Buying High and Selling Low in the Lodging-Property Market

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Abstract
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Keywords
lodging-property market, transaction price, sellers, buyers, property values

Disciplines
Hospitality Administration and Management

Comments
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Buying High and Selling Low
in the Lodging-Property Market

The prices of lodging properties are influenced by the motivations and knowledge level of the parties on both sides of transactions.

by John B. Corgel and Jan A. deRoos

EACH YEAR ownership of hundreds of U.S. lodging properties is transferred in the real-estate market. In theory, the mutually agreed upon sale price for a property is based on the buyer's and the seller's financial goals, their investment outlook, and their knowledge of the property's characteristics. That price is strongly influenced by the physical characteristics of the property (e.g., number of rooms, restaurants, pools, etc.), its location relative to other land uses, and the economic conditions of the market in which it is located. Physical, locational, and economic factors cumulatively generate income or loss and cause value changes over time.

Property prices relate directly to property fundamentals. The

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analysis of those fundamentals underlies both traditional and currently applied approaches to property valuation in the real-estate-appraisal profession. Because the physical, locational, and economic aspects of a mid-market hotel, for example, are observable and the cash flows from operations and future sales may be estimated by the buyer and seller using standard financial-analysis techniques, the buyer should be able to avoid overpaying for a hotel and the seller should be able to avoid selling a hotel too cheaply. Extending this theoretical argument to the general case of all lodging-property sales, neither a buyer’s nor a seller’s wealth should be abnormally enhanced or reduced as the result of any transaction.

But not all buyers and sellers are equal. Some buyers are better informed than others about the local economic conditions that affect property prices. Some sellers are not as adept at negotiation as others. Some parties in transactions are more motivated than others to complete transactions in a timely manner and may pay more or accept less for expediency. Japanese hotel buyers during the late 1980s, for example, are thought to have overpaid for properties, perhaps because of their strong motivation to place money in the U.S. real-estate market when it was booming, perhaps because they wished to obtain trophy properties, or perhaps because they made purchase decisions without good information about key property and market fundamentals. The Resolution Trust Corporation (RTC) is another example. Some believe that political pressure from Congress pushed the RTC into selling property from its portfolio quickly and cheaply instead of waiting until the real-estate market recovered.

To show that a particular type of buyer overpaid or that a seller undersold in the lodging-property market, however, is far too general a finding to be useful to market participants. If some buyers pay premiums and some sellers offer discounts, do these outcomes persist in all transactions in which a specific type of participant is involved? Suppose buyer premiums and seller discounts are the result of mistakes. The root causes of such “errors” should be of interest to market participants who want to fill information gaps and exploit inefficiencies. Some foreign buyers, for example, are known for their careful examination of the physical characteristics of properties, but because of their foreign residency, they may not astutely evaluate how local market economics affect real-estate prices or they may unduly weight such factors as residual property value much more heavily than do sellers based in the United States. Armed with the knowledge of how mistakes are made, brokers and consultants may be of better service to these buyers by providing detailed local market information.

In this article we explore the idea that the transaction price may be different for a given lodging property in the case of one buyer and seller pair relative to another. The findings reported here are from a statistical exploration that is made possible by a large database of lodging-property transactions that occurred throughout the United States during the late 1980s and early 1990s. We begin with a discussion of previous research on the influence of buyers and sellers on property prices, then we present the findings from our study and their implications.

What We Already Know

Property-rights theory suggests that private contracts do not influence real-estate prices in competitive markets unless the contracts affect the underlying property rights. Private contracts including leases, management agreements, franchise agreements, and contracts for sale are outside the realm of rent and price formation unless they restrict the use of the property. For example, a contract for sale accompanied by a deed that restricts owners’ rights to use a property only as a hotel would diminish value because of the options it destroys.

Only recently has serious testing begun on the effect of private contracts on value. Sirmans and Sirmans present some evidence that professional management has a positive effect on monthly apartment rent. Shilling, Sirmans, Turnbull, and Benjamin provide somewhat stronger evidence that contingency clauses in contracts for sale lead to significant increases in the prices of houses (such clauses often involve the ability to obtain

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financing and the sale of the currently owned property. However, Hanson was unable to find differences between the ratios of operating income to replacement costs for hotels affiliating with a chain and engaging a management company versus independent hotels. Corgel also could not establish that the franchise affiliations of hotels had a statistically significant effect on hotel-sale prices.

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 lodging property may be different in the case of one buyer and seller combination compared to another is rooted in the belief that buyer and seller characteristics influence price formation even though property rights have not been disturbed. In theory, a given buyer behaves differently from other buyers and a given seller behaves differently from other sellers for three reasons. First, each buyer and seller is capable of pricing errors because neither buyer nor seller has all the information about every property in the market that is necessary to set a perfect price for any single property. 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 instance, may value a property higher than an individual because of the competitive edge the property provides to the brand.

The corporate-finance literature is rich with evidence that the values of securities are affected by the presence of investors driven by tax and leverage clienteles. Maris and Elayan review this literature and find in their study a tax-induced clientele that is willing to pay more for equity REITs. We know of only one study that addresses these issues in the market for real estate that does not involve securities. During the 1980s some real-estate-market observers believed that limited-partnership syndications overpaid for properties to gain maximum tax subsidies for limited partners. Holding other factors constant, Beaton and Sirmans accept the null hypothesis that the prices paid for apartments by different types of buyer organizations are equal. In other words, their data indicate that the form of the buyer's organization is unrelated to the price paid.

**Data on Lodging-Property Transactions**

Our statistical study of the effects of buyers and sellers on lodging-property sale prices relies on a large database of hotel and motel transactions. For this purpose, a property is defined as a hotel if it includes at least 150 rooms, meeting and banquet space, and restaurant facilities. The data are national in scope and include a large proportion of the lodging-property transactions that occurred during the period beginning in the first quarter of 1985 and ending in the last quarter of 1992. The data are detailed with respect to property characteristics, location, and local economic information. Buyers and sellers in the transactions are identified so that they may be classified (see Exhibit 1).

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3 John B. Corgel, “Brand Name Affiliation and Real Estate Prices,” working paper, School of Hotel Administration, Cornell University, 1992.


The primary source of transaction information is the database of the Hospitality Market Data Exchange (HMDE) maintained by Hospitality Valuation Services (HVS). The HMDE contains the sale price, number of rooms, date of sale, and general-location information for several thousand properties. Some information about the characteristics of the properties, such as average room rate, age, amenities, and the conditions of the sales (e.g., financing terms and the organization forms of buyers and sellers) were obtained during visits to the HVS office. Other data were gathered from the following sources:

- Hotel & Travel Index, the AH&MA Hotel and Motel Redbook, and Mobil Travel Guides;
- Members of the Hotel and Motel Brokers Association;
- Telephone interviews with hotel and motel managers;
- Bureau of Labor Statistics and U.S. Bureau of the Census; and
- Sales and Marketing Management magazine.

The database comprises more than 1,300 transactions. Although the sample was not randomly chosen, efforts were made to avoid concentrations of property sales by quarter, geographic region, chain affiliation, and other property characteristics.

Approximately 40 percent of the sales in the database are omitted from consideration for parts of this study because average daily rate and occupancy statistics are unavailable or the property has extraordinary characteristics, such as casino gambling.

**Perspective**

A broad perspective on behavioral differences among participants in lodging-property markets is gained from the descriptive statistics presented in Exhibit 2. Although the exhibit presents only averages for selected characteristics of transactions across

### Exhibit 2

**Mean values of selected characteristics from lodging-property transactions 1985–1992, by buyer classification**

<table>
<thead>
<tr>
<th>Selected Property Characteristics</th>
<th>All Buyers</th>
<th>Individual</th>
<th>Partnership</th>
<th>Hotel Corporation</th>
<th>Real-Estate Corporation</th>
<th>Other Corporation</th>
<th>Institution</th>
<th>Foreign</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All periods (1985-1992)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of transactions</td>
<td>1,314</td>
<td>273</td>
<td>406</td>
<td>221</td>
<td>8,603,001</td>
<td>78,51</td>
<td>74,74</td>
<td></td>
</tr>
<tr>
<td>Cash equivalent price</td>
<td>$11,010,126</td>
<td>5,646,353</td>
<td>9,893,522</td>
<td>10,014,587</td>
<td>8,603,001</td>
<td>7,976,053</td>
<td>20,060,977</td>
<td>43,721,381</td>
</tr>
<tr>
<td>Percent hotel (versus motel)</td>
<td>44.5%</td>
<td>17.5</td>
<td>48</td>
<td>55.6</td>
<td>46.9</td>
<td>44.8</td>
<td>60.7</td>
<td>74.3</td>
</tr>
<tr>
<td>Age of property</td>
<td>15.8 Yr.</td>
<td>19.3</td>
<td>14.2</td>
<td>16.7</td>
<td>14.5</td>
<td>14.3</td>
<td>12.8</td>
<td>15.9</td>
</tr>
<tr>
<td>Distance to airport</td>
<td>15.7 Mi.</td>
<td>19.8</td>
<td>14.7</td>
<td>13.9</td>
<td>14.9</td>
<td>14.6</td>
<td>14.9</td>
<td>14.1</td>
</tr>
<tr>
<td>Distance to commercial center</td>
<td>4.9 Mi.</td>
<td>5.3</td>
<td>4.9</td>
<td>4.6</td>
<td>4.9</td>
<td>5.7</td>
<td>3.7</td>
<td>4.4</td>
</tr>
<tr>
<td><strong>Early period (1985-1986)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of transactions</td>
<td>350</td>
<td>59</td>
<td>142</td>
<td>50</td>
<td>65</td>
<td>16</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Cash equivalent price</td>
<td>$11,742,123</td>
<td>6,676,962</td>
<td>12,058,662</td>
<td>8,372,469</td>
<td>12,401,650</td>
<td>12,023,753</td>
<td>23,353,036</td>
<td>64,987,500</td>
</tr>
<tr>
<td>Percent hotel (versus motel)</td>
<td>50%</td>
<td>27</td>
<td>52</td>
<td>58</td>
<td>61</td>
<td>43</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Age of property</td>
<td>14.6 Yr.</td>
<td>16.3</td>
<td>14.6</td>
<td>14.5</td>
<td>12.6</td>
<td>16.4</td>
<td>11.8</td>
<td>24.5</td>
</tr>
<tr>
<td>Distance to airport</td>
<td>12.9 Mi.</td>
<td>16.7</td>
<td>19.9</td>
<td>18.8</td>
<td>11.2</td>
<td>12.4</td>
<td>14.5</td>
<td>8.6</td>
</tr>
<tr>
<td>Distance to commercial center</td>
<td>4.9 Mi.</td>
<td>5.5</td>
<td>4.9</td>
<td>4.9</td>
<td>5.4</td>
<td>2.6</td>
<td>4.3</td>
<td>1</td>
</tr>
<tr>
<td><strong>Middle period (1987-1989)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of transactions</td>
<td>534</td>
<td>109</td>
<td>156</td>
<td>103</td>
<td>70</td>
<td>51</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>Cash equivalent price</td>
<td>$12,495,720</td>
<td>8,657,491</td>
<td>11,329,130</td>
<td>11,277,690</td>
<td>7,365,196</td>
<td>7,414,263</td>
<td>31,737,604</td>
<td>49,449,387</td>
</tr>
<tr>
<td>Percent hotel (versus motel)</td>
<td>44.5%</td>
<td>13</td>
<td>52</td>
<td>54</td>
<td>38</td>
<td>47</td>
<td>77</td>
<td>74</td>
</tr>
<tr>
<td>Age of property</td>
<td>16.3 Yr.</td>
<td>21.4</td>
<td>13.3</td>
<td>17.1</td>
<td>16</td>
<td>13.8</td>
<td>13.8</td>
<td>17.7</td>
</tr>
<tr>
<td>Distance to airport</td>
<td>15.9 Mi.</td>
<td>18.5</td>
<td>16.2</td>
<td>13.2</td>
<td>15.6</td>
<td>14.9</td>
<td>15.9</td>
<td>17.3</td>
</tr>
<tr>
<td>Distance to commercial center</td>
<td>5.6 Mi.</td>
<td>6.4</td>
<td>5.5</td>
<td>5</td>
<td>5.2</td>
<td>5.2</td>
<td>4.7</td>
<td>6.9</td>
</tr>
<tr>
<td><strong>Late period (1990-1992)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of transactions</td>
<td>430</td>
<td>105</td>
<td>108</td>
<td>68</td>
<td>76</td>
<td>11</td>
<td>19</td>
<td>43</td>
</tr>
<tr>
<td>Cash equivalent price</td>
<td>$8,569,414</td>
<td>1,946,459</td>
<td>4,973,109</td>
<td>9,306,796</td>
<td>6,494,239</td>
<td>4,693,150</td>
<td>6,573,182</td>
<td>38,146,482</td>
</tr>
<tr>
<td>Percent hotel (versus motel)</td>
<td>39.9%</td>
<td>16</td>
<td>35.2</td>
<td>55.9</td>
<td>42.1</td>
<td>36.3</td>
<td>52.6</td>
<td>76.7</td>
</tr>
<tr>
<td>Age of property</td>
<td>16 Yr.</td>
<td>18.7</td>
<td>14.8</td>
<td>17.9</td>
<td>14.7</td>
<td>13.5</td>
<td>12.7</td>
<td>14.1</td>
</tr>
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<td>17.6 Mi.</td>
<td>22.9</td>
<td>17.7</td>
<td>13</td>
<td>17.7</td>
<td>18.7</td>
<td>14.2</td>
<td>12.6</td>
</tr>
<tr>
<td>Distance to commercial center</td>
<td>4.9 Mi.</td>
<td>3.9</td>
<td>4.2</td>
<td>3.9</td>
<td>4.3</td>
<td>12.1</td>
<td>2.2</td>
<td>2.5</td>
</tr>
</tbody>
</table>
buyer classifications, it reveals quite clearly that different buyers favor different types of properties. Not surprisingly, individuals generally purchase lower-price properties, primarily older motels that are at a greater distance from commercial centers and airports than the average. At the other end of the buyer spectrum are institutions and foreigners who favor high-price hotels. Institutions seem to be especially interested in newer hotels. Partnerships, hotel corporations, real-estate corporations, and other corporations represent a large and rather homogeneous middle class of buyers. During the period 1990 through 1992, however, there was greater diversity in the buying behavior of those entities.

Insight on the behavior of lodging-property-market participants is gained from an examination of the prices they paid and received. Holding all other factors constant, we investigated the effects of unique buyer and seller factors on aggregate prices. More specifically, we determined which effects on pricing of particular property characteristics, such as room rate or age of property, caused the different classes of buyers to overvalue or undervalue a property. By effects we mean overpayment by buyers and underselling by sellers (i.e., selling too cheaply).

We use multivariate-regression procedures to determine the effects of buyers and sellers on prices while holding other factors constant. The model has the following general form:

\[ S_i = s (P_i, L_i, E_i, Q_i, T_i, X_i, Y_i; \beta, \epsilon) \]

where:
- \( S_i \) is the cash equivalent sale price of the \( i \)-th property;
- \( P_i \) is a vector of property characteristics of the \( i \)-th property at the time of sale;
- \( L_i \) is a vector of locational characteristics of the \( i \)-th property at the time of sale;
- \( E_i \) is a vector of economic characteristics of the local area in which the \( i \)-th property is located at time of sale;
- \( Q_i \) is an unobserved quality measure of the \( i \)-th property at the time of sale;
- \( T_i \) is the year of sale of the \( i \)-th property;
- \( X \) is a vector of buyer classifications, one buyer class for the \( i \)-th property;
- \( Y \) is a vector of seller classifications, one seller class for the \( i \)-th property; and
- \( \beta, \epsilon \) are estimated parameters and the error terms of the model, respectively.

Exhibit 3 shows which buyer classes paid premiums or gained discounts and which sellers received premiums or gave discounts in the lodging-property market during the study period.

The determination as to whether premiums or discounts occurred comes from the regression coefficients for the \( X \) and \( Y \) variables. Although the procedure is somewhat complicated, essentially it involves identifying buyer and seller classes that either pay or receive 10 percent more and identifying buyer and seller classes that either pay or receive 10 percent less than the theoretically correct prices predicted by the regression model.

As indicated in Exhibit 3, some buyers consistently bought lodging properties at premiums, particularly individuals and foreign buyers, and some sellers consistently sold at discounts, particularly financial institutions and the RTC. These are not shocking results. Theory tells us that the less-informed buyers will err by overpaying and the less-patient sellers will let properties go at discounts.\(^{11}\)

Fortunately the data allow for a more penetrating analysis than...
that just described. The results presented in Exhibit 4 are interesting because they yield information about the characteristics that encouraged buyers to pay premiums and sellers to accept discounts. Partnerships, for instance, paid more per dollar of room rate than other buyers. Likewise, individuals paid more per room, foreign buyers paid more for proximity to an airport, and banks paid a premium for proximity to commercial centers. A proper interpretation of the results is that some buyers were willing to pay significantly more on average than others for additional units of the particular characteristics they sought.

Where did financial institutions and the RTC go wrong as sellers in the lodging-property markets? The analysis of property characteristics suggests that these sellers accepted less than the market was willing to pay for proximity to commercial centers and airports and for property located in areas with greater effective buying income. Discounts, however, were partially offset by premiums received for room rate and local-area employment strength.

**The Right Price**

Prices of lodging properties are influenced by the behavior of parties on both sides of transactions. Price discounts and premiums seem to result from buyers’ and sellers’ information-gathering capabilities, bargaining skills, and patience. As we expected, individuals consistently paid premiums for properties. These premiums are positively related to the number of rooms in a given property. Also as we expected, some foreign buyers paid premiums based on the weight they gave to the effective buying income of the local area and a property’s proximity to an airport. Finally, financial institutions and the RTC discounted the properties they sold as compared to the price they might have commanded in consideration of the location and local economic conditions. The implications of our findings are as follows:

1. When appraisers apply the sales-comparison approach to value, they are justified in adjusting comparable sales to account for buyer and seller influences.

2. Brokers are better able to demonstrate the value of their services, particularly in pricing properties for buyers and finding high-paying buyers for sellers. Agents or brokers with access to up-to-date data can recommend certain courses of action based on the most recent transactions available for comparable deals.

3. Lenders should be more careful when issuing loans to certain classes of buyers for particular types of properties. For example, if an individual (or group of individuals) seeks to purchase a large hotel, the lender may wish to offer a loan at a slightly lower loan-to-value ratio than the lender would offer to other borrowers.

This study does not answer two important questions. First, do all buyers and sellers in a class behave in the same way? Aggregation of market participants into classes is a limitation of the study. Foreign buyers, for example, are not a homogeneous group and the results in Exhibits 3 and 4 tend to confirm that foreign buyers behave differently from one another (e.g., foreign buyers did not overpay during 1985–86). Disaggregation of this and other classes of buyers and sellers was not possible due to sample-size problems.

Second, do the premiums and discounts associated with classes of buyers and sellers persist through time? Another limitation of the study is that the results tend to be time specific. Some market participants are only in the market for a brief period (e.g., RTC), and other market participants will learn from their previous behavior.

The data are constantly improving and future studies using more complete data sets should not be burdened with the same limitations as this study.