# Point of View

# Hotel Investment: In Recovery or Incapacitated?

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The sensitivity of hotel revenues to changing conditions in national and local market economies represents an endemic, systematic risk of hotel investing that is not easily managed.[1] Moreover, twice during the last dozen years a catastrophic event has occurred coincidentally with a recession (*i.e.*, Gulf War during the 1990–1991 recession and terrorist attacks of September 11, 2001 during the 2001-? recession). Various Wall Street analyst reports (*e.g.*, Ader, 2001) and industry publications (*e.g.*, Wood, 2002) document the severity of revenue decline experienced by hotels from the combined effects of recession and unprecedented terrorist acts. Recently, room revenues have shown signs of recovery, albeit very slowly, in most areas of the United States. The Hotel Outlook forecasts indicate an even stronger recovery of occupancy during late 2002 and early 2003.[2]

Daily reporting of room revenue from Smith Travel Research provides the opportunity to map the top-line operating performance of hotels following the events of 2001. Because of the non-continuous trading characteristic of the hotel asset markets, however, much more speculation exists as to what has and will happen to hotel property values, and in turn, investment opportunities. O'Neill and Lloyd-Jones (2001) estimate that hotels lost 8.6% in value per room due to the events of September 11. In addition, they forecast that hotels should increase in value by 1.3% for 2002 and by 5.8% during 2003. These estimates come from a statistical analysis of hotel property sales occurring prior to

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September 11, 2001 together with revenue forecasts before and after the terrorist attacks.

A study of how economic downturns and catastrophic events affect commercial property investment strategy should begin with a conceptual foundation that features three inherent truths about property markets. First, real estate prices do not necessarily equal real estate values and values do not necessarily equal replacement costs. Knowing the difference between the conditions that produce rising (falling) prices without changes in values versus conditions that generate both price and value changes is critical in the formulation of investment strategies during periods of economic uncertainty and psychological stress. Second, separation exists between space markets (i.e., room rental) and asset markets. A 20% decline in revenues, for example, does not necessarily translate either directly or immediately into a 20% decline in asset prices. Third, property transactions, because of their scale, can be substantially influenced by factors such as capital market conditions and seller motivation.

This article provides insights about hotel investment during atypical periods. The story begins with a review of a few basic principles of property markets in the context of economic downturns and catastrophic events during the last three decades. The special case of the past year is specifically addressed. This review is followed by examinations of pricing and valuation parameters for hotel real estate, both in the public and private markets, throughout 2001 and early 2002. The findings indicate that hotel real estate has not been adversely affected by the extraordinary and tragic events of 2001. Conditions were not present to produce price discounts due to alteration of sellers' motivations or downward value adjustments because of permanent changes in the level and volatility of hotel incomes.

## Market Values, Market Prices and Replacement Costs

In a perfectly competitive real estate market, the prices of properties equal their market values, where market prices represent observable facts and market value estimates are normative. Real estate markets, however, are not perfectly competitive, but properties may trade close to market values if informed buyers and sellers dominate in the market and sellers do not act under duress. Also, when real estate values equal replacement costs, the market demand and supply become balanced (*i.e.*, state of equilibrium). If demand and supply diverge, as they often do because of the time it takes to develop in response to a change in demand, then values lie either above or below replacement costs.

Keeping these principles in mind, it is possible to sort out what happens in a recession and following a catastrophic event. During the 1990–1991 recession and Gulf War, values fell well below replacement costs mainly because, prior to demand falling in 1990, supply was added to the market at an unusually high rate. Also, prices fell below market values as the RTC came under pressure from Congress to dispose of properties quickly.

Hotel market conditions produced by the current recession and the September 11 catastrophic events differ markedly from those of the last recession and war. Supply grew at a strong, although not extraordinary, pace during the late 1990s and until now the number of sellers under duress remains almost nonexistent. Also, with the constant flow of current data on revenues and supply additions offered by industry vendors to hotel investors today, the uninformed market participants should not be operative. This means that neither prices nor values are under much downward pressure unless participants view the demand shift that threatens revenues to be permanent. When market participants perceive revenue declines as permanent, asset demand falls and capitalization rates rise. Values, therefore, are forced downward by the dual forces of lower stabilized incomes and reduced investment demand, given that other capital market opportunities become relatively attractive. As addressed later in this article, prices may continue to fall to levels below values if seller motivations shift due to eroding market conditions.

## Space and Property Market Interaction

Modern approaches to property market analysis proceed with the recognition that the market for non-securities real estate involves two distinct, albeit highly interrelated markets—the market for real estate use (*i.e.*, space market) and the market for capital assets (*i.e.*, property market). This separation occurs because property owners are not typically the users of the space. This fact is no more evident than in the hotel markets. Nevertheless, these markets have two fundamental links (DiPasquale and Wheaton, 1996). First, rent levels or room rates determined in the space markets substantially affect the demand for properties. Second, supply additions to property markets through construction not only drive down the prices of the assets, but also reduce rents or room rates.

Over the past two decades we have witnessed the interactions among the space and property markets triggered by actions that occurred in both markets. The economic downturns of the early 1980s, defined by the NBER as January 1980 through July 1980 and July 1981 through November 1982, were classical demand-based recessions in which stimuli of real estate market effects originated with a downward shift in the demand for space. By contrast, the real estate recession of the early 1990s was triggered by excessive supply growth originating in the property markets. The current economic situation resembles that of the early 1980s, with the added dimension of catastrophic events. Hence, any property market effects observed during 2001 and beyond will follow from the decline in revenues caused by demand shifts in the space market that occurred during the second half of 2001.

The academic and professional literature do not provide much guidance for answering two important empirical questions. First, to what extent do sizeable changes in revenues, such as those experienced in the hotel sector during the second half of 2001, translate into property value adjustments? Second, how long does it take for space market-to-property market adjustments to occur?

As part of a new product development, economists at the Hospitality Research Group (HRG) and Torto Wheaton Research (TWR) performed several experiments with a hotel capitalization model.[3] These experiments produced preliminary findings related to the questions posed above. With respect to the magnitude of response in the hotel property market to changes in the space market, specifically occupancy and average daily rate (ADR), a percentage change in occupancy results in approximately a five basis point change in hotel capitalization rates. Also, a percentage change in ADR produces only about a one basis point change in hotel capitalization rates. With respect to the lag, it takes one quarter for a change in occupancy to be reflected in capitalization rates and two quarters for changes in ADR to appear in capitalization rates. These results are averages for all hotels.

The implications of the experiment with the hotel capitalization rate model are that the effects of the substantial revenue declines in 2001 would translate into an increase in capitalization rates of more than 100 basis points, assuming no recovery of revenue. Given the one-two quarter lag, most of the revenue effects will become impounded into property values by the end of the second quarter of 2002.

## The Transaction and the People Matter

Another perspective on the current state of the hotel property markets following the events of 2001 comes from a reconsideration of the behavioral phenomena that surround any property transaction. Because of the scale of the asset, a number of factors influence buyers and sellers beyond net income estimates and the capitalization rate. Certainly, the shear scale of a property sale generates sizeable transaction costs. These costs involve fees, lost time, taxes and perhaps even psychological reactions that altogether represent a substantial amount of friction.

Motivations also affect property sales. Each contract for sale represents the agreement on price and terms reached by a specific buyer and seller combination. The idea that the price of a hotel, for example, may be different in the case of one buyer and seller combination compared to another for the same property is rooted in the belief that buyer and seller characteristics influence transactions even though the property rights remain the same. In theory, a given buyer behaves differently from other buyers and a given seller behaves differently from other sellers for three reasons. First, every participant is capable of errors because no participant has all of the information necessary to always make correct decisions. Second, buyers and sellers are not equally patient. Some sellers, for example, are overly eager to sell and thus sell at low prices while other sellers are willing to wait for 'their price.' Finally, there are strategic reasons why market participants may be willing to transact for the same property at different prices. A hotel company, for example, may value a hotel more than an individual investor because of a competitive edge the property provides to the brand. Corgel and deRoos (1994) empirically demonstrate that buyers and sellers do behave differently in hotel property transactions and their behaviors have price effects.

Even before the recession of 2001 and the events of September 11 the bid-ask spreads for hotels were quite high. Sellers were receiving solid dividends in a low interest rate environment and the risks of revenue volatility and property value declines appeared acceptable. Buyers, still remembering the large wealth transfers that occurred through discount buying and arbitrage selling during the early 1990s, continued to seek 20% to 30% IRRs via low-bid buying strategies. Spreads remained wide in the first half of 2002 despite all that occurred in 2001. The buyers in the hotel markets appear to have the same mentality as they did before the recession and catastrophic events—be opportunistic! Seller motivation, by contrast, could be changing.

Sellers may be characterized as having one of the following attitudes: (1) sit and wait; (2) feeling the pressure; (3) panic. Because this economic downturn is not driven either by crisis in the capital markets or by crisis in the real estate markets, few sellers are 'feeling the pressure.' Plenty of liquidity exists in the capital markets and the supply pipeline of development projects has and continues to be in line with space and property market demand schedules. Also, 'panic' has not become a dominant personality trait of sellers. This is likely true because sellers do not perceive the revenue declines of 2001 to be permanent and alternative investment opportunities do not offer attractive yields. The 'sit and wait' mood of sellers that has persisted for some time will likely continue as long as the economy shows signs of recovery and interest rates remain at low levels relative to recent history.

## Evidence from Hotel Property Market Trading

The hotel property market did not come to a standstill during 2001 and the early part of 2002. A database of hotel sales developed by HRG contains information on 675 transactions of properties with more than 20 rooms that occurred from January 2001 through April 2002. The following two separate experiments are performed with these data:

1. The entire sample was run in a regression that includes controls for age, number of rooms, room rate, market segment, metropolitan location and brand affiliation. The focus variables in the regression are the time dummies, specified in two-month intervals with the interval of September and October 2001 omitted. None of the time dummies are statistically significant at the 90% level. All of the coefficients are positive except for May and June 2001 and November and December 2001. The coefficients for the two time intervals in 2002 are positive and relatively large, although insignificant.
2. Two matched samples of 64 hotel sales were created from transactions that occurred (a) during the last four months of 2001 and (b) during the first four months of 2002. The average price-per-room of the September 2001 through December 2001 sample equals $49,471 while the average price-per-room of the January 2002 through April 2002 sample equals $50,827.

The results of the two experiments indicate that the prices of hotel properties remained stable throughout the sixteen-month period. This suggests that prices in the hotel property market did not adjust to changes in the space market caused by the recession and catastrophic events of September 11.

## Exhibit 1
### Hotel REIT Prices and Price/FFO Ratios for 2001—April 2002

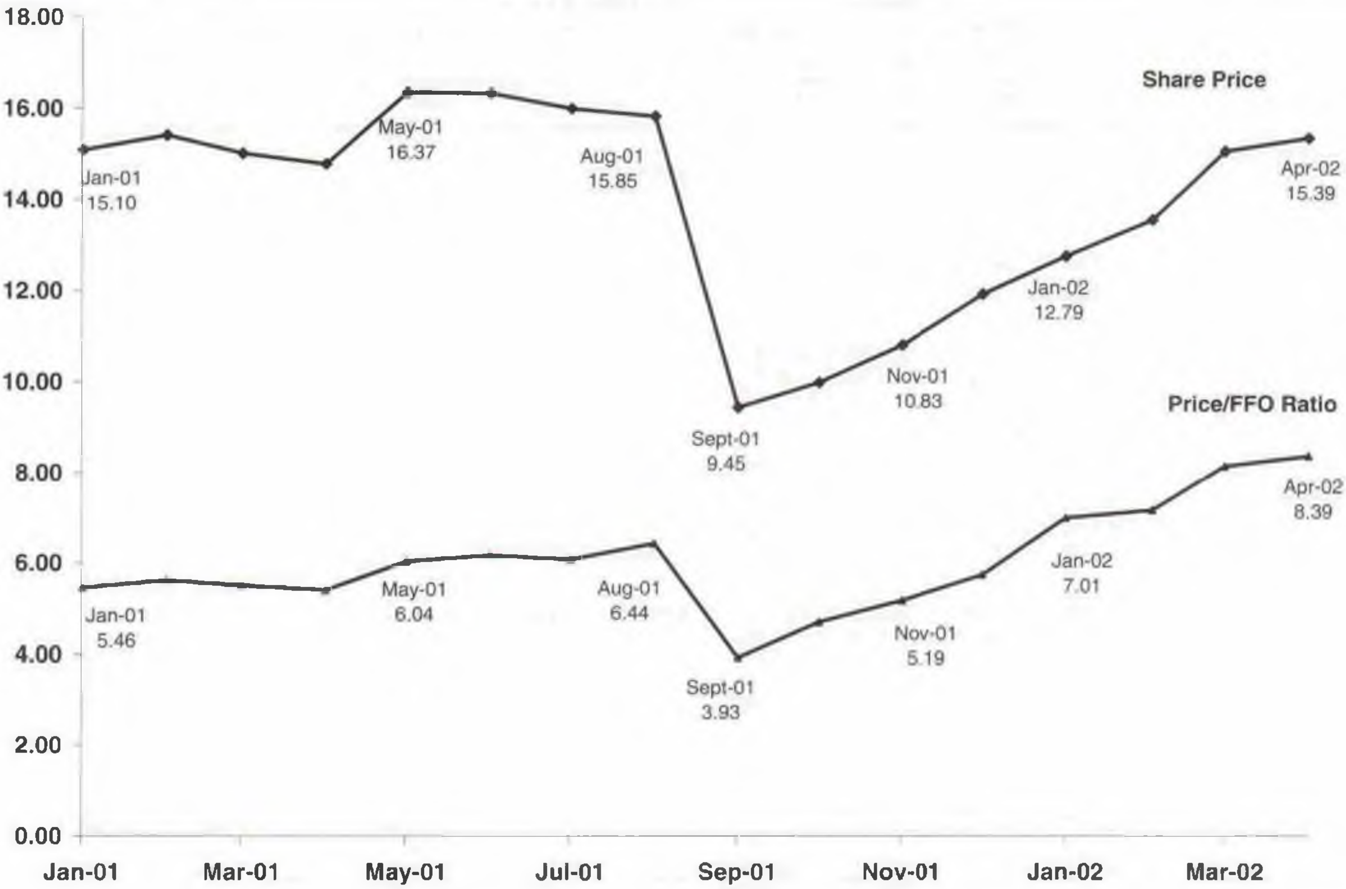
**Panel A**

| | Host Marriott | RFS Hotel Investors | FelCor Lodging Trust | Innkeepers USA Trust | Hospitality Properties Trust | MeriStar Hospitality Corp | LaSalle Hotel Properties | Equity Inns | Winston Hotels | Boykin Lodging |
|---|---|---|---|---|---|---|---|---|---|---|
| | HMT | RFS | FCH | KPA | HPT | MHX | LHO | ENN | WXH | BOY |
| January 24, 2001 | | | | | | | | | | |
| Price at Close | $13.44 | $14.00 | $24.25 | $11.75 | $24.81 | $21.63 | $16.00 | $7.13 | $8.00 | $9.94 |
| P/FFO Ratio | 6.34 | 5.67 | 5.47 | 5.93 | 6.02 | 5.05 | 6.02 | 5.40 | 4.60 | 4.14 |
| February 21, 2001 | | | | | | | | | | |
| Price at Close | $12.97 | $14.40 | $23.85 | $11.90 | $25.75 | $21.38 | $16.01 | $8.05 | $8.56 | $11.31 |
| P/FFO Ratio | 6.12 | 5.83 | 5.36 | 6.01 | 6.28 | 4.98 | 6.00 | 6.10 | 4.92 | 4.62 |
| March 21, 2001 | | | | | | | | | | |
| Price at Close | $12.00 | $14.46 | $22.95 | $11.31 | $26.38 | $19.50 | $15.91 | $8.00 | $8.25 | $11.50 |
| P/FFO Ratio | 5.69 | 5.85 | 5.16 | 5.71 | 6.43 | 4.57 | 5.96 | 6.06 | 5.03 | 4.66 |
| April 24, 2001 | | | | | | | | | | |
| Price at Close | $12.50 | $13.99 | $21.40 | $10.65 | $25.75 | $19.92 | $16.56 | $7.15 | $8.06 | $11.95 |
| P/FFO Ratio | 5.98 | 5.71 | 4.83 | 5.46 | 6.30 | 4.70 | 6.20 | 5.42 | 4.66 | 4.84 |
| May 23, 2001 | | | | | | | | | | |
| Price at Close | $13.43 | $15.50 | $23.82 | $11.30 | $27.05 | $23.05 | $17.45 | $9.80 | $10.35 | $11.91 |
| P/FFO Ratio | 6.36 | 6.28 | 5.35 | 5.71 | 6.60 | 5.40 | 6.54 | 7.42 | 5.95 | 4.82 |
| June 18, 2001 | | | | | | | | | | |
| Price at Close | $12.88 | $14.79 | $23.61 | $11.77 | $28.30 | $22.94 | $17.52 | $9.43 | $10.09 | $12.16 |
| P/FFO Ratio | 6.41 | 6.11 | 5.48 | 6.73 | 6.94 | 5.55 | 6.87 | 6.88 | 5.83 | 5.02 |
| July 17, 2001 | | | | | | | | | | |
| Price at Close | $12.74 | $14.48 | $22.14 | $11.16 | $28.16 | $21.71 | $17.72 | $9.49 | $10.17 | $12.43 |
| P/FFO Ratio | 6.34 | 5.98 | 5.14 | 6.38 | 6.90 | 5.26 | 6.95 | 6.93 | 5.88 | 5.14 |
| August 17, 2001 | | | | | | | | | | |
| Price at Close | $12.97 | $14.40 | $21.69 | $11.53 | $28.40 | $21.45 | $17.20 | $9.20 | $9.96 | $11.70 |
| P/FFO Ratio | 6.94 | 6.55 | 6.09 | 6.95 | 7.06 | 5.63 | 6.94 | 6.92 | 5.96 | 5.32 |
| September 21, 2001 | | | | | | | | | | |
| Price at Close | $6.45 | $9.10 | $12.70 | $7.95 | $20.95 | $8.65 | $7.95 | $6.01 | $7.12 | $7.60 |
| P/FFO Ratio | 3.51 | 4.14 | 3.65 | 4.88 | 5.25 | 2.29 | 3.26 | 4.52 | 4.29 | 3.47 |
| October 24, 2001 | | | | | | | | | | |
| Price at Close | $6.72 | $9.70 | $13.67 | $7.90 | $24.81 | $9.45 | $8.38 | $3.58 | $7.75 | $8.02 |
| P/FFO Ratio | 4.91 | 5.16 | 4.18 | 5.06 | 6.30 | 2.85 | 3.58 | 6.21 | 4.97 | 3.87 |
| November 8, 2001 | | | | | | | | | | |
| Price at Close | $7.65 | $9.50 | $16.02 | $7.31 | $25.92 | $10.31 | $8.51 | $7.39 | $7.98 | $7.70 |
| P/FFO Ratio | 5.80 | 5.34 | 5.80 | 4.91 | 6.61 | 3.68 | 4.11 | 6.16 | 5.28 | 4.21 |
| December 13, 2001 | | | | | | | | | | |
| Price at Close | $8.97 | $11.15 | $16.65 | $9.50 | $27.80 | $12.78 | $11.00 | $6.61 | $7.88 | $7.23 |
| P/FFO Ratio | 6.74 | 6.26 | 5.99 | 6.38 | 7.11 | 4.79 | 5.31 | 5.55 | 5.51 | 3.95 |
| January 22, 2002 | | | | | | | | | | |
| Price at Close | $9.66 | $12.26 | $17.47 | $10.14 | $29.20 | $13.90 | $11.65 | $7.52 | $7.92 | $8.20 |
| P/FFO Ratio | 8.78 | 7.57 | 7.34 | 7.74 | 7.28 | 6.44 | 6.47 | 7.09 | 5.66 | 5.73 |
| February 21, 2002 | | | | | | | | | | |
| Price at Close | $10.37 | $13.08 | $18.73 | $10.00 | $31.06 | $15.00 | $13.00 | $7.39 | $8.80 | $8.51 |
| P/FFO Ratio | 7.80 | 7.83 | 7.80 | 7.87 | 7.80 | 7.21 | 6.74 | 6.91 | 6.42 | 5.42 |
| March 19, 2002 | | | | | | | | | | |
| Price at Close | $11.93 | $14.65 | $21.48 | $10.84 | $33.79 | $17.39 | $14.65 | $8.17 | $9.06 | $9.13 |
| P/FFO Ratio | 10.37 | 9.21 | 8.91 | 8.54 | 8.49 | 8.28 | 7.88 | 7.50 | 6.61 | 5.82 |
| April 25, 2002 | | | | | | | | | | |
| Price at Close | $11.91 | $15.03 | $20.73 | $11.45 | $34.42 | $17.75 | $15.70 | $7.99 | $9.50 | $9.37 |
| P/FFO Ratio | 10.27 | 9.45 | 8.60 | 9.02 | 8.65 | 8.41 | 8.44 | 7.33 | 7.72 | 5.97 |

Note: The source is *Hotel and Motel Management*.

**Exhibit 1** (continued)
**Hotel REIT Prices and Price/FFO Ratios for 2001—April 2002**

**Panel B**




## Evidence from Public Hotel REIT Trading

Public hotel Real Estate Investment Trusts (REITs) represent nearly a pure play on hotel properties.[4] Hotel REIT pricing, therefore, provides evidence of hotel property pricing after accounting for the leading behavior of public market trading. Exhibit 1 presents pricing information for ten of the top publicly-traded hotel REITs extending from before the current recession that began in early 2001 through the first four months of 2002. The data shown in Panel A reveals a pattern of decline for all firms beginning immediately after September 11 and recovery beginning as early as November 2001 for some firms and by December 2001 for the others. By April 2002, the prices and price/FFO relationships returned to or exceeded early 2001 levels. Visual evidence of this complete recovery in hotel REIT trading appears in Panel B, which graphs the *average* prices and price/FFO ratios for the ten firms from early 2001 through April of 2002.

The trading activity in the hotel REIT market during the past sixteen months offers two interesting insights. First, the price patterns reveal no downward movement from the recession that, according to the NBER, started in March 2001, but only began showing up in the revenue reports from Smith Travel Research in August 2001.[5] In the REIT sector of the hotel industry, it appears that the recession did not have long-run consequences! Second, not only did hotel REIT share prices fully recover within six months of September 11, but the relationship between prices and pro forma periodic income fully recovered during the same period from pre-recession and pre-September 11 levels. This indicates an absence of persistence in discounting hotel real estate. As far as the public hotel real estate markets are concerned, the recession and psychological effects of terrorism on travel are history.

## Conclusion

The U.S. appears to be recovering from the economic and psychological shocks of 2001. As the recovery hangs in the balance, questions arise about how hotels will be viewed by investors. The hotel property markets appear undisturbed in any lasting sense by the economic and terrorist events of 2001. The motivations of sellers have not changed and alternative investment yields remain low, thus their asking prices have not come down. Opportunistic hotel buyers show no signs of raising their bids, while many other potential buyers (*e.g.*, hotel corporations and REITs) continue to be inactive. The observations and findings presented herein quickly become obsolete should the recession linger or terrorist activity in the U.S. increase.

## Endnotes

1. In an unpublished study of the hotel revenue behavior during economic downturns and recoveries, the income elasticity of demand for hotel rooms was estimated to be in the range of 1.30 to 1.74 for limited-service properties and between 1.01 and 1.25 for full-service hotels. This means that the number of rooms occupied is fairly sensitive to changes in household and business incomes.
2. *Hotel Outlook* is an econometric forecasting product jointly produced by the Hospitality Research Group of PKF Consulting and Torto Wheaton Research (www.tortowheatonresearch.com).
3. See Sivitanides, Southard, Torto and Wheaton (2001) for a similar analysis.
4. Each firm has a specific risk component that must be controlled for to create pure-play portfolios (see Geltner and Kruger, 1998).
5. The possibility exists that the effect of the recession was already reflected in the share prices of hotel REITs by January 2001. For six of the ten companies, the share price in January 2001 exceeded the share price in January 1999 and January 2000. Further examinations of the share price patterns indicate that the current recession was not anticipated on January 2001.

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