their practices in response to the decline in overall construction, engaging in a wider variety of product types and improving work practices. Despite the relatively recent uptick in contracting, industry participants report no consistency in bidding. Requests for proposals often receive a wide range of bids for the same project. For specialized hotel contractors, renovations have made up a majority of projects since 2009.

In the past few years, costs of furniture, fixtures, and equipment (FF&E) have decreased as purchasing agents have negotiated substantial discounts with vendors on many items. Other FF&E costs have not been affected as dramatically; for example, the costs of fabrics and wood furniture have remained high. By 2012, most FF&E costs are anticipated to increase back to 2007 levels. As with our prior survey, fewer development projects mean fewer construction services. Categories such as public agency fees have not declined, although decreases in tax assessments and professional fees have moderated soft costs to a degree.

Green building remains a new hotel construction objective, but only a small portion of proposed hotels are being developed to meet LEED certifications. New construction primarily emphasizes more efficient energy system design and operations, rather than the wholesale use of green building materials and construction methods. With the improvement in the hotel industry seen in 2011 and 2012, planning for new hotel construction is gaining momentum. Once again, hotel construction is expected to compete with other real estate development, and the costs of most materials are forecasted to be



higher by the end of 2011 due to continuing strong international demand. Although lending rates are relatively moderate at this time, the availability of new financing for hotel development will continue to be a pivotal factor in propelling the pipeline of increased hotel construction.

### Per-Room Hotel Development Costs

Consistent with the last survey, lower costs in the 2009-2010 development cost survey have the greatest impact on land and building improvements. Other categories, as shown in Exhibit 6.2, are not as volatile.

It is important to note that there is no uniform system of allocation for hotel development budgets. Hotel development costs are accounted for in numerous line items and categories. Individual accounting for specific projects

#### Exhibit 6.2 2010 Hotel Development Cost Survey Per-Room Averages (Based on 2009-2010 Amounts)

	Land	Building and Site Improvements	Soft Costs	FF&E	Pre-Opening and Working Capital	Total
<b>Budget/Economy Hotels</b>						
Average from Budgets	\$11,700	\$50,800	\$4,400	\$8,100	\$3,000	\$65,200
Median	\$11,200	\$46,200	\$2,200	\$8,100	\$2,900	\$52,700
Allocation	14%	66%	10%	11%	4%	
<b>Midscale Hotels w/o F&amp;B</b>						
Average from Budgets	\$23,400	\$71,400	\$11,100	\$9,500	\$4,100	\$98,000
Median	\$12,200	\$63,100	\$8,100	\$9,200	\$2,800	\$82,100
Allocation	14%	68%	9%	10%	4%	
<b>Extended-Stay Hotels</b>						
Average from Budgets	\$12,200	\$79,000	\$11,300	\$12,600	\$3,300	\$131,600
Median	\$10,900	\$69,300	\$9,900	\$13,000	\$2,400	\$105,500
Allocation	12%	68%	9%	12%	4%	
<b>Midscale Hotels w/ F&amp;B</b>						
Average from Budgets	\$13,900	\$76,800	\$13,200	\$12,000	\$3,800	\$117,300
Median	\$10,200	\$63,300	\$10,400	\$11,300	\$3,000	\$100,600
Allocation	13%	65%	11%	12%	3%	
<b>Full-Service Hotels</b>						
Average from Budgets	\$16,800	\$122,900	\$22,200	\$22,000	\$6,900	\$208,100
Median	\$13,200	\$111,600	\$14,000	\$18,100	\$5,700	\$156,200
Allocation	12%	64%	12%	12%	4%	
<b>Luxury Hotels and Resorts</b>						
Average from Budgets	\$86,700	\$345,700	\$133,800	\$54,000	\$20,800	\$598,500
Median	\$88,600	\$299,800	\$88,600	\$57,700	\$18,700	\$538,200
Allocation	17%	59%	14%	10%	4%	

#### Hotel Development Cost Survey Per-Room Range of Costs for 2010

2010	Land	Building and Site Improvements	Soft Costs	FF&E	Pre-Opening and Working Capital	Total
Budget/Economy Hotels	\$3,700-\$25,800	\$31,000-\$97,300	\$600-\$13,000	\$4,500-\$16,600	\$1,400-\$7,100	\$40,100-\$143,800
Midscale Hotels w/o F&B	3,600-73,100	46,400-173,900	2,100-61,200	5,500-25,600	900-25,700	60,800-389,400
Extended Stay Hotels	2,200-39,400	52,700-163,700	2,300-84,200	3,500-23,800	700-25,300	71,200-270,300
Midscale Hotels w/F&B	3,300-54,500	46,700-150,300	3,400-63,100	6,700-36,300	300-18,900	74,700-302,700
Full-Service Hotels	3,500-100,100	62,000-357,300	2,300-118,300	8,400-53,500	1,900-85,500	97,100-591,500
Luxury Hotels and Resorts	12,200-222,800	183,800-1,411,600	24,800-229,400	33,700-119,500	10,400-80,600	415,400-1,481,600

Source: HVS



can be affected by tax implications, underwriting requirements, and investment structures. For example, installation of FF&E and construction finish work in a development project can overlap. Accounting for these items is not always the same from one project to another.

We also recommend that users of the *HVS Hotel Development Cost Survey* consider the per-room amount in the individual cost categories as only a general guide for that category. The totals for low and high ranges in each cost category do not add up to the high and low range of the sum of the categories. None of the data used in the survey showed a project that was either all at the low range of costs or all at the high range of costs. A property that has a high land cost may have lower construction costs and higher soft costs. Thus, the total costs shown in Exhibit 6.2 are from per-room budgets for hotel developments and are not a sum of the individual components.

## Estimating Hotel Land Values

Hotel appraisers are sometimes asked to estimate the value of a total property and then calculate a separate land value. To calculate land value, the appraiser investigates the market to find recent transfers of vacant parcels with similar acreage, street frontage, location, and zoning. Any differences between the comparable property and the subject are then adjusted on a grid. In practice, this process can be difficult due to the lack of sufficiently comparable vacant lands sales data and the complexity of estimating the necessary adjustments. An alternative approach is the comparable ground lease method, based on the premise that the value of land is tied directly to its capacity to generate income at its highest and best use.

A number of hotel transactions are structured using ground leases. Typical rental terms vary from simple flat payments with escalation adjustments to formulas based entirely on gross revenues. To quantify the income attributed to the land alone, the net rental using a percentage of gross revenue is the logical choice.

### Case Study

#### Estimating Hotel Land Values

In the following example, the comparable ground lease procedure is used to estimate the land value of the Marriott in its third year of operation. The following data are given:

Projected rooms revenue	\$11,158,000
Projected food revenue	\$4,146,000
Projected beverage revenue	\$1,119,000

Ground leases for eight hotels similar to the subject were found; their rental formulas are set forth in Exhibit 6.3. The estimated ground rent for the subject is calculated using the comparable formulas and the subject's projected revenues.

#### Exhibit 6.3 Hotel Ground Rental Formulas

Comparable	Percentage of Gross			Estimated Ground Rent \$(000)
	Rooms Revenue	Food Revenue	Beverage Revenue	
1	3.0%	1.0%	1.0%	\$430
2	3.0%			\$364
3	7.0%			\$850
4	4.0%	2.0%		\$600
5	2.0%	1.0%	1.0%	\$309
6	5.0%		3.0%	\$634
7	4.0%	1.0%	1.0%	\$552
8	5.0%			\$607

Comparable 4 is the most comparable to the subject property. As a result, the



ground rent of \$600,000 will be used in the subject land valuation. The value of the land can then be calculated by capitalizing the subject's estimated ground rent by an appropriate land capitalization rate. Based on the risks associated with a land investment and looking at land and ground lease transactions, a 6% capitalization rate appears to be appropriate.

Ground Rent	Capitalization Rate	Land Value
\$600,000	÷ 0.06	= \$10,000,000

This land value estimate is approximately 16% of the total value estimate for the proposed Marriott and is within the 10% to 20% range considered normal for a hotel. The comparable ground lease procedure assumes that the hotel represents the highest and best use of the land.

### Sales Comparison Approach

The sales comparison approach is based on the assumption that an informed purchaser will pay no more for a property than the cost of acquiring an existing property with equal utility. When this approach is applied, market value is estimated by comparing the sale prices of recent transactions involving properties similar to the property being appraised. Dissimilarities are resolved with appropriate adjustments. These differences may pertain to transaction characteristics such as property rights conveyed, financing terms, conditions of sale, and market conditions, as well as property characteristics such as location, physical condition, scope of facilities, and market orientation.

The reliability of the sales comparison approach depends on three factors:

- Availability of timely, comparable sales data
- Verification of sales data
- Degree of comparability, i.e., the extent of adjustment needed to account for the differences between the subject and the comparable property.

The sales comparison approach often provides highly supportable value estimates for homogeneous properties such as vacant land and single-family homes when the adjustments are few and relatively simple to compute. For larger, more complex properties such as office buildings, shopping centers, and hotels, the required adjustments are often numerous and difficult to estimate.

For example, assume an appraiser is valuing a hotel property by comparing it with a similar hotel across the street that was sold last year. In this case, the subject differs from the comparable in the following ways:

- Seller will take back purchase-money financing
- Different franchise affiliation
- Better visibility
- More parking facilities
- Larger restaurant and smaller lounge
- Enclosed swimming pool
- Higher-grade furnishings
- Two vanity sinks per guest room

These are just a few of the many potential differences for which adjustments will be needed to make the indicated sale price of the comparable reflect





the market value of the subject. In appraising lodging facilities, the adjustment process is often difficult and generally unsupported by market data. The market-derived capitalization rates that are sometimes used by appraisers are susceptible to the same shortcomings inherent in the sales comparison approach. In fact, the reliability of the income capitalization approach can be substantially reduced when capitalization rates obtained from unsupported market data are used. This practice not only weakens the final estimate of value but also ignores the typical investment analysis procedures employed by hotel purchasers.

Although the sales comparison approach is seldom given substantial weight in a hotel appraisal, it can be used to bracket a value or check the value derived by the income capitalization approach. For example, assume an appraiser is valuing a mid-rate commercial hotel. The appraiser has researched the market and discovered two recent sales. One sale involved a first-class hotel with a value of \$150,000 per room. The other sale was of a mid-rate hotel that was obviously less attractive than the property being appraised; it had a value of \$125,000 per room.

Although a value estimate based on these data would be difficult to support, a range of values within which the final estimate should fall has been established. If the income capitalization approach results in a value indication that is outside this range, the appraiser knows that the data must be re-evaluated. Occasionally, appraisers may apply a gross income multiplier or rooms revenue multiplier. If this practice reflects the actions of the market, it can be considered in an appraisal.

### Lodging DataBank

As in all appraisals, the market must be researched to locate comparable sales with which to support the market value estimate. To help hotel owners, operators, lenders, and appraisers identify comparable sales of hotels, HVS has established the Lodging DataBank (LDB), a central clearinghouse of information relating to thousands of hotel transactions throughout the world. The LDB is developed to house facilities information, sales transactions, and development statistics, along with market information and company research pertaining to the hospitality industry. The data are categorized by property name, city, and state, and contain pertinent information relating to each transaction.

In order to provide a measure of lodging sales activity, HVS publishes hotel transaction surveys each year. These surveys track hotel sales with sale prices over \$10 million. Exhibit 6.4 identifies the major hotel sales activity that took place in the United States over the past 20 years.

These data show that the hotel industry is highly cyclical from the perspective of the number of hotel transactions and sale prices. Participants in the hotel industry need to be aware of the volatility risk and stay up to date as to the current and expected cycle trends.

Exhibit 6.5 shows the hotel transaction trends for Europe, which also illustrate the volatile nature of the hotel industry. Hotel transactions are not as prevalent in India, China, and South America as they are in the United States and Europe. As a result, it is more difficult to access data and effectively utilize the sales comparison approach in these regions of the world.

### Hotel Valuation Index

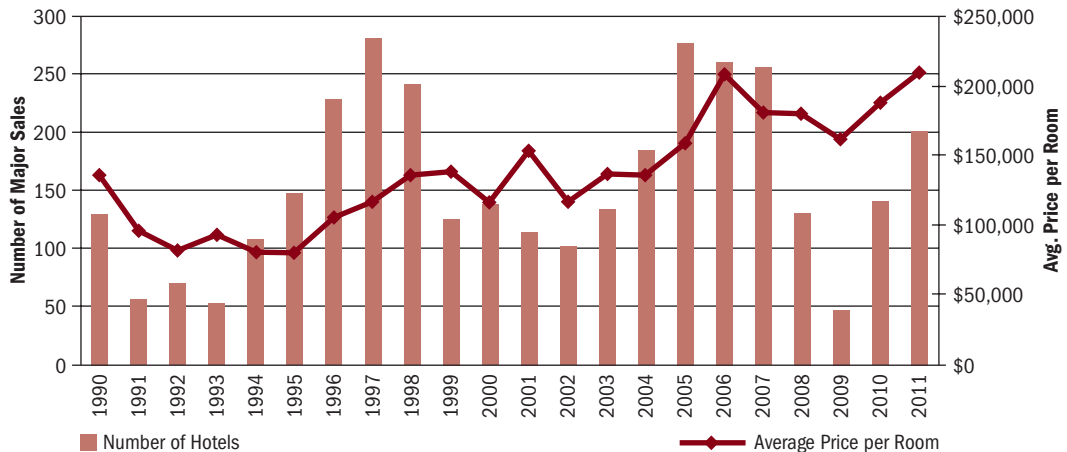
A second source of hotel market data is the *Hotel Valuation Index* (HVI), a sophisticated valuation benchmark showing the indexed market value of a typical hotel. The HVI is tracked on the basis of individual market areas in the United States, Europe, India, and Asia. The index is based on actual oc-





**Exhibit 6.4 Major Transactions History**

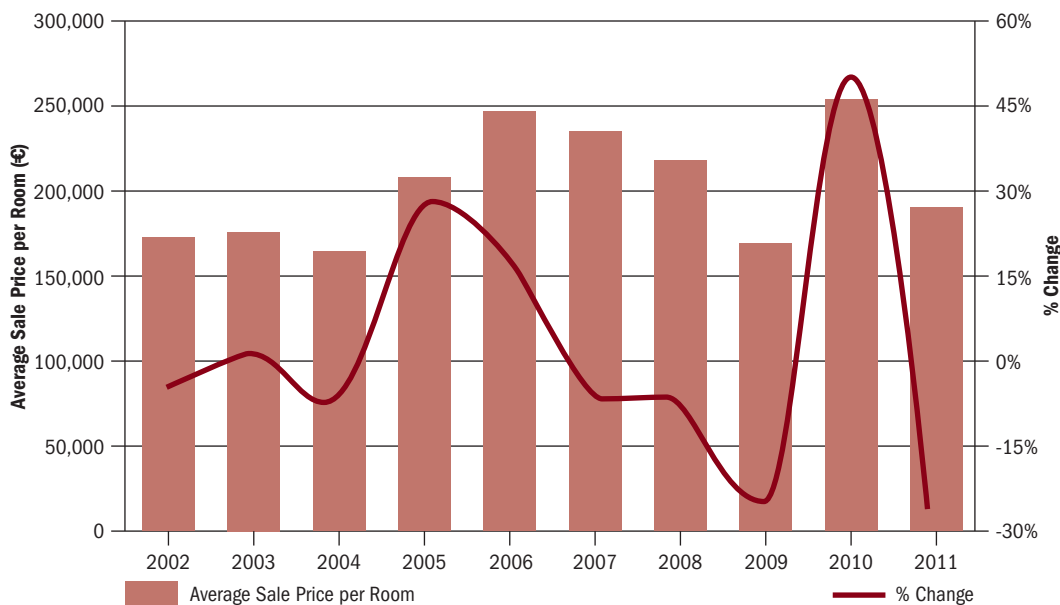
Year	Number of Hotels	Number of Rooms	Average Price per Room
1990	130	40,053	\$136,000
1991	56	16,489	96,000
1992	70	26,751	82,000
1993	53	20,026	93,000
1994	108	38,579	81,000
1995	147	48,619	80,000
1996	227	77,916	106,000
1997	280	82,867	117,000
1998	241	78,865	136,000
1999	125	35,901	139,000
2000	138	37,443	117,000
2001	114	28,183	154,000
2002	102	29,331	117,000
2003	133	34,859	137,000
2004	184	54,619	136,000
2005	277	80,274	159,000
2006	260	75,773	208,000
2007	256	63,847	181,000
2008	129	24,240	180,000
2009	46	10,997	134,000
2010	138	32,055	191,000
2011	200	49,742	209,000



Source: HVS

cupancy and room rate data along with local operating performance, projections of supply and demand, and capitalization rates derived by HVS. The HVI reflects trends in market value over time and assumes a willing buyer and seller rather than a distressed, liquidation-type transaction. While the Lodging DataBank records the actual price paid for a hotel unadjusted for non-market factors such as favorable financing and unusual motivations that could impact the sale price, the HVI represents the property's value under the standard definition of market value.



**Exhibit 6.5 European Hotel Sales 2002-2011**

Source: HVS—London Office

The HVI assigns the greatest weight to the income capitalization approach, with secondary support provided by the sales comparison and cost approaches. Appraisers recognize that hotel values change over time due to differing earnings expectations and capitalization rates. The HVI was designed to illustrate these changes and quantify the amount of variance attributable to movements in earnings and the costs of debt and equity capital. The following four tables show the HVI for major cities situated in the United States, Europe, India, and China for the years 2000 through 2010. The HVI data contained in each table are specific to that region and cannot be compared to other regions. The HVI can be used to evaluate the change in hotel values over time. For example, if an appraiser wanted to find out how much the value of a typical London hotel declined from the market's peak in 2007 to its low in 2009, he or she would take the HVI for London in 2009, divide it by the London HVI for 2007, and then subtract 1:

$$(1.8325/2.3606) - 1 = -22\%$$

The HVI can also be used to compare hotel values in different markets at different points in time. In the next set of tables shown in Exhibit 6.6, the HVI is an indexed value based on the value of a typical hotel in the region in the year 2000. For example, the market value of a typical hotel in the United States in 2000 would be:

$$2000 \text{ HVI} = 1.000$$

Each market area is indexed from this base and assigned a number showing the value relationship of that market area to the base. For example, the index for Miami in 2006 was 2.2688, which means that the value of a hotel in Miami was approximately 126% higher than that of a similar hotel situated elsewhere in the United States in 2000. A more meaningful comparison is indicated by



**Exhibit 6.6**

HVI	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>United States</b>											
Atlanta	0.2249	-0.0638	-0.1260	-0.2691	-0.0512	0.3157	0.6227	0.4149	0.1027	-0.1797	0.0679
Boston	3.3794	1.8686	1.4515	0.6970	1.3881	1.8425	2.1961	2.8950	2.4050	1.8984	2.7863
Chicago	1.2436	0.4502	0.3369	0.3682	0.4856	1.0701	1.9460	2.1470	1.4974	0.3318	0.8474
Dallas	0.3689	-0.1362	-0.1976	-0.3387	-0.1693	0.2405	0.5888	0.4612	0.3183	-0.0463	0.1127
Denver	0.2779	-0.0189	-0.1214	-0.2355	-0.0811	0.2888	0.8306	0.9699	0.9289	0.6160	0.9813
Houston	-0.0347	0.0148	-0.0696	-0.3181	-0.1948	0.3186	0.5743	0.6148	0.9243	0.2913	0.0655
Las Vegas	1.0486	0.7568	0.8671	1.7461	2.1337	2.1272	1.8262	2.1545	1.3539	-0.2842	-0.4589
Los Angeles	0.7853	0.3319	0.2783	0.3402	1.0001	1.6022	1.8788	2.2186	1.8453	0.9084	1.4399
Miami	0.6678	0.1420	-0.1769	0.0724	0.8835	2.1211	2.2688	3.2099	2.7348	1.4086	1.9890
Minneapolis	0.2712	-0.0076	-0.0507	-0.1731	0.0813	0.3815	0.6346	0.5171	0.3104	-0.1120	0.1226
New Orleans	1.1867	0.8256	0.7628	0.5944	0.7351	1.0396	0.7297	0.0557	0.2630	0.1015	0.4507
New York	3.4087	0.9888	0.4889	0.4879	1.7903	3.6731	4.7010	6.4373	5.8249	3.4637	3.7613
Orlando	0.7779	0.1926	0.2429	0.1646	0.7335	0.7588	0.8771	0.6982	0.3618	-0.2216	-0.0172
Philadelphia	0.2418	-0.0712	0.1574	0.0553	0.2811	0.5247	0.7767	0.7433	0.4623	0.0887	0.0798
Phoenix	0.3972	0.0490	-0.0640	0.0755	0.5332	0.9964	1.5520	1.2989	0.6493	-0.2681	-0.1766
San Diego	1.3146	1.0785	1.1688	1.3747	1.5751	1.8507	2.4244	2.2370	1.8735	1.1536	1.2241
San Francisco	3.8488	1.8114	0.7547	0.5556	1.2088	2.0468	2.5762	3.2694	3.4430	2.4272	3.5462
Seattle	0.6552	0.2878	0.1589	0.2073	0.4957	0.9004	1.5983	1.5521	1.3215	0.7658	0.9697
Washington DC	1.4719	0.9626	1.1195	1.2673	2.0234	2.8464	2.5739	2.9292	2.6486	2.9241	3.4429
United States	0.0000	-0.2384	-0.2385	-0.2399	-0.0361	0.2139	0.4707	0.4104	0.1981	-0.1694	-0.0257
<b>Europe</b>											
Paris	1.9564	1.8321	1.9122	1.7746	1.8503	1.9715	2.1492	2.2786	2.1439	2.0671	2.1537
London	2.1384	1.8668	1.7731	1.6684	1.8674	2.0019	2.2368	2.3606	1.8160	1.8325	1.9858
Zürich	1.2565	1.3063	1.2142	1.1476	1.2185	1.3208	1.4537	1.5636	1.6516	1.5770	1.7671
Geneva	1.2503	1.3806	1.4330	1.3198	1.2094	1.3198	1.4197	1.4970	1.7557	1.5878	1.5648
Rome	1.6553	1.6041	1.5750	1.5450	1.6181	1.6650	1.7953	1.7173	1.4142	1.2693	1.2940
Istanbul	0.9729	0.8754	0.7047	0.6378	0.7458	0.9844	1.0917	1.1810	1.3090	1.2048	1.2446
Milan	1.3338	1.4223	1.4761	1.4706	1.4223	1.4343	1.6109	1.5839	1.3685	1.1902	1.0426
Amsterdam	1.2758	1.1923	1.1267	1.0719	1.0685	1.1295	1.3158	1.3054	1.1112	0.9338	1.0309
Moscow	0.6034	0.7398	0.8377	0.9102	1.1080	1.3495	1.6273	1.8602	1.6754	1.1735	1.2236
Stockholm	0.9132	0.8172	0.7723	0.7219	0.7359	0.7741	0.8607	0.9323	0.8677	0.7865	0.8099
Barcelona	1.2925	1.2732	1.2915	1.2202	1.1168	1.0564	1.1328	1.1956	0.9637	0.8190	0.8464
Edinburgh	0.9387	0.8887	0.9184	0.8872	0.9705	1.0234	1.1467	1.1664	0.8505	0.7860	0.8079
Madrid	1.2694	1.2366	1.2666	1.1938	1.0635	1.0694	1.2067	1.2312	1.0239	0.8375	0.7759
Frankfurt	0.6848	0.7284	0.6801	0.6663	0.6418	0.6430	0.6811	0.6373	0.5871	0.5865	0.7000
Copenhagen	0.8255	0.7743	0.7511	0.6888	0.6678	0.7344	0.8182	0.8264	0.7735	0.7566	0.7500
Berlin	0.6177	0.6415	0.6510	0.6323	0.6387	0.6341	0.6670	0.6624	0.6637	0.6582	0.6868
Vienna	0.6844	0.6852	0.6755	0.7190	0.7248	0.7530	0.8372	0.8916	0.8455	0.6900	0.6785
Brussels	0.6960	0.6667	0.6150	0.5905	0.6089	0.6361	0.6854	0.7272	0.7399	0.6525	0.6532
Warsaw	0.9020	0.8842	0.7502	0.6681	0.5783	0.6251	0.7173	0.7908	0.7590	0.6212	0.6465
Prague	0.8298	0.8256	0.7901	0.8030	0.9449	0.9857	0.9993	0.9451	0.7464	0.5946	0.6043
Athens	0.7751	0.7527	0.7968	0.7748	0.8268	0.7685	0.7887	0.8255	0.8048	0.6917	0.4887
Lisbon	0.5646	0.5642	0.5536	0.5313	0.5451	0.4922	0.5656	0.6330	0.5584	0.4805	0.4674
Dublin	0.8913	0.8153	0.8018	0.8174	0.8358	0.8915	0.9491	0.9258	0.7536	0.6017	0.5690
Budapest	0.7002	0.6918	0.6724	0.5811	0.6267	0.7002	0.7336	0.7246	0.6005	0.4997	0.4959
Europe	1.0000	0.9791	0.9635	0.8674	0.8891	0.9257	1.0083	1.0392	0.9271	0.8029	0.7864
<b>India</b>											
Agra	0.2401	0.2198	0.2168	0.4075	0.6104	0.8110	0.9699	1.2494	1.1012	0.9296	1.3459
Bengaluru	1.1210	0.9703	1.3684	1.8823	3.7804	4.5367	6.0026	4.6191	3.1842	2.6496	2.7876
Chennai	1.3808	0.9869	0.9150	1.2742	1.6482	2.0992	2.5942	3.4270	2.1210	1.8604	2.2270
Delhi NCR	1.2478	0.9533	1.0062	1.5105	2.2855	3.3296	4.2719	5.1390	3.4599	2.5471	2.8592
Goa	0.8774	0.7161	0.9191	0.9595	1.3614	1.7048	2.3888	2.9106	1.7416	1.9695	2.2221
Hyderabad	0.7681	0.7728	0.8374	1.2515	1.6540	2.4122	2.3729	2.5557	1.7582	1.0203	1.3459
Jaipur	0.7834	0.5283	0.5408	0.7219	0.9681	1.3235	1.6321	1.9303	1.4807	1.1220	1.6873
Mumbai	1.5813	1.0749	1.0790	1.2822	1.5290	2.4676	3.6713	4.9199	2.9701	2.5399	2.9542
India	1.0000	0.7778	0.8604	1.1612	1.7296	2.3356	2.9880	3.3439	2.2271	1.8298	2.1786
<b>Asia</b>											
Tokyo	1.0100	0.9102	0.9676	0.9277	1.0050	1.1047	1.3566	1.5686	1.2145	0.9950	0.9950
Hong Kong	0.4090	0.2968	0.3741	0.3042	0.4464	0.5910	0.8130	1.0125	0.7706	0.6209	0.7007
Singapore	-0.1471	-0.2244	-0.2095	-0.2569	-0.2120	-0.1172	0.1471	0.4339	0.2469	0.1347	0.1347
Shanghai	-0.5237	-0.5087	-0.4638	-0.4638	-0.4165	-0.3766	-0.2195	-0.0175	-0.1122	-0.2020	-0.1222
Seoul	0.2569	0.1820	0.2643	0.2145	0.2269	0.2768	0.4289	0.5012	0.2319	0.2569	0.2569
Beijing	-0.5411	-0.5262	-0.5012	-0.5312	-0.4713	-0.4289	-0.2918	-0.0873	-0.2020	-0.2893	-0.2893
Bangkok	-0.4638	-0.4414	-0.3865	-0.4040	-0.3741	-0.3491	-0.3416	-0.2768	-0.4214	-0.4688	-0.4788
Asia	0.0000	-0.0445	0.0064	-0.0299	0.0292	0.1001	0.2704	0.4478	0.2469	0.1496	0.1710



the value difference between hotels in two cities. For example, assume a hotel in Los Angeles sold in 2007 for \$250,000 per room. In order to calculate what a similar hotel in San Francisco would probably command in 2009, the 2009 HVI for San Francisco would be divided by the 2007 HVI for Los Angeles.

2009 San Francisco		2007 Los Angeles		Adjustment Factor
2.4272	÷	2.2186	=	1.094

Next, the 2007 Los Angeles sale price of \$250,000 per room is multiplied by 1.094 to yield the estimated 2009 sale price for the San Francisco hotel:

$$\$250,000 \times 1.094 = \$273,500/\text{room (rounded)}$$

The HVI automatically adjusts for time and location, which makes it an excellent adjustment tool for the sales comparison approach.

In Exhibit 6.7, the next set of tables developed from the HVI shows the percent change in value from year to year for a typical hotel in each one of these major markets throughout the world.

Exhibit 6.8 shows the percent change in value of a typical hotel located in Europe, Asia, India, and the United States from 2000 to 2010. It shows one of the few periods when the changes in hotel values throughout the world were in sync, highlighting the global nature of this recession. The graph also shows the volatile nature of hotel values, particularly in the India and US markets, where values have high peaks and low valleys. As of 2012, it appears that hotel values throughout the world are recovering.

### HVI versus Replacement Cost

Another use for the Hotel Valuation Index (HVI) is to stay informed about the current relationship between a hotel’s market value and its replacement cost. This information is useful in planning new hotel development, acquisitions, and when to buy and when to sell. It can also forecast volatility.

A hotel’s market value is the price at which it will sell in an open market in which buyers and sellers are acting in their own self interest without any pressure to buy or sell and with full knowledge of the market. The market value for a hotel is generally estimated through an income valuation model in which future net income is capitalized into value.

Replacement cost is the total development cost to build a hotel, including acquiring the land, constructing the improvements, and furnishing the property with FF&E.

The HVI has been tracking the relationship between a hotel’s market value and its replacement cost in the United States since 1987 for luxury and mid-price hotels. The two graphs in Exhibit 6.9 show the change in market value and replacement cost over this period of time.

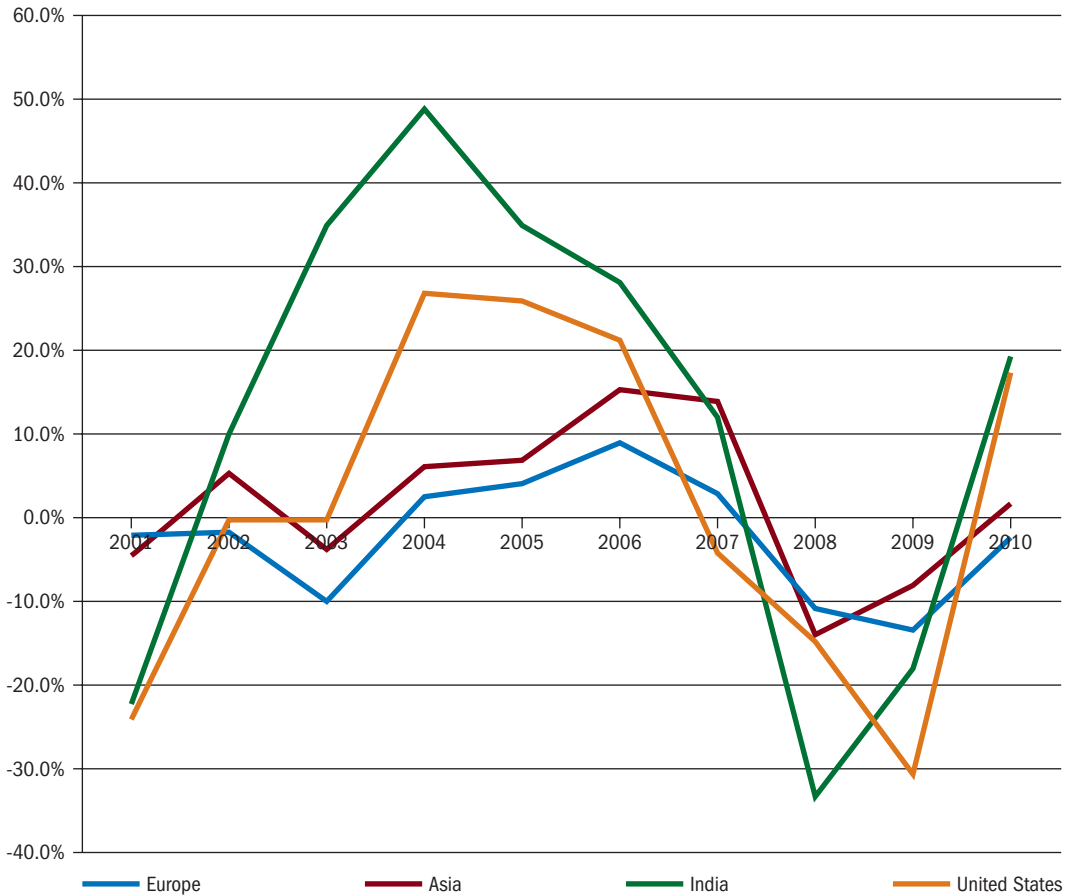
### Value versus Replacement Cost for Luxury Hotels

The peaks and valleys in value for the luxury hotels track exactly the overview of US hotel values described previously. Between 1989 and 1996, luxury hotel values were below replacement cost. They rose above replacement cost starting in 1997 and actually remained either above or equal to replacement cost throughout the period. Generally, luxury hotels were able to hold their value relative to replacement cost. Because of the high cost of developing luxury hotels, this segment seldom becomes overbuilt, which is the factor that usually causes wide swings in value and depresses value below replacement cost.

**Exhibit 6.7**

Percent Change in Value	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>United States</b>										
Atlanta	-23.6%	-6.6%	-16.4%	29.8%	38.7%	23.3%	-12.8%	-22.1%	-25.6%	30.2%
Boston	-34.5%	-14.5%	-30.8%	40.7%	19.0%	12.4%	21.9%	-12.6%	-14.9%	30.6%
Chicago	-35.4%	-7.8%	2.3%	8.6%	39.3%	42.3%	6.8%	-20.6%	-46.7%	38.7%
Dallas	-36.9%	-7.1%	-17.6%	25.6%	49.3%	28.1%	-8.0%	-9.8%	-27.7%	16.7%
Denver	-23.2%	-10.4%	-13.0%	20.2%	40.3%	42.0%	7.6%	-2.1%	-16.2%	22.6%
Houston	5.1%	-8.3%	-26.7%	18.1%	63.8%	19.4%	2.6%	19.2%	-32.9%	-17.5%
Las Vegas	-14.2%	6.3%	47.1%	14.1%	-0.2%	-9.6%	11.6%	-25.4%	-69.6%	-24.4%
Los Angeles	-25.4%	-4.0%	4.8%	49.2%	30.1%	10.6%	11.8%	-11.6%	-32.9%	27.8%
Miami	-31.5%	-27.9%	30.3%	75.6%	65.7%	4.7%	28.8%	-11.3%	-35.5%	24.1%
Minneapolis	-21.9%	-4.3%	-12.9%	30.8%	27.8%	18.3%	-7.2%	-13.6%	-32.2%	26.4%
New Orleans	-16.5%	-3.4%	-9.6%	8.8%	17.5%	-15.2%	-39.0%	19.6%	-12.8%	31.7%
New York	-54.9%	-25.1%	-0.1%	87.5%	67.5%	22.0%	30.5%	-8.2%	-34.6%	6.7%
Orlando	-32.9%	4.2%	-6.3%	48.9%	1.5%	6.7%	-9.5%	-19.8%	-42.8%	26.3%
Philadelphia	-25.2%	24.6%	-8.8%	21.4%	19.0%	16.5%	-1.9%	-16.1%	-25.6%	-0.8%
Phoenix	-24.9%	-10.8%	14.9%	42.6%	30.2%	27.8%	-9.9%	-28.3%	-55.6%	12.5%
San Diego	-10.2%	4.3%	9.5%	8.4%	10.7%	20.1%	-5.5%	-11.2%	-25.1%	3.3%
San Francisco	-42.0%	-37.6%	-11.3%	42.0%	37.9%	17.4%	19.4%	4.1%	-22.9%	32.7%
Seattle	-22.2%	-10.0%	4.2%	23.9%	27.1%	36.7%	-1.8%	-9.0%	-23.9%	11.5%
Washington DC	-20.6%	8.0%	7.0%	33.3%	27.2%	-7.1%	9.9%	-7.1%	7.6%	13.2%
United States	-23.8%	0.0%	-0.2%	26.8%	25.9%	21.2%	-4.1%	-15.1%	-30.7%	17.3%
<b>Europe</b>										
Paris	-6.4%	4.4%	-7.2%	4.3%	6.6%	9.0%	6.0%	-5.9%	-3.6%	4.2%
London	-12.7%	-5.0%	-5.9%	11.9%	7.2%	11.7%	5.5%	-23.1%	0.9%	8.4%
Zürich	4.0%	-7.1%	-5.5%	6.2%	8.4%	10.1%	7.6%	5.6%	-4.5%	12.1%
Geneva	10.4%	3.8%	-7.9%	-8.4%	9.1%	7.6%	5.4%	17.3%	-9.6%	-1.4%
Rome	-3.1%	-1.8%	-1.9%	4.7%	2.9%	7.8%	-4.3%	-17.6%	-10.2%	1.9%
Istanbul	-10.0%	-19.5%	-9.5%	16.9%	32.0%	10.9%	8.2%	10.8%	-8.0%	3.3%
Milan	6.6%	3.8%	-0.4%	-3.3%	0.8%	12.3%	-1.7%	-13.6%	-13.0%	-12.4%
Amsterdam	-6.5%	-5.5%	-4.9%	-0.3%	5.7%	16.5%	-0.8%	-14.9%	-16.0%	10.4%
Moscow	22.6%	13.2%	8.7%	21.7%	21.8%	20.6%	14.3%	-9.9%	-30.0%	4.3%
Stockholm	-10.5%	-5.5%	-6.5%	1.9%	5.2%	11.2%	8.3%	-6.9%	-9.4%	3.0%
Barcelona	-1.5%	1.4%	-5.5%	-8.5%	-5.4%	7.2%	5.5%	-19.4%	-15.0%	3.3%
Edinburgh	-5.3%	3.3%	-3.4%	9.4%	5.5%	12.0%	1.7%	-27.1%	-7.6%	2.8%
Madrid	-2.6%	2.4%	-5.7%	-10.9%	0.6%	12.8%	2.0%	-16.8%	-18.2%	-7.4%
Frankfurt	6.4%	-6.6%	-2.0%	-3.7%	0.2%	5.9%	-6.4%	-7.9%	-0.1%	19.4%
Copenhagen	-6.2%	-3.0%	-8.3%	-3.1%	10.0%	11.4%	1.0%	-6.4%	-2.2%	-0.9%
Berlin	3.8%	1.5%	-2.9%	1.0%	-0.7%	5.2%	-0.7%	0.2%	-0.8%	4.4%
Vienna	0.1%	-1.4%	6.4%	0.8%	3.9%	11.2%	6.5%	-5.2%	-18.4%	-1.7%
Brussels	-4.2%	-7.7%	-4.0%	3.1%	4.5%	7.8%	6.1%	1.7%	-11.8%	0.1%
Warsaw	-2.0%	-15.2%	-10.9%	-13.4%	8.1%	14.7%	10.2%	-4.0%	-18.2%	4.1%
Prague	-0.5%	-4.3%	1.6%	17.7%	4.3%	1.4%	-5.4%	-21.0%	-20.3%	1.6%
Athens	-2.9%	5.9%	-2.8%	6.7%	-7.1%	2.6%	4.7%	-2.5%	-14.0%	-29.3%
Lisbon	-0.1%	-1.9%	-4.0%	2.6%	-9.7%	14.9%	11.9%	-11.8%	-14.0%	-2.7%
Dublin	-8.5%	-1.6%	1.9%	2.3%	6.7%	6.5%	-2.5%	-18.6%	-20.2%	-5.4%
Budapest	-1.2%	-2.8%	-13.6%	7.9%	11.7%	4.8%	-1.2%	-17.1%	-16.8%	-0.8%
Europe	-2.1%	-1.6%	-10.0%	2.5%	4.1%	8.9%	3.1%	-10.8%	-13.4%	-2.0%
<b>India</b>										
Agra	-8.5%	-1.4%	88.0%	49.8%	32.9%	19.6%	28.8%	-11.9%	-15.6%	44.8%
Bengaluru	-13.4%	41.0%	37.5%	100.8%	20.0%	32.3%	-23.0%	-31.1%	-16.8%	5.2%
Chennai	-28.5%	-7.3%	39.3%	29.4%	27.4%	23.6%	32.1%	-38.1%	-12.3%	19.7%
Delhi NCR	-23.6%	5.5%	50.1%	51.3%	45.7%	28.3%	20.3%	-32.7%	-26.4%	12.3%
Goa	-18.4%	28.4%	4.4%	41.9%	25.2%	40.1%	21.8%	-40.2%	13.1%	12.8%
Hyderabad	0.6%	8.4%	49.4%	32.2%	45.8%	-1.6%	7.7%	-31.2%	-42.0%	31.9%
Jaipur	-32.6%	2.4%	33.5%	34.1%	36.7%	23.3%	18.3%	-23.3%	-24.2%	50.4%
Mumbai	-32.0%	0.4%	18.8%	19.2%	61.4%	48.8%	34.0%	-39.6%	-14.5%	16.3%
India	-22.2%	10.6%	35.0%	49.0%	35.0%	27.9%	11.9%	-33.4%	-17.8%	19.1%
<b>Asia</b>										
Tokyo	-5.0%	3.0%	-2.0%	4.0%	5.0%	12.0%	9.0%	-13.8%	-9.9%	0.0%
Hong Kong	-8.0%	6.0%	-5.1%	10.9%	10.0%	13.9%	11.0%	-12.0%	-8.5%	4.9%
Singapore	-9.1%	1.9%	-6.0%	6.0%	12.0%	29.9%	25.0%	-13.0%	-9.0%	0.0%
Shanghai	3.1%	9.1%	0.0%	8.8%	6.8%	25.2%	25.9%	-9.6%	-10.1%	10.0%
Seoul	-6.0%	7.0%	-3.9%	1.0%	4.1%	11.9%	5.1%	-17.9%	2.0%	0.0%
Beijing	3.3%	5.3%	-6.0%	12.8%	8.0%	24.0%	28.9%	-12.6%	-10.9%	0.0%
Bangkok	4.2%	9.8%	-2.8%	5.0%	4.0%	1.1%	9.8%	-20.0%	-8.2%	-1.9%
Asia	-4.5%	5.3%	-3.6%	6.1%	6.9%	15.5%	14.0%	-13.9%	-7.8%	1.9%



**Exhibit 6.8** Percent Change in Hotel Value

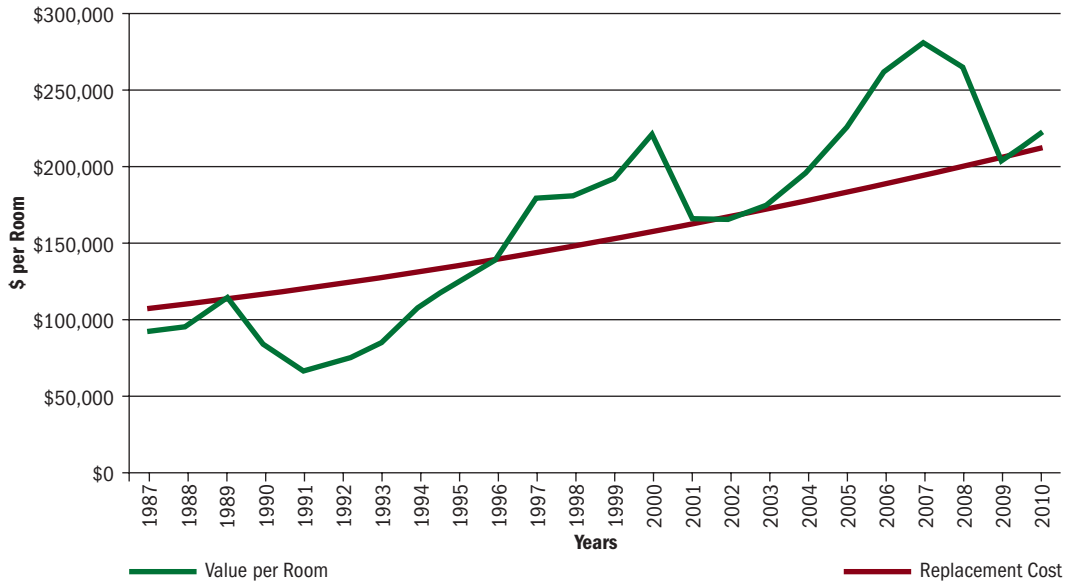
### Value versus Replacement Cost for Mid-Price Hotels

Between 1987 and 2010, the value of mid-price hotels was often below their replacement costs. This difference was largely due to the relative ease of developing these types of hotels. Financing was relatively available, land cost was typically not excessive, and hotel brands were pushing these types of products. As a result, developers were building too many mid-price hotels during good times when values should have been rising rapidly. This overbuilding caused values to stop rising and actually decline in some markets.

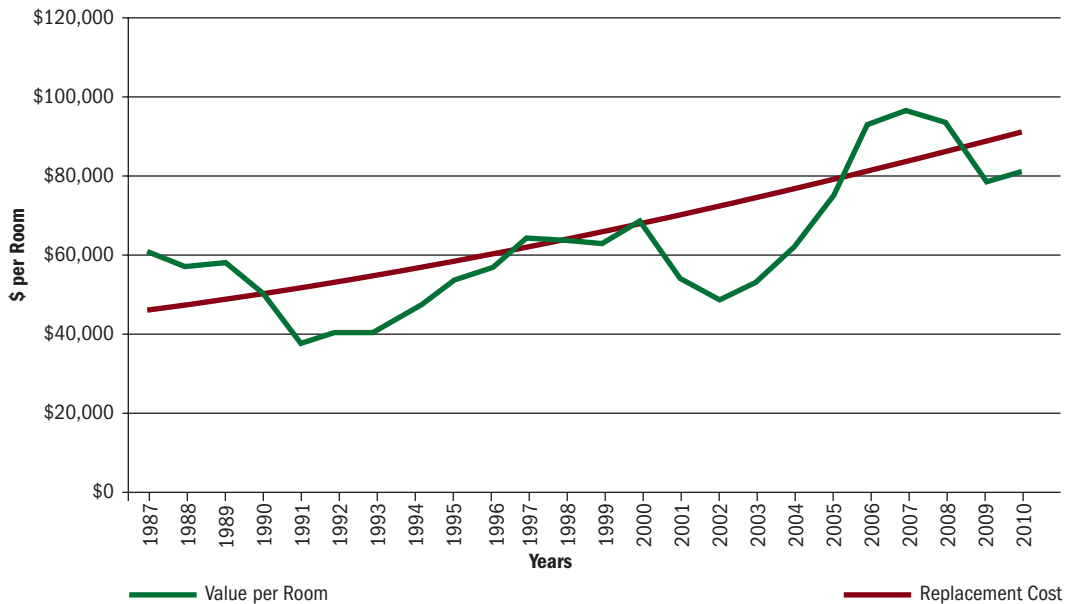
The relationship between market value and replacement cost ties together in the following manner. It is a good time to build new hotels when market value is greater than cost because the cost of entry is lower than the value achieved when the hotel opens. It is better to purchase an existing hotel when hotel values are less than replacement cost. At such times, new development is not economically feasible since the value created when the hotel is complete would be less than its cost. The United States hotel industry is currently experiencing a period in which value is less than cost, so there is little new hotel development. This type of relationship is a barrier to entry for new development. The graphs seem to indicate that a more favorable relationship



**Exhibit 6.9 Value vs. Replacement Cost: Luxury Hotels**



**Value vs. Replacement Cost: Mid-Price Hotels**



between value and cost is developing for luxury hotels as compared to mid-price hotels; so if financing is available, there might be more interest in this segment as the United States continues its economic recovery.

With the limited supply of new hotels expected to enter the market over the next several years and rapidly rising values fueled by the recovery, the market value line for most segments should rise above replacement cost in the near future.



# Income Capitalization Approach

The income capitalization approach converts the anticipated future benefits of property ownership (dollar income) into an estimate of present value. In hotel valuation, this approach typically involves a discounting procedure.

The income capitalization approach is generally the preferred technique for appraising income-producing properties because it closely simulates the investment rationale and strategies of knowledgeable buyers. The approach is particularly relevant to hotel properties, which are bought mainly for investment purposes and involve relatively high risks. Most of the data used in the income capitalization approach is derived from the market, which reduces the need for unsupportable, subjective judgments.

The income capitalization approach is applied in three steps:

- 1. Forecast net income for a specified number of years.
- 2. Select an appropriate discount factor or capitalization rate.
- 3. Apply the proper discounting and/or capitalization procedure.

Each of these steps will be discussed in detail.

## Forecasting Net Income

Many terms are used to describe the net income that is capitalized into an estimate of value: *net income before recapture*, *net income before depreciation*, or *net operating income*. All of these terms may be defined as the *annual net income before financial charges* (e.g., as the recapture of debt service) are deducted. This concept is referred to in this book as *net income before debt service* (after a reserve for replacement). The data in Exhibit 6.10 is from a typical hotel financial statement showing what goes into the net income line. It does not include items such as depreciation and income taxes.

In the income capitalization approach, the forecast of net income before debt service is based on two assumptions:

- 1. The income and expense forecast is expressed in changing dollars.
- 2. The management is competent.

When the first edition of this book was published in 1978, the use of constant dollars in all hotel projections was recommended. As inflation became a more important consideration to both hotel lenders and investors, however, it became apparent that interest, discount, and capitalization rates were being adjusted upward for inflation. Hotel investors now base their purchases on the property's expected future benefits with inflation built in, so it is also built into the other investment parameters.

Exhibit 6.10 Net Income			
Income before fixed charges	\$21,969	34.3%	\$89.95
Fixed Charges			
Management fee	\$1,921	3.0%	\$7.80
Property tax	\$2,080	3.2%	\$8.52
Insurance	\$755	1.2%	\$3.09
Reserve for replacement	\$2,561	4.0%	\$10.41
Total fixed charges	\$7,317	11.4%	\$29.82
Net income	\$14,652	22.9%	\$60.13



Forecasts of income and expenses are usually based on competent management because the quality of management plays an important role in the profit potential of a lodging facility. The appraiser must equalize the effects of varying managerial expertise by assuming that the property being appraised will be managed competently. In reality, management quality may be poor, competent, or superior. If the property is currently under poor management, the appraiser is justified in projecting improved operating results based on competent management. If, on the other hand, the subject has superior management, the income and expenses used to estimate market value should reflect less managerial skill—i.e., lower revenue and/or higher expenses. No such assumption is needed if management is fixed by a long-term contract and would not change in the event of a sale, or if the appraiser is estimating investment value rather than market value. Investment value is the value to a particular investor based on individual financial and managerial requirements. It differs from market value in that market value must represent the actions of typical buyers and reflect average, competent management.

The procedure for forecasting income before interest and depreciation has already been described. The appraiser defines the market area, locates and quantifies the demand, and allocates the room nights among the competitive facilities. This procedure provides the information needed to estimate occupancy and average rate. Based on these data, rooms revenue and other sources of income—such as food and beverage sales and telephone income—can be computed. Expense data can be obtained from actual operating statements if the subject is an existing property or from comparable properties and national averages if the subject is a proposed facility.

### Hotel Life Cycle

The expected flow of net income before debt service must be assessed to select the appropriate discounting procedure. All real estate investments have specific life cycles that show the rise and fall of net income over the property's economic life. Most income-producing properties reach their full economic potential relatively quickly. This level may then be maintained for a number of years before it gradually declines as various forms of depreciation erode the property's income.

It generally takes some time for lodging facilities to achieve their maximum level of income. A typical hotel will experience rising occupancy in its first two to four years of operation; net income does not often cover normal debt service during this period. A stabilized level of income is normally reached sometime between the second and fifth years of operation. The income before debt service will usually rise above the stabilized level for a few years and then gradually start to decline between the seventh and twelfth years because of physical deterioration and/or functional and external obsolescence. This decline continues over the remaining economic life of the property. The life cycle of a lodging facility is not predetermined, however. It can be lengthened or shortened depending on how much maintenance and periodic upgrading the owner is willing to do. In addition, a hotel can be affected by external factors that can dramatically change its economic life, either making it shorter or longer. The closure of a major demand generator, overbuilding, new modes of travel or changes in travel patterns, the development of a new convention center, airport expansion, and other factors can alter a hotel's remaining economic life.

Proposed hotels are appraised as of the beginning of their life cycles, but existing lodging facilities may be appraised at any point in the cycle. By esti-



mating a property’s position in the life cycle, the appraiser can project future net income before debt service (if adequate market data are available) and select an appropriate discounting procedure.

**Selecting Appropriate Capitalization Rates and Discount Factors**

Capitalization rates and discount factors are used to convert expected future income into an indication of value. These rates and factors have an interest component, which reflects the return on capital, and a recapture component, which provides for a return of capital.

Theoretically, the interest component can be derived through risk and investment analysis. Starting with a base rate that represents the minimal risk of a safe investment such as a federally insured savings account, the analyst makes a series of upward adjustments to reflect different elements of risk and the investment burden. For example, adjustments might be made for the following factors.

	%
Safe rate (minimum risk)	$X$
Add for general hostelry risk	$1_1$
Add for management burden	$1_2$
Add for food and beverage risk	$1_3$
Add for rapid functional obsolescence	$1_4$
Add for lack of liquidity	$1_5$
Add for other elements	$1_6$
	Final interest rate

In practice, estimating the magnitude of each upward adjustment is too subjective a process to provide a supportable interest rate. Utilizing the analytical expertise of the hundreds of money managers who serve the nation’s lending institutions can produce a more reliable rate.

Generally, a hotel investment consists of a large amount of debt financing in the form of a mortgage (55%–75% of the total investment) and a smaller amount of equity capital (25%–45%). Thus, 55% to 75% of a hotel project’s cost of capital is based on the mortgage interest rate, which implies that 60% to 75% of the capitalization or discount rate is determined by the cost of the mortgage financing. The lender, who considers all possible risks, establishes the interest rate on a hotel mortgage. Obviously the mortgagee is in a more secure position than the equity investor, but the lender may be forced to assume the equity position in the event of a foreclosure.

To develop a capitalization rate, the appraiser first researches the cost of the debt component of the investment by evaluating recent hotel financing transactions. To simplify the calculations for appraisal purposes, the interest rate is generally assumed to be fixed rather than variable. Although variable-rate mortgages are used to finance some hotel projects, it is often possible to have another lending entity fix the interest rate at a specific level, which effectively converts the variable payments into fixed payments. For the purpose of illustration, a fixed payment mortgage will be used.

The mortgage provision that has the greatest economic impact on an investment is the mortgage interest rate. To assess the cost of mortgage capital, hotel appraisers must know the current lending rates for hotel mortgage loans. To provide appraisers with a reference point from which to estimate the cost of mortgage financing, there is a critical need for reliable, timely estimates of hotel mortgage interest rates.

One procedure for accumulating mortgage rate information is to survey lenders who are actively making hotel loans. This approach will generally yield results, but the data may not be very accurate for the following reasons:

- It may be difficult to find lenders who are actively lending on hotel projects.
- Even lenders who are active in the hotel lending market do not make hotel loans on a regular basis. Therefore, any information obtained for these sources may be dated, particularly in a fast-changing money market.
- Not all lenders are willing to provide data relative to the loans they have made.
- A lender who responds to an interest rate survey may provide information that represents the “asking price” for a hotel loan rather than the final terms negotiated.

A better, more reliable approach is for the appraiser to obtain accurate information on hotel loans actually originated by lenders. The best source for this type of data is the American Council of Life Insurance. This organization, which represents most of the major life insurance companies in the United States, publishes quarterly reports on the hotel mortgages originated by their member companies. Some of the relevant data available to subscribers include the number of loans made, the total dollar amount loaned, the interest rate, the loan-to-value ratio, and the terms of the loans.

The primary 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.

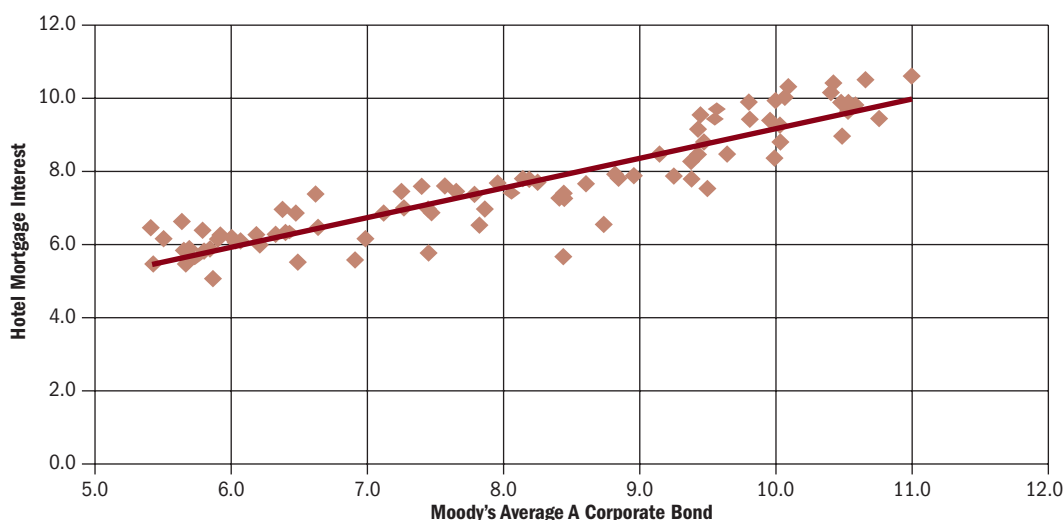
HVS developed such a procedure by running a series of regression analyses. Quarterly mortgage interest rate data supplied by the American Council of Life Insurance were compared with numerous, widely reported money market instruments. Included in this analysis were the prime rate, the federal funds rate, 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*. Exhibit 6.11 shows the relationship between the average interest rate of a hotel mortgage and the yield of an Average A corporate bond.

In Exhibit 6.12, the quarterly interest rates for hotel mortgages as reported by the American Council of Life Insurance are shown in the middle column. The quarterly rates for Average A corporate bond yields as reported by Moody's are shown in the far-right column.

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

X Coefficient 0.915847  
 Constant 1.192196  
 $Y = 0.915847 X + 1.192196$   
 Coefficient of correlation = 96%



**Exhibit 6.11 Hotel Interest Rate Regression****Exhibit 6.12**

Quarter	ACLI Hotel Interest Rate	Moody's Avg. A Corp. Bond Yield (%)
2010-3	5.9	5.1
2010-2	6.5	5.5
2010-1	7.5	5.8
2009-4	8.4	5.7
2009-3	7.5	5.8
2009-2	8.7	6.6
2009-1	7.8	6.5
2008-4	6.9	5.6
2008-3	6.6	6.5
2008-2	6.0	6.2
2008-1	6.4	6.3
2007-4	6.1	6.1
2007-3	6.2	6.3
2007-2	5.9	6.2
2007-1	5.7	5.9
2006-4	6.3	6.3
2006-3	7.0	6.2
2006-2	6.4	6.4
2006-1	5.8	5.9
2005-4	5.8	5.8
2005-3	5.4	5.5
2005-2	5.7	5.5
2005-1	5.7	5.6
2004-4	5.7	5.9
2004-3	6.0	6.1
2004-2	5.8	6.4
2004-1	6.2	6.0
2003-4	5.9	6.3
2003-3	5.4	6.5
2003-2	5.5	6.2
2003-1	5.6	6.6
2002-4	6.5	6.9
2002-3	6.4	7.0
2002-2	6.6	7.4
2002-1	7.3	7.5
2001-4	7.4	7.6
2001-3	7.6	7.6
2001-2	8.1	7.8
2001-1	8.0	7.7



Using the regression formula and current Average A corporate bond rate of 6.4%, the resulting hotel interest rate would be:

$$0.91584 \times 6.4\% + 1.1922 = 7.0\%$$

Appraisers using this regression approach to update hotel mortgage interest rates should rerun the regression analysis each quarter when the American Council of Life Insurance releases its latest data on hotel mortgage interest rates.

The real strength of the mortgage-equity analysis of a real estate investment is the fact that the mortgage component of the discount rate can be readily supported with current, highly accurate interest rate data. Most investors would agree that it is far better to have 55% to 75% of the mortgage-equity discount rate fully supported than to rely on a totally subjective (and usually outdated) overall discount rate.

Other sources of lending information include local banks and insurance companies, real estate investment trusts, mortgage brokers, and regulatory agencies. By comparing the rates derived from several sources, an appraiser can estimate the mortgage interest components with relative accuracy.

The mortgage recapture component, which represents the return of the investment, is expressed in the rate of amortization. According to the American Council of Life Insurance, hostelry loans have typically been structured to be repaid over a 20- to 30-year term. The recapture component plus the interest component equals the yearly mortgage constant. The annual debt service is calculated by multiplying the mortgage constant by the original loan amount.

Mortgage amortization rates vary widely around the world. In general, areas experiencing high rates of inflation generally have higher amortization rates as well. For example, the current amortization rate for hotel mortgages is 10 years in India and South America, where the local economies are experiencing high levels of inflation. The remaining 25% to 45% of a hotel investment is equity money. Like common stock, which entitles the owner to the residual earnings after all expenses, including debt service, have been paid, real estate equity investments normally provide overall returns that are higher than those demanded by the mortgage component. The short-term equity return, which is called the *equity dividend rate* by appraisers and the *cash-on-cash return* by hotel investors, represents the annual net income after debt service divided by the value of the equity.

The rate of return that an equity investor expects over a 10-year holding period (the long-term return) is called *equity yield*. Unlike the equity dividend, which is a short-term rate of return, the equity yield specifically considers a long holding period (generally 10 years), annual cash flows impacted by inflation, property appreciation, mortgage amortization, and proceeds from the sale at the end of the holding period. Both the equity dividend and the equity yield will produce a good estimate of value when used with the proper technique and supported by the appropriate data.

Accurate data relating to equity return expectations are not always easy to obtain. However, since the equity return component represents only 25% to 45% of the discount rate (depending on the loan-to-value ratio), the negative impact of any error is reduced. Hotel appraisers typically rely on two sources of equity data: investor interviews and past appraisals.

To obtain data through investor interviews, an appraiser surveys actual or potential hotel investors who have recently made or contemplated an equity investment in a lodging facility. Depending on the type of property be-



ing appraised, the appraiser should survey either institutional or individual investors. The key to obtaining reliable information from investor interviews is to explain carefully the terms *equity dividend* and *equity yield* before conducting the survey. Many hotel investors may be uncertain as to the exact meaning of terms such as *overall rate*, *capitalization rate*, or *total property yield*. A misunderstanding of terms can distort the appraiser's findings and make the survey invalid. Unless the equity investor has a clear understanding of *equity dividend* and *equity yield*, it is generally best not to include his or her responses in the results of that particular survey.

A broad cross-section of active buyers must be surveyed because each is influenced by a variety of factors. The results of a limited sample can produce misleading assumptions. For example, an investor in a high tax bracket may settle for a lower-than-market equity return if the tax shelter benefits of the investment are particularly attractive. Similarly, the opportunity to resell a property after several years for a higher price may induce a buyer to accept a lower equity dividend. Because owning a hotel has a certain amount of status, some buyers may be willing to accept a lower equity return. An active hotel-motel broker can often provide insight into the equity rates of return demanded in the current market. Good sources of equity information include typical hotel buyers and investors, lenders seeking equity participation and joint ventures, and hotel management companies.

A second source of equity return information is readily available to appraisal firms that regularly perform hotel valuations. These appraisers can derive equity dividend and equity yield rates from actual sales of hotels they have recently appraised. This approach differs from deriving an overall rate from the market in that the appraiser uses the actual forecast of income and expense that was developed in the appraisal immediately preceding the sale. An illustration of this procedure follows.

### Example

Over the past several years, HVS has appraised thousands of hotels in most major market areas around the world. In each of these appraisals, a similar mortgage-equity technique was used to forecast income into the future and discount it back to present value at rates that reflect the cost of both debt and equity capital. In instances in which hotels were actually sold subsequent to the appraisal, equity dividend and equity yield rates were derived from the projection of income and expense by excluding any incentive management fees and then inserting the projection into the valuation model. The appraised value was adjusted to reflect the actual sale price merely by modifying the return assumptions. Exhibit 6.13 shows a representative sample of hotel sales (focused- and full-service) that were evaluated by HVS in this manner and the resulting various rates of return. The table shows the following types of returns for each sale:

- Total property yield—unleveraged internal rate of return (*IRR*)
- Equity yield—10-year *IRR* for the equity component
- Equity dividend—one-year, cash-on-cash return to the equity component
- Overall rates—net income divided by sale price (The net income can be based on the previous (historical) year, the first year's projected net income, and the projected stabilized net income.)

In addition to quantifying the equity dividend and equity yield, the appraiser sometimes needs to estimate a terminal capitalization rate. When a 10-year forecast is used, the terminal (or going-out) capitalization rate is



**Exhibit 6.13 Focused-Service Sales**

						Overall Rate Based on Net Operating Income			
Hotel	Location	Number of Rooms	Date of Sale	Total		Historical Year	Projected Year One	Stabilized Year	Equity Dividend
				Property Yield	Equity Yield				
Courtyard Wall at Monmouth Pk.	Wall Township, NJ	113	Dec-10	11.9%	18.0%	7.3 %	7.1%	8.3%	5.0%
Springhill Suites	Bellport, NY	128	Dec-10	12.9	20.6	1.0	8.1	10	7.6
Homewood Suites	Carlsbad, CA	145	Nov-10	11.8	17.5	7.7	8.7	9.0	8.7
Residence Inn White Plains	White Plains, NY	133	Oct-10	12.8	18.5	6.6	6.9	8.9	6.9
Residence Inn New Rochelle	New Rochelle, NY	124	Oct-10	11.5	16.4	6.0	6.4	8.0	6.0
Springhill Suites	Washington, DC	86	Oct-10	11.3	14.5	8.9	9.0	8.8	9.0
Coutyard by Marriott	Altoon, IA	105	Aug-10	11.4	14.8	8.3	8.3	9.3	8.3
Residence Inn	Holtsville, NY	124	Aug-10	10.9	20.6	7.3	7.1	8.5	3.9
Hampton Inn & Suites	Houston, TX	120	Jul-10	11.2	16.1	6.6	6.7	9.1	6.7
Holiday Inn West	Phoenix, AZ	144	Jul-10	16.6	23.8	3.1	4.7	14.4	—
Holiday Inn Express & Suites	Shelton, CT	128	May-10	12.9	19.1	5.0	6.0	9.4	6.0
Homewood Suites Dallas	Dallas, TX	137	Apr-10	13.3	19.5	5.4	6.6	10.7	6.6
Homewood Suites Farmington	Farmington, CT	121	Apr-10	14.3	21.8	7.5	8.1	11.3	8.1
Homewood Suites Maitland	Maitland, FL	143	Apr-10	15.2	21.8	6.4	7.1	12.3	7.1
Homewood Suites Billerica	Billerica, MA	147	Apr-10	14.1	21.4	7.9	8.5	11.1	8.5
Homewood Suites Brentwood	Brentwood, TN	121	Apr-10	13.4	20	6.5	8.0	10.3	8.0
Clarion Renton	Renton, WA	111	Mar-10	10.8	14.2	7.6	7.6	5.2	—
Holiday Inn Express Times Square	New York, NY	210	Feb-10	14.5	21.5	—	7.4	10.4	4.3
Hampton Inn & Suites	New York, NY	184	Feb-10	15.3	23	—	7.2	11.1	3.9
Candlewood Suites Times Square	New York, NY	188	Feb-10	13.1	17.8	—	3.3	6.6	2.5

**Full-Service Sales**

						Overall Rate Based on Net Operating Income			
Hotel	Location	Number of Rooms	Date of Sale	Total		Historical Year	Projected Year One	Stabilized Year	Equity Dividend
				Property Yield	Equity Yield				
Hilton Suites Lexington	Lexington, KY	174	May-11	10.9%	17.9%	9.1%	7.3%	8.0%	7.3%
Red Lion Fifth Avenue	Seattle, WA	297	May-11	8.9	12.0	5.1	5.5	7.2	—
Marriott Courtyard Westside	Culver City, CA	260	Apr-11	10.6	13.0	6.5	6.7	8.0	5.2
Xona Suites	Scottsdale, AZ	431	Apr-11	13.2	17.4	—	3.3	11.9	3.3
Sheraton Bay Keauhou Resort	Kailua-Kona, HI	521	Apr-11	12.2	14.9	—	—	11.1	—
Inn at Morro Bay	Morro Bay, CA	98	Apr-11	12.0	15.4	3.1	5.3	9.4	—
Skamania Lodge	Stevenson, WA	254	Dec-10	11.7	17.7	6.2	7.2	8.6	7.2
Sheraton Framingham	Framingham, CT	375	Oct-10	13.5	18.2	4.0	6.9	10.7	6.9
St. Regis Hotel	Aspen, CO	179	Sep-10	10.0	11.7	2.3	2.5	8.2	2.5
Fairmont Copley Plaza	Boston, MA	383	Aug-10	8.8	9.6	3.4	3.3	7.6	3.3
InterContinental Buckhead	Atlanta, GA	422	Jul-10	11.9	17.2	6.8	6.5	8.5	6.5
Sir Francis Drake	San Francisco, CA	416	Jun-10	10.1	12.9	1.7	3.5	7.8	3.5
DoubleTree Hotel Bethesda	Bethesda, MD	269	Jun-10	11.8	17.3	8.4	8.3	8.6	8.3
Renaissance Syracuse	Syracuse, NY	279	May-10	14.6	20.6	8.0	8.4	11.5	8.4
Los Angeles Marriott Downtown	Los Angeles, CA	469	Mar-10	12.2	16.8	1.3	3.2	9.8	—
Casa Madrona Hotel & Spa	Sausalito, CA	61	Feb-10	11.7	15.8	1.9	2.9	10.3	2.9
Tuscan Inn	San Francisco, CA	221	Jan-10	13.0	17.1	6.6	6.6	10.0	6.6
W Hotel	San Francisco, CA	404	Jul-09	13.7	16.9	8.0	6.4	10.6	4.0
Hyatt Regency Orange County	Garden Grove, CA	654	Oct-08	10.5	15.8	8.0	6.9	7.7	6.9
Sheraton Gateway LAX	Los Angeles, CA	802	Aug-08	11.0	17.4	6.3	8.1	8.0	8.1





used to capitalize the net income in Year 11 into a reversionary value. It is basically an overall rate that can be estimated with a simple mortgage-equity band of investment using an equity dividend. Note that this rate is applied to the net income before debt service at a point in time 11 years after the date of value; thus, it should be adjusted upward somewhat to reflect the fact that the hotel will probably be closer to the end of its economic life.

**Applying the Proper Capitalization or Discounting Procedure**

Several procedures can be used to combine mortgage and equity data into a discount factor or capitalization rate that will transform a projected net income estimate into an indication of value. The selection of discount factors and capitalization rates depends on many factors, including the length of the income projection period, the age of the property and its position in its life cycle, the nature of the mortgage financing, and the sophistication of equity investors. The following discussion describes the various methods for developing discount factors and their proper applications in the valuation process.

**Capitalizing Stabilized Income**

A single, stabilized estimate of net income can be capitalized at an appropriate rate. The stabilized net income relates to a representative year, or more technically, it is the discounted average net income over the property’s economic life. In estimating stabilized earnings, more weight is given to the income expected during the early years of the investment because this income is less affected by discounting.

**Case Study**

**Capitalizing Stabilized Income**

Based on the forecast of income and expense developed for the proposed Marriott, it is estimated that the net income before debt service will stabilize at approximately \$5,900,000. This level of net income is anticipated to be achieved between the third and fourth year of operation for the proposed Marriott, which is approximately the period of time it takes for hotels of this type to achieve a stabilized level of net income.

Now the appraiser must develop a rate to capitalize the stabilized net income. One procedure for developing a capitalization rate is the *band-of-investment* (weighted cost of capital) technique. Combining the weighted average of the return demanded by the mortgage position of the investment

with the dividend required by the equity component results in a capitalization rate that reflects the basic financial composition of the hotel investment.

Using the previously described mortgage interest rate regression formula and a survey of hotel equity investors, the following mortgage and equity terms were established as appropriate:

Interest rate	7%
Amortization	25 years
Mortgage constant	8.48%
Loan-to-value ratio	70%
Equity dividend rate	12%

The band-of-investment technique is used to develop a capitalization rate that



is the weighted average of the mortgage constant and equity dividend rate:

Weighted Cost of Capital			
Capital Components	Capital Ratios	Cost of Capital	Weighted Average
Mortgage	70%	$\times 0.0848 =$	0.0594
Equity	30%	$\times 0.1200 =$	0.0360
Capitalization rate			= 0.0954

The stabilized net income is divided by the capitalization rate to produce the capitalized value:

Valuation	
Net operating income	\$5,900,000
Capitalization rate	0.0954
Value	\$61,864,673
Rounded value	\$62,000,000

The value can be mathematically proven through the following calculations:

Proof:	
Mortgage	$70\% \times \$62,000,000 = \$43,400,000$
Equity	$30\% \times \$62,000,000 = \$18,600,000$
Value	\$62,000,000
Debt service	
	$0.0848 \times \$43,400,000 = \$3,680,906$
Equity dividend	
	$0.1200 \times \$18,600,000 = \$2,232,000$
Net income	\$5,912,906
Rounded	\$5,900,000

These calculations show that the \$62,000,000 value can be divided into a mortgage portion of \$43,400,000 and an equity portion of \$18,600,000. The yearly mortgage payment, consisting of interest and amortization, is calculated by multiplying the original mortgage balance (\$43,400,000) by the constant (0.0848), which results in an annual debt service of \$3,680,906. The equity dividend is established by multiplying the equity investment (\$18,600,000) by the anticipated equity return (0.12), which yields \$2,232,000. The annual debt service plus the equity dividend equals the stabilized net income before debt service (\$5,900,000).

The band-of-investment technique essentially works backwards, using the projected stabilized net income to calculate the value that will meet the demands of both the mortgage and equity investors. The components that form the band of investment (mortgage terms and equity requirements) can be well documented and supported. However, the stabilized net income used in this approach does not always reflect the potential for low income during the early years of the investment. To get a better indication of the net income of a property in its initial years, the analyst should project five to 10 years of income and expenses.

## 10-Year Forecast Using an Equity Yield Rate

To show the normal occupancy build-up for new hotels, plus the cyclical nature of hotel investments, most appraisers use projection periods of three to 10 years.

A 10-year projection using an equity yield rate is similar to an Ellwood valuation approach, in which the yearly income to equity plus the equity reversion is discounted at an equity yield rate and the income to the mortgagee is discounted at a mortgage yield rate. The sum of the equity and mortgage values is the total property value.

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.

Valuation using a 10-year income projection and an equity yield rate is performed in four steps.

1. The terms of typical hotel financing are set forth, including the interest rate, the amortization term, and the loan-to-value ratio.
2. An equity yield rate of return and terminal capitalization rate are established.
3. The value of the equity component is calculated and added to the initial mortgage amount to produce the overall property value.
4. The value estimate is allocated between the mortgage and equity components.

Researching and analyzing typical financing terms has been discussed in detail, so the next step is to establish an equity yield rate of return. Currently, a number of hotel buyers base their equity investments on a 10-year equity yield rate projection that takes into account the benefits of ownership, such as periodic cash flow distributions, residual sale or refinancing distributions that return property appreciation and mortgage amortization, income tax benefits, and non-financial considerations such as status and prestige. In addition, the appraiser must estimate a terminal capitalization rate, which will be used to capitalize the Year 11 net income into a reversionary value.

Next, the value of the equity component is calculated by deducting the yearly debt service from the forecasted income, which leaves the net income to equity for each year of the forecast. The net income as of Year 11 is capitalized into a reversionary value. After deducting the mortgage balance as of the end of the tenth year as well as normal legal and selling costs, the equity residual is discounted to the date of value at the equity yield rate. Next, the net income to equity for each of the 10 projection years is also discounted. The sum of these discounted values equals the value of the equity component. Adding the equity component to the initial mortgage balance yields the overall property value.

Because the amounts of the mortgage and the debt service are unknown but the loan-to-value ratio is determined in Step 1, the calculation can be solved either through an iterative process using a computer or with an algebraic equation that computes the total property value.

A complex algebraic equation that solves for the total property value using the 10-year mortgage-equity technique was developed by Suzanne R. Mellen, MAI. This equation is known as the *simultaneous valuation formula*. A complete discussion of this technique is contained in Mellen's article, "Simultaneous Valuation: A New Capitalization Technique for Hotel and Other Income Properties," which appeared in the April 1983 issue of *The Appraisal Journal*. Material from this article has been incorporated into this chapter.

Finally, the value estimate is proven by allocating the total property value between the mortgage and equity components and verifying that the rates of return set forth in Steps 1 and 2 can be precisely met through the forecasted net income.



## Case Study

### Determine the Appropriate Mortgage Debt Financing Terms

The mortgage interest regression formula indicates a current interest rate of 7%. Since the mortgage data reported by the American Council of Life Insurance generally represents investment-grade hotel properties, the appraiser may want to adjust this rate for the location, type of hotel, age and condition of the property, operating history, local supply and demand trends, management expertise and affiliation, and interest being appraised.

It is assumed that the proposed Marriott will have new facilities, good management, and a recognized affiliation. Offsetting these positive attributes is the projected downward trend in area occupancies as additional rooms open in the market and become more competitive. In addition to increased competition, the Marriott will have to survive the normal build-up of occupancy experienced by all new hotels; many lenders account for this risk factor. Based on the appraiser's analysis, the following mortgage terms would probably be available for the proposed Marriott:

Interest rate	7%
Amortization schedule	25 years
Payments per year	monthly
Mortgage constant	0.0848
Mortgage term	10 years
Loan-to-value ratio	70%

### Estimate an Appropriate Equity Yield and Terminal Capitalization Rate

A survey of hotel investors was conducted to determine their current equity yield requirements. In addition, the appraiser reviewed recent appraisals of hotels that sold proximate to the date of value. The range of equity yields for hotels comparable to the proposed Marriott is 16% to 20%.

Using the same investment criteria employed to determine the mortgage interest rate, an 18% equity yield rate was selected for the proposed Marriott. The terminal capitalization rate can be estimated with the mortgage-equity band of investment utilizing an equity dividend rate. The factors that were considered are set forth previously in this chapter in the discussion of capitalizing stabilized income.

Capital Components	Capital Ratios	Cost of Capital	Weighted Average
Mortgage	70% ×	0.0848	= 0.0594
Equity	30% ×	0.1200	= 0.0360
		Capitalization rate	= 0.0954

Adjusting the rates to reflect the tenth year terminal capitalization rate produces a going-out rate of 11.5% for the proposed Marriott. The terminal capitalization rate for a hotel is typically 100-200 basis points above the going-in rate or the stabilized capitalization rate.

### Estimate Overall Property Value by Valuing the Equity Component and Add It to the Initial Mortgage Balance

The remainder of the process is purely mathematical. The appraiser must solve an algebraic equation that calculates the exact amount of debt and equity that the hotel will be able to support based on the anticipated cash flow derived from the forecast of income and expense and the specific return requirements demanded by the mortgage lender (interest) and the equity investor (equity yield).

To solve for the value of the mortgage and equity components, the appraiser first deducts the yearly debt service from the forecast of income before debt service; the remainder is the net income to equity for each year in the forecast. The net income as of Year 11 is capitalized into a reversionary value using the terminal capitalization rate. The equity residual, which



is the total reversionary value minus the mortgage balance at that point in time and any broker, legal, and other closing costs associated with the sale, is discounted to the date of value at the equity yield rate. The net income to equity for each of the forecast years is also discounted. The sum of these discounted values equates to the value of the equity component. Since the equity component represents a specific percentage of the total value, the value of the mortgage and the total property value can be easily computed.

The process described in this section 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.

$NI$	Net income available for debt service
$V$	Value
$M$	Loan-to-value ratio
$F$	Annual debt service constant
$N$	Number of years in projection period
$d_e$	Annual cash available to equity
$d_r$	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
$R_r$	Overall terminal capitalization rate applied to net income to calculate total property reversion (sale price at end of the projection period)
$1/S_{\overline{n}}$	Current worth of \$1 (discount factor) at the equity yield rate

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

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

### 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 ( $d_e$ ) is the property’s net income before debt service ( $NI$ ) minus the debt service. The following formula represents net income to equity:

$$NI - (F \times M \times V) = d_e$$

### 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 ( $NI''$ ) by the terminal capitalization rate ( $R_r$ ). The following formula calculates the property’s reversionary value in Year 10:

$$NI''/R_r = \text{reversionary value}$$

### Broker, Legal, and Other Closing Costs

When a hotel is sold, 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 ( $NI^{11}/R_p$ ) can be calculated with the following formula:

$$(b(NI^{11}/R_p)) = \text{broker and legal costs}$$

### 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:

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

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 ( $M \times V$ ). The formula is:

$$(1 - P) \times M \times V = \text{ending mortgage balance}$$

### 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:

$$(NI^{11}/R_p) - (b(NI^{11}/R_p)) - ((1 - P) \times M \times V) = d,$$

### 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:

$$\begin{aligned} NI^1 - (F \times M \times V) &= d_e^1 \\ NI^2 - (F \times M \times V) &= d_e^2 \dots \\ NI^{10} - (F \times M \times V) &= d_e^{10} \\ (NI^{11}/R_p) - (b(NI^{11}/R_p)) - ((1 - P) \times M \times V) &= d_e \end{aligned}$$

### 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 ( $1/S^e$ ). 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:

$$(d_e^1 \times 1/S^1) + (d_e^2 \times 1/S^2) + \dots + (d_e^{10} \times 1/S) + (d_e \times 1/S^{10}) = (1 - M)V$$



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 equal the value of the equity.

$$((NI^1 - (f \times M \times V)) \, 1/S^1) + \dots + ((NI^2 - (f \times M \times V)) \, 1/S^2) + \dots + ((NI^{10} - (f \times M \times V)) \, 1/S^{10}) + \dots + (NI^{11}/R_p) - (b(NI^{11}/R_p)) - ((1 - P) \times M \times V) \, 1/S^{10} = (1 - M)V$$

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

Case Study

Applying the 10-Year Discounted Cash Flow Valuation Formula—Proposed Marriott

Generally, the net income before debt service is projected beyond the stabilized year at an assumed rate of change. By projecting increasing property revenues and expenses at the same rate of inflation, the net income expressed as a percentage of total revenue will remain constant and the dollar amount of net income will escalate each year at the rate of change. When a category of revenue or expense is expected to increase at a different rate, the appraiser should reflect this aberration in that specific year’s forecast of income and expense. This situation is likely to be the result of contractual changes in a ground rent expense, use of an escalating reserve for replacement percentage, or an expected change in the property tax expense.

The appraiser finds that hotel investors are using inflation rates of approximately 3%. The following table shows the net income of the proposed Marriott projected beyond the stabilized year at a 3% rate of inflation.

2014	\$3,754
2015	\$5,359
2016	\$5,686
2017	\$6,260
2018	\$7,227
2019	\$7,451
2020	\$7,667
2021	\$7,879
2022	\$8,184
2023	\$8,385
2024	\$8,637

Solving for Value Using the Simultaneous Valuation Formula

In the case of the subject property, the following variables are known:

Annual net income	NI	See previous table
Loan-to-value ratio	M	70%
Debt service constant	f	0.08481
Equity yield	Y <sub>e</sub>	18%
Brokerage and legal fees	b	2%
Annual constant required to amortize the loan in 10 years	f <sub>p</sub>	0.13933
Terminal capitalization rate	R <sub>t</sub>	11.5%

The following table shows the present worth of a \$1 factor at the 18% equity yield rate:

Year	Present Worth Factor at 18%
1	0.84746
2	0.71818
3	0.60863
4	0.51579
5	0.43711
6	0.37043
7	0.31393
8	0.26604
9	0.22546
10	0.19106

Intermediary calculations must be made using these known variables before the simultaneous valuation formula can be applied. The fraction of the loan paid off during the projection period is calculated as follows:

P = (0.08481 - 0.07) / (0.13933 - 0.07) = 0.213666

The annual debt service is calculated as  $f \times M \times V$ .

$$(f \times M \times V) = 0.08481 \times 0.7 \times V = (0.05937)V$$

Next, the formula is expressed in terms of  $V$ :

$$\begin{aligned} & (3,754,000 - 0.05937V) \times 0.84746 \\ & + (5,359,000 - 0.05937V) \times 0.71818 \\ & + (5,686,000 - 0.05937V) \times 0.60863 \\ & + (6,260,000 - 0.05937V) \times 0.51579 \\ & + (7,227,000 - 0.05937V) \times 0.43711 \\ & + (7,451,000 - 0.05937V) \times 0.37043 \\ & + (7,667,000 - 0.05937V) \times 0.31393 \\ & + (7,879,000 - 0.05937V) \times 0.26604 \\ & + (8,184,000 - 0.05937V) \times 0.22546 \\ & + (8,385,000 - 0.05937V) \times 0.19106 \\ & \quad + ((8,637,000 / 0.115) \\ & \quad - (0.02 \times (8,637,000 / 0.115)) \\ & \quad - ((1 - 0.213666) \times 0.7 \times V)) \\ & \quad \times 0.191064) = (1 - 0.7) V \end{aligned}$$

Then, like terms are combined:

$$\begin{aligned} \$41,650,924 - 0.371980V &= (1 - 0.7)V \\ \$41,650,924 &= 0.67198V \\ V &= \$41,650,924 / 0.67198 \\ V &= \$61,983,000 \end{aligned}$$

Total property value as indicated by the income capitalization approach = \$62,000,000 (rounded)

## Proof of Value

The value is mathematically proven by calculating the yields to the mortgage and equity components over the projec-

tion period. If the mortgagee receives its 7% yield and the equity yields 18%, then \$61,983,000 (rounded) is the correct value estimate derived by the income capitalization approach.

The indicated market value is allocated as follows:	
Mortgage component (70%)	\$43,388,000
Equity component (30%)	18,595,000
Total	\$61,983,000
Calculation of annual debt service:	
Mortgage component	\$43,388,000
Mortgage constant	0.084814
Annual debt service	\$3,679,888

Net income to equity is forecast in Exhibit 6.14.

The residual value to equity at the end of Year 10 is calculated by capitalizing the Year 11 net income as follows:

Reversionary value	
(\$8,637,000/0.115)	\$75,100,000
Less:	
Brokerage and legal fees	1,502,000
Mortgage balance	34,117,000
Net sale proceeds to equity	\$39,481,000

Adding the Year 10 projected net income to equity plus the equity residual produces the tenth year's cash flow to equity.

**Exhibit 6.14** Forecast of Net Income to Equity

Year	Net Income Available for Debt Service		Total Annual Debt Service		Net Income to Equity
2014	\$3,754,000	—	\$3,680,000	=	\$74,000
2015	5,359,000	—	3,680,000	=	1,679,000
2016	5,686,000	—	3,680,000	=	2,006,000
2017	6,260,000	—	3,680,000	=	2,580,000
2018	7,227,000	—	3,680,000	=	3,547,000
2019	7,451,000	—	3,680,000	=	3,771,000
2020	7,667,000	—	3,680,000	=	3,987,000
2021	7,879,000	—	3,680,000	=	4,199,000
2022	8,184,000	—	3,680,000	=	4,504,000
2023	8,385,000	—	3,680,000	=	4,705,000





Year 10 net income to equity	\$4,705
Net sales proceeds to equity	39,481
Total	<u>\$44,186</u>

The annual cash flow to equity plus the residual equity value is discounted to present value at the equity yield rate of 18% (see Exhibit 6.15).

This proves the equity component's value of \$18,595,000. Exhibit 6.15 demonstrates that the equity investor will receive an 18% yield on the equity component if

the annual cash flow and reversion take place as projected. Since the debt service factored into the calculations is based on an interest rate of 7%, the required yield for the lender will also be achieved. In addition to the yield to the equity investor, Exhibit 6.16 shows the property yield (11.4%) and the mortgage yield (6.93%).

As indicated in Exhibit 6.16, the mathematically correct yield to the mortgagee calculates to 6.9%. Whereas the mortgage constant and value are calculated on the basis of monthly mortgage payments,

#### Exhibit 6.15 Equity Component Yield (IRR of 18%)

Year	Net Income to Equity		Present Worth of \$1 Factor at 18.0%		Discounted Cash Flow
2014	\$74,000	×	0.847461	=	\$63,000
2015	1,679,000	×	0.718190	=	1,206,000
2016	2,006,000	×	0.608639	=	1,221,000
2017	2,580,000	×	0.515798	=	1,331,000
2018	3,547,000	×	0.437118	=	1,550,000
2019	3,771,000	×	0.370441	=	1,397,000
2020	3,987,000	×	0.313934	=	1,252,000
2021	4,199,000	×	0.266047	=	1,117,000
2022	4,504,000	×	0.225465	=	1,015,000
2023	44,186,000*	×	0.191072	=	<u>8,443,000</u>
Value of equity component					\$18,595,000

\* 10th year net income to equity of \$4,705,000 plus sales proceeds of \$39,481,000

#### Exhibit 6.16 Total Property Yield and Mortgage Component Yield

##### Proof of 11.5% Total Property Yield or Unleveraged IRR

Year	Net Income Available for Debt Service		Present Worth of \$1 Factor at 11.4%		Discounted Cash Flow
2014	\$3,754,000	×	0.897933	=	\$3,371,000
2015	5,359,000	×	0.806284	=	4,321,000
2016	5,686,000	×	0.723989	=	4,117,000
2017	6,260,000	×	0.650094	=	4,070,000
2018	7,227,000	×	0.583741	=	4,219,000
2019	7,451,000	×	0.524161	=	3,906,000
2020	7,667,000	×	0.470661	=	3,609,000
2021	7,879,000	×	0.422622	=	3,330,000
2022	8,184,000	×	0.379487	=	3,106,000
2023	81,983,000*	×	0.340754	=	<u>27,936,000</u>
Total property value					\$61,985,000

\* 10th year net income of \$8,385,000 plus sales proceeds of \$73,598,000





Proof of Mortgage Yield					
Year	Total Annual Debt Service		Present Worth of \$1 Factor at 6.9%		Discounted Cash Flow
2014	\$3,680,000	×	0.935191	=	\$3,442,000
2015	3,680,000	×	0.874582	=	3,218,000
2016	3,680,000	×	0.817901	=	3,010,000
2017	3,680,000	×	0.764893	=	2,815,000
2018	3,680,000	×	0.715321	=	2,632,000
2019	3,680,000	×	0.668962	=	2,462,000
2020	3,680,000	×	0.625607	=	2,302,000
2021	3,680,000	×	0.585062	=	2,153,000
2022	3,680,000	×	0.547144	=	2,013,000
2023	37,797,000*	×	0.511684	=	19,340,000
Value of mortgage component					\$43,387,000

\* 10th year debt service of \$3,680,000 plus outstanding mortgage balance of \$34,117,000

the mortgage yield in this proof assumes single annual payments. As a result, the	proof's derived yield may be slightly less than the stipulated investment parameter.
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One advantage of valuing a hotel with a 10-year forecast using an equity yield rate is that the projection period can specifically show the build-up of net income over the assumed holding period used by most investors. Another benefit is that the value of the mortgage component can be easily substantiated in the market by analyzing current and comparable mortgage terms for similar lodging facilities; assuming a 70% loan-to-value ratio, 70% of the property's market value can be supported.

The difficult part of this approach is estimating the proper equity yield rate. Although many hotel owners have become more sophisticated, they do not always understand the meaning of equity yield from an appraiser's point of view. Some still think in terms of cash on cash or equity dividend and hold that the reversionary benefits of property appreciation and mortgage amortization are inherently considered in an equity dividend rather than specifically incorporated into a yield calculation. Consequently, care must be exercised in obtaining yield rates from investors to ensure that their responses represent yields rather than dividends.

Even with good data and support, estimating a hotel equity yield rate is a subjective process based largely on professional judgment. On the other hand, the estimate of a hotel mortgage interest rate can be well documented using published life insurance industry data and the interest rate regression formula described previously. Although an element of subjectivity remains, the value of the mortgage component is largely objective. Thus, the capitalization technique produces results that are approximately 70% objective and 30% subjective. In contrast, a 10-year forecast using a discount rate produces results that must be considered largely subjective and that do not reflect the investment analysis procedures currently used by typical hotel buyers.



# 10-Year Forecast Using a Discount Rate

Some large institutional investors who purchase hotels on an unleveraged basis (with no debt capital) will apply an overall discount rate to the 10-year forecast of net income before debt service. To this discounted cash flow, they add the discounted value of the property at the end of the tenth year, which is derived by capitalizing the net income in Year 11 at the terminal capitalization rate.

## Case Study

### Applying a Discount Rate to the 10-Year Forecast

In the following example, data associated with the proposed Marriott portion of the case study is used to illustrate 10-year forecasting using a discount rate. The following table shows the projected annual net income before debt service developed previously for the proposed Marriott.

2014	\$3,754
2015	\$5,359
2016	\$5,686
2017	\$6,260
2018	\$7,227
2019	\$7,451
2020	\$7,667
2021	\$7,879
2022	\$8,184
2023	\$8,385
2024	\$8,637

The following inputs were developed based on surveys of hotel investors:

Discount rate	11.4%
Terminal capitalization rate	11.5%
Brokerage and legal expense	2% of sale price

The reversionary value is calculated by capitalizing the net income before debt service in Year 11 at the terminal capitalization rate:

$\$8,637,000 \div 0.115$	\$75,100,000
Sales proceeds	\$75,100,000
Less: brokerage and legal (2%)	1,502,000
Net sales proceeds	\$73,598,000
<b>Tenth year net income plus net sales proceeds:</b>	
Net income 10th year	\$8,385,000
Net sales proceeds	73,598,000
Total	\$81,983,000

When the net income before debt service for each year plus the reversionary value (net sales proceeds) are discounted to present value at the 11.4% discount rate, it results in a value of \$63,060,000 for the proposed Marriott (see Exhibit 6.17).

The 11.4% discount rate for the proposed Marriott was established based on investor surveys. As discussed previously, the reliability of these types of surveys is not always good. A more important reason for not utilizing an overall discount rate developed from investor surveys is the length of time between the performance of

Exhibit 6.17 Total Property Present Value			
Year	Net Income before Debt Service	PV Factor @ 11.4%	Discounted Cash Flow
1	\$3,754	0.897933	\$3,371
2	\$5,359	0.806284	\$4,321
3	\$5,686	0.723989	\$4,117
4	\$6,260	0.650094	\$4,070
5	\$7,227	0.583741	\$4,219
6	\$7,451	0.524161	\$3,906
7	\$7,667	0.470661	\$3,609
8	\$7,879	0.422622	\$3,330
9	\$8,184	0.379487	\$3,106
10	\$81,983	0.340754	\$27,936
Total property value			\$61,982

Exhibit 6.18 shows the parameters for valuing the proposed Marriott. Column A shows the parameters used in the case study. The resulting value is \$61,983,000. The calculated discount rate is 11.4%. Now assume that there was a major economic collapse while the appraisal was being performed, and interest rates rose 200 basis points within a week's time. There would be no way to measure the impact of this new interest rate environment by attempting to talk with investors. However, by using the previously described regression formula and inputting the current Average A corporate bond yields, the appraiser would determine that hotel interest

This example provides compelling support for utilizing a mortgage equity valuation model for hotels. In countries where debt financing may not be readily available, such as Brazil, the mortgage equity model can still be used by assuming that the loan-to-value ratio is 0%. (Note that because the Excel models cannot actually handle a 0% loan-to-value ratio, users should input 0.0000000001. This will provide the same results)

	A	B	C
Mortgage interest	7.0%	9.0%	6.0%
Amortization	25 years	25 years	25 years
Loan to value	70%	70%	70%
Equity yield	18.0%	18.0%	18.0%
Terminal capitalization rate	11.5%	11.5%	11.5%
Selling expenses	2.0%	2.0%	2.0%
Market value (\$000)	\$61,983	\$57,255	\$64,541
Calculated discount rate	11.4%	12.6%	10.7%

The Hotel Valuation Software has two hotel mortgage-equity valuation modules:

- Both models utilize the previously described mortgage-equity valuation procedure. The variable hold model allows the appraiser to select a projection period from 1 to 10 years. The refinancing model provides the option to refinance the initial mortgage at some point during the 10-year projection period. The refinancing model is useful when most market participants anticipate refinancing, such as during a period of relatively low loan-to-value ratios like 2008 to 2011.

Both of the software modules will be demonstrated using the data from the proposed Marriott case study.

**Hotel Mortgage-Equity Valuation Module—Variable Hold  
(HMEV VarHold V3-Tabs)**

The following screenshot shows the Intro page for the HMEV VarHold V3 software.

Hotel Valuation Software

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Intro

HCS Inputs

Underwriting Matrix

LTV Output

DCR Output

Debt Yield Output

Hotel Valuation Software, 3<sup>rd</sup> Edition

Hotel Mortgage-Equity Valuation Model

Begin Analysis

By Jan A. deRoos, Ph.D. , Stephen Rushmore, MAI, FRICS, CHA and  
Suzanne Mellen, MAI, FRICS, CRE

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As a freely downloadable tool, the authors, Hotel Valuation Software Inc., the Center for Hospitality Research and the School of Hotel Administration will not provide any type of software support as part of the distribution. If you have a question or problem, please contact the Center for Hospitality Research; the e-mail address is hosp\_research@cornell.edu.

The next screen is for the input of mortgage equity information.

**Hospitality Valuation Software**

Contents

Intro

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Underwriting Matrix

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DCR Output

Debt Yield Output

**Hotel Mortgage-Equity Valuation Model Inputs**

Enter the project information for this analysis below:

<b>Job Title:</b>	Proposed Marriott Hotel
<b>Prepared By:</b>	Steve Bachmire
<b>Prepared For:</b>	HE Hospitality, LLC
<b>Job ID:</b>	4437
<b>Number Of Rooms:</b>	200

Enter Input Legend

Mandatory Input:	<div style="width: 20px; height: 10px; background-color: #FFD700; border: 1px solid black;"></div>
Optional Input:	<div style="width: 20px; height: 10px; background-color: #FFA500; border: 1px solid black;"></div>
Output Only:	<div style="width: 20px; height: 10px; background-color: #FF8C00; border: 1px solid black;"></div>
No User Input:	<div style="width: 20px; height: 10px; background-color: #FF69B4; border: 1px solid black;"></div>
Information/Instructional:	<div style="width: 20px; height: 10px; background-color: #ADD8E6; border: 1px solid black;"></div>

Valuation Input

<b>First Projection Year:</b>	2014
<b>Holding Period:</b>	10
<b>Stabilized Year:</b>	2019
<b>Realty Yield:</b>	8.00%
<b>Turned Cap Rate:</b>	11.50%
<b>Selling Expenses:</b>	2.00%
<b>Mortgage Interest Rate:</b>	7.00%
<b>Mortgage Amortization:</b>	25
<b>Mortgage Payments Per Year:</b>	12

Net Income Input

2014:	\$								3,784
2015:	\$								5,359
2016:	\$								5,656
2017:	\$								6,280
2018:	\$								7,277
2019:	\$								7,451
2020:	\$								7,629
2021:	\$								7,879
2022:	\$								8,164
2023:	\$								8,385
2024:	\$								8,637

Inflation Rate After NOI Stabilizes: 3.00%

< Go Back
Continue >

The following screenshot shows the mortgage equity inputs. The holding period is 10 years in this example. If a shorter holding period is desired, enter the number of years on this line. The net income is entered up to the year in which it stabilizes and future increases are based on an assumed inflation rate. The net income for the proposed Marriott is projected to stabilize in 2019, at which point any further increase would be based on the 3% inflation rate.



Enter the project information for this analysis below.	
<b>Job Title:</b>	Proposed Marriott Hotel
<b>Prepared By:</b>	Steve Rushmore
<b>Prepared For:</b>	HEI Hospitality, LLC
<b>Job ID:</b>	4451
<b>Number Of Rooms:</b>	200

Valuation Inputs	
<b>First Projection Year:</b>	2014
<b>Holding Period:</b>	10
<b>Stabilized Year:</b>	2019
<b>Equity Yield:</b>	18.00%
<b>Terminal Cap Rate:</b>	11.50%
<b>Selling Expenses:</b>	2.00%
<b>Mortgage Interest Rate:</b>	7.00%
<b>Mortgage Amortization:</b>	25
<b>Mortgage Payments Per Year:</b>	12

Net Income Inputs	
<b>2014:</b>	\$ 3,754
<b>2015:</b>	\$ 5,359
<b>2016:</b>	\$ 5,686
<b>2017:</b>	\$ 6,260
<b>2018:</b>	\$ 7,227
<b>2019:</b>	\$ 7,451
<b>2020:</b>	\$ 7,667
<b>2021:</b>	\$ 7,879
<b>2022:</b>	\$ 8,184
<b>2023:</b>	\$ 8,385
<b>2024:</b>	\$ 8,637
<b>Inflation Rate After NOI Stabilizes:</b>	3.00%

< Go Back
Continue >

After the net income is entered up to the stabilized year and the stabilized inflation rate is entered on the line labeled “Inflation Rate after *NOI* Stabilizes,” the box labeled “Auto Fill Inflation” should be clicked. This will increase the projected net income for the subsequent years at the inflation rate.

On the next screen, which is the Underwriting Matrix page, the model estimates the value of the hotel using three mortgage-equity valuation methodologies: loan to value, debt coverage, and debt yield.



**Hospitality Valuation Software**

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Intro

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**Underwriting Matrix**

LTV Output

DCR Output

Debt Yield Output

## Underwriting Matrix

Fill out the matrix below with the appropriate values to complete the analysis.

<b>Loan To Value</b>	<b>For Valuation Estimate</b>
	Loan To Value Ratio: <input style="width: 100%;" type="text"/>
<b>Debt Coverage Ratio</b>	
	Debt Coverage Ratio (DCR): <input style="width: 100%;" type="text"/>
	Year NOI To Be Used: <input style="width: 100%;" type="text"/>
<b>Debt Yield</b>	
	Debt Yield: <input style="width: 100%;" type="text"/>
	Year NOI To Be Used: <input style="width: 100%;" type="text"/>
<a href="#">&lt; Go Back</a>	<a href="#">Continue &gt;</a>

The loan-to-value methodology will value the hotel to produce a specific loan-to-value ratio. For the proposed Marriott, the case study assumes a 70% loan-to-value ratio. The debt coverage methodology will value the hotel to produce a specific debt coverage ratio as of a specified year. For the proposed Marriott case study, a 1.4 debt coverage ratio needs to be achieved by 2015, the second year of operation.

The debt yield methodology will value the hotel to produce a specific debt yield as of a specified year. For the proposed Marriott case study, a 12% debt yield needs to be achieved by 2015, the second year of operation.

The following screenshot shows the loan to value, debt coverage, and debt yield data entered into the software.

## Underwriting Matrix

Fill out the matrix below with the appropriate values to complete the analysis.

<b>Loan To Value</b>	<b>For Valuation Estimate</b>
	Loan To Value Ratio: <input style="width: 100%;" type="text" value="70.00%"/>
<b>Debt Coverage Ratio</b>	
	Debt Coverage Ratio (DCR): <input style="width: 100%;" type="text" value="1.40"/>
	Year NOI To Be Used: <input style="width: 100%;" type="text" value="2015"/>
<b>Debt Yield</b>	
	Debt Yield: <input style="width: 100%;" type="text" value="12.00%"/>
	Year NOI To Be Used: <input style="width: 100%;" type="text" value="2015"/>
<a href="#">&lt; Go Back</a>	<a href="#">Continue &gt;</a>

The next screen is the output screen for the loan-to-value methodology for the proposed Marriott.

## Proposed Marriott Hotel, Job ID: 4451

Proposed Marriott Hotel, Job ID: 4451

[illegible]



In the upper left corner of the screen is a box that summarizes the property value shown as the total property value, the value of the mortgage component, and the value of the equity component. The loan-to-value ratio is 70%. The box also contains the *IRR* for each of the three components. The *IRR* of 11.39% for the value of the property is the total property yield, which is the unleveraged *IRR* and also the calculated discount rate. The 6.93% is the annual *IRR* for the mortgage. If this *IRR* was calculated assuming monthly payments, it would equal the mortgage interest rate of 7%. The software values the property assuming monthly mortgage payments, so the actual value of the property and the components are accurate. The 18% *IRR* for the equity component is the equity yield rate.

The Project Metrics box to the right contains useful data on the valuation. The following are the definitions of these metrics:

- Total appreciation: The change in property value over the holding period
- Annual appreciation: The average annual compound property value appreciation rate
- Cash flow return: The portion of property value attributed to property cash flows over the holding period
- Appreciation return: The portion of property value attributable to the reversion at the end of the holding period
- Total property yield: Unleveraged *IRR* over the holding period
- Stabilized going-in capitalization rate: The stabilized year's net operating income (adjusted for inflation) divided by property value

The long row of numbers below these boxes contains the cash flows used to calculate the *IRR*. The year 2013 (Year 0) is the calculated value of each component used to determine the *IRR*. The total property cash flows are the net incomes that were projected for the proposed Marriott and entered in the input screen. The mortgage line contains the annual debt service. The equity line is the cash flow to equity each year, which is the net income less the annual debt service.

The data in the 2023 column is:

- \$81,987: The net sale price of \$73,602 plus the Year 10 projected net income of \$8,385. The net sale price is the Year 11 net income of \$8,637 capitalized at 11.5% (\$75,104), less 2% selling expenses of \$1,502.
- \$37,798: The remaining mortgage balance of \$34,118 plus the Year 10 debt service of \$3,680.
- The equity residual of \$39,484 plus the Year 10 net income to equity of \$4,705. The equity residual is the net sale price of \$73,602 less the remaining mortgage balance of \$34,118.

The ratio lines show the debt coverage ratio, the debt yield, and the equity dividend rate for each of the projection years. The calculated ratios for the Year 2015 are:

- Debt coverage ratio: (net income/debt service)  $\$5,359/\$3,680 = 1.46$
- Debt yield: (net income/value of mortgage component)  $\$5,359/\$43,388 = 12.35\%$



- Equity dividend rate: (cash flow to equity/value of equity component)  
 $\$1,679/\$18,595 = 9.03\%$

The proof of value toward the bottom of the screen shows the discounted cash flow calculations for the total property value, the mortgage component value, and the equity component value, which proves that each of the value components actually receives the yields that were entered into the model.

The following screen shows the output based on the debt coverage ratio methodology. The value of the total property using the debt coverage ratio is \$62,801,000. The proof that this value is correct is the debt coverage ratio line for 2015, which shows a debt coverage ratio of 1.4.



**Job Title:** Proposed Marriott Hotel, Job ID: 4451

The following screen shows the output based on the debt yield methodology. The value of the total property using the debt yield is \$62,579,000. The proof that this value is correct is the debt yield line in 2015, which shows a debt yield of 12%.

## Debt Yield Ratio Output

Job Title: Proposed Marriott Hotel, Job ID: 4451

### Debt Yield Model

	Value Per Room	IRR	Project Metrics
Value of the Property	\$ 312,593	11.22%	Total Appreciation 20.02%
Value of the Mortgage Component	\$ 17,920	✓	Appreciation Cash Flow 14.44%
Value of the Equity Component	\$ 63,601	18.00%	Appreciation Return 59.39%
			Appreciation Return 40.61%
			Total Property Yield 11.22%
			Stabilized Going In Cap Rate 10.27%

Cash Flow for IRR Calc	Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Property		\$ (62,579)	\$ 3,754	\$ 5,359	\$ 3,788	\$ 5,686	\$ 6,260	\$ 7,227	\$ 7,451	\$ 7,667	\$ 7,879	\$ 8,184
Mortgage		\$ (44,658)	\$ 3,788	\$ 3,788	\$ 3,788	\$ 3,788	\$ 3,788	\$ 3,788	\$ 3,788	\$ 3,788	\$ 3,788	\$ 3,788
Equity		\$ (17,920)	\$ (34)	\$ 1,571	\$ 1,571	\$ 1,898	\$ 2,472	\$ 3,439	\$ 3,663	\$ 3,879	\$ 4,091	\$ 4,396
			0.99	1.41	1.41	1.50	1.65	1.91	1.97	2.02	2.08	2.16
Debt Coverage Ratio		8.41%	12.00%	12.00%	12.73%	14.02%	16.18%	16.68%	17.17%	17.64%	18.33%	18.78%
Debt Yield		-0.19%										
Equity Dividend Rate												

Proof of Value	Total Property Present Value	Mortgage Component Present Value	Equity Component Present Value
	Net Income Before	Net Income Before	Net Income Before
	D. S.	D. S.	D. S.
Year	Year	Year	Year
2014	\$ 3,754	\$ 3,788	\$ (34)
2015	\$ 5,359	\$ 3,788	\$ 1,571
2016	\$ 5,686	\$ 3,788	\$ 1,998
2017	\$ 6,260	\$ 3,788	\$ 2,472
2018	\$ 7,227	\$ 3,788	\$ 3,439
2019	\$ 7,451	\$ 3,788	\$ 3,663
2020	\$ 7,667	\$ 3,788	\$ 3,879
2021	\$ 7,879	\$ 3,788	\$ 4,091
2022	\$ 8,184	\$ 3,788	\$ 4,396
2023	\$ 8,187	\$ 3,804	\$ 43,083
	\$ 62,573	\$ 44,658	\$ 17,920
Year 10 Net Income of	\$ 8,385	\$ 3,788	\$ 4,597
+ Reversion of	\$ 73,602	\$ 35,116	\$ 38,486
	\$ 81,987	\$ 38,904	\$ 43,083

### Reversion Cash Flow Calculations

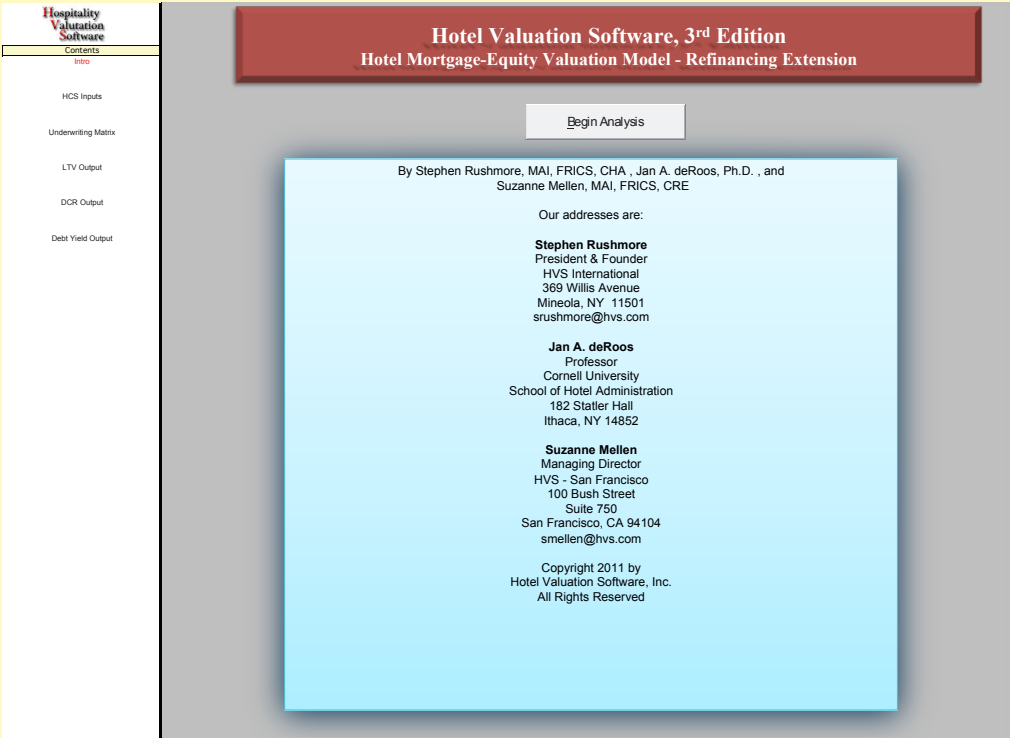
Year 11 Net Income of \$8637 capitalized at 11.5% equals	\$ 75,104
Less: Selling Expenses	\$ 1,502
Equals: Net sales price	\$ 73,602

### Reversion Calculations for Proof

Net Sales Price	\$ 73,602
Less: RMB	\$ 35,116
Equals: Equity Residual	\$ 38,486

**Hotel Mortgage-Equity Valuation Model—Refinancing Extension  
(HMEV Refi V3)**

The following screenshot shows the Intro page for the HMEV Refi V3 software.



The next screen is the Hotel Mortgage-Equity Valuation Model Inputs screen, where the mortgage equity and refinancing information is entered.

Hotel Mortgage-Equity Valuation Model Inputs - Refi Extension

Enter the project information for this analysis below.

Job Title:   
Prepared By:   
Prepared For:   
Job ID:   
Number of Rooms:

Valuation Inputs

First Projection Year:   
Stabilized Year:   
Equity Yield:   
Terminal Cap Rate:   
Selling Expense:   
Mortgage Interest Rate (Initial):   
Mortgage Amortization (Initial):   
Mortgage Payments Per Year (Initial):

Refinancing Inputs

Refinance Year:   
Mortgage Interest Rate (Refi):   
Mortgage Amortization (Refi):   
Mortgage Payments Per Year (Refi):   
Refi Costs (As a % of Gross Refi Proceeds):

Net Income Inputs

☐ Auto Fill Inflation

Inflation Rate After NOI Stabilizes:

[< Go Back](#)
[Continue >](#)

Color Input Legend

Mandatory Input:   
Optional Input:   
Output Only:   
No User Input:   
No User Input:   
Information/Instructional:

The following screen shows all the mortgage-equity and refinancing data entered. The information entered here is the same as in the previous model, with the following differences:

- The Valuation Inputs box contains information on the initial financing.
- The Refinancing Inputs box contains information on the refinancing, including the refinance year and the refinance cost (as a percentage of gross refinance proceeds).
- The refinancing inputs assume that the mortgage is refinanced in 2018.
- The interest rate is projected to decline to 6%.
- The refinance costs are estimated to be 1%.

Note that the auto fill inflation for the net income inputs works the same as in the previous model. The mortgage and equity valuation inputs are the same as the ones that were used in the previous valuation software. The amortization and payments per year also remain the same.



Enter the project information for this analysis below.																																					
<b>Job Title:</b>	Proposed Marriott																																				
<b>Prepared By:</b>	Steve Rushmore																																				
<b>Prepared For:</b>	HEI Hospitality, LLC																																				
<b>Job ID:</b>	4451																																				
<b>Number of Rooms:</b>	200																																				
Valuation Inputs																																					
<b>First Projection Year:</b>	2014																																				
<b>Stabilized Year:</b>	2019																																				
<b>Equity Yield:</b>	18.00%																																				
<b>Terminal Cap Rate:</b>	11.50%																																				
<b>Selling Expenses:</b>	2.00%																																				
<b>Mortgage Interest Rate (Initial):</b>	7.00%																																				
<b>Mortgage Amortization (Initial):</b>	25																																				
<b>Mortgage Payments Per Year (Initial):</b>	12																																				
Refinancing Inputs																																					
<b>Refinance Year:</b>	2018																																				
<b>Mortgage Interest Rate (Refi):</b>	6.00%																																				
<b>Mortgage Amortization (Refi):</b>	25																																				
<b>Mortgage Payments Per Year (Refi):</b>	12																																				
<b>Refi Costs (As a % of Gross Refi Proceeds):</b>	1.00%																																				
Net Income Inputs																																					
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Auto Fill Inflation</div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr><td>2014:</td><td>\$</td><td>3,754</td></tr> <tr><td>2015:</td><td>\$</td><td>5,359</td></tr> <tr><td>2016:</td><td>\$</td><td>5,686</td></tr> <tr><td>2017:</td><td>\$</td><td>6,260</td></tr> <tr><td>2018:</td><td>\$</td><td>7,227</td></tr> <tr><td>2019:</td><td>\$</td><td>7,451</td></tr> <tr><td>2020:</td><td>\$</td><td>7,667</td></tr> <tr><td>2021:</td><td>\$</td><td>7,879</td></tr> <tr><td>2022:</td><td>\$</td><td>8,184</td></tr> <tr><td>2023:</td><td>\$</td><td>8,385</td></tr> <tr><td>2024:</td><td>\$</td><td>8,637</td></tr> <tr> <td><b>Inflation Rate After NOI Stabilizes:</b></td> <td></td> <td>3.00%</td> </tr> </tbody> </table>	2014:	\$	3,754	2015:	\$	5,359	2016:	\$	5,686	2017:	\$	6,260	2018:	\$	7,227	2019:	\$	7,451	2020:	\$	7,667	2021:	\$	7,879	2022:	\$	8,184	2023:	\$	8,385	2024:	\$	8,637	<b>Inflation Rate After NOI Stabilizes:</b>		3.00%
2014:	\$	3,754																																			
2015:	\$	5,359																																			
2016:	\$	5,686																																			
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2022:	\$	8,184																																			
2023:	\$	8,385																																			
2024:	\$	8,637																																			
<b>Inflation Rate After NOI Stabilizes:</b>		3.00%																																			
< Go Back	Continue >																																				

The next screen shows the Underwriting Matrix. The Hotel Mortgage-Equity Valuation Model–Refinance Extension software values the hotel based on a loan-to-value ratio and also a debt coverage ratio. This information is entered twice: the first time is for the valuation estimate that will serve as the basis for the overall value and the second serves as the basis for the refinancing valuation. The loan-to-value ratio for the initial mortgage is 70%. At refinancing, this amount is anticipated to increase to 75%. The initial debt coverage ratio is anticipated to be 1.4 in 2015, increasing to 1.5 at refinancing in 2018.



## Underwriting Matrix

Fill out the matrix below with the appropriate values to complete the analysis.

### Loan To Value

#### For Valuation Estimate

#### In Year Of Refi

Loan To Value Ratio:

70.00%

75.00%

### Debt Coverage Ratio

Debt Coverage Ratio (DCR):

1.40

1.50

Year NOI To Be Used:

2015

2018

[< Go Back](#)

[Continue >](#)

The next screen shows the loan-to-value output. The box located in the upper left corner contains a recap of the valuation inputs. The box to the right of the Valuation Input box is the Valuation Output box, which indicates a value of \$61,983,496. This value assumes that the projected net income is valued assuming the initial mortgage equity parameters. This value, along with all the other information in this book, is identical to the value obtained from the previous variable hold valuation module.

The next box shows the mortgage equity valuation inputs for the refinancing assumption. The last box contains the valuation outputs as of the refinancing. As of 2018, the value is \$84,394,875, which comes to \$421,974 per room. The calculated discount rate is 9.96%. The capitalization rate based on the first year's net operating income (*NOI*) is 8.83%. The new mortgage is \$63,296,156. The annual debt service is \$4,893,816. The debt coverage ratio as of the refinance year is 1.52.

The next row of boxes titled "LTV Model" shows the valuation output assuming the refinancing. The value of the property is \$66,068. The mortgage is \$43,388, and the equity is \$22,680. The Metrics box is the same as in the previously described variable hold valuation module.

The next section, labeled "Cash Flows for *IRR* Calcs," shows how the refinancing actually works. The total property cash flow figures are the net income figures developed from the subject Marriott case study. Refinancing is anticipated to occur in 2018, and the mortgage line shows a negative \$20,062, which is the net mortgage flow calculated as follows:

Refinancing year value	\$84,395
New loan to value ratio	75.00%
New mortgage amount	\$63,296
Rem. balance on initial mortgage	\$39,554
Gross refinancing proceeds	\$23,742
Less: DS on initial mortgage	\$3,680
Net mortgage flow	\$20,062





In 2018, the net income to equity is calculated as follows:

Refi year net income to equity	\$3,547
plus the gross refi proceeds	\$23,742
less the refinancing costs	\$633
Net income to equity	\$26,656

The tables at the bottom of the screen show the proof of value for each component. Throughout these calculations, the equity actually yielded the assumed 18%.



## Loan To Value Outputs

Job Title: Proposed Marriott Job ID: 4451

Value Based On Currently Available Parameters			
Valuation Input	Valuation Metric	Valuation Output	Valuation Output
Loan to Value Ratio	61,983,466	20.19	84,394,975
Amortization	303,917	3.00%	421,974
Loan Term	11.37%	75.00%	9.96%
Interest Rate	6.06%	Overall Discount Rate	9.96%
Cap Rate - 1st Year NOI	43,388,447	Cap Rate - 1st Year NOI	8.83%
Mortgage @ 70% LTV	216,942	Mortgage @ 75% LTV	63,296,156
Mortgage Per Room	3,679,926	Mortgage Per Room	316,481
Annual Debt Service	1,02	Annual Debt Service	4,893,816
Debt Coverage Ratio - Year 1	1.02	Debt Coverage Ratio - Full Year	1.32
Equity Yield	18.00%	Equity Yield	18.00%

### LTV Model

	\$ (000)	RR	Value Per Room	Metric
Value of the Property	\$ 66,068	10.39%	\$ 330,341	Total Appreciation
Value of the Mortgage Component	\$ 43,388	6.43%	\$ 216,942	Annual Appreciation
Value of the Equity Component	\$ 22,680	18.00%	\$ 113,399	Cash Flow Return
				Appreciation Return
				Total Property Yield
				Stabilized Cash II Rate

Cash Flows for RR Cals	Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Property		\$ (66,068)	\$ 3,754	\$ 5,359	\$ 7,427	\$ 9,586	\$ 12,727	\$ 14,881	\$ 17,036	\$ 19,191	\$ 21,346	\$ 23,501
Mortgage		\$ (43,388)	\$ 3,680	\$ 5,359	\$ 7,427	\$ 9,586	\$ 12,727	\$ 14,881	\$ 17,036	\$ 19,191	\$ 21,346	\$ 23,501
Equity		\$ (22,680)	\$ 74	\$ 1,679	\$ 2,006	\$ 2,580	\$ 2,656	\$ 2,557	\$ 2,557	\$ 2,773	\$ 2,985	\$ 3,290
Debt Coverage Ratio		1.02	8.65%	12.35%	13.10%	13.43%	13.68%	13.93%	14.18%	14.43%	14.68%	14.93%
Equity Dividend Ratio		7.40%	10.39%	12.35%	13.10%	13.43%	13.68%	13.93%	14.18%	14.43%	14.68%	14.93%

### Proof of Value

Year	Net Income Before	D. S.	Total Property Present Value	Discounted Cash Flow	Year	Net Income Before	D. S.	Mortgage Component Present Value	Discounted Cash Flow	Year	Net Income Before	D. S.	Equity Component Present Value	Discounted Cash Flow
2014	\$ 3,754	\$ 10.39%	\$ 3,401	\$ 3,401	2014	\$ 3,680	\$ 6.43%	\$ 3,680	\$ 3,458	2014	\$ 74	\$ 18%	\$ 74	\$ 63
2015	\$ 5,359	\$ 0.8207	\$ 4,398	\$ 4,398	2015	\$ 5,359	\$ 0.8207	\$ 5,359	\$ 5,053	2015	\$ 1,679	\$ 0.742	\$ 1,679	\$ 1,206
2016	\$ 7,427	\$ 0.7435	\$ 5,686	\$ 5,686	2016	\$ 7,427	\$ 0.7435	\$ 7,427	\$ 7,053	2016	\$ 2,006	\$ 0.686	\$ 2,006	\$ 1,221
2017	\$ 9,586	\$ 0.6717	\$ 7,171	\$ 7,171	2017	\$ 9,586	\$ 0.6717	\$ 9,586	\$ 9,181	2017	\$ 2,557	\$ 0.631	\$ 2,557	\$ 1,631
2018	\$ 12,727	\$ 0.6031	\$ 9,221	\$ 9,221	2018	\$ 12,727	\$ 0.6031	\$ 12,727	\$ 12,324	2018	\$ 2,656	\$ 0.583	\$ 2,656	\$ 1,732
2019	\$ 14,881	\$ 0.5527	\$ 10,951	\$ 10,951	2019	\$ 14,881	\$ 0.5527	\$ 14,881	\$ 14,481	2019	\$ 2,773	\$ 0.537	\$ 2,773	\$ 1,833
2020	\$ 17,036	\$ 0.5007	\$ 12,839	\$ 12,839	2020	\$ 17,036	\$ 0.5007	\$ 17,036	\$ 16,636	2020	\$ 2,985	\$ 0.491	\$ 2,985	\$ 1,934
2021	\$ 19,191	\$ 0.4536	\$ 14,881	\$ 14,881	2021	\$ 19,191	\$ 0.4536	\$ 19,191	\$ 18,791	2021	\$ 3,290	\$ 0.445	\$ 3,290	\$ 2,035
2022	\$ 21,346	\$ 0.4109	\$ 17,036	\$ 17,036	2022	\$ 21,346	\$ 0.4109	\$ 21,346	\$ 20,946	2022	\$ 3,547	\$ 0.400	\$ 3,547	\$ 2,136
2023	\$ 23,501	\$ 0.3723	\$ 19,191	\$ 19,191	2023	\$ 23,501	\$ 0.3723	\$ 23,501	\$ 23,101	2023	\$ 3,804	\$ 0.355	\$ 3,804	\$ 2,237

### Refinancing Year Calculations

Refinancing Year Value	\$ 84,395
New Loan to Value Ratio	75.00%
New Mortgage Amount	\$ 63,296
Balance on Initial Mortgage	\$ 39,554
Gross Refinancing Proceeds	\$ 23,742
Less DS on Initial Mortgage	\$ 3,680
Net Mortgage Flow	\$ 20,062

Ref Year Net Income to Equity	\$ 3,547
plus the Gross Refi Proceeds	\$ 23,742
less the Refinancing Costs	\$ 633
Net Income to Equity	\$ 26,656

### Reversion Cash Flow Calculations

Year 10 Net Income of	\$ 8,385
+ reversion of	\$ 23,602
	\$ 81,987

### Reversion Calculations for Proof

Year 11 Net Income of \$8,637	\$ 75,104
capitalized at 11.5% equals	\$ 1,502
Less: Selling Expenses	\$ 73,602
Equals: Net sales price	\$ 1,502

Year 10 Net Inc. to Equity of  
+ the equity residual of.

Net Sales Price  
Less: RMB  
Equals: Equity Residual

Year 10 mort. Payment of  
+ the RMB of.

The reversion is the remaining mortgage balance (RMB) of the  
loan in at the end of year 10.

Under the refinancing assumption, the value of the proposed Marriott increased approximately \$4,000,000, from \$62,000,000 to \$66,000,000. The refinancing module is useful during periods in which financing is scarce or rates are very high and there is an expectation that financing volume will increase or rates will decrease in the future.

The following output sheet shows the valuation assuming a debt coverage ratio of 1.4 as of 2015 and 1.5 as of 2018. Both of these ratios were achieved. The debt coverage line shows 1.4 in 2015 and -0.42 in 2018. The negative number for 2018 can be explained by the fact that all the refinancing took place during that year, which had a negative net mortgage flow. The actual debt coverage ratio as of 2018 is  $\$7,227/\$4,818 = 1.5$ . All the other tables prove that the values are the same as the loan-to-value module.

This concludes the illustration of the Hotel Valuation Software. Over time, this software will be updated and enhanced. Those who register their e-mail addresses with HVS Software, LLC, will be provided with updates.



## Debt Coverage Ratio Outputs

Job Title: Proposed Marriott Job ID: 4451

Value Based On Currently Available Parameters				Value Based On Refinancing Year Cash Flows			
Valuation Input	Valuation Output	Valuation Input	Valuation Output	Valuation Input	Valuation Output	Valuation Input	Valuation Output
Debt Coverage Ratio	3.00%	Value Per Room	\$ 62,800.825	Debt Coverage Ratio	2018	Value Per Room	\$ 86,011.548
Year of NOI Used	1.40	Overall Discount Rate	314.004	Cap Rate - 1st Year NOI	3.00%	Overall Discount Rate	430.058
Amortization	25	Mortgage @ 1.40 DCR	11.37%	Loan Term	1.50	Mortgage @ 1.50 DCR	9.96%
Interest Rate	7.00%	Annual Debt Service	451,326.638	Interest Rate	6.00%	Annual Debt Service	623,155.556
Terminal Cap Rate	11.50%	Debt Coverage Ratio - Year 1	225.663	Terminal Cap Rate	11.50%	Debt Coverage Ratio - Ref Year	311.578
Equity Yield	18.00%	Debt Coverage Ratio - Year 1	3,627.853	Equity Yield	18.00%	Debt Coverage Ratio - Ref Year	4,618.000
		Debt Coverage Ratio - Year 1	0.98			Debt Coverage Ratio - Ref Year	1.55

### DCR Model

	\$ (000)	RR	Value Per Room	Metrics
Value of the Property	\$ 66,503	10.23%	\$ 332.513	Total Appreciation 12.93%
Value of the Mortgage Component	\$ 451,133	6.44%	\$ 225.663	Annual Appreciation 1.22%
Value of the Equity Component	\$ 21,370	18.00%	\$ 106.849	Cash Flow Return 78.42%
				Appreciation Return 21.58%
				Total Property Yield 10.29%
				Stabilized Going II Rate 32.23%

Cash Flows for RR Cals	Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Property		\$ (66,503)	\$ 3,754	\$ 5,359	\$ 6,260	\$ 6,260	\$ 7,427	\$ 7,427	\$ 7,451	\$ 7,667	\$ 7,879	\$ 8,184
Mortgage		\$ (451,133)	\$ 3,828	\$ 3,828	\$ 3,828	\$ 3,828	\$ (17,344)	\$ (17,344)	\$ 4,818	\$ 4,818	\$ 4,818	\$ 4,818
Equity		\$ (21,370)	\$ (74)	\$ 1,531	\$ 1,858	\$ 2,432	\$ 23,948	\$ 2,633	\$ 2,633	\$ 2,849	\$ 3,061	\$ 3,366
Debt Coverage Ratio			0.98	1.40	1.49	1.64	2.42	1.55	1.59	1.64	1.70	1.74
Debt Yield			8.32%	11.26%	12.60%	13.87%	16.01%	16.51%	16.51%	17.18%	17.58%	18.25%
Equity Dividend Rate			-0.32%	7.18%	8.07%	11.39%	112.00%	12.32%	13.33%	14.36%	15.25%	16.29%

Proof of Value	Total Property Present Value				Mortgage Component Present Value				Equity Component Present Value			
	Net Income Before	PV Factor @	Discounted Cash	Year	Net Income Before	PV Factor @	Discounted Cash	Year	Net Income Before	PV Factor @	Discounted Cash	Year
2014	\$ 3,754	10.23%	\$ 3,404	2014	\$ 3,828	6.44%	\$ 3,596	2014	\$ (74)	18%	\$ (63)	2014
2015	\$ 5,359	0.8222	\$ 4,406	2015	\$ 3,828		\$ 3,379	2015	\$ 1,531		\$ 7182	2015
2016	\$ 5,866	0.7455	\$ 4,239	2016	\$ 3,828		\$ 3,174	2016	\$ 2,849		\$ 1,131	2016
2017	\$ 6,260	0.6751	\$ 4,239	2017	\$ 3,828		\$ 2,948	2017	\$ 2,849		\$ 1,068	2017
2018	\$ 7,427	0.6129	\$ 4,429	2018	\$ (17,344)		\$ (1,694)	2018	\$ 23,948		\$ 10,468	2018
2019	\$ 7,451	0.5557	\$ 4,141	2019	\$ 4,818		\$ 3,676	2019	\$ 2,633		\$ 975	2019
2020	\$ 7,667	0.5039	\$ 3,863	2020	\$ 4,818		\$ 3,112	2020	\$ 2,849		\$ 894	2020
2021	\$ 7,879	0.4569	\$ 3,600	2021	\$ 4,818		\$ 2,924	2021	\$ 3,061		\$ 814	2021
2022	\$ 8,184	0.4143	\$ 3,391	2022	\$ 4,818		\$ 2,747	2022	\$ 3,366		\$ 759	2022
2023	\$ 8,184	0.3756	\$ 3,079	2023	\$ 6,860		\$ 2,599	2023	\$ 2,128		\$ 437	2023
			\$ 66,503				\$ 451,133				\$ 21,370	

### Refinancing Year Calculations

Refinancing Year Value	\$ 86,012
New Mortgage Amount	\$ 1,50
Rem. Balance on Initial Mortgage	\$ 62,316
Gross Refinancing Proceeds	\$ 41,144
Less: DS on Initial Mortgage	\$ 21,172
Net Mortgage Flow	\$ 17,344

### Reversion Cash Flow Calculations

Year 10 Net Income of	\$ 8,385
+ reversion of	\$ 23,602
	\$ 81,987

### Reversion Calculations for Proof

Year 11 Net Income of \$8,637	\$ 75,104
capitalized at 11.5% equals	\$ 1,502
Less: Selling Expenses	\$ 73,602
Equals: Net sales price	\$ 1,502

Year 10 Net Inc. to Equity of	\$ 3,567
+ the equity residual of	\$ 17,561
	\$ 21,128

Net Sales Price	\$ 73,602
Less: RMB	\$ 56,042
Equals: Equity Residual	\$ 17,561

The reversion is the remaining mortgage balance (RMB) of the loan in at the end of year 10.

## Hotel Valuation—Global Perspective

As previously discussed, most hotel owners, operators, lenders, and investors around the globe use the income capitalization approach for valuing hotels. In most parts of the world, hotel acquisitions are typically financed with mortgage and equity capital, which justifies the use of the mortgage equity valuation methodology described in this chapter.

Chapter 5 presented the development of a projection of revenue, expense, and net income for five regions of the world: South America, China, Europe, India, and the United States. Using these 10-year projections along with the mortgage equity parameters utilized in these regions will produce values for a proposed Marriott located in these areas. Exhibit 6.19 shows the mortgage-equity parameters currently used in each region for valuing a hotel similar to the proposed Marriott.

<b>Exhibit 6.19 Valuation Parameters by Region</b>					
	<b>South America</b>	<b>China</b>	<b>Europe</b>	<b>India</b>	<b>USA</b>
Loan to value	55%	55%	65%	60%	70%
Amortization (years)	10	10	20	10	25
Mort. term	10	10	10	10	10
Interest	9.0%	7.25%	6.0%	11.5%	7.0%
Terminal	10.0%	8.5%	7.0%	9.0%	11.5%
Transaction cost	2.0%	1.5%	1.5%	1.0%	2.0%
Equity yield	18.0%	16.0%	17.0%	18.0%	18.0%
Value (\$000)	\$41,100	\$51,700	\$62,600	\$86,500	\$62,000
Val./room	\$205,000	\$259,000	\$313,000	\$432,000	\$310,000
Total property yield	14.9%	12.0%	11.6%	16.0%	11.4%
4th yr. NOI	\$4,972	\$5,041	\$5,280	\$9,546	\$6,263
NOI %	23.6%	24.9%	24.7%	38.8%	29.7%
Incentive mgmt. fee	Yes	Yes	Yes	Yes	No

The loan-to-value ratio varies from a low of 55% for South America and China to a high of 70% for the United States. Lenders in the United States tend to offer larger mortgages than in other parts of the world. The amortization period ranges from 10 years for South America, China, and India to 20 years for Europe and 25 years for the United States. Amortization periods tend to be lower in regions where inflation rates are higher; this can be explained by the fact that the lender wants to be paid off more quickly because the value of the money used is eroding due to inflation.

Interest rates are also tied to inflation. South America has a 9% interest rate and India has a rate of 11.5%. Europe has the lowest rate at 6%, while the United States has a rate of 7% and China has a rate of 7.25%. Terminal capitalization rates range from a low of 7% for Europe to a high of 11.5% for the United States. These rates tend to project the rate of return environment 10 years from now.

The transaction costs range from 1% in India to 2% in South America and the United States. The equity yields show a fairly tight range, from a low of 16% for China to a high of 18% for South America, India, and United States.

Using these mortgage-equity parameters and the individually projected net incomes produced values (in thousands) that ranged from a low of \$41,100 for



South America to a high of \$86,500 for India. The United States was third highest at \$62,000, while China was second lowest with a value of \$51,700. Europe was second highest with a value of \$62,600, almost equal to the United States.

The total property yields (overall discount rate) coupled with the Year 4 *NOI* explain the relationship between the projection of income and expense and the mortgage equity parameters. While the total property yield for India of 16% was significantly higher than the other regions, its Year 4 *NOI* at \$9,546 (\$000) was sufficiently high to give India the top spot for overall value. The total property yield for South America was the second highest at 14.9%, but coupled with the lowest Year 4 *NOI* at \$4,972 (\$000), produced the lowest value. The three countries with 10-year amortization rates had the highest total property yields.

The line in Exhibit 6.19 labeled “*NOI* %” shows the net operating income as a percentage of total revenue. India had the highest at 38.8%. The line for the incentive management fees shows that the United States was the only region where the incentive management fee was included in the equity yield as opposed to specifically showing the expense in the income and expense statement.

The table illustrates the valuation of a proposed Marriott hotel in five regions of the world using typical mortgage equity parameters at a given point in time. These specific inputs are likely to change and should not be relied upon when valuing a hotel. They are used here to demonstrate how a hotel can be valued in different economic environments using the mortgage-equity valuation methodology set forth in this chapter.

Of the three valuation approaches available to the appraiser, the income capitalization approach generally provides the most persuasive and supportable conclusions when valuing a lodging facility.

In the selection of a discounting or capitalization procedure, the appraiser considers the market and techniques used by hotel buyers and sellers in reaching their investment decisions. In the past, various procedures have been employed by hotel investors; their selections have usually been based on factors such as the quality and reliability of the available data, economic conditions, inflation, the availability of financing, and risk. A brief summary of each technique follows:

- Capitalize one stabilized year  
This simple technique works well for an established property that is expected to maintain a stable level of occupancy and net income in the future. It is difficult, however, to establish an appropriate stabilized net income for hotels with occupancies that are increasing or decreasing.
- Ten-year forecast using an equity yield rate  
This technique is complicated, but it most accurately reflects the actions of typical hotel buyers, who purchase properties based on their leveraged discounted cash flow. Often the mortgage component can be fully supported by recent market transactions, so 55% to 75% of the discount rate can be substantiated.
- Ten-year forecast using a discount rate  
This technique is simple but less reliable because the derivation of the discount rate has little support. Moreover, it is difficult to adjust the discount rate for changes in the cost of capital.
- Automated valuation model (AVM)  
The next section of this chapter summarizes research that is intended to help hotel owners, appraisers, and other analysts with an interest in



a hotel to quickly, cheaply, and objectively estimate the hotel's market value using an AVM.

## Automated Valuation Models for Hotels

Using data that are readily available to hotel stakeholders, a quick estimate of the market value of a property can be made using an AVM.<sup>3</sup> However, despite the fact that real estate appraisal has gradually evolved from a largely manual process to a more automated one (particularly for residential real estate), a usable AVM for hotels was not developed until relatively recently.<sup>4</sup>

A hotel AVM was developed using the statistical application of stepwise multiple linear regression analysis. The goals for this AVM were to be practical (i.e., to provide analysts with a usable formula), to supplement traditional appraisal training (although the use of AVMs in residential real estate has already gone beyond the supplemental stage), and to be relatively simple to apply (i.e., users of the AVM should not need to use stepwise linear regression analysis, only basic math). The methodology essentially employs the sales comparison approach. While the model presented here does not specifically use the income capitalization approach, it does make use of a hotel's *NOI* as a predictor of value.

In a traditional application of the sales comparison approach to estimate market value (i.e., likely sale price), the real estate appraiser analyzes the economics of recent sales of comparable properties and makes subjective adjustments to the information available from those sales transactions to arrive at an estimate of the subject property's market value—or in many cases, to arrive at a range (high and low) of the likely value. The AVM presented here uses a similar—though more mechanized, quicker, cheaper, and objective—approach. It also makes use of actual hotel sales transactions that have occurred in the marketplace. As a result, analysts using it are not required to gather comparable hotel sales transaction data themselves.

The methodology employed in this study is not intended to replace such vital background as real estate appraisal training and professional hotel management experience and education but is intended to assist analysts with understanding the dynamics of hotel properties. It is important that analysts conducting hotel appraisal assignments better understand these properties, and a significant amount has already been written on the topic to assist with doing so.<sup>5</sup> Although computerized valuation methodologies are increasingly available for commercial properties, the development of such methodologies for lodging properties has progressed much more slowly.<sup>6</sup>

This study uses a proprietary database compiled at The Pennsylvania State University to develop and present an AVM for use by those with an in-

3. Joseph K. Eckert, Patrick M. O'Connor, and Charlotte Chamberlain, "Computer-Assisted Real Estate Appraisal: A California Savings and Loan Case Study," *The Appraisal Journal* (October 1993): 524-532; John H. Detweiler and Ronald E. Radigan, "Computer-Assisted Real Estate Appraisal: A Tool for the Practicing Appraiser," *The Appraisal Journal* (January 1996): 91-101; Detweiler and Radigan, "Computer-Assisted Real Estate Appraisal: A Tool for the Practicing Appraiser," *The Appraisal Journal* (July 1999): 280-286.
4. John W. O'Neill. "An Automated Valuation Model for Hotels," *Cornell Hotel and Restaurant Administration Quarterly* (August 2004): 260-268.
5. Stephen Rushmore, *Hotels and Motels: Valuations and Market Studies* (Chicago: Appraisal Institute, 2001); Rushmore, *Hotels and Motels: A Guide to Market Analysis, Investment Analysis, and Valuations* (Chicago: Appraisal Institute, 1992); Rushmore, *The Computerized Income Approach to Hotel-Motel Market Studies and Valuations* (Chicago: Appraisal Institute, 1990).
6. S. Kleege, "Will Computers Take Over the Appraisal Game?" *American Banker* (June 13, 1997): 10; John B. Corgel and Jan A. deRoos, "Pure Price Changes of Lodging Properties," *Cornell Hotel and Restaurant Administration Quarterly* (April 1992): 70-77.



terest in hotels, such as managers, owners, developers, potential purchasers, potential lenders, and analysts. In other words, users of the formulas presented here do not need access to the proprietary database but they do need to have an interest in a hotel or at least have access to fundamental operating figures of the hotel. The database used in this study consists of verified sales of hotels in the United States that include operating information for the 12 months preceding the sale. These properties represent multiple hotel types and all regions of the United States (New England, Middle Atlantic, Southeast, Upper Midwest, Lower Midwest, Southwest, and West).

The database that was used to construct the AVM consists of a sample of 327 hotel sales transactions for which it was possible to obtain complete hotel operating and descriptive information—information that would normally be readily available to a party with an interest in a hotel. For each transaction, the database includes (for the trailing 12 months prior to the sale transaction) ADR, occupancy percentage, *NOI*, capitalization rate, and room revenue multiplier (RRM), as well as the number of guest rooms, sale price, age, sale date, and hotel type. The hotel types represented include economy (75 properties), midscale (94 properties), full-service (111 properties), all-suite without food and beverage (32 properties), and all-suite with food and beverage (15 properties). All sales transaction data were verified with a party involved in the transaction (e.g., seller, purchaser). The database includes information regarding hotel sales transactions from a full economic cycle. Descriptive statistics are presented in Exhibit 6.20.

Exhibit 6.20 Descriptive Statistics Used to Construct the AVM								
Statistic	Rooms	OCC	ADR	Cap	NOI	RRM	Price/Room	Age (Years)
Median	173	70.0	\$78.25	10.6	\$980,400	3.08	\$59,338	11.0
Mean	219	68.7	\$83.15	10.7	\$1,721,277	3.21	\$74,020	16.1
Std. Deviation	163	12.2	\$37.28	2.2	\$2,213,162	1.14	\$58,330	15.2
Minimum	35	18.5	\$31.50	1.1	\$67,840	0.70	\$6,931	1.0
Maximum	1,348	96.3	\$250.50	20.4	\$18,676,000	9.25	\$479,167	98.0

Models using regression analysis to predict hotel sale price have been previously developed based on a variety of the factors considered in this study.<sup>7</sup> The current database size of 327 properties provides excellent statistical power; AVMs that have been developed by other researchers for other types of real property (and have had statistical significance using regression analysis) have typically had sample sizes ranging from 143 to 219 properties.<sup>8</sup> Exhibit 6.21 presents a summary description of the variables used in this study. It is important to note that variables like capitalization rate, room revenue multiplier (RRM), and price/room were not considered in this model. These variables were excluded because even though these data were available for each of the 327 hotel sale transactions, they are in fact direct indicators of—and calculated as a function of—actual sale price, and the intent of

7. John W. O'Neill and Anne R. Lloyd-Jones, "Hotel Values in the Aftermath of September 11, 2001," *Cornell Hotel and Restaurant Administration Quarterly* 42, no. 6 (December 2001): 10-21; O'Neill and Lloyd-Jones, "September 11th: Hotel Values and Strategic Implications," *Cornell Hotel and Restaurant Administration Quarterly* 43, no. 5 (October 2002): 53-64.

8. Eckert, O'Connor, and Chamberlain, "Computer-Assisted Real Estate Appraisal: A California Savings and Loan Case Study; Detweiler and Radigan, "Computer-Assisted Real Estate Appraisal: A Tool for the Practicing Appraiser" (1996); Detweiler and Radigan, "Computer-Assisted Real Estate Appraisal: A Tool for the Practicing Appraiser" (1999).



### Exhibit 6.21 Description of Variables Considered in Developing the AVM

Variable	Description
occ	Occupancy percentage rate for trailing 12 months prior to sale
ADR	Average daily rate for trailing 12 months prior to sale
rooms	Number of guest rooms
NOI/room	Net operating income divided by number of guest rooms
regcode	Code indicating region of the United States in which hotel is located*
metro	Code indicating whether hotel is located in a major metropolitan area†
type	Code indicating type of hotel‡
open year	Calendar year hotel originally opened
sale year	Calendar year hotel sale transaction occurred

\* This variable consists of a series of six dummy variables in which 1 = New England, 2 = Middle Atlantic, 3 = Southeast, 4 = Upper Midwest, 5 = Lower Midwest/Southwest, and 6 = West.

† 1 = hotel is located in a metropolitan area with over one million permanent residents; 0 = hotel is not located in a metropolitan area with over one million permanent residents.

‡ This variable consists of a series of five dummy variables in which 1 = economy, 2 = moderate service (midscale), 3 = full service, 4 = all-suite without food and beverage operations, and 5 = all-suite with food and beverage operations.

this study was to develop a model that could be used to predict hotel market value (likely sale price) using other factors.

Using stepwise multiple linear regression analysis, four steps resulted in significant regression coefficients.<sup>9</sup> The  $R^2$  (regression coefficient) increased from 0.791 in the first step, to 0.892 in the second step, to 0.897 in the third step, and to 0.9 in the fourth step, indicating improved predictive ability in each step. In the fourth step, the overall model with four variables explains approximately 90% of the variance in the hotel sale price per room. This  $R^2$  statistic exceeds the range of  $R^2$  results of AVMs previously developed for other types of real property, in which  $R^2$  results have ranged between 0.772 and 0.888.<sup>10</sup>

Specifically, after a constant ( $y$ -intercept) of -\$42,873, the *NOI/room* variable was automatically entered in the first step, and *ADR*, *rooms*, and *occ* (occupancy percentage) were automatically added in subsequent steps. Thus, the model found *NOI* on a per-guest-room basis and *ADR* to be the most significant predictors of sale price per room. As a result, the two most significant predictors of a hotel's sale price appear to be its "bottom line," (i.e., *NOI*) and its "top line" revenue, in this case an indicator of room revenues measured on a per-guest-room basis. After *NOI* and *ADR*, the number of guest rooms was the next most significant predictor of sale price. This is probably due to the fact that the number of guest rooms serves as a proxy for the extent and level of services and amenities offered by a hotel—such as the number of food and beverage outlets, business amenities, and recreational amenities. This is true because larger hotels usually (but not always) contain more amenities, all other things being equal. Finally, the hotel's occupancy level is a significant predictor of hotel sale price per room, most likely because occupancy (along with *ADR*) is a determinant of hotel room revenues per available room (RevPAR), which would be calculated as *ADR* multiplied by occupancy rate. These results indicate that hotel purchasers may give "credit" to the upside potential of a property—i.e., the anticipated ability to improve on a hotel's bottom line is reflected in sale price if occupancy rate and/

9.  $R^2 = 0.900$ ,  $F = 555.735$

10. Detweiler and Radigan, "Computer-Assisted Real Estate Appraisal: A Tool for the Practicing Appraiser" (1996); Detweiler and Radigan, "Computer-Assisted Real Estate Appraisal: A Tool for the Practicing Appraiser" (1999); Bennie D. Waller, "The Impact of AVMs on the Appraisal Industry," *The Appraisal Journal* (July 1999): 287-292.



or ADR are relatively strong, even when *NOI* is not. A summary of the results of the stepwise multiple linear regression analysis is presented in Exhibit 6.22.

<b>Exhibit 6.22 Summary of Overall Stepwise Multiple Linear Regression Analysis</b>				
<b>Step</b>	<b>Variable Added</b>	<b>Beta Coefficient</b>	<b>t</b>	<b>Significance</b>
1	<i>NOI</i> /room	5.615	16.492	$p < 0.001$
2	ADR	615.039	12.310	$p < 0.001$
3	rooms	33.693	3.751	$p < 0.001$
4	occ	234.891	2.343	$p < 0.05$

Thus, stepwise multiple linear regression analysis found that *regcode* (region code), *metro*, *type*, *open year*, and *sale year* were not overall significant predictors of sale price per guest room after the other four variables had been automatically included. While differences were found in the summary statistics for sale price by region (e.g., properties in New England tended to sell for higher prices per room than properties in the Southeast), region is apparently not a significant predictor of sale price when hotel *NOI*, occupancy, ADR, and number of guest rooms are included in the model because variations in economics by region are captured in the model by the variations in property *NOI*, occupancy, ADR, and number of guest rooms. Similar results were found regarding the variable for large metropolitan areas (over one million permanent residents), meaning that while properties in larger metropolitan areas may sell for higher prices, the model captures these differences through variations in *NOI*, occupancy, ADR, and number of guest rooms. Similarly, while different types of hotels average different prices on a per-guest-room basis, the model captures these differences with the four variables that were included in the stepwise regression.

The open year variable was not significant, even when this variable was converted to age (i.e., sale year minus open year). In other words, there appear to be many relatively old hotels that do not significantly lose value over time. Furthermore, the extent to which age affects a hotel's economics appears to be captured by the model's other four variables.

The sale year variable was also not significant. The database that was used to construct the AVM includes data regarding hotel sales transactions occurring during a number of different years. However, the variances in sale prices correlated with changes in occupancy, ADR, and *NOI*. Therefore, sale year was ultimately excluded as a variable in the model. This result is interesting and very practical for analysts because it indicates that the model of best fit (with the four variables included) may actually be applied with the coefficients presented here, relatively independent of time period.

In short, a hotel's value per guest room may be estimated using the following AVM formula:

---

- \$42,873		
+ <i>NOI</i> /room	×	5.615
+ ADR	×	615.039
+ rooms	×	33.693
+ occ*	×	234.891
= estimated value per room		

\* Technically, the figure that should be used is occupancy rate multiplied by 100. For example, 70 rather than 0.7 should be used for a hotel operating with an annual occupancy level of 70%.



An actual 57-room Hampton Inn in Ohio that operated with an annual *NOI* of approximately \$450,000, an ADR of \$76.81, and an annual occupancy rate of 72.8% would be valued as such:

		Coefficient		
				– \$42,873
+ \$450,000/57	×	5.615	=	+ \$44,329
+ \$76.81	×	615.039	=	+ \$47,241
+ 57	×	33.693	=	+ \$1,921
+ 72.8%	×	234.891	=	+ \$17,100
			=	\$67,718/room

In the previous example, the subject 57-room hotel would have an estimated value of approximately \$3,860,000 (\$67,718 × 57). In fact, the hotel actually sold for \$64,912 per room, or within 5% of the likely sale price predicted by the AVM presented here. There are reasons why the actual value of this Hampton Inn may not be exactly \$67,718 per room. An analyst could construct confidence intervals; for example, the use of 95% confidence intervals would allow analysts to be essentially 95% sure that the hotel value is actually within a calculated range.

To determine confidence intervals for the results of a multiple regression analysis, analysts must calculate both the low and high boundaries of the likely value range using unique coefficients developed through matrix algebra. In this case, this would involve constructing a four-by-four matrix with 16 terms, which is unwieldy.<sup>11</sup>

Most analysts would prefer using statistical software such as SPSS to determine confidence intervals. In the SPSS Data Editor (SPSS 11.0 for Windows), select “Analyze,” “Regression,” “Linear,” and then “Case Labels Variable.” (If a case labels variable is not selected, the confidence interval values will not be added to the spreadsheet). Next, click on “Statistics,” select the statistics that are desired to appear in the output (such as the covariance matrix, descriptives, collinearity diagnostics, etc.), and then click on “Save.” Next, select “Predicted Values Unstandardized” and then “Predicted Intervals Mean and Individual.” The default confidence interval is 95%. The unstandardized predicted values represent the regression line. The mean interval represents the confidence bands around the regression line. The individual interval represents the confidence interval for any new predictions based on the regression solution. These selections will result in five new variables being added to the spreadsheet:

- *pre\_1* is the predicted value
- *lmci\_1* is the lower bound of the 95% confidence interval for the mean (i.e., regression line)
- *umci\_1* is the upper bound
- *lici\_1* is the lower bound of the 95% prediction confidence interval (for new values)
- *uici\_1* is the upper bound

11. See, for example, John Neter, Michael Kutner, Christopher Nachtsheim, and William Wasserman, *Applied Linear Statistical Models*, 4th ed. (Chicago: McGraw-Hill/Irwin, 1996).

In summary, the predictor variables (*NOI*/room, occupancy, ADR, and number of rooms) in the overall model correlated with the response variable (sale price per room) with a regression coefficient ( $R^2$ ) of 0.9 (90%). Considering all the hotel sale transactions, the average actual sale price per room varied from the predicted sale price per room by a mean of 9.8% (the median



was 7.5%). Previous research has found that actual real estate appraisals of commercial properties differ from sale prices by a variance of only about 5%.<sup>12</sup> Thus, while the model presented here results in a hotel value estimate that comes close to the level of accuracy achieved by actual hotel appraisals, it is not quite so accurate on average.

The AVM formula presented here generally should be used in addition to the valuation approaches described in this chapter. Despite the fact that more sophisticated real estate valuation techniques exist, real estate appraisers frequently use simpler methods such as AVMs.<sup>13</sup> Licensed real estate appraisers who use AVMs should, however, be aware of Advisory Opinion 18 of the *Uniform Standards of Professional Appraisal Practice*, which states that the output of an AVM is not, by itself, an appraisal.<sup>14</sup>

The AVM formula presented in this chapter should be useful to hotel analysts desiring a low cost and objective estimate of hotel value. Also, this formula should be beneficial for hotel stakeholders who wish to acquire a quick value estimate prior to obtaining a complete appraisal.

The research summarized here found that the AVM formula presented in this chapter has a reasonably high level of validity, although the average level of accuracy is not quite as good as that of an actual hotel appraisal. Analysts should use such models as a “sanity check” for more sophisticated valuation analyses. They may also be useful in meetings or in the field when computer technology is not readily available.

Such AVMs will probably always be useful for a quick analysis and for assessing the appropriateness of more detailed analysis. Those who work in an industry (such as the hospitality industry) or who are analyzing an industry (such as consultants and other analysts) should not ignore simple methodologies or rules of thumb that are becoming commonplace the way AVMs are becoming common in commercial real estate analysis. However, in the analysis of commercial real estate, the identification of the macroeconomic and local economic factors that affect it should always be considered as well. AVMs are probably most beneficial for analyzing portfolios of hotels rather than individual properties. Previous research has found that most idiosyncratic risk in individual properties is diversified away at the portfolio level.<sup>15</sup>

## Conclusions

Regardless of the valuation technique applied, the estimate of market value should represent the actions of hotel investors and provide a basis for comparing investment alternatives. Developing capitalization rates and applying the proper discounting procedure are crucial to the income capitalization approach. Appraisers should always try to mirror the rationale and actions of typical buyers and sellers in the current market.

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12. Brian R. Webb, “On the Reliability of Commercial Appraisals: An Analysis of Properties Sold from the Russell-NCREIF Index,” *Real Estate Finance* 11, no. 1 (Spring 1994): 62-65.
  13. Lawrence B. Smith, “Rental Apartment Valuation: The Applicability of Rules of Thumb,” *The Appraisal Journal* (October 1985): 541-552.
  14. *Uniform Standards of Professional Appraisal Practice*, 2012-2013 ed. (Washington, D.C.: The Appraisal Foundation, 2011), p. A-42.
  15. Shannon P. Pratt, Robert F. Reilly, and Robert P. Schweis, *Valuing a Business: The Analysis and Appraisal of Closely Held Companies* (New York: McGraw-Hill, 2000), 274; Jeffrey D. Fisher and Brian R. Webb, “Central Issues in the Analysis of Commercial Real Estate,” *Journal of the American Real Estate and Urban Economics Association* (Summer 1992): 211-228; Brian R. Webb, Mike Miles, and David Guilkey, “Transactions-Driven Commercial Real Estate Returns: The Panacea to Asset Allocation Models?” *Journal of the American Real Estate and Urban Economics Association* (Summer 1992): 325-358.





# Lodging Industry Conferences

Appendix

A

## HVS Conferences

Caribbean	Caribbean Hotel Investment Conference and Operations Summit (CHICOS)	<a href="http://www.hvschicos.com">www.hvschicos.com</a>
Chile	South American Hotel and Tourism Investment Conference (SAHIC)	<a href="http://www.sahic.com">www.sahic.com</a>
China	China Hotel Investment Conference (CHIC)	<a href="http://www.chinahotelconference.com">www.chinahotelconference.com</a>
India	Hotel Investment Conference South Asia (HICSA)	<a href="http://www.hicsaconference.com">www.hicsaconference.com</a>
Mexico	Mexico Hotel and Tourism Investment Conference (MexHIC)	<a href="http://www.MexHIC.com">www.MexHIC.com</a>

## Asia/United Arab Emirates/Africa

	Real Estate Investment World Asia	<a href="http://www.terrapin.com">www.terrapin.com</a>
Australia	Australia, New Zealand, and Pacific Hotel Industry Conference (ANZPHIC)	<a href="http://www.anzphic.com">www.anzphic.com</a>
China	International Hotel Investment Forum (IHIF) Asia Pacific	<a href="http://ihif.questexevents.net">http://ihif.questexevents.net</a>
India	Hotel Operations Summit India (HOSI)	<a href="http://www.hosiconference.com">www.hosiconference.com</a>
Kenya	Africa Hotel Investment Forum	<a href="http://www.africa-conference.com">www.africa-conference.com</a>
Singapore	Economy Hotels World Asia	<a href="http://www.terrapinn.com">www.terrapinn.com</a>
	Hospitality Architecture + Design Exhibition and Conference	<a href="http://www.hadexpo.questexevents.net">www.hadexpo.questexevents.net</a>
	Hospitality Investment World Asia	<a href="http://www.terrapinn.com">www.terrapinn.com</a>
South Africa	Hotel Investment World Africa	<a href="http://www.terrapinn.com">www.terrapinn.com</a>
Turkey	Central Asia and Turkey Hotel Investment Conference	<a href="http://www.cathic.com">www.cathic.com</a>
United Arab Emirates	Arabian Hotel Investment Conference (AHIC)	<a href="http://www.arabianconference.com">www.arabianconference.com</a>

## Europe

Germany	Expo Real–International Trade Fair for Commercial Property and Investment	<a href="http://www.exporeal.net">www.exporeal.net</a>
	International Hotel Investment Forum	<a href="http://www.berlinconference.com">www.berlinconference.com</a>
Italy	Annual International Hotel Conference	<a href="http://www.internationalhotelconference.com">www.internationalhotelconference.com</a>
Russia	Russia and CIS Hotel Investment Conference (RHIC)	<a href="http://www.russia-cisconference.com">www.russia-cisconference.com</a>
United Kingdom	Annual European Hotel Finance and Investment Summit	<a href="http://www.euromoneyseminars.com">www.euromoneyseminars.com</a>
	The Annual Hotel Conference	<a href="http://www.theahc.co.uk">www.theahc.co.uk</a>
	European Real Estate Opportunity and Private Fund Investing Forum	<a href="http://www.imn.org">www.imn.org</a>
	HOSPACE	<a href="http://www.hospace.net">www.hospace.net</a>
	Hotel Investment Conference Europe	<a href="http://www.europehotelconference.com">www.europehotelconference.com</a>
	The Master Innholders General Managers Conference	<a href="http://www.masterinnholders.co.uk">www.masterinnholders.co.uk</a>
	Sleep	<a href="http://www.thesleepevent.com">www.thesleepevent.com</a>
	World Economy and Budget Hotels Congress	<a href="http://www.hospitalitynet.org/event/3001470.html">www.hospitalitynet.org/event/3001470.html</a>

## North America

Canada	Canadian Hotel Investment Conference	<a href="http://www.hotelinvest.ca">www.hotelinvest.ca</a>
	Western Canadian Hotel and Resort Investment Conference	<a href="http://bigpictureconferences.ca">http://bigpictureconferences.ca</a>
United States	American Hotel and Lodging Association Summit	<a href="http://www.ahla.com">www.ahla.com</a>
	American Resort Development Association (ARDA) Annual Convention	<a href="http://www.arda.org">www.arda.org</a>
	The Americas Lodging Investment Summit	<a href="http://www.alisconference.com">www.alisconference.com</a>
	Caribbean Hotel and Resort Investment Summit (CHRIS)	<a href="http://www.chrisconference.com">www.chrisconference.com</a>
	International Association of Venue Managers Convention	<a href="http://www.iavm.org">www.iavm.org</a>
	International Economic Development Council Convention	<a href="http://www.iedonline.org">www.iedonline.org</a>
	Lifestyle/Boutique Hotel Investors Conference	<a href="http://www.lifestyleboutiquelh.com">www.lifestyleboutiquelh.com</a>
	The Lodging Conference	<a href="http://www.lodgingconference.com">www.lodgingconference.com</a>
	Meet The Money Conference	<a href="http://www.meetthemoney.com">www.meetthemoney.com</a>



Midwest Lodging Investors Summit	<a href="http://midwestlodginginvestors.com">http://midwestlodginginvestors.com</a>
New York University International Hospitality Industry Investment Conference	<a href="http://www.scps.nyu.edu">www.scps.nyu.edu</a>
Real Estate Investment World Latin America	<a href="http://www.terrapinn.com">www.terrapinn.com</a>
Shared Ownership Investment Conference	<a href="http://www.sharedownershipinvestment.com">www.sharedownershipinvestment.com</a>

## South America

Argentina	Expo Real Estate	<a href="http://www.exporealestate.com.ar">www.exporealestate.com.ar</a>
	Hotelga	<a href="http://www.hotelga.com.ar">www.hotelga.com.ar</a>
	Marktur Forum	<a href="http://www.markturforum.com">www.markturforum.com</a>
	Salón del Mercado Inmobiliario	<a href="http://www.sminmobiliario.com.ar">www.sminmobiliario.com.ar</a>
Brazil	Real Estate Investment World Brasil	<a href="http://www.terrapinn.com/2012/reiwbrasil/index.stm">www.terrapinn.com/2012/reiwbrasil/index.stm</a>
	South American Shared Ownership Investment Conference (SASOIC)	<a href="http://www.sasoic.com">www.sasoic.com</a>
Chile	Congreso Nacional de Hotelería	<a href="http://www.congresohotelero.cl">www.congresohotelero.cl</a>
Mexico	The Real Estate Show	<a href="http://www.expodesarrolloinmobiliario.com">www.expodesarrolloinmobiliario.com</a>
Uruguay	Regional Real Estate Investment Conference	<a href="http://www.reporteinmobiliario.com">www.reporteinmobiliario.com</a>









# Tourism Journals



## Appendix

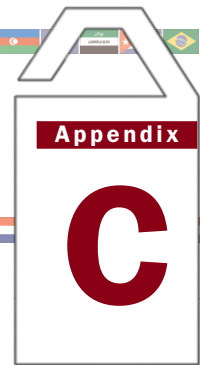
# B

- Annals of Leisure Research
- Annals of Tourism Research
- ASEAN Journal of Hospitality and Tourism
- Asia Pacific Journal of Tourism Research
- Australian Journal of Tourism Research
- China Tourism Research
- Current Issues in Tourism
- e-Review of Tourism Research
- Geography Review
- International Journal of Contemporary Tourism Management
- International Journal of Hospitality Management
- International Journal of Hospitality and Tourism Administration
- International Journal of Service Industry Management
- International Journal of Tourism Research
- Journal of Ecotourism
- Journal of Heritage Tourism
- Journal of Hospitality and Leisure Marketing
- Journal of Hospitality, Leisure, Sport and Tourism
- Journal of Hospitality Marketing and Management
- Journal of Hospitality and Tourism Research
- Journal of Information Technology and Tourism
- Journal of International Volunteer Tourism and Social Development
- Journal of Leisure Research
- Journal of Quality Assurance in Tourism and Hospitality
- Journal of Sustainable Tourism
- Journal of Tourism Consumption and Cultural Change
- Journal of Tourism and Cultural Change
- Journal of Tourism History
- Journal of Tourism Studies
- Journal of Travel Research
- Journal of Travel and Tourism Research
- Leisure Management
- Leisure Sciences
- Leisure Studies
- Managing Leisure
- Pacific Tourism Review
- Tourism Analysis
- Tourism Economics
- Tourism in Focus
- Tourism Geographies
- Tourism and Hospitality Research
- Tourism Management
- Tourist Studies
- Travel and Tourism Analysis
- World Leisure and Recreation Association Journal





# Travel/Lodging Industry Periodicals



## HVS Newsletters

	HVS EMEA Newsletter	<a href="http://www.hvs.com">www.hvs.com</a>
	HVS Global Hospitality Report	<a href="http://www.hvs.com">www.hvs.com</a>
Asia	The Daily Lodging Report Asia Pacific	<a href="http://www.gvcu.com">www.gvcu.com</a>
	HVS Asia Hotel Watch	<a href="http://www.hvs.com">www.hvs.com</a>
	HVS Asia Pacific Newsletter	<a href="http://www.hvs.com">www.hvs.com</a>
Brazil	HVS Brazilian Hospitality Report	<a href="http://www.hvs.com">www.hvs.com</a>
Canada	HVS Canadian Outlook	<a href="http://www.hvs.com">www.hvs.com</a>
China	HVS China Hotel Investment Watch	<a href="http://www.hvs.com">www.hvs.com</a>
North America	The Daily Lodging Report North America	<a href="http://www.gvcu.com">www.gvcu.com</a>

## Global

ETN Global Travel Industry News	<a href="http://www.eturbonews.com">www.eturbonews.com</a>
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## Asia/Middle East

	Business Traveller Online Middle East	<a href="http://www.motivatepublishing.com">www.motivatepublishing.com</a>
Australia	Ehotelier.com	<a href="http://www.ehotelier.com">www.ehotelier.com</a>
China	Business Traveller Online China	<a href="http://www.businessstraveller.com">www.businessstraveller.com</a>
	Horwath HTL Newsletter	<a href="http://www.horwathhtl.asia">www.horwathhtl.asia</a>
Hong Kong	Asian Hotel and Catering Times (AHCT)	<a href="http://www.thomsonpress.com.hk">www.thomsonpress.com.hk</a>
	AsiaSpa	<a href="http://www.asiaspa.com">www.asiaspa.com</a>
	Hotel Asia Pacific	<a href="http://www.hotelasiapacific.com">www.hotelasiapacific.com</a>
India	Hotelier India.com	<a href="http://www.hotelierindia.com">www.hotelierindia.com</a>
Indonesia	DestinAsian Magazine	<a href="http://www.destinasian.com">www.destinasian.com</a>
Lebanon	Hospitality News Middle East	<a href="http://www.hospitalitynewsmag.com">www.hospitalitynewsmag.com</a>
Singapore	Travel Daily Asia Newsletter	<a href="http://www.traveldailyasia.com">www.traveldailyasia.com</a>
Thailand	Pacific Asia Travel Association	<a href="http://www.pata.org">www.pata.org</a>
United Arab Emirates	Destinations of the World News	<a href="http://www.dotwnews.com">www.dotwnews.com</a>
	Gulf Business	<a href="http://www.motivatepublishing.com">www.motivatepublishing.com</a>

United Arab Emirates/ Hong Kong	4 Hoteliers	<a href="http://www.4hoteliers.com">www.4hoteliers.com</a>
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## Europe

Denmark	Business Traveller Online Denmark	<a href="http://www.businesstravellerdenmark.com">www.businesstravellerdenmark.com</a>
France	Business Travel France	<a href="http://www.businesstravel.fr">www.businesstravel.fr</a>
	HTR Magazine	<a href="http://www.htrmagazine.com">www.htrmagazine.com</a>
Germany	Business Traveller Online Germany	<a href="http://www.businesstraveller.de">www.businesstraveller.de</a>
	AHGZ–Allgemeine Hotel und Gastronomie Zeitung	<a href="http://www.ahgz.de">www.ahgz.de</a>
	Hospitality Inside	<a href="http://www.hospitalityinside.com">www.hospitalityinside.com</a>
	Hotelier	<a href="http://www.hotelier.com">www.hotelier.com</a>
	Top Hotel	<a href="http://www.tophotel.de">www.tophotel.de</a>
	Tourismus Journal	<a href="http://www.luciusverlag.com">www.luciusverlag.com</a>
Hungary	Turizmus Magazine	<a href="http://www.turizmusonline.hu">www.turizmusonline.hu</a>
The Netherlands	Hospitality Net	<a href="http://www.hospitalitynet.org">www.hospitalitynet.org</a>
Spain	Hosteltur	<a href="http://www.hosteltur.com">www.hosteltur.com</a>
Switzerland	Immo-News.net	<a href="http://www.immo-news.net">www.immo-news.net</a>
United Kingdom	Business Traveller Online UK	<a href="http://www.businesstraveller.com">www.businesstraveller.com</a>
	Conde Nast Traveller	<a href="http://www.cntraveller.com">www.cntraveller.com</a>
	E-tid.com	<a href="http://www.e-tid.com">www.e-tid.com</a>
	Hotel Designs	<a href="http://www.hoteldesigns.net">www.hoteldesigns.net</a>
	Hotel Management International	<a href="http://www.hmi-online.com">www.hmi-online.com</a>
	Sleeper Magazine	<a href="http://www.sleepermagazine.co.uk">www.sleepermagazine.co.uk</a>

## North America

Canada	Gaming Industry Wire	<a href="http://www.gamingindustrywire.com">www.gamingindustrywire.com</a>
	Hotel Development	<a href="http://www.hotelchange.com">www.hotelchange.com</a>
	Hotelier	<a href="http://www.hoteliermagazine.com">www.hoteliermagazine.com</a>
	Hotel News Resource	<a href="http://www.hotelnewsresource.com">www.hotelnewsresource.com</a>
	Hotel Realty Resource	<a href="http://www.hotelrealtyresource.com">www.hotelrealtyresource.com</a>
	Meetings and Incentive Travel	<a href="http://www.meetingscanada.com">www.meetingscanada.com</a>
United States	American Hotel and Lodging Association	<a href="http://www.smartbrief.com">www.smartbrief.com</a>
	Budget Travel News	<a href="http://www.budgettravel.com">www.budgettravel.com</a>
	Building Operating Management	<a href="http://www.facilitiesnet.com">www.facilitiesnet.com</a>
	Business Traveler Online US	<a href="http://www.businesstravelerusa.com">www.businesstravelerusa.com</a>
	Business Travel News	<a href="http://www.businesstravelnews.com">www.businesstravelnews.com</a>
	Casino Journal	<a href="http://www.casinojournal.com">www.casinojournal.com</a>
	Chain Leader Magazine	<a href="http://www.thenewmagazinecity.com">www.thenewmagazinecity.com</a>
	Commercial Property News	<a href="http://www.thenewmagazinecity.com">www.thenewmagazinecity.com</a>
	Concierge Preferred	<a href="http://www.conciergepreferred.com">www.conciergepreferred.com</a>



Cruise Industry News	<a href="http://www.cruiseindustrynews.com">www.cruiseindustrynews.com</a>
Departures Magazine	<a href="http://www.departures.com">www.departures.com</a>
Entrepreneur	<a href="http://www.entrepreneur.com">www.entrepreneur.com</a>
Food and Beverage Magazine	<a href="http://www.fb101.com">www.fb101.com</a>
Franchise Times Magazine	<a href="http://www.franchisetimes.com">www.franchisetimes.com</a>
GlobeSt.com	<a href="http://www.globest.com">www.globest.com</a>
Hospitality-1st	<a href="http://www.hospitality-1st.com">www.hospitality-1st.com</a>
Hospitality Design	<a href="http://www.hospitalitydesign.com">www.hospitalitydesign.com</a>
Hospitality Sales and Marketing Association International Marketing Review	<a href="http://www.hsmi.org">www.hsmi.org</a>
Hospitality Technology Magazine	<a href="http://www.htmagazine.com">www.htmagazine.com</a>
Hotel Business	<a href="http://www.hotelbusiness.com">www.hotelbusiness.com</a>
Hotel Business Review/Hotel Newswire	<a href="http://www.hotelexecutive.com">www.hotelexecutive.com</a>
Hotel Facilities and Operations	<a href="http://www.francepub42.com">www.francepub42.com</a>
Hotel F&B Magazine	<a href="http://www.hotelfandb.com">www.hotelfandb.com</a>
Hotel Interactive	<a href="http://www.hotelinteractive.com">www.hotelinteractive.com</a>
Hotel Management	<a href="http://www.hospitalityworldnetwork.com">www.hospitalityworldnetwork.com</a>
HotelNewsNow.com	<a href="http://www.hotelnewsnow.com">www.hotelnewsnow.com</a>
Hotel Online	<a href="http://www.hotel-online.com">www.hotel-online.com</a>
Hotels- The Magazine of the Worldwide Hotel Industry	<a href="http://www.hotelsmag.com">www.hotelsmag.com</a>
Journal of Hospitality and Tourism Research	<a href="http://www.sagepub.com">www.sagepub.com</a>
Journal of Leisure Research	<a href="http://www.sagamorepub.com">www.sagamorepub.com</a>
Latin Finance	<a href="http://www.latinfinance.com">www.latinfinance.com</a>
Lodging Econometrics	<a href="http://www.lodgingeconometrics.com">www.lodgingeconometrics.com</a>
Lodging Hospitality	<a href="http://http://lhonline.com">http://lhonline.com</a>
Lodging Magazine	<a href="http://www.lodgingmagazine.com">www.lodgingmagazine.com</a>
Meeting News	<a href="http://www.meetingnews.com">www.meetingnews.com</a>
Metropolis	<a href="http://www.metropolismag.com">www.metropolismag.com</a>
Midwest Meetings	<a href="http://www.midwestmeetings.com">www.midwestmeetings.com</a>
Military Club Hospitality	<a href="http://www.ebmpubs.com">www.ebmpubs.com</a>
National Real Estate Investor	<a href="http://www.nreionline.com">www.nreionline.com</a>
Nation's Restaurant News	<a href="http://www.nrn.com">www.nrn.com</a>
Real Estate Alert	<a href="http://www.realert.com">www.realert.com</a>
Real Estate Center Online News	<a href="http://www.recenter.tamu.edu">www.recenter.tamu.edu</a>
Real Estate Forum	<a href="http://www.almrealestatemediagroup.com">www.almrealestatemediagroup.com</a>
RE Journals.com	<a href="http://www.rejournals.com">www.rejournals.com</a>
Resort and Recreation Magazine	<a href="http://www.resort-recreation.com">www.resort-recreation.com</a>
Southeast Real Estate Business	<a href="http://www.southeastrebusiness.com">www.southeastrebusiness.com</a>



Spa Solutions	<a href="http://www.spa-solutions.net">www.spa-solutions.net</a>
Travel World News	<a href="http://www.travelworldnews.com">www.travelworldnews.com</a>
Vacation Ownership World	<a href="http://www.evacationownershipworld.com">www.evacationownershipworld.com</a>
Wired Hotelier	<a href="http://www.wiredhotelier.com">www.wiredhotelier.com</a>

## South America

	La Agencia de Viajes LADEVI	<a href="http://www.ladevi.travel">www.ladevi.travel</a>
	Hosteltur.com E-Comunicación para el Turismo del Futuro	<a href="http://www.hosteltur.com">www.hosteltur.com</a>
Argentina	El Inmobiliario.com	<a href="http://www.elinmobiliario.com">www.elinmobiliario.com</a>
	Hospitalidad and Negocios	<a href="http://www.hospitalidadynegocios.com">www.hospitalidadynegocios.com</a>
	Host News	<a href="http://www.hostnews.com.ar">www.hostnews.com.ar</a>
	Hotelier News Argentina	<a href="http://www.hoteliernews.com.ar">www.hoteliernews.com.ar</a>
	Inmobidiario Every Day Real Estate	<a href="http://www.everydayrealestate.com.ar">www.everydayrealestate.com.ar</a>
	Latitud 2000	<a href="http://www.latitud2000.com">www.latitud2000.com</a>
	Mensajero Web - Información Turística al Instante	<a href="http://www.mensajeroweb.com.ar">www.mensajeroweb.com.ar</a>
	Newsletter Destino Argentina	<a href="http://www.destinoargentina.com">www.destinoargentina.com</a>
	Newsletter FEHGRA	<a href="http://www.fehgra.org.ar">www.fehgra.org.ar</a>
	Reporte Inmobiliario - Economia and Real Estate	<a href="http://www.reporteinmobiliario.com.ar">www.reporteinmobiliario.com.ar</a>
	Turismo 530 Diario Digital	<a href="http://www.turismo530.com">www.turismo530.com</a>
Caribbean	Caribbean News	<a href="http://www.caribbeannewsdigital.com">www.caribbeannewsdigital.com</a>
Chile	Chef and Hotel	<a href="http://www.chefandhotel.cl">www.chefandhotel.cl</a>
Ecuador	Traffic News - Diario Turístico Latinoamericano	<a href="http://www.trafficnews.ec">www.trafficnews.ec</a>
	Welcome Ecuador	<a href="http://www.welcomeecuador.com">www.welcomeecuador.com</a>
Mexico	ICONO Magazine	<a href="http://www.iconomagazine.com">www.iconomagazine.com</a>
	Real Estate Market and Lifestyle	<a href="http://www.realestatemarket.com.mx">www.realestatemarket.com.mx</a>
Perú	InfoTourPerú	<a href="http://www.infotourperu.com">www.infotourperu.com</a>
	T News	<a href="http://www.tnews.com.pe">www.tnews.com.pe</a>
	Travel@Idía	<a href="http://www.travelaldia.com">www.travelaldia.com</a>
Uruguay	Newsletter PASAPORTE	<a href="http://www.newsletterpasaporte.com">www.newsletterpasaporte.com</a>





# Travel Associations



APPENDIX

D

Airlines for America

[www.airlines.org](http://www.airlines.org)

American Hotel and Lodging Association

[www.ahla.com](http://www.ahla.com)

American Resort Development Association

[www.arda.org](http://www.arda.org)

American Society of Interior Designers

[www.asid.org](http://www.asid.org)

American Society of Travel Agents

[www.astanet.com](http://www.astanet.com)

Asian American Hotel Owners Association

[www.aahoa.com](http://www.aahoa.com)

Boutique and Lifestyle Lodging Association

[www.boutiquelodgingassociation.org](http://www.boutiquelodgingassociation.org)

Caribbean Hotel and Tourism Association

[www.caribbeanhotelandtourism.org](http://www.caribbeanhotelandtourism.org)

Council on Hotel, Restaurant and  
Institutional Education

[www.chrie.org](http://www.chrie.org)

Council of Hotel and Restaurant Trainers

[www.chart.org](http://www.chart.org)

Global Business Travel Association

[www.gbta.org](http://www.gbta.org)

Green Hotels Association

[www.greenhotels.com](http://www.greenhotels.com)

Green Meeting Industry Council

[www.gmicglobal.org](http://www.gmicglobal.org)

Historic Hotels of America

[www.historichotels.org](http://www.historichotels.org)

Hospitality Asset Managers Association

[www.hamagroup.org](http://www.hamagroup.org)

Hospitality Financial and Technology  
Professionals

[www.hftp.org](http://www.hftp.org)

Hospitality Sales and Marketing Association  
International

[www.hsmi.org](http://www.hsmi.org)

Hotel Association of Canada

[www.hotelassociation.ca](http://www.hotelassociation.ca)

Hotel Electronic Distribution Network  
Association

[www.hedna.org](http://www.hedna.org)

Hotel Technology Next Generation

[www.htng.org](http://www.htng.org)

Independent Lodging Industry Association

[http://  
independentlodgingindustryassociation.  
com](http://independentlodgingindustryassociation.com)

InterContinental Hotels Group Owners  
Association

[www.owners.org](http://www.owners.org)

International Association of Conference  
Centers

[www.iaconline.org](http://www.iaconline.org)

International Council on Hotel, Restaurant  
and Institutional Education

[www.chrie.org](http://www.chrie.org)

International Franchise Association

[www.franchise.org](http://www.franchise.org)

International Hotel and Restaurant  
Association

[www.ih-ra.com](http://www.ih-ra.com)

International Society of Hospitality  
Consultants

[www.ishc.com](http://www.ishc.com)

Latino Hotel and Restaurant Association

[www.latinhospitality.org](http://www.latinhospitality.org)

Meeting Professionals International

[www.mpiweb.org](http://www.mpiweb.org)



National Association of Black Hotel Owners,  
Operators, and Developers  
[www.nabhood.net](http://www.nabhood.net)

National Restaurant Association  
[www.restaurant.org](http://www.restaurant.org)

National Society of Minorities in Hospitality  
[www.nsmh.org](http://www.nsmh.org)

National Tour Association  
[www.ntaonline.com](http://www.ntaonline.com)

Network of Executive Women in Hospitality  
[www.newh.org](http://www.newh.org)

Open Travel Alliance  
[www.opentravel.org](http://www.opentravel.org)

Pacific Asia Travel Association  
[www.pata.org](http://www.pata.org)

Professional Association of Innkeepers  
International  
[www.innkeeping.org](http://www.innkeeping.org)

Resort Hotel Association  
[www.resorthotelinsurance.com](http://www.resorthotelinsurance.com)

Society for Accessible Travel and Hospitality  
[www.sath.org](http://www.sath.org)

United States Tour Operators Association  
[www.ustoa.com](http://www.ustoa.com)

US Travel Association  
[www.ustravel.org](http://www.ustravel.org)

World Travel and Tourism Council  
[www.wttc.org](http://www.wttc.org)

World Waterpark Association  
[www.waterparks.org](http://www.waterparks.org)





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