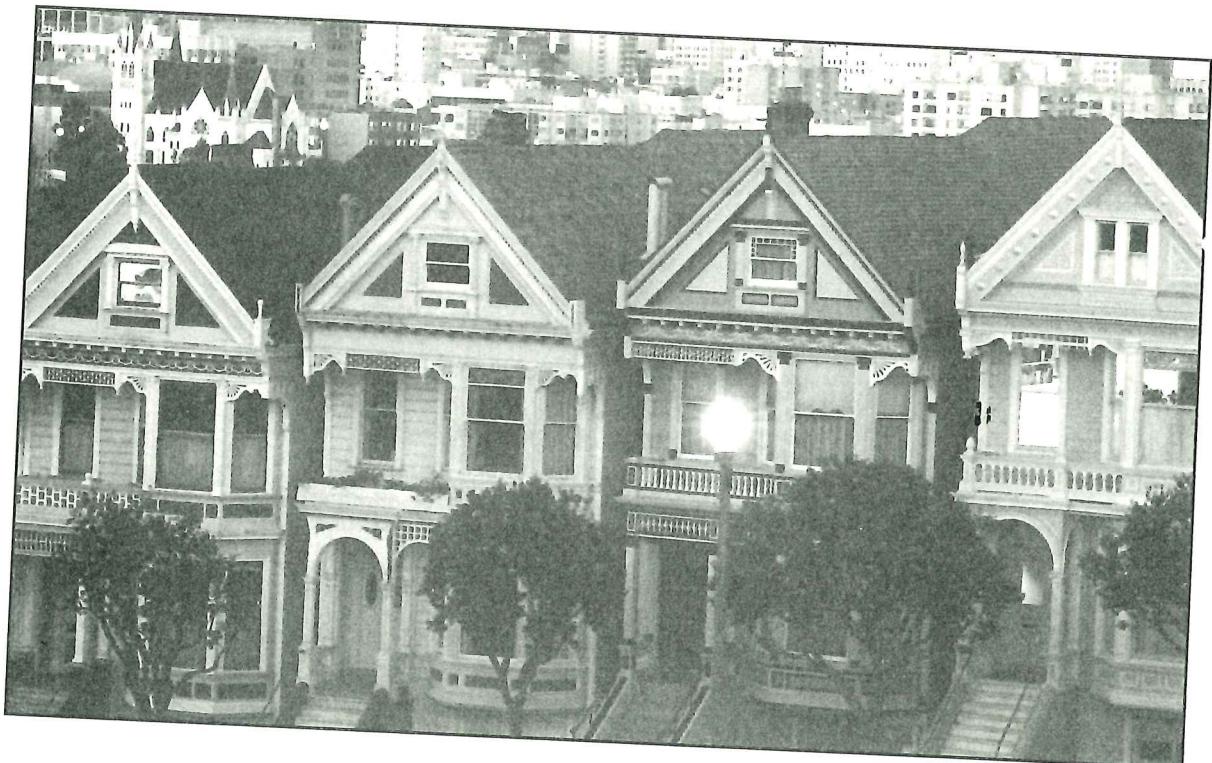


# Sales Comparison Approach



## **INTRODUCTION**

---

The sales comparison approach is one of the three methods of estimating the value of an income-producing property. A value is estimated by comparing the subject property to recent sales of similar properties on a physical unit or income ratio basis. The basis of the approach relies on the proposition that an informed purchaser will pay no more for a property than the cost of acquiring a similar property having the same utility. The approach is based primarily on the economic principles of substitution and supply and demand, in that the price paid for comparable properties is affected by the supply and demand conditions at the date of sale as well as by the price being asked for properties with the same utility.

This approach is applicable when there is an active market for the property type in the market area plus an adequate number of sales that can be compared to the subject. It is essential that adequate information for each sale be available from an authoritative and reliable source. Comparisons cannot be made without accurate and complete data and the *direct sales comparison approach* cannot be used if there is a lack of recent sales. In addition, it is difficult to apply if the comparable sales are not highly similar to the subject property, if the data cannot be reliably verified, if local market conditions are changing rapidly, or if regional or national economic factors are changing.

## **SOURCES OF COMPARABLE DATA**

---

Information on *comparable sales* may be available from several sources. Primary sources include the buyer and seller, brokers, public records, professional data companies, multiple listing services, and other appraisers. When gathering data, the appraiser should be aware of the applicable information needed and must seek to confirm all data reported. It is important that the data be reported using the same units of comparison. For example, operating expenses reported for one building as dollars per

square foot of net rentable area would obviously not be directly comparable. It is important that the appraiser gather data in units of comparison that are considered important by the typical investor in the marketplace. As with the income approach, the direct comparison approach should mirror the considerations, concerns, and actions of typical investors. For example, reports on sales of office buildings are typically based on a price per square foot of either gross building area or net building area. Reporting a sale on a price per square foot of land area would be inappropriate.

When gathering comparable information, the appraiser must consider not only the physical improvements but also the market area characteristics. For larger properties, such as hotels or regional malls, there may be few or no sales of similar properties in the general market area, simply because there are no or only a few similar properties in the area itself. In this instance, it would be logical to use sales outside the general market as long as the comparable areas are similar. Under these circumstances, it is also important to consider whether the typical investors for each property type would be similar. In other words, two markets could be considered comparable, even if they are located in different market areas, if the buildings are similar and the investors for both properties could be considered similar.

## ■ IDENTIFICATION OF UNITS OF COMPARISON

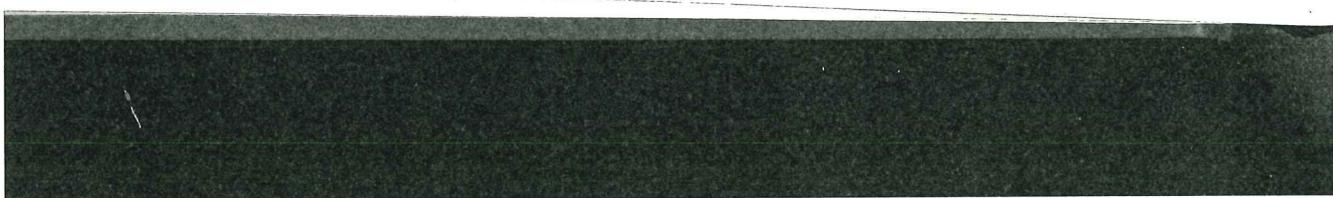
As mentioned earlier, estimating value by the direct sales comparison approach is accomplished by comparing sales of similar properties with the subject by using either a price per physical unit basis or income ratios. Typical *units of comparison* on a physical unit basis include

- price per square foot of gross building area;
- price per square foot of net building area;
- price per unit (apartments, miniwarehouses, hotels, health care facilities);
- price per seat (restaurants and theaters);
- price per door (truck terminals and distribution centers);
- price per boat slip (marinas);
- price per parking space (parking decks);
- price per hole (golf courses);
- price per lane (bowling alleys); and
- price per lot or pad (subdivisions, mobile home parks, RV parks).

The important consideration for an appraiser is to properly identify the units of comparison used for the different property types in the marketplace and to calculate the unit value correctly for the comparable property. Without accurate information, the direct sales comparison approach is difficult to use.

The common units of comparison on an income unit basis include

- *potential gross income multiplier (PGIM)* (value divided by potential gross income);



- *effective gross income multiplier (EGIM)* (value divided by effective gross income);
- gross rent multiplier (GRM)<sup>1</sup> (value divided by gross rent); and
- net income multiplier (NIM)<sup>2</sup> (value divided by net operating income).

The proper use of the income multiplier was presented in Chapter 4. As a short review, the multipliers represent relationships between various levels of income and the sales price of a comparable property. Once the factors are properly extracted from each sale, they are compared with the subject and an appropriate multiplier is selected to estimate the value of the subject property. Differences in factors for comparable properties may be caused by one or more of the following:

- Differences in ownership interests
- Noncash equivalent sales prices
- Excess land
- Possible differences in lease terms, market condition, and expense treatment in leases
- Differences in occupancy levels

## ELEMENTS OF COMPARISON

On identification and calculation of the appropriate unit of comparison, each is compared to the subject property and adjusted for differences. Potentially the typical adjustment could be for one or more of the following *elements of comparison*:

- Ownership interest:
  - a. Fee simple
  - b. Leased fee
- Nonmarket financing (cash equivalency)
- Conditions of sale (buyer and seller motivations)
- Change in market conditions (sometimes referred to as time)
- Locational characteristics:
  - a. Access to transportation patterns
  - b. Neighborhood land use pattern
  - c. Existence of public utilities and facilities
  - d. Existence or lack of support facilities
- Physical characteristics:
  - a. Appearance and design
  - b. Effective age
  - c. Construction type and quality
  - d. Condition

- e. Size and finished area
- f. Floor height/ceiling height
- g. Equipment
- h. Amenities
- i. Site improvements
- Economic characteristics:
  - a. Operating expenses
  - b. Management
  - c. Lease terms and concessions
  - d. Tenant mix
- Use:
  - a. Existing versus highest and best use
  - b. Intended use
- Nonrealty components of value:
  - a. Business value
  - b. Personality

### **Ownership Interest**

The subject and/or comparable sales may represent differences in *ownership interests*. One sale may represent a leased fee interest, whereas another sale may include nonrealty interest items such as personal property. In each case, if the assignment is to estimate the fee simple interest value for the subject, no comparable would give a reliable indication of value without adjusting the sales to make each sale represent a value indication of a fee simple ownership interest. In addition, sometimes the subject and a comparable may represent the same ownership interest but still not be comparable. A leased fee interest in the subject may not be directly comparable to the sale of a leased fee interest (all other elements being equal), simply because the existing leases for each may affect the properties by differing percentages (the market rent equivalency adjustment may represent different relative percentages). For example, a multitenant office building with one below-market-rate lease representing only about 5 percent of the rentable area would be expected to be influenced to a lesser degree than a multitenant office building having many leases at rates substantially below the market. (Approaches to estimating the impact of leases were presented in Chapter 9.)

### **Cash Equivalency**

It is possible for the reported sales price for an income-producing property to include a premium paid for the assumption of a below-market-rate loan. If this is the case for a selected comparable, the amount of the premium paid must be deducted



from the transaction price before comparing the comparable with the subject. This adjustment is referred to as a cash equivalency adjustment, and the adjusted sales price would then become a cash equivalent price. (Methods of calculating this adjustment are presented in Chapter 15 of this book.) The amount of the adjustment should reflect the additional value placed on the loan assumption by the buyer. In other words, the amount of the adjustment should be calculated from the buyer's point of view rather than from the lender's.

### Conditions of Sale

Changes in the market are not the only conditions that need to be researched. Motivations behind a sale (the conditions of sale) must also be investigated to ensure that neither party in the transaction was under any undue pressure and that the transaction was at arm's length and not between related parties. Forced sales where the seller is under unusual pressure to sell the property are generally not good indications of the value of a property.

### Market Conditions

After adjusting the sales to reflect cash equivalent indications of the same ownership interest, each must be modified to reflect changes in market conditions between the date of the sale and the effective date of the appraisal. This adjustment is frequently referred to as the time adjustment. The market changes may be positive or negative and could represent minor or major adjustments, depending on the magnitude of the changes in market conditions.

### Locational Attributes

Since real estate is immobile, location is a key element affecting an income-producing property. Probably the most important *locational attribute* is current neighborhood land use and potential patterns of change. Compatibility of land use as well as absence of and protection from adverse influences is a highly desirable trait and, therefore, is a major contributor to value. Differences in additional location features such as neighborhood and property accessibility, transportation patterns, existence of neighborhood support facilities such as shopping and schools, and access to adequate utilities can result in differences in property values.

### Physical Characteristics

The most obvious adjustment made in the direct sales comparison approach is for differences in the *physical characteristics* of two properties. Differences in condition, quality, design, age, and equipment are generally readily discernible. Adjustment for differences in physical characteristics should reflect the contributing value of the attribute itself, not just the cost to reproduce or replace the items.

## THE ADJUSTMENT PROCESS

In adjusting sales of income-producing properties, the key test of the relative worth of an attribute is its ability to generate income (specifically in the form of net operating income).

There are several methods of reporting or basing adjustments, including

- percentage adjustment;
- dollar adjustment;
- qualitative analysis; and
- statistical analysis.

*Percentage adjustments* and *dollar adjustments* are quantitative in nature and should reflect the relative differences between the comparable and the subject. Most of the ownership interests, cash equivalency, and functional and economic obsolescence adjustments are made on a lump-sum dollar basis, whereas the locational and physical characteristics adjustments are typically based on percentage differences. Qualitative adjustments are usually confined to those instances where the adjustments are large or where any adjustment would be so small that, basically, only a reconciliation of an estimate for the subject is needed. The method used by an appraiser should be dictated by the concerns and activities of a typical investor in the property's market segment.

Making adjustments is somewhat subjective, so the best approach to developing a reliable estimate of value by the sales comparison approach is to find sales of improved properties that are obviously highly similar to the subject property. If highly similar properties are not available, little weight should be placed on any value estimate made by this approach because of the variety of factors that could contribute to differences in unit value indications for apparently similar properties.

Once adjustments are made to the comparables, the various adjusted prices can be reconciled to estimate a value for the subject property. Typically, a range of values will result because of imprecision in the market. However, this range should not be too varied. When reconciling the value, greater weight may be placed on the values of comparables that are most similar to the subject property. However, it is common to report a range of values in the appraisal report rather than a single specific value.

## SALES COMPARISON APPROACH EXAMPLE

Following is the information from three office building sales similar to the subject property. The effective date of the appraisal is 1/1/03. The subject building has the following characteristics.

Gross building area	24,000 square feet (sq. ft.)
Net building area	20,000 sq. ft.
Market rent/sq. ft. net	\$15.00
Market expenses/sq. ft.	\$4.10
Market vacancy	6%
Age of building	New

## Comparable Office Building Sales

Property Number	1	2	3
Date of sale	5/02	10/01	12/02
Age	1 Year	4 Years	3 Years
Sales price	\$2,675,000	\$4,200,000	\$1,650,000
Property rights purchased	Fee simple	Fee simple	Leased fee
Site area	74,300 sq. ft.*	84,000 sq. ft.	35,000 sq. ft.
Gross building area	26,500 sq. ft.	46,200 sq. ft.	22,300 sq. ft.
Net building area	22,200 sq. ft.	40,150 sq. ft.	18,300 sq. ft.
Potential gross income	\$344,000	\$592,000	\$227,000
Vacancy/credit loss	5%	6%	0%
Effective gross income	326,800	556,500	227,000
Operating expenses	99,000	172,500	72,000
Net operating income	227,800	384,000	155,000
Loan amount	\$2,000,000	\$2,750,000	\$1,400,000
Interest rate	9.75%	8.75%†	9.5%

\*Contains 28,000 square feet or \$200,000 of excess land.

†Market interest rate was 9.75% at date of sale.

All three sales have locations similar to that of the subject. Comparables 1 and 2 are built of better-quality materials than the subject and comparable 3 is a lower quality than the subject. Following are the key ratios calculated for each sale before making any adjustments.

## Ratio Extraction—No Adjustments

Property Number	1	2	3
Price/sq. ft. gross area	\$100.94	\$90.91	\$73.99
Price/sq. ft. net area	\$120.50	\$104.61	\$95.63
Building efficiency ratio	83.8%	86.9%	82.1%
PGIM	7.78	7.09	7.27
EGIM	8.19	7.55	7.27
Expense ratio	30.3%	31.0%	31.7%
Expense/sq. ft. gross area	\$3.75	\$3.73	\$3.23
Overall rate	0.085	0.091	0.094
Rent/sq. ft. gross area	\$12.98	\$12.81	\$10.18
Rent/sq. ft. net area	\$15.50	\$14.75	\$12.40
Floor area ratio	41.2%	55.0%	63.7%

Note the differences in several of the rates and ratios, even though the sales are highly similar. The first step is to adjust the sales for differences in ownership interest, financing, and excess land.

Sales Price Adjustment Chart

Property Number	1	2	3
Sales price	\$2,675,000	\$4,200,000	\$1,650,000
Property rights appraised	0	0	+200,000*
Excess land adjusted	200,000	0	0
Financing adjustment	0	<u>215,000</u>	0
ADJ price (fee simple)	\$2,475,000	\$3,985,000	\$1,850,000
Potential gross income	\$344,000	\$592,000	\$265,350†
Vacancy	5%	6%	6%
Effective gross income	\$326,800	\$556,500	\$249,429
Operating expenses	<u>\$99,000</u>	<u>\$172,500</u>	<u>\$78,000</u>
Net operating income	\$227,800	\$384,000	\$171,429

\*Market equivalency adjustment.

†Potential gross income and expense based on market.

After adjustments, the key ratios are again calculated for each sale.

Ratio Extraction—After Adjustment

Property Number	1	2	3
Price/sq. ft. gross area	\$93.40	\$86.26	\$82.96
Price/sq. ft. net area	\$111.49	\$99.25	\$101.09
Building efficiency ratio	83.8%	86.9%	82.1%
PGIM	7.19	6.73	6.97
EGIM	7.57	7.16	7.42
Expense ratio	30.3%	31.0%	31.3%
Expense/sq. ft. gross area	\$3.75	\$3.73	\$3.50
Overall rate	0.092	0.096	0.093
Rent/sq. ft. gross area	\$12.98	\$12.81	\$11.08
Rent/sq. ft. net area	\$15.50	\$14.75	\$13.50
Floor area ratio	57.2%	55.0%	63.7%

Following is an example of an adjustment grid based on the price per square foot of gross building area. The adjustments reflect the appraiser's judgment as to how the price per square foot would have differed if the comparable property would have been the same as the subject property being appraised. For example, each of the comparable properties is older than the subject property, so the price of the comparable property is increased to reflect what the price would be if it were new like the subject.

Property Number	1	2	3
Price/sq. ft. gross area	\$93.40	\$86.26	\$82.96
Market conditions	<u>1.87</u>	<u>3.45</u>	<u>0</u>
Adjusted price/sq. ft.	\$95.27	\$89.71	\$82.96
Location	0	0	0
Age	+1%	+4%	+3%
Size	0	+2%	0
Quality	-5%	-5%	+5%
Condition	<u>0</u>	<u>0</u>	<u>0</u>
Total adjustment	-4%	+1%	+8%
Price/sq. ft.	\$91.46	\$90.61	\$89.60

Before making the adjustment, the range of indications for the subject would have been as follows.

	Unadjusted Indications			% Difference
Potential gross income multipliers (PGIM)	7.09	to	7.78	9.7%
Effective gross income multipliers (EGIM)	7.27	to	8.19	12.6%
Overall capitalization rate	8.5%	to	9.4%	10.5%
Price/sq. ft. of gross building area	\$73.99	to	\$100.94	36.4%

	After Adjustments			
	Adjusted Indications		% Difference	
PGIM	6.73	to	7.19	6.8%
EGIM	7.16	to	7.57	5.7%
Overall capitalization rate	9.20%	to	9.6%	4.3%
Price/sq. ft. of gross building area	\$89.60	to	\$90.61	1.2%

The reduction in the range highlights the importance of a logical and supportable adjustment process.

Following is a discussion of the strengths and weaknesses of each technique used to estimate value.

#### Appraisal of the Subject Property

Potential gross income (20,000 sq. ft. × \$15.00/sq. ft.)	-	\$300,000
Vacancy and credit loss (6%)		<u>-18,000</u>
Effective gross income		\$282,000
Operating expenses (24,000 sq. ft. × \$4.10/sq. ft.)		<u>-82,000</u>
Net operating income		\$200,000

#### *Potential Gross Income Multiplier*

$$\$300,000 \times 7.0 = \$2,100,000$$

#### **Comments.**

This technique is reliable when the interests appraised are identical and the building efficiency ratios for the subject and the comparable fall within a narrow range (as is the case in the example). If any comparable or the subject is rented under different terms (say, gross lease versus net or absolute net basis), the *potential gross income multipliers* (PGIMs) will not logically fall within a narrow range. It is also extremely difficult to use this method if either the comparable or the subject represents a leased-fee interest. In the example, after adjustment the indications appear to give a good indication of value after adjusting each comparable for the ownership interest and adjusting comparable 3 income to represent market income.

#### *Effective Gross Income Multiplier*

$$\$282,000 \times 7.5 = \$2,115,000$$

#### **Comments.**

The *effective gross income multiplier* (EGIM) gives a good indication of value when the subject and the comparable represent the price of the same interest and the leases are based on the same terms (say, gross versus net or absolute net). Unlike the PGIM, it gives a good indication even if the efficiency ratios are not in a reasonable range. After adjusting each sale for ownership interests, the three appear to give good indications of value. It should be noted that the range of indicators is not affected by minor age, quality, or size differentials between the comparables and the subject. This factor only analyzes the comparable sales and the subject based on their relative income-producing potential.

*Overall Rate*

$$\$200,000/0.094 = \$2,127,660$$

**Comments.**

The overall rate gives a good indication of value if the properties represent the same interest and are similar in other respects. Any value indication and the implied overall rate produced using a discounted cash-flow or yield capitalization approach should be comparable to the overall rates indicated by sales. Typically, if the sales have a wide range in their overall rates, the differences primarily are due to differences in ownership interests or level of occupancy assumed.

*Price per Square Foot of Gross Building Area*

$$24,000 \text{ sq. ft.} \times \$90.00/\text{sq. ft.} = \$2,160,000$$

**Comments.**

The *price per square foot* of gross building area will give a good indication of the value of a subject property only after ensuring that each sale represents the same ownership interests and that adjustments have been made for differences in the locational and physical characteristics of the subject and the comparable. If the building efficiency ratios are not similar, the price per square foot of net rentable area would probably be a better indicator of value.

## Summary of Value Indicators

Method Used	Value Indication
PGIM	\$2,100,000
EGIM	2,115,000
Overall rate	2,127,660
Price per square foot of gross building area	2,160,000

**Comments.**

The four approaches resulted in a reasonably small range of value indications. This is obviously because each sale is highly similar to the subject. The indications were arrived at without having to make a significant number of adjustments. The value of the 24,000 square foot office building falls in the range of \$2,100,000 to \$2,160,000, or around \$2,125,000.

## SUMMARY

The sales comparison approach estimates value by comparing the subject property with other comparable properties that recently have sold. This approach is best used when an adequate number of sales of similar properties exist and data can be retrieved from accurate sources.

Price can be compared through units of comparison, such as price per square foot. The units used to compare prices differ for different property types. Income units such as the potential gross income multiplier can also be used to compare properties. The sales price of comparables must also be adjusted for elements of comparison such as ownership interest, nonmarket financing, market conditions, location, physical characteristics, economic characteristics, use, and nonrealty components of value.

To estimate the value of the property, a sales adjustment grid is created in which elements of comparable properties are adjusted to reflect differences from the subject property. These adjustments can be made through dollar, percentage, qualitative, or statistical adjustments. The adjusted sales prices of the comparables will indicate a value for the subject.

This approach can give a very strong indication of value when the comparable sales are similar and represent the same ownership interest. Care should be taken when analyzing leased-fee interests because each may be affected to different degrees by the lease terms and tenant creditworthiness. Just because two sales represent a leased-fee interest does not mean they are similar.

## KEY TERMS

adjusted sales price	dollar adjustment	potential gross income multiplier (PGIM)
adjustments	effective gross income multiplier (EGIM)	price per square foot
cash equivalency adjustment	elements of comparison	units of comparison
comparable sales	locational attributes	
conditions of sale	ownership interest	
direct sales comparison approach	percentage adjustment	
	physical characteristics	

## ENDNOTES

1. The gross rent multiplier is typically used for residential rental properties and usually represents a monthly multiplier.
2. The net income multiplier is the reciprocal of the overall rate.