

Efficient Utilization Of InterContinental® New Orleans Hotel Resources After Hurricane Katrina: A Case Study


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ABSTRACT

A significant capital budgeting problem faced the InterContinental New Orleans Hotel after the wake of Hurricane Katrina in 2005. The problem was presented to students as a case study. Students were provided firm specific and market data to perform a detailed discounted cash flow analysis, including estimation of the weighted average cost of capital and the corresponding sensitivity analysis. The case is designed to be used in an upper level undergraduate corporate finance class.

Keywords: Case Study, Corporate Finance, Project Evaluation, Capital Budgeting, Weighted Average Cost of Capital, Hotel Industry, Hurricane Katrina

INTRODUCTION

 On August 29, 2005, Hurricane Katrina made landfall along the U.S. Gulf Coast. The cities of New Orleans, Louisiana; Mobile, Alabama; and Gulfport, Mississippi, were significantly impacted. In addition to heavy rains, storm surge and levee failures caused heavy property damage. Strong winds even damaged oil production facilities in the Gulf. In total, insured losses from Hurricane Katrina in the U.S., the Bahamas, and the North Atlantic reached 45 billion U.S. dollars, making Katrina by far the costliest natural disaster since 1970.

The hotel industry was devastated. It was estimated that at least 286 hotels along the U.S. Gulf Coast were closed due to damages from wind and flooding. In New Orleans alone, 127 hotels with their 20,000 rooms were severely damaged and had to be closed (Kraus 2005). Twelve of those hotels were franchised properties of the InterContinental Hotel Group (Donahue 2005). The InterContinental New Orleans, a hotel belonging to the InterContinental Hotel Group, was one of the hotels affected. There were 2,200 people caught in the building as the storm made landfall. Irvin Norvack, the chief of maintenance who was there during the hurricane, stated “it was very rough, but we held together and no one left in a body bag.” It was almost a month later when InterContinental could get its construction crew and office personnel back to New Orleans from Houston and Dallas, Texas.

After Katrina, questions abounded. “What would the future bring to the city?” “More important to this case, how would the InterContinental New Orleans Hotel become profitable once again?” Allison Dakota, the general manager, was tasked with answering this concern.

NEW ORLEANS, LOUISIANA

A city known for its exquisite cuisine, historical landmarks, and festive environment, New Orleans has always been a city that relies heavily on tourism. Mardi Gras, The Jazz and Heritage Festival, French Quarter Festival, the Voodoo Music Experience, the International Arts Festival, and other festivals attract people from all. It is estimated that Mardi Gras, a carnival celebration, brings more than 700,000 tourists to the city annually. The

estimated economic impact of Mardi Gras alone is \$322 million (theadvocate.com, retrieved 1/26/2010). Despite its attractiveness as a tourism center, New Orleans's geography creates a precarious situation. New Orleans is especially vulnerable to hurricanes due to its "bowl shape" geography, mostly situated below sea level. Hurricane season runs from late July until November and with an average of 10 hurricanes per season (ScienceDaily 2008), people from New Orleans need to be always prepared for potential disruptions in their daily lives.

The U.S. Army Corps of Engineers (USACE) as the Federal Agency in charge of public engineering projects in the U.S. is the agency responsible for the design and construction of most of the flood and hurricane levees along the Mississippi River and in the New Orleans area. Disappointedly, the Hurricane Protection Project System experienced severe damages during and after Hurricane Katrina. The flooding of New Orleans was caused by ruptures in about 50 locations in the city's hurricane protection system. "Of the 284 miles of federal levees and floodwalls, 169 experienced damages" (ASCE 2007). As a result the USACE started the Inner Harbor Navigation Canal Lake Borgne surge barrier project, the biggest civil works project in the history of the USACE to be completed by year 2011 (USACE 2009).

AN OPPORTUNITY FOR THE INTERCONTINENTAL NEW ORLEANS HOTEL

Following the hurricane, tourism took a nose dive. Travel into and around New Orleans became difficult and the local economy was distraught. Tens of thousands of homes and businesses were destroyed or heavily damaged. Much of the city was inundated until early October 2005. Federal and state recovery efforts were slower than many desired. Indeed, almost five years later, recovery efforts are still in progress.

In the meantime, the InterContinental New Orleans Hotel's managerial team was considering spending considerable time and money to bring the hotel back. But would it be the same? After all, tourism was down considerably. Even so-called experts opined that if the city were to be rebuilt, the process would take years. Such dire forecasts clouded the thought of rebuilding as investment dollars would be difficult to come by, would need to be repaid, and would have to generate revenue.

As is often the case whenever there are crises, there are opportunities. Allison Dakota noticed that the market had changed dramatically. After the disaster, local churches and charities had really stepped up to the challenge of rebuilding the city and went far and wide to recruit people for disaster recovery assistance in the New Orleans area. As a consequence, visitors came not for tourism, but as volunteers to work and rebuild affected areas. Hence, Allison faced more questions: "If instead of only renovating, should the hotel convert some larger suites into smaller, regular rooms that could satisfy the volunteers' demand for shelter?" Would this be economically feasible, given the high investment required?" To answer such questions, Allison needed to perform a capital budgeting analysis to decide whether or not to undertake the suite conversions. Plans needed to be formulated and different scenarios needed to be considered before any decision could be made. Eventually, following the general mood in the city, the owners of the hotel decided to stay in the city and gave Allison the vote of confidence in the conversion and renovation efforts. She put herself to work immediately by considering different forms to convert the grander, more luxurious suites into smaller, more profitable rooms and acquiring bids from several able contractors for the necessary work.

THE INTERCONTINENTAL HOTELS GROUP (IHG)

By 2005, the InterContinental Hotels Group (LON: IHG, NYSE: IHG; ADRs) was the world's largest hotelier by number of rooms. The hotel group was represented by a total of seven different brands: Holiday Inn, Holiday Inn Express, Indigo, Intercontinental, Hotel Plaza, Staybridge Suites, and Candlewood Suites. Altogether, the group owned, managed, or franchised about 3,600 hotels with more than 500,000 guest rooms, generating 12 million stays a year in nearly 100 countries grouped into four regions: Europe, Middle East and Africa (EMEA) region, the Americas region, the Asia Pacific region, and the Central region.

The Intercontinental hotels group owns, manages, or franchises its hotels. Franchised units represented the largest part of the business, while ownership represented less than one percent of the portfolio. The Intercontinental New Orleans that opened in the 1980s was a partnership between private investors and Pan American Life Insurance

as a franchised hotel. IHG owned the brand and was responsible for marketing. A fee was charged to room revenue for IHG efforts, while a third party operator held the ownership and provided the staff and the investment capital.

At the time, IHG's long-term prospects were promising. Travel industry trends indicated a continuing growth due to factors such as increasing popularity of low cost airlines, new travelling markets (e.g., China and Russia), an additional demand for one million rooms by 2012, and a consumers' preference for branded hotels over non-branded hotels, as indicated by IHG surveys.¹ By 2005, the total capacity of the hotel industry worldwide was estimated to grow annually by 3%.

In October 2005, Allison decided to perform a capital budgeting analysis to decide whether or not to undertake the suite conversions and renovations. Assisted by a team of staff members from the departments of Marketing, Management, and Finance, she gathered information to estimate cash inflows and outflows associated with the project. The plan was to convert three suites into separate, smaller rooms and renovate three other rooms in order to charge higher daily rates². The details of the suite conversions are shown in Table 1.

Table 1: Suite Conversions and Renovations Details

| Suite Conversions | |
|--------------------------|--|
| <i>Current Status</i> | <i>Future Status</i> |
| Suite 1 | 4 standard rooms and one smaller suite |
| Suite 2 | 3 standard rooms |
| Suite 3 | 3 club rooms |

| Room Renovations | |
|-------------------------|----------------------|
| <i>Current Status</i> | <i>Future Status</i> |
| Standard room | Standard room |
| Club room | Club room |
| Small suite | Small suite |

Table 2: First Year Revenue Projections, InterContinental New Orleans

| Panel A | | |
|----------------|-------|--------------------|
| New Rooms | ADR* | Annual # of Nights |
| Rooms | \$198 | 71 |
| Small Suite | \$594 | 71 |
| Club Rooms | \$297 | 71 |

| Renovated Rooms | ADR* | Annual # of Nights |
|-----------------|-------|--------------------|
| Rooms | \$171 | 71 |
| Small Suite | \$513 | 71 |
| Club Rooms | \$257 | 71 |

| Panel B | | |
|----------------|-------|--------------------|
| Current Rooms | ADR* | Annual # of Nights |
| Big Suite | \$530 | 71 |
| Regular room | \$149 | 71 |
| Small Suite | \$447 | 71 |
| Club Room | \$224 | 71 |

Note: *ADR stands for average daily rate. Price per suite is 3x as much as a room, and the price of a *Club Room* is 1.5x as much as that of a regular room.

¹ IHG at a Glance – A Report. Available at http://www.ihgplc.com/files/pdf/factsheets/ihg_at_a_glance.pdf. Accessed on September 2009

² The actual number of rooms to be converted and renovated was higher; we decided to reduce the number of rooms and details about the nature of the hotel business to facilitate the analysis.

The analysis required the estimation of incremental revenues from the converted rooms as compared to the current rooms’ revenues. Table 2 shows the revenue projections of the annual number of nights and average daily rental (ADR) rates for the converted (“new”) and renovated rooms (Panel A) versus the “as is” (“current”) rooms (Panel B) at 95% occupancy for the first year.³

Once Allison and her team projected, in detail, first-year revenues for the “new” rooms, they continued forecasting years 2 to 10 using the industry’s growth projections. A perpetuity estimate was used to compute a terminal value. Allison incorporated an adjustment in ADR to account for the drop in occupancy of the big suites. The change in ADR would be 5% for the first five years and 2.4% for the remaining years.

The costs associated with the new rooms included those of suite conversion and renovations, room furnishings, and other project-related fees. In addition, an analysis must account for the room night rentals that will be lost due to the project, including rentals of nearby rooms that would be impacted. Table 3 provides the average estimation bids from different contractors (i.e., construction), Furniture, Fixtures, and Equipment (FF&E), architecture and design, opportunity costs, and a provision for unexpected costs (contingency costs).

Table 3: Project’s Selected Costs

| Panel A: Construction Costs | | |
|-----------------------------|---------|----------|
| Room Type | Sq Feet | Rate |
| Room Conversion | 1,000 | \$ 17.00 |
| Suite Conversion | 3,000 | \$ 25.00 |
| ClubRoom Conversion | 1,500 | \$ 22.00 |
| Room Renovation | 1,000 | \$ 15.00 |

| Panel B: FFE | |
|---------------|----------|
| Room Type | Cost |
| Suites | \$15,000 |
| Club Room | \$11,500 |
| Standard Room | \$9,500 |

| | |
|-------------------------------|-----------------|
| Tax @ 9.75% | |
| Freight @ 8% | |
| Installation @ 6% | |
| Purchasing @ 5% | |
| Architecture and Design @ 10% | |
| Contingency @ 10% | |
| OPPORTUNITY COST | \$19,655 |

Since accounting depreciation is a non-cash deduction that reduces the tax bill, the acceptable depreciation charge is determined by law. Therefore, FF&E and construction costs (additions to the building) should be depreciated by a modified accelerated cost recovery system (MACRS) schedule.⁴ According to the IRS, the FF&E fell into the 5-year property class. Buildings would be depreciated by the straight line method in 39 years. Table 4 provides the depreciation information.

³ Allison knew that the hotel’s profits were maximized when the building was above 95% occupied. However, best practices suggest a need to estimate revenues at different levels of occupancy to compute a range of metrics rather than a point estimate.

⁴ MACRS is the method of accelerated asset depreciation required by the U.S. tax code. Under MACRS, assets are divided into classes which dictate the number of years over which the cost of the assets will be recovered. There are MACRS for property and real (real estate) property.

Table 4: Depreciation Schedule

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Years 7-39 |
|-----------------------|--------|--------|--------|--------|--------|--------|------------|
| FFE | 20% | 32% | 19.2% | 11.52% | 11.52% | 5.76% | |
| Building ⁵ | 2.461% | 2.564% | 2,564% | 2.564% | 2.564% | 2.564% | 2.564% |

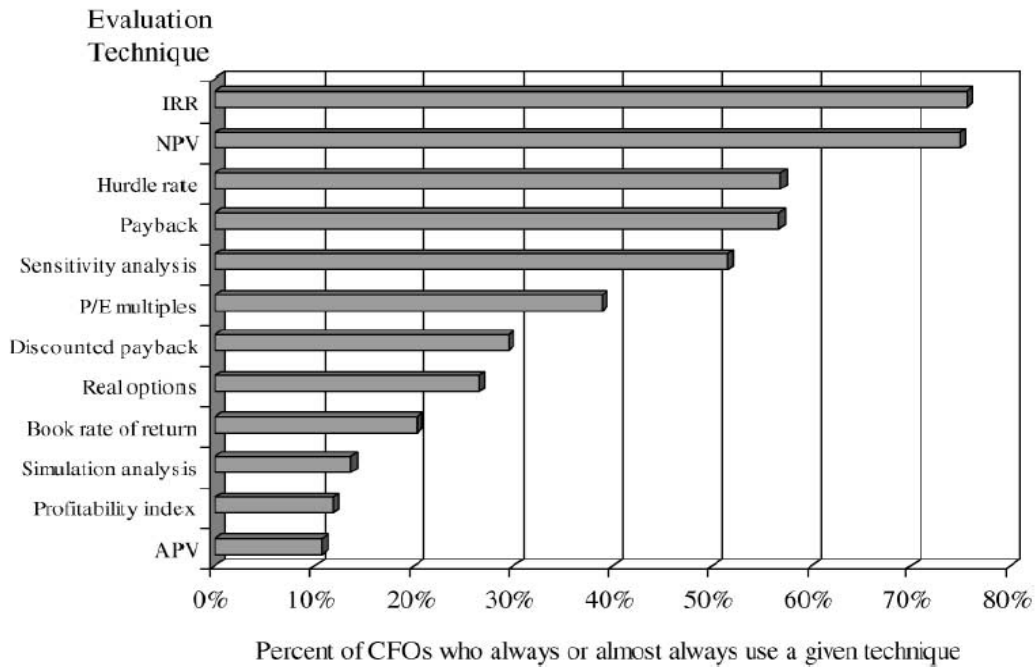
Note: The depreciation of buildings follows a middle of the month convention for the first year. That is, the asset is assumed to be put into place in the middle of the month. Therefore, for the first year, the depreciation rate is 2.461% but for the remaining 38 years is 2.564%

Due to this project, accounts receivables, inventory, and accounts payables would experience little change, if any. The hotel policy was to charge its customers as the service was rendered, to hold as little inventory as possible, and to keep short-term payables low. In Allison’s opinion, 1% of the annual revenues would be a close estimate of the annual networking capital employed by the hotel.

Was the Project Worth Undertaking?

Allison and her staff were able to project free cash flows for the ten-year period starting January 2006. In their spreadsheet, they needed to be sure to link relevant inputs to free cash flows and later to the corresponding metrics or techniques to evaluate the project. They knew that several variables (i.e., growth rate, cost of capital, inflation, and so on) would be under scrutiny by top management when they presented the project evaluation. Having an all-variables-linked spreadsheet would allow them to change any variable and have the new estimated metrics immediately, thus allowing them to answer top management’s questions. It would also allow them to perform different scenarios and sensitivity analyses relatively easy.

Figure 1: Capital Budgeting Techniques Commonly Used by Practitioners



Source: Graham and Harvey (2001) Notes: Survey results based on 392 CFOs conducted in 1999. IRR stands for Internal Rate of Return, NPV is Net Present Value, P/E is Price to Earnings, and APV is Adjusted Present Value.

A concern for Allison and her finance staff was the determination of what metrics or techniques (i.e., net present value, internal rate of return and its modified version, payback, discounted payback, sensitivity analysis,

⁵ The depreciation of buildings follows a middle of the month convention for the first year. That is, the asset is assumed to be put into place in the middle of the month. Therefore, for the first year, the depreciation rate is 2.461% but for the remaining 38 years is 2.564%

simulation, among others) to use for the evaluation of the projected free cash flows. Allison analyzed the results of a survey conducted by Graham and Harvey (2001) to almost 400 CFOs from companies listed on the Fortune 500 regarding the techniques they used to evaluate capital budgeting decisions (Figure 1). Allison realized that a combination of several techniques would make her sales pitch more persuasive since the individual techniques had both advantages and drawbacks.

Tables 5 through 9 provide data to estimate the weighted average cost of capital (WACC), an input for some of the evaluation techniques.

Table 5: USA Equity Risk Premium

| Study | Dates Covered | Equity Premium |
|---------------------------|---------------|----------------|
| Dimson, Marsh, & Staunton | 1900-2000 | 5.60% |
| Fama & French | 1872-2000 | 5.60% |
| Mehra & Prescott | 1890-1979 | 6.00% |
| Ibbotson | 1926-1999 | 7.50% |
| Siegel | 1926-1990 | 6.10% |
| Siegel | 1802-1925 | 1.90% |
| Fama & French | 1872-1950 | 4.40% |
| Fama & French | 1951-2000 | 7.40% |

Source: Clarke and De Silva (2003). Notes: Equity Premium estimated as the compound, annualized rate of return (geometric mean) on equities minus the compound, annualized return on short-term government debt. References of column "Study": **Dimson, E., P. Marsh, and M. Suanton**, Millennium Book II: 101 Years of Investment Returns, London Business School & ABN-AMRO, 2001. **Fama, E. & K. French**, The Equity Premium, The Journal of Finance, April 2002, 637-659. **Mehra, R., and Prescott, E.**, The Equity Premium: A Puzzle, Journal of Monetary Economics, March 1985, 145-161. **Siegel, J.** The Equity Premium: Stock and Bond Returns Since 1802, Financial Analysts Journal, Jan/Feb 1992, 23-38. **Ibbotson Associates**, Stock, Bonds, Bills, and Inflation Yearbook, Chicago: Ibbotson Associates, 2000

Table 6: InterContinental Stock Prices and Stock Indices

| Date | Adjusted Close Price | | Indices | |
|------------|----------------------|---------------|-----------|-----------|
| | IHG LN Equity | IHG US Equity | SPX Index | UKX Index |
| 1/30/2004 | 1,123.03 | 13.73 | 1,131.13 | 4,390.70 |
| 2/27/2004 | 1,081.44 | 13.41 | 1,144.94 | 4,492.20 |
| 3/31/2004 | 1,033.61 | 12.58 | 1,126.21 | 4,385.70 |
| 4/30/2004 | 1,096.00 | 12.98 | 1,107.30 | 4,489.70 |
| 5/31/2004 | 1,088.72 | 13.29 | 1,120.68 | 4,430.70 |
| 6/30/2004 | 1,211.42 | 14.68 | 1,140.84 | 4,464.10 |
| 7/30/2004 | 1,215.58 | 14.79 | 1,101.72 | 4,413.10 |
| 8/31/2004 | 1,176.07 | 14.03 | 1,104.24 | 4,459.30 |
| 9/30/2004 | 1,307.09 | 15.74 | 1,114.58 | 4,570.80 |
| 10/29/2004 | 1,386.11 | 16.86 | 1,130.20 | 4,624.20 |
| 11/30/2004 | 1,386.11 | 17.63 | 1,173.82 | 4,703.20 |
| 12/31/2004 | 1,202.32 | 17.18 | 1,211.92 | 4,814.30 |
| 1/31/2005 | 1,239.46 | 17.18 | 1,181.27 | 4,852.30 |
| 2/28/2005 | 1,237.60 | 17.44 | 1,203.60 | 4,968.50 |
| 3/31/2005 | 1,146.62 | 16.07 | 1,180.59 | 4,894.40 |
| 4/29/2005 | 1,156.83 | 16.20 | 1,156.85 | 4,801.70 |
| 5/31/2005 | 1,183.75 | 15.93 | 1,191.50 | 4,964.00 |
| 6/30/2005 | 959.32 | 17.23 | 1,191.33 | 5,113.20 |
| 7/29/2005 | 985.87 | 17.47 | 1,234.18 | 5,282.30 |
| 8/31/2005 | 1,017.19 | 18.38 | 1,220.33 | 5,296.90 |
| 9/30/2005 | 976.34 | 17.32 | 1,228.81 | 5,477.70 |
| 10/31/2005 | 961.36 | 17.01 | 1,207.01 | 5,317.30 |
| 11/30/2005 | 1,066.89 | 18.36 | 1,249.48 | 5,423.20 |
| 12/30/2005 | 1,143.15 | 19.68 | 1,248.29 | 5,618.80 |

Source: Bloomberg database, accessed on September 18th, 2009

**Table 7: Selected Treasury Securities in the USA from 1995-2006 (Maturities 1-, 10-, and 30 years)
US Treasuries (annual rates)**

| Maturity | 1 year | 10 years | 30 years |
|----------------------|--------|----------|----------|
| Bloomberg ticker | C0821Y | C08210Y | C08230Y |
| High | 6.1400 | 6.4200 | 6.6500 |
| Avg | 4.1078 | 5.0282 | 5.4323 |
| Low | 1.1953 | 3.8455 | 4.4968 |
| End of December 2006 | 5.0000 | 4.7183 | 4.7989 |
| End of December 2005 | 4.4162 | 4.4029 | 4.4968 |
| End of December 2004 | 2.7942 | 4.2570 | 4.8165 |
| End of December 2003 | 1.2081 | 4.2247 | 5.0100 |
| End of December 2002 | 1.1953 | 3.8455 | 4.7651 |
| End of December 2001 | 2.0300 | 5.0200 | 5.5000 |
| End of December 2000 | 5.4700 | 5.0600 | 5.5300 |
| End of December 1999 | 6.1400 | 6.4200 | 6.6100 |
| End of December 1998 | 4.5800 | 4.6300 | 5.1200 |
| End of December 1997 | 5.6200 | 5.7400 | 5.9400 |
| End of December 1996 | 5.6200 | 6.4100 | 6.6500 |
| End of December 1995 | 5.2200 | 5.6100 | 5.9500 |

Source: Prepared by authors. Data from Bloomberg

Table 8: IHG Selected Peers by Market Capitalization (in millions)

| Ticker | Name | Mkt Cap |
|---------|------------------------------|-----------|
| IHG US | INTERCONTINENTAL HOTELS-ADR | 3,878.12 |
| CCL US | CARNIVAL CORP | 27,882.90 |
| AC FP | ACCOR SA | 12,696.40 |
| CPG LN | COMPASS GROUP PLC | 10,833.50 |
| SW FP | SODEXO | 9,645.38 |
| MAR US | MARRIOTT INTERNATIONAL-CL A | 9,577.71 |
| HOT US | STARWOOD HOTELS & RESORTS | 6,385.93 |
| RCL US | ROYAL CARIBBEAN CRUISES LTD | 4,998.96 |
| TT/ LN | TUI TRAVEL PLC | 4,906.72 |
| TCG LN | THOMAS COOK GROUP PLC | 3,681.17 |
| WTB LN | WHITBREAD PLC | 3,491.94 |
| WYN US | WYNDHAM WORLDWIDE CORP | 2,813.19 |
| TUII GR | TUI AG | 2,569.67 |
| WMH LN | WILLIAM HILL PLC | 2,146.05 |
| MAB LN | MITCHELLS & BUTLERS PLC | 1,996.66 |
| MLC LN | MILLENNIUM & COPTHORNE HOTEL | 1,913.51 |
| LAD LN | LADBROKES PLC | 1,958.80 |
| CHH US | CHOICE HOTELS INTL INC | 1,899.98 |
| SOL SM | SOL MELIA SA | 1,831.29 |
| NHH SM | NH HOTELES SA | 1,802.31 |
| PUB LN | PUNCH TAVERNS PLC | 1,323.69 |
| ETI LN | ENTERPRISE INNS PLC | 1,210.13 |
| JDW LN | WETHERSPOON (J.D.) PLC | 1,121.67 |
| KUNN SW | KUONI REISEN HLDG-REG(CAT B) | 1,054.82 |
| REZT SS | REZIDOR HOTEL GROUP AB | 565.68 |
| RNK LN | RANK GROUP PLC | 509.84 |

Source: Bloomberg. Market capitalization as of September 19, 2009

Table 9: Selected Financial 2003/2005 for IHG and Peers (in millions USD)

| | IHG | | | WYNDHAM | | | HILTON | | | MARRIOTT | | | ORIENT EXPRESS | | | LAS VEGAS SAND | | |
|-----------------------------|---------|---------|---------|---------|--------|--------|--------|--------|--------|----------|--------|--------|----------------|---------|---------|----------------|--------|---------|
| | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 | 2003 | 2004 | 2005 |
| Revenues | 4394.5 | 1339 | 1548.7 | NA | 3014 | 3471 | 2849 | 4146 | 4437 | 9014 | 10099 | 11550 | 315.86 | 357.28 | 433.15 | 691.75 | 1197.1 | 1740.9 |
| Operating Income | 565.24 | 155.7 | 305.38 | NA | 600 | 620 | 515 | 658 | 805 | 377 | 477 | 555 | 30.26 | 38.91 | 59.66 | 186.13 | 618.47 | 489.45 |
| Net Income | 31.04 | 701.56 | 901.6 | NA | 349 | 431 | 164 | 238 | 460 | 502 | 596 | 669 | 23.61 | 28.22 | 40.73 | 66.63 | 495.18 | 283.69 |
| | | | | NA | | | | | | | | | | | | | | |
| Total Assets | 9416.1 | 8961.9 | 4700.6 | NA | 8343 | 9167 | 8178 | 8242 | 8743 | 8177 | 8668 | 8530 | 1173.7 | 1265.6 | 1415.6 | 1917 | 3601.5 | 3879.7 |
| Current Assets | 1646 | 1145.6 | 1215.1 | NA | 2071 | 2568 | 1020 | 1106 | 2089 | 1235 | 1946 | 2010 | 162.4 | 176.19 | 157.7 | 272.74 | 1405.1 | 644.71 |
| Cash & ST Investments | 770.41 | 291.19 | 739.04 | NA | 94 | 99 | 82 | 303 | 1154 | 229 | 770 | 203 | 81.35 | 85.61 | 38.4 | 152.79 | 1294.9 | 456.85 |
| Accts Receivable Net | 493.99 | 545.99 | 274.99 | NA | 344 | 371 | 246 | 269 | 312 | 699 | 797 | 837 | 43.22 | 34.98 | 59.06 | 54.2 | 56.58 | 84.78 |
| Inventories | 78.47 | 80.46 | 5.16 | NA | 365 | 446 | 193 | 144 | 219 | 0 | 0 | 0 | 26.11 | 28.96 | 29.64 | 6.25 | 8.01 | 9.97 |
| Other currents | 303.17 | 227.97 | 195.93 | NA | 1268 | 1652 | 499 | 390 | 404 | 307 | 379 | 970 | 11.72 | 26.63 | 30.61 | 59.5 | 45.64 | 93.11 |
| PP&E, net | 7046 | 3689.7 | 2330.6 | NA | 735 | 718 | 3641 | 3510 | 2985 | 2513 | 2389 | 2341 | 822.26 | 916.81 | 1010.9 | 1484.7 | 1756.1 | 2600.5 |
| Other non-current | 417.3 | 3973.3 | 960.75 | NA | 3978 | 4046 | 1307 | 1416 | 1483 | 2512 | 2648 | 2207 | 159.46 | 143.06 | 184.06 | 159.63 | 440.26 | 634.56 |
| | | | | NA | | | | | | | | | | | | | | |
| Total liabilities | 4570.7 | 5249.2 | 2803.2 | NA | 3664 | 4134 | 5939 | 5674 | 5932 | 4339 | 4587 | 5278 | 661.21 | 720.6 | 742.16 | 1754.9 | 2285.5 | 2270.2 |
| Current Liabilities | 1934.9 | 1774 | 1364.7 | NA | 1179 | 1295 | 895 | 629 | 864 | 1770 | 2996 | 2760 | 151.64 | 176.24 | 212.2 | 223.37 | 612.56 | 460.37 |
| Accounts payable | 237.18 | 304.6 | 144.37 | NA | 271 | 239 | 553 | 611 | 772 | 584 | 570 | 591 | 23.75 | 23.84 | 22.68 | 16.68 | 120.76 | 198.73 |
| Debt ST | 23.18 | 122.61 | 6.87 | NA | 290 | 355 | 338 | 14 | 47 | 476 | 997 | 615 | 51.27 | 46.24 | 72.15 | 41.38 | 314.05 | 15.24 |
| Other ST Liabilit without c | 1674.6 | 1346.8 | 1213.4 | NA | 618 | 701 | 4 | 4 | 45 | 710 | 1429 | 1554 | 76.62 | 106.15 | 117.37 | 165.31 | 177.75 | 246.39 |
| Debt LT | 1762 | 2214.6 | 704.67 | NA | 1478 | 1687 | 3801 | 3633 | 3572 | 1391 | 836 | 1681 | 502.92 | 537.46 | 496.16 | 1525.1 | 1494.1 | 1635.7 |
| Other Liabilities LT | 873.84 | 1260.6 | 733.88 | NA | 1007 | 1152 | 468 | 631 | 818 | 1178 | 755 | 837 | 3.8 | 4.19 | 4.15 | 6.44 | 178.82 | 174.13 |
| Stockholder equity | 4845.4 | 3712.7 | 1897.4 | NA | 4679 | 5033 | 2239 | 2568 | 2811 | 3838 | 4081 | 3252 | 512.44 | 544.99 | 673.4 | 162.11 | 1316 | 1609.5 |
| | | | | NA | | | | | | | | | | | | | | |
| Total shares outstand | 423.59 | 399.12 | 378.87 | NA | | | 379.39 | 386.03 | 381.45 | 231.23 | 223.61 | 208.37 | 51.84 | 52.29 | 574.34 | 1.22 | 354.16 | 354.18 |
| | | | | NA | | | | | | | | | | | | | | |
| Cash flow from operations | 1001.4 | 844.43 | 548.96 | NA | 142 | 488 | 380 | 638 | 486 | 403 | 891 | 837 | 33.24 | 52.56 | 36.79 | 137.12 | 373.37 | 589.92 |
| Cash flow from investment | -723.7 | -276.59 | 3386.5 | NA | -323 | -692 | 60 | -132 | 620 | 311 | 287 | -130 | -40.57 | -100.58 | -218.35 | -298.33 | -51.65 | -1126 |
| Cash flow from financing | -187.87 | -1187 | -3464.6 | NA | 217 | 221 | -451 | -122 | -255 | -683 | -637 | -1274 | 50.81 | 52.28 | 134.34 | 207.52 | 820.39 | -302.72 |
| Depreciation & amortiz | 494.99 | 316.89 | 236.31 | NA | 119 | 131 | 334 | 330 | 299 | 160 | 166 | 184 | 25.26 | 28.35 | 31.08 | 53.86 | 69.43 | 90.6 |
| CAPEX | 775.97 | 448.78 | 305.38 | NA | 116 | 134 | 202 | 178 | 423 | 210 | 181 | 780 | 54.45 | 65.1 | 114.9 | 279.95 | 465.75 | 860.62 |
| Free cash flow | 225.44 | 395.65 | 243.58 | NA | 26 | 354 | 178 | 460 | 63 | 193 | 710 | 57 | -21.21 | -12.54 | -78.11 | -142.83 | -92.38 | -270.7 |
| CAPEX/Dep | 1.5676 | 1.4162 | 1.2923 | NA | 0.9748 | 1.0229 | 0.6048 | 0.5394 | 1.4147 | 1.3125 | 1.0904 | 4.2391 | 2.1556 | 2.2963 | 3.6969 | 5.1977 | 6.7082 | 9.4991 |

Source: Prepared by authors. Data from Bloomberg and Economatica.

Although Allison was familiar with the WACC computation, she knew that an analyst had several discretionary decisions to make in order to estimate the WACC. For instance, to estimate the cost of debt, current interest rates for the hotel industry or the on-going interest rate for the hotel's debt could be used. To estimate the cost of equity, the Capital Asset Pricing Model (CAPM) approach, the bond-yield-plus-risk-premium approach, or other models could be used. Further, if the CAPM approach were to be used, Allison would have to decide between the Treasury Bill rates and the Treasury Bond rates as the proxy for the risk-free rate. Finally, to estimate betas or systematic risks, how far back in the historical data should she consider? The questions required addressing if a meaningful analysis was to be performed. At least she knew that the WACC and CAPM are estimated as follows.

$$WACC = r_d \left(\frac{D}{D+E} \right) (1 - T) + r_e \left(\frac{E}{D+E} \right) \quad (1)$$

$$CAPM = r_e = r_f + \beta (r_m - r_f) \quad (2)$$

where in (1), r_d is the annual cost of debt, D is net debt with financial cost, T represents income tax rate, and E is equity (i.e., measured by market capitalization). In (2), r_f represents the risk free rate (i.e., measured by Treasury securities rates), r_m is the expected rate of return of the whole market, r_m minus r_f is the equity risk premium. The expected rate of equity is represented by r_e and beta represents the firm's systematic risk estimated by dividing the covariance of the returns of the firm and the market by the variance of the market returns. Finally, Allison realized that to estimate WACC, she would have to take into consideration that the hotel was a partly-owned entity. IHG owned 33%, while a private investor owned a 67% stake. Most likely some adjustments for risk would be necessary.

EPILOGUE

Undertaking the conversions and renovations proved to be successful. By the first quarter of 2007, IHG's Finance Director⁶ announced in the earnings call that U.S. revenue increased 5.3%, outperforming the market "against a prior year comparable, which includes the significant one of business arising from Hurricane Katrina displacement. Rate growth was a solid 6.4% and occupancy levels improved through the quarter".

SUGGESTED STUDY QUESTIONS

1. What is the Intercontinental Hotel Group's weighted average cost of capital (WACC)? How much of a risk premium is embedded in it? What does the size of the risk premium tell you about the riskiness of the project?
2. Using the financial data provided, what is the net present value, the IRR and the modified IRR of the project?
3. What is the difference between analysis and scenario analysis?
4. Based on your analysis, what is your recommendation about the proposed project? How sensitive is your recommendation to (1) the incremental revenue growth rate, (2) the inflation rate, and (3) the weighted average cost of capital?

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⁶ Solomons, Richard, Q1 2007 Earnings Call-Management Discussion Section. Bloomberg Services, May 9, 2007.

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REFERENCES

1. ASCE, The American Society of Civil Engineers Hurricane Katrina External Review Panel, 2007, The New Orleans hurricane protection system: what went wrong and why - a report in 2009 Available on <http://fetcher.fw-notify.net/0000004183-1448729376/ERPReport.pdf>. Accessed on September 16, ed.
2. Clarke, R., and H. De Silva, 2003, April. Analytic Investors, *Risk Management Perspectives*.
3. Donahue, Patrick, 2005, September 2. InterContinental Reports Storm Damage to 12 New Orleans Hotels, *Bloomberg News*.
4. Graham, J. , and C. Harvey, 2001, The Theory and Practice of Corporate Finance: Evidence from the Field, *Journal of Financial Economics*, 60, 187-243.
5. Kraus, James, 2005, September 16. Hurricane Shuts 286 Hotels Along U.S. Coast, *Bloomberg News*.
6. Science Daily, 2008, April 10. 'Well Above-average' Hurricane Season Forecast For 2008, Available at <http://www.sciencedaily.com/releases/2008/04/080409133718.htm>.
7. USACE, The U.S. Army Corps of Engineers, 2009, Corps' largest project ever begins in New Orleans USACE's web site, www.usace.army.mil (Accessed on September 17, 2009).