

E. Resistance to elements and usage. A determination is made as to the resistance of the dwelling to the effects of weather, decay, corrosion, fire, and deterioration. Consideration is given to three categories:

1. Lot improvements.
 - a. How is the soil protected from erosion?
 - b. Is the land properly graded so that the structure is not damaged by water?
 - c. The yard improvements such as walks and walls should be of adequate materials.
2. The building exterior. Analysis is made with reference to the resistance of the exterior of the building to the effects of the elements.
3. Building interior. Consideration is given to the resistance of interior surfaces and materials to determine wear and tear and deterioration.

F. Suitability of mechanical equipment. Measures the extent that the equipment contributes to the desirability and appeal of the dwelling through convenience, economy, and comfort. Consideration is given to:

1. Plumbing system.
2. Heating system.
3. Electric system.
4. Supplementary equipment.



Part IV

METHODS OF APPRAISING PROPERTIES-- Sales Comparison/Market Data Approach

Overview: this chapter gives the particulars for using the market data approach. Not only is the approach discussed in detail, but strong advantages and disadvantages are presented regarding this approach.

After studying this section, the student should:

- ✓ have a more thorough knowledge of the sales comparison/market data approach to appraising.
- ✓ know two (2) advantages of the sales comparison/market data approach to appraising.
- ✓ know five (5) disadvantages of the sales comparison/market data approach to appraising.

Introduction

It is generally conceded there are three approaches to consider in making a market value estimate. These approaches are:

- (1) **Sales Comparison Approach or Market Comparison Approach.** (Both terms are used interchangeably.) Recent sales and listings of similar type properties in the area are analyzed to form an opinion of value by this approach.
- (2) **Cost Approach.** This approach considers the value of the land, assumed vacant, added to the depreciated cost new of the improvements.
- (3) **Income Capitalization Approach.** The estimated potential net income of real property is capitalized into value by this approach.

- a. Adequacy of floor and wall space for proper placement of furniture.
 - b. Circulation--should not have to pass through long living room to reach other parts of the house.
 - c. Fireplace should be away from the traffic flow.
 - d. Wall spaces--adequate for furniture arrangements.
- 2. Dining room or area.
 - a. Ease of access to kitchen.
 - b. Size of room or area governed by overall size of house.
 - c. Best if room is nearly square.
- 3. Bedrooms.
 - a. Master bedroom should be of adequate size (minimum 10' x 12').
 - b. Other bedrooms (minimum 9' x 10').
 - c. Cross ventilation should be provided.
 - d. Located away from family areas and kitchen for privacy.
 - e. Should not have to go through one bedroom to enter another.
 - f. Closet space should be adequate (minimum depth 2 feet--6 square feet).
- 4. Kitchen.
 - a. Workspace should be ample and efficient in plan.
 - b. Equipment should be centrally located to eliminate unnecessary foot travel.
 - c. Walls, ceilings and floors should be of easily maintained materials.
 - d. Adequate provision should be made for proper lighting and ventilation.
 - e. Kitchen should be conveniently located in relation to dining areas and family room.
 - f. Kitchen should have an exterior entrance.
 - g. Laundry facilities should be adjacent to the kitchen.
- 5. Bathrooms.
 - a. Proper location with respect to other rooms.
 - b. If only one bathroom exists, it should be located off the central hall.
 - c. Bathroom should not open directly into kitchen or living room.
 - d. Adequate ventilation--exterior window or automatic exhaust fan is necessary.
 - e. Floors, walls, and ceilings easily cleaned and maintained.
- 6. Closets and storage.
 - a. At least one clothes closet per bedroom.
 - b. Adequate linen closet space.
 - c. Storage closets should be centrally located.
 - d. A storage area should be provided near the laundry equipment.
 - e. Exterior storage necessary if there is only a carport.

B. Site

- 1. Construction should be related to the size of the building site.
- 2. The house should be so located on the land that it relates to the building site or "belongs."
- 3. Adequate front, rear and side yards are necessary for light and privacy. Yards may be clustered in planned unit developments.
- 4. A private service yard for drying clothes and storage of refuse should be convenient to the kitchen.
- 5. Entrance to the garage should be convenient and readily accessible.
- 6. Proper landscaping.
- 7. Recreational garden facilities.

8. Adequate yard improvements.

BROKER'S GUIDELINES FOR CONSIDERING PHYSICAL CHARACTERISTICS OF REAL PROPERTY FOR FHA INSURANCE PURPOSES.

A. Visual appeal of property. How well will the property as a whole retain its market appeal?

1. Exterior design of structures.
 - a. Visual appeal based upon the probability of continuing market acceptance.
 - b. Certain architectural styles are short-lived in their acceptance and become obsolete.
2. Setting.
 - a. Measures the property's appeal in the market because of terrain, accessory buildings, walks, landscaping.
 - b. The dwelling and surroundings should present a pleasing and unified composition.
3. Interior design of dwelling.
 - a. The interior design should exhibit simplicity of treatment, harmony in proportions and refinement in design.
 - b. Interior permanent features should be up-to-date and of adequate constructions.

B. Livability of property. The degree of usefulness, convenience and comfort which the property affords is determined by:

1. Site utilization.
 - a. Considers all aspects of the site and its arrangements as these affect the livability of the entire property.
 - b. The lot characteristics including size, shape, topography, orientation and natural advantages are considered.

2. Dwelling space utilization.

Consideration is given to the size and efficient distribution of space within the structure.

3. Room characteristics. Consideration is given to the size and proportion of the rooms in relationship to the overall area of the dwelling. The following factors are considered:

- a. Room orientation.
- b. Circulation.
- c. Privacy
- d. Closet and storage space.
- e. Kitchen efficiency.
- f. Service facilities.
- g. Insulation.

C. Natural light and ventilation. The effect of natural light and natural ventilation of the desirability, livability and healthfulness is considered.

1. The proper amount or ratio of natural light to room area should be maintained.
2. Ventilation of all rooms is studied to measure its effect on desirability of the dwelling.
3. Cross ventilation desirable in all bedrooms.

D. Structural quality. The quality of structural design, materials, and workmanship is determined for the dwelling. The component elements to be considered are as follows:

1. Foundations.
2. Wall construction.
3. Partitions.
4. Floor construction
5. Ceiling construction.
6. Roof construction.

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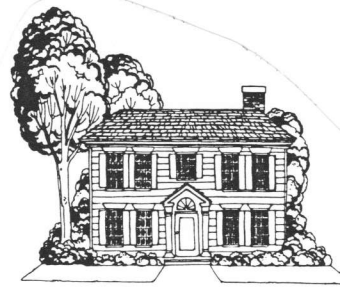
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Frequently the knowledgeable appraiser will use all three methods in appraising a given property. No single method by itself should be depended upon to produce a reliable estimate.

Not only does each parcel of real estate differ in some respects from all other properties, but there are many different purposes for which an appraisal may be made. Each variation of purpose could result in a considerable, yet logical, variation of estimated value. For example the nature of the property, whether non-investment, investment or service; the purpose of the purchase, whether for use, investment or speculation; and the purpose of the appraisal, such as for sale, loan, taxation, insurance and the like, all constitute matters which will influence the proper methods of appraisal approach and the final result reached by the appraisal.

Consequently the first step in any appraisal procedure is to have a clear understanding of the reasons for making the appraisal and the objective to be sought. The adequacy and reliability of available data also are determining factors in the selection of the approaches to be employed. A lack of certain pertinent or up-to-date information may well eliminate an otherwise possible approach.

In other instances proper procedures may only call for an appropriate discounting of conclusions drawn from such data. Thus, based on its adaptability to the specific problem, one method is usually given greater weight than the other approach methods.

In most appraisals all three approach methods will ordinarily have something to contribute. Each approach method is used independently to reach an estimated value. Then as a final step, by applying to each separate value a weight proportionate to its merits in that particular instance, conclusions are reached as to one appropriate value. This procedure is known as reconciliation.

THE SALES COMPARISON (OR MARKET DATA COMPARISON) APPROACH

This approach is most generally adaptable for use by real estate brokers and salespersons. It lends itself well to the appraisal of land, residences and other types of improvements which exhibit a high degree of similarity, and for which a ready market exists. The Principle of Substitution is the basis of this approach. The buyer should not pay more for a property than the cost of acquiring a comparable substitute property. An analysis of market data is necessary in all three approaches to value.

The mechanics of the market comparison approach involve the use of sales and market data of all kinds in order to compare closely the property being appraised with other similar properties which have recently been sold or are offered for sale as to time of the sales, location of the sales and physical characteristics of the improvements. The sources used for determining value include actual sales prices, listings, offers, rents and leases, as well as an analysis of economic factors affecting marketability.

Sources of Data

Sales or market data are obtained from many sources including:

Appraiser's own files. Information gathered on previous assignments might provide information for the present appraisal.

Public records. The county assessor's office keeps a record of all sales transactions recorded within the county. This information is kept confidential for the assessor's own use, but an owner can obtain needed information about owner's property from the assessor's office. The date of recording of any deed may be obtained from the Recorder's Office. The exact legal description as well as legal seller and buyer can be obtained from an inspection of the deed (or facsimile). The documentary transfer tax applies on most all transfers of real property located in the county. Notice of payment is entered on face of the deed or on a separate paper filed with the deed. If a portion of the total price

paid for the property is exempt because a lien or encumbrance remains on the property, this fact must be stated on the deed or on a separate paper filed with the deed.

Multiple listing offices, fellow appraisers or brokers. Information on listings, offerings, and sales may frequently be obtained from real estate multiple listing facilities, real estate offices or by appraisers familiar with the area.

Legal property owner, sellers or buyers. When viewing comparable sales and other pertinent data in an area, additional information is solicited by interviewing property owners living in the neighborhood. The appraiser should try to confirm the sales price and circumstances of the sale with buyer, seller and/or broker. If informed of the appraiser's purpose, parties will usually verify and explain the sale.

Classified ads and listings. Ads are a source of information on properties currently being offered for sale. If possible, the appraiser's name should be on the mailing list of banks, savings and loan, and other institutions selling properties.

Listing prices may often indicate the probable top market value of a specific property while bid prices may normally indicate the lowest probable value. Both are subject to variation based on motivation, but a reasonable number of properties falling into this category will provide a bracket within which a current fair value may be found. Offers are likely to approach market value more closely than are listings. However, an offer to purchase is not usually a matter of common knowledge.

The Procedure

The procedure used in the sales comparison approach method is to systematically assemble data concerning comparable properties which are as "like-kind" to the subject as possible in regard to: neighborhood location; size (a comparable number of bedrooms and baths); age; architectural style; financing terms and general price range. The greater the number of good comparable data used, the better the result, provided a proper analysis is made. The approach is based on the assumption that property is worth what it will sell for in the absence of undue stress, and if reasonable time is given to find a buyer. For this reason, the appraiser should look behind sales and transfers to ascertain what influences may have affected sales prices--particularly if only a few comparisons are available.

Proper comparisons between "like" properties should be based on an actual inspection of such property. Inspection should determine the condition of the improvements at time of sale, not the condition as of date of inspection; attempt to inspect room arrangement and room count so that the utility of the data may be compared to the subject property; inspect yard improvements and determine their influence upon the sales price; verify the sales price with the buyer or seller to determine if the sale was an arm's length or open market transaction; and compare size of the lot and its topography with the subject. For nearly comparable properties adjustment penalties should be imposed for such items as: poor repair, freakish design, existing nuisances, etc. Conversely, additional values should be allowed for superior design, view, special features, better condition, higher quality of materials, landscaping and the like.

Unless the sales being compared are of recent date, consideration must also be given to adjusting values in keeping with the economic trend of the district and the worth of the dollar. Financing terms receive value adjustment considerations, e.g., for favorable existing assumable financing, or perhaps seller-assisted financing.

Units and Elements of Comparison. The common units of comparison used by appraisers in the sales comparison approach are property components that can readily be used for comparison purposes, i.e., square foot, number of rooms, number of units. Elements of comparison basically are characteristics in either the property or the transaction itself that cause prices to vary. These principal elements of comparison are financing terms, time (the market conditions at the time of the sale), sale

conditions (no pressures--arm's length), location, physical characteristics, and income (if any) from the property.

Using the appropriate units and elements of comparison for the subject and each comparable, the appraiser assigns an estimated adjusted amount (dollar or percentage) for each difference found in the items of comparison (number of bathrooms, view, square footage, financing, forced sale). A price is thus found for each comparable property that should realistically reflect its present value in the current market where the subject property is being sold. The less comparable properties are then eliminated from consideration and greater weight is given to the comparable sales most compatible to the property being appraised. Through this judgment process or reconciliation process, the appraiser arrives at the final estimate of value for the subject property, using the compatible comparables as indicators of the value of and price to be asked for the subject property.

Advantages and Disadvantages. Some of the advantages of using the sales comparison approach are:

- (1) It is the most easily understood method of valuation and in most common practice among real estate brokers and salespersons.
- (2) It is particularly applicable for appraisal purposes involving the sale of single family residences and loan arrangements therewith. These make up the great bulk of real estate transactions.

Some of the disadvantages of the comparison approach method are as follows:

- (1) Locating enough "nearly-alike" properties which have recently sold or listed to indicate a value.
- (2) Adjusting amenities to make them comparable to the subject property. The greater the amount of adjustment, the less reliable the comparable becomes.
- (3) Older sales become less reliable in a changing market.
- (4) The occasional difficulty in confirming the transaction details.
- (5) Limitations on its reliability under rapidly changing economic conditions and in periods of high inflation and interest rates when property appreciation rates may cause hazardous value conclusions to be made.

Applications of the Procedure--Residential Sales.

"Like" properties are always compared with "like." The more current the data the better. The suggested order for making unit and element comparisons is in this sequence: (1) finance terms (2) time (market conditions) (3) sale conditions (4) location (5) physical characteristics (6) other-special considerations for income property.

The steps are:

1. Research the market for bona fide "like-kind" recent market data. Select data. Verify.
2. Select the appropriate units and elements of comparison. Adjust the sales price of each comparable (or eliminate it from consideration). The adjustment is always made to the comparable not the subject property.
3. Each comparable will have its own value indication. Eliminate the less comparable properties. Set out comparison results in chart or grid form. Using judgment and experience, the appraiser reconciles or correlates the adjusted sales prices of the comparables and by giving greatest weight to the sale that is most compatible to the subject property, he assigns an estimated value to the subject. The appraiser does not average the adjusted sales prices of the comparables unless all are equally good. Reconciling is a judgment process.

EXAMPLE

Assume that the house to be appraised is a 2,400 square foot, 5-year old, single-family tract home located two blocks from the beach, with a fair view, stucco, 10 rooms, 4 bedrooms, 3 baths, 3-car garage. It is in good condition. Prices have been increasing at 1% a month. The appraiser has selected from the same tract neighborhood comparables which are equal in most of their financing and physical characteristics except as shown on the rating chart. The value or sales price for the subject property is determined as shown on the chart below.

Adjust sales prices to indicate the appraised parcel value by subtracting the adjustment if the appraised parcel (subject) is inferior to the comparable and by adding the adjustment if the subject is superior to the comparable.

SALES COMPARISON DATA APPRAISAL RATING GRID--SINGLE-FAMILY RESIDENCE TRACT HOME

Elements/Units	Comparables			Subject
	Data 1	Data 2	Data 3	
Sales Price	\$164,000	\$176,000	\$178,000	?????
		adjustments		
Financing terms	normal	normal	normal	normal
Conditions of sale	normal	normal	normal	normal
Time(sale Date)	6-82	11-82	4-83	7-83
Adjustment 1%/mn	+\$22,960	+15,840	+7,120	
Location to beach	1 block	3 blocks	4 blocks	2 blocks
Adjustment	*(inferior) -\$6,000	*(superior) +\$2,000	*(superior) +\$4,000	
Garage	equal	equal	equal	equal
Age	equal	equal	equal	equal
Rooms	equal	equal	equal	equal
Bathrooms	equal	equal	equal	equal
View	none	some	fine	fair
Adjustments	*(superior) +\$4,000	*(superior) +\$1,000	*(inferior) -\$6,000	
Square Footage	2,400	2,430	2,390	2,400
Adjustment	0	0	0	
Total Adjustments	\$20,960	\$18,840	\$5,120	
Adjusted sales price	\$184,960	\$194,840	\$183,120	
INDICATED VALUE				\$195,000

 *Inferior means the subject property is inferior to the comparable in this regard. Superior means the opposite. Subtract the adjustment if the subject property is inferior to the comparable property. Add the adjustment if the subject property is superior to the comparable property.

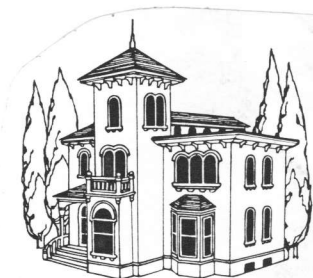
RECONCILIATION: Data 2 is perhaps the better comparable because it is closest to the subject property in size, location, and view although not as good as the subject. Data 3 is the latest sale, but has the greatest difference in view and location. Data 1 is the oldest sale, and is most useful for confirming the indication of value. Indicated value--say \$195,000.

Part V: COST APPROACH

Overview: the second approach to appraising property is fully described in Part V including its limitations and desirability of use dependent on the subject property to be appraised. As the student will soon observe, the cost approach is very complex but can yield some very accurate results under certain circumstances.

After studying this section, the student should:

- ✓ have a more thorough knowledge of the cost approach to appraising.
- ✓ know advantages of the cost approach to appraising.
- ✓ know disadvantages of the cost data approach to appraising.
- ✓ have more knowledge of functional, physical and external depreciation.



The Cost Approach varies the value of the appraised parcel as the combination of:

- (a) The value of the land as if vacant, and
- (b) The cost to reconstruct the appraised building as new on date of value,
- (c) Less the accrued depreciation the appraised building suffers in comparison with a new building.

The Principle of Substitution applies: value tends to be set by the price of an equivalent substitute. In the Cost Approach, the substitute is the cost of reconstructing the present building new on a vacant site.

The total cost of (a) the land as if vacant, plus (b) the reconstruction cost new of the building, with all direct and indirect expenses and profit, and before deduction of depreciation, will tend to set the upper limit of value. In this view, the cost new can be used as a benchmark for measuring the other approaches.

THE PROCEDURE IN BRIEF

1. Estimate the value of the land as though vacant and available for development to its highest and best use.
2. Estimate the replacement or reproduction cost of the existing improvements as of the appraisal date.
3. Estimate the amount of accrued depreciation to the improvements from all causes (physical deterioration and/or functional or external obsolescence.).
4. Deduct the amount of the accrued depreciation from the replacement cost new to find the estimate of the depreciated value of the improvements.
5. Add the estimated present depreciated value for the improvements to the value of the land. The result is an indication of the value for the subject property.

Cost New Bases.

The Cost Approach views the value of the building at its cost of reconstruction as new on date of value. There are three bases of reconstruction cost new: (a) Historic Cost Indexed to Cost New, (b) Reproduction Cost New, and (c) Replacement Cost New. Each have their value to the cost new study, but terms should not be confused.

A. Historic Cost Indexed to Cost New. Historic Cost is the actual cost of the building when originally constructed, yesterday or fifty years ago. By use of price indices from building or engineering cost services, or from the original building contractor, Historic Cost can be "indexed" to a cost new on date of value. Indexed Historic Cost can be very useful if, (1) the building is fairly new, and/or (2) it is so unique that it is the only reliable value base. The advantage of Indexed Historic Cost is in the accuracy of employing actual building costs. The disadvantage is the older the costs are, the less reliable they can be indexed. When considering Indexed Historic Costs, the appraiser should be assured; (1) That historic costs were normal costs at time of construction, and (2) that historic costs, as indexed, accurately reflect cost new on date of value.

B. Reproduction Cost New is the cost, on date of value, or reconstructing a replica of the appraised building. This is a replica in actual design and materials. In this method, the cost new estimate is made as if looking at plans of an exact duplicate of the present building. The advantage of the Reproduction Cost New is the greater accuracy of duplicating the building in actual design and materials. The disadvantage is the advances in building construction and methods, materials, and design, make cost estimates of obsolete building construction very difficult and wildly distorted for materials no longer reasonably available or requiring large amounts of hand labor. Reproduction Cost New is the most useful for (1) study of refined methods of depreciation, (2) unique construction, and (3) occasional legal requirements for court testimony.

C. Replacement Cost New is a cost new study looking to reconstruct the building with modern methods, design, and materials that would most closely replace the use of the appraised building. For example, an older brick warehouse would be constructed today with concrete block or tilt-up cast slab construction. The advantage of Replacement Cost New is the ready availability of accurate current costs, and materials. The disadvantage is the subjective decisions of proper current replacements of materials and design for older construction. In actual practice, the Replacement Cost New is the most frequently used Cost Approach base.

Progressive Steps in the Cost Approach--Discussion

A. An estimate is made as to the current market land value, assumed vacant and available for improvement to its highest and best use. Land value is usually based on a market approach utilizing comparable market data of similar sites in the area.

B. An estimate is made of the cost new of reconstructing the buildings and other improvements.

1. The appraiser selects the proper cost new base:

(a) Historic Cost of appraised building indexed to cost new on date of value.

(b) Reproduction Cost of duplicating the replica of the appraised building using original materials and design on date of value.

(c) Replacement Cost of replacing the use and facility of the appraised building using modern materials, methods, and design on date of value.

2. The appraiser completes property inspection, description, measurement, inventory, and plot plan of appraised building improvements and equipment, with notes regarding type, style, quality, and condition of building materials, workmanship and condition.

3. The appraiser selects appropriate methods of Cost New Estimating.

(a) Square-Foot Method. The most common method used by appraisers is to estimate the cost of construction. The property being appraised is compared with other similar structures where costs are known, and which have been reduced to units per square foot of floor area. Standard type buildings whose costs are known are broken down on a cost per square foot of floor area. The building being appraised is compared with the most comparable standard building and its cost per square foot is used for the subject property. Adjustments must be made for size of building, and various exterior and interior features. Though adjustments cannot be made for many variables, this method, in most instances, is accurate enough for the real estate appraiser. The square-foot method can be used and applied faster than any other estimate.

(b) Cubic-foot Method. Similar to the square-foot method, except the cubic contents of buildings are compared instead of the square footage of the floor area. This method is most popular in the Eastern United States. If used properly, it is more accurate than the square foot method, since the height as well as area of the building is taken under consideration.

(c) Quantity Survey Method. A detailed estimate of all labor and materials is compiled for each component of the building. Items such as overhead, insurance, contractor's profit, must be added to direct costs. This is a very accurate but time-consuming method to arrive at costs. Because of the detail and time required this method is seldom used, except by building contractors and professional cost estimators.

(d) Unit-in Place Cost Method. Cost of units of the building as installed is computed and applied to the structure. The total costs of walls in place, heating units, roof, are obtained on a square foot basis, including labor, overhead, and profit. This is a detailed accurate method generally used for checking on new construction units. It is seldom used by appraisers because of specialized knowledge necessary to gather all elements making up the unit costs.

4. The appraiser investigates cost sources and estimates cost new of all buildings and improvements. Costs must be measured accurately. They are classified as direct (hard) costs and indirect (soft) costs. Indirect costs are usually associated with the administration of the project while direct costs are expenditures for labor, equipment and materials, overhead and profit.

(a) Cost sources:

- (1) Costs of comparable buildings under construction.
- (2) Owners, builders, and/or contractors of comparable buildings.
- (3) The contractor of original building, if available.
- (4) Published cost services (usually handbooks providing current comprehensive cost data, by local areas and general construction types).
- (5) Professional cost estimators.

(b) The appraiser completes the cost estimate to include all:

- (1) Direct expenses of construction such as labor, materials and equipment and engineering for the building, site preparation, street and utility work, landscaping, etc.
- (2) Indirect expenses such as legal, title, appraisal and feasibility study fees, license, permits, ad valorem taxes during construction, demolition and removal costs, inspections, insurance during construction, financing charges, accounting, etc.
- (3) Developers overhead, supervision, and profit; for planning, construction, and sale of the project to "turnkey" condition (that is, completely ready for a new purchaser/occupant) and selling costs.

C. The appraiser estimates the accrued depreciation and deducts from cost new estimate. This amount must be deducted from the cost new to determine the present value of the improvements. The difficulties of correctly estimating depreciation tend to increase with the age of the improvement. Experience and good judgment are among the necessary qualifications for making a realistic estimate of

proper depreciation. There is no justification in assuming that improvements necessarily depreciate at a rate corresponding to their age.

D. The appraiser adds the land value to depreciated value of improvements for indicated value by Cost Approach.

DEPRECIATION

In connection with the appraisal of real property, depreciation is defined as "loss in value from any cause." It is customarily measured by estimating the difference between the current replacement or reproduction cost new and the estimated value of the property as of the date the property was appraised.

Contrasting with depreciation is appreciation of values which results from inflation or from special supply and demand forces relating to the specific property. Appreciation may reduce or offset entirely a normal anticipated decrease of value due to depreciation.

Depreciation includes all of the influences that reduce the value of a property below its cost new. The principal influences are often grouped under three general headings and subdivided as follows:

1. Physical deterioration, resulting from:
 - a. Wear and tear from use;
 - b. Negligent care (sometimes termed "deferred maintenance")
 - c. Damage by dry rot, termites, etc.;
 - d. Severe changes in temperature.
2. Functional obsolescence, resulting from:
 - a. Poor architectural design and style;
 - b. Lack of modern facilities;
 - c. Out-of-date equipment;
 - d. Changes in styles of construction;
 - e. Construction methods and materials obsolete by current standards;
 - f. Changes in utility demand.
3. External obsolescence, resulting from adverse environmental and economic influences outside the property itself, such as:
 - a. Misplacement of improvement;
 - b. Zoning and/or legislative restrictions;
 - c. Detrimental influence of supply and demand;
 - d. Change of locational demand.

The first two categories of accrued depreciation are considered to be inherent within the property and may be curable or incurable. Obsolescence is caused by factors external to the property and is almost always incurable.

Appraisal and income tax views--"Book" vs. Actual Depreciation

It is important to understand that "depreciation" is a word with two meanings; one for the appraiser and another for the owner concerned with tax position.

Book Depreciation. Depreciation, for the owner's income tax position, is "book" depreciation or a mathematical theoretical calculation of steady depreciation from owner's original purchase price or cost basis. This "book" depreciation allows the owner to recover the cost of the investment over the "useful" life of the improvement and is mathematically accrued annually and deducted as an income tax deduction. In this sense, the owner's accountant sees depreciation as a deduction from gross income.

Frequently this deduction makes gross income a negative amount, at least on paper. The building seems to be losing value faster than the income replaces it. This gives the owner a "paper loss" that

can be offset against other income. This "paper loss" or "tax shelter" possibility is a motivating factor for purchase or exchange of many income properties.

"Book" depreciation is (1) an allowable deduction from cost for accounting or income tax purposes; (2) determined by owner's policy and to meet IRS requirements; and (3) deducted from owner's original (historic) cost.

"Book value," then, is the current value for accounting purposes of an asset expressed as original cost plus capital additions minus accumulated depreciation, based on the method used for the computation of depreciation over the useful life of the asset for income tax purposes. Depreciation is allowed on the improvements only--not land--and the depreciation, in the accountant's usage, is assumed to be a mathematical wasting away of the improvements.

The book value of the property may be ascertained at any given time by adding the depreciated value of the improvement to the allocated value of the land.

Actual Depreciation. The "book" depreciation from owner's original cost is not the depreciation normally considered by the appraiser. The appraiser looks not to owner's original cost, but cost new on date of value. From this current cost new, the appraiser deducts the estimate of accrued actual (not book) depreciation. Depreciation (loss in value) is estimated only for improvements.

Actual depreciation used by appraisers (cost approach primarily) is (1) loss in value; (2) determined by market data, observed condition, etc. and (3) deducted from current reconstruction cost new.

Accruals for future depreciation may vary considerably since the accountant and the appraiser select rates of depreciation for different purposes, they may vary considerably. While both estimators may use the same period as to the remaining economic life of the property and may also use the same method, additional considerations may affect the resultant rate. Whereas the accountant may be restricted because of accounting conventions, the appraiser is under no such restrictions.

The real estate agent who is determining values should understand the necessity for following proper appraisal procedures and should not rely on book values either to estimate accrued depreciation or for future depreciation accruals.

Methods of Calculating Accrued Depreciation

Accrued depreciation is depreciation which has already occurred up to the date of value. Remainder depreciation is depreciation which will occur in the future. Accrued depreciation may be classified either as curable or incurable. The measure between curable and incurable is economic feasibility. It is possible to physically restore or cure most depreciation such as by expensive restoration of old homes. However, in most circumstances, cure of deficiencies is measured by the economic gain (increased rents) compared with the cost of the cure. Three methods of estimating accrued depreciation are:

Straight line or age-life method

1. Depreciation which occurs annually proportional to its total estimated life.
2. A property with an estimated total life of 50 years would therefore be said to depreciate at an equal rate of 2 percent per year (2 percent x 50 years equals 100 percent depreciation).
3. Effective age of the building is generally used instead of actual age.
 - a. Effective age is the age of a similar and typical property of equal usefulness, condition and future life expectancy.

b. If the subject property was actually 25 years of age, but was as well maintained and would sell for as much as adjoining 20-year-old properties, it would therefore be said to have an effective age of 20 years.

Advantages of the Straight Line Method: the Straight line method is used to a great extent as it is easy to calculate, is used by the Internal Revenue Service, and is easily understood by the layperson.

Disadvantages of the Method: in actuality, buildings do not depreciate in a straight line at a stated percentage each year, but will vary according to maintenance and demand for the type of structure.

Cost-to-cure or observed condition method (Breakdown Method)

1. The observed deficiencies within and without the structure are observed, and their costs to cure are calculated. This cost to cure is the amount of accrued depreciation which has taken place.
2. An amount for physical deterioration or deferred maintenance for needed repairs and replacements is computed.
3. Functional obsolescence due to outmoded plumbing fixtures, lighting fixtures, kitchen equipment, is determined and assigned a dollar value.
4. Functional obsolescence which cannot economically be cured, such as poor room arrangements, improved construction materials, is measured by calculating the loss in rental value due to this condition.
5. External obsolescence is caused by conditions outside the property and is measured by determining the loss of rental value of the property as compared with a similar property in an economically stable neighborhood. The capitalized rental loss is distributed between the land and the building.

Advantages of the Cost to Cure/Observed Condition method: this is the most refined method of examining complex causes and cures of depreciation.

Disadvantages of the method: It can be difficult to calculate minor or obscure depreciation accurately. Measurement by rental loss is sometimes difficult to substantiate.

Combination straight line and cost-to-cure method

The straight line method using effective age may be used to determine the normal depreciation as if the property is not suffering for undue depreciation. To this amount may be added the excess deterioration and obsolescence as measured above. For example:

House 20 years old, remaining life estimated at 30 years for a total life of 50 years--thus depreciating at a rate of 2 percent a year. Effective age due to condition estimated at 15 years.

Cost New	\$75,000
----------	----------

- | | |
|---|----------|
| 1. Normal deterioration. | |
| 2 percent x 15 years = 30 percent | |
| 30 percent x \$75,000 = | \$22,500 |
| 2. Excessive physical deterioration. | |
| New roof, exterior painting | \$3,000 |
| 3. Functional obsolescence, curable | |
| Modernize bathroom | \$2,250 |
| 4. Functional obsolescence, incurable. | |
| Poor room arrangement results in rental | |
| loss of \$30 per month when | |
| compared to normal house. | |

Monthly gross rent multiplier 100.

100x \$30 a month = \$3,000

5. External obsolescence.

Estimated monthly rent of subject is
located in ideal neighborhood (after
curing physical and functional
deficiencies) \$600

Estimated rental loss due to external
causes \$25

Yearly rental loss 12x\$25 = \$300

Capitalization rate applicable to
properties in ideal neighborhood
(ratio annual rent to value) 12 percent

Capitalized rental loss

\$300 divided by 12 percent = \$2,500

Ratio of land to building value
in ideal neighborhood, land 25 percent,
building 75 percent.

Economic obsolescence

75 percent x \$2,500 \$1,875

Total estimated depreciation \$32,625

Depreciated value of house \$42,375

Reproduction or Replacement Cost Method

The subject property is improved with a duplex, two detached garages, a covered porch for each unit and common driveway and walks.

Measurements and current cost replacement figures for the improvements are as follows:

Each unit of duplex is 25'x35'	@ \$32.00 per square foot.
Each detached garage is 21'x25'	@ \$10.00 per square foot.
Each covered porch is 6'x10'	@ \$8.00 per square foot.
Driveway is 20'x100'	@ \$1.30 per square foot.
Walks--3'x40'	@ \$1.30 per square foot.

The improvements are now 12 years old and it is determined that such improvements have a remaining economic life of 28 years. The current lot value by comparison is \$15,000. Depreciation computations are based on the use of the straight line method.

Each unit of duplex is (25'x35'	@ \$32.00 per square foot) x 2	= \$56,000.00
Each detached garage is(21'x25'	@ \$10.00 per square foot) x 2	= 10,500.00
Each covered porch is (6'x10'	@ \$8.00 per square foot) x 2	= 960.00
Driveway is(20'x100'	@ \$1.30 per square foot)	= 2,600.00
Walks--(3'x40'	@ \$1.30 per square foot)	= 156.00
Improvements--Total Replacement Cost New		\$70,216.00

Depreciation:

12 years + 28 years = 40 years life of improvements when new	
100 divided by 40 = 2 1/2 percent annual depreciation rate, or recapture rate.	
12 years x 2 1/2 percent = 30 percent total depreciation to date.	
\$70,216 x 30 percent = Total depreciation in value to date	\$21,065
Total value of improvements less depreciation	\$49,151
Plus lot value	\$15,000
Total Current Value of Property by Replacement Cost Approach	\$64,151

MARKET DATA DEPRECIATION METHOD

A comparative method is frequently used in residential appraisals where the property being appraised can be compared with market data of buildings of similar type and condition.

1. From the sales price of a comparable residential property is deducted an estimate of land value.
2. From the resulting total comparable improvement value, deduct the estimated contributory value of secondary improvements and landscaping,
3. The result is the value of the comparable main residence at its total depreciated value in place,
4. Divide this main residence value by the residence square footage. This yields depreciated unit value in place of the comparable residence.
5. By multiplying the appraised building square footage by the unit value of the comparable residence, the total indicated depreciated value is found for the appraised residence.

Sales price of comparable property.....	\$109,000
Less estimated land value.....	-35,000
Improvement Value	\$74,000
Less estimated value of secondary improvements and landscaping	-18,000
Value of comparable residence	\$56,000
Divide by area of comparable residence	divided by 2,900 sq.ft.
Depreciated unit value of comparable residence	\$19.31/sq.ft.
Multiply by size of appraised residence	x2,850 sq.ft.
Indicated depreciated value in place of appraised residence	\$55,034

Advantages of the Market Data Method: This method is the most accurate measure of depreciation from the market.

Disadvantage of the method: It is sometimes difficult to obtain truly comparable market data and occasionally difficult to accurately estimate land value and secondary improvement value for deductions for main residence value indication.

Age-life method using effective age

House has an actual physical age of 25 years with a remaining life of 25 years, thus depreciating at the rate of 2 percent a year. It is the opinion of the appraiser that the subject house is of the same condition and utility as similar houses that are only 20 years of age. Therefore the house has been assigned an effective age of 20 years.

The accrued depreciation would thus be 20 years times 2 percent or 40 percent
Calculated cost new \$120,000

Accrued depreciation (40 percent x \$120,000)	\$48,000
Depreciated value of improvement	\$72,000
Plus land value	\$50,000
Indicated value by cost approach	\$122,000

Measuring Physical Deterioration

A store building has a remaining useful life of 30 years and an effective age of 20 years. Present reproduction cost for the structure is \$100,000. The roof is 75% deteriorated. A new one will cost \$4,000. The air conditioning and heating systems are 40% depreciated. Their installed cost new is \$6,000. What is the total amount of physical deterioration?

The building, under the straight-line or age-life method, is 40% depreciated (100% divided by 50 = 2% x 20 years effective age = 40%). This 40% depreciation to the building is to be applied to the amount of the building's reproduction cost less the depreciation already taken on the other components.

Depreciation to roof	(.75 x \$4,000) =	\$3,000
Depreciation to air-conditioning and heater.....	(.40 x \$6,000) =	\$2,400
Depreciation to rest of building	(.40x \$90,000) =	\$36,000
		\$41,400

Income Approach--future Depreciation

Future depreciation is the loss in value which has not yet occurred but will come in the future and is of significance in the capitalization of income method, which will be discussed next at length. In the income approach to valuation, depreciation is based on the remaining economic or useful life during which time provision is made for the recapture of the value of improvements. It is the return "of" the investment--as differentiated from the return (interest and profits) "on" the invested capital. Under the income approach this depreciation is usually measured by one of two different methods. These are:

Straight-line depreciation, a definite sum deducted from the income each year during the total estimated economic life of the building to replace the capital investment. If the appraiser estimates that building will have a remaining life of 25 years, it is provided that 1/25 or 4 percent of the building value be returned annually out of net income.

Sinking-fund method, which also includes a fixed annual depreciation deduction from income, but with yearly reserves set up from such funds into a sinking fund which at compounding interest will offset the depreciated value of the structure and be collectible at the end of the building's useful life. Accruals for future depreciation to replace the capital investment are in addition to and essentially different from both maintenance charges and reserves for periodic replacement of curable depreciation. Should there be any estimated salvage value to the improvement at the end of its economic life, this amount need not be returned through annual depreciation charge under either the straight-line or the sinking-fund method.

Part VI

INCOME (CAPITALIZATION) APPROACH

Overview: There are various techniques one may use to value a property based on its income. Part VI has the limited scope of review and instructing the learner about techniques which are based on gross income (gross rent multiplier) and net income (capitalization rates). Several sample problems are solved to demonstrate the "net income" approach and the "gross income" approach.

After studying this section, the student should:

- ✓ understand the types of properties most suited for the income approach.
- ✓ be able to complete non-complex problems using the gross rent multiplier approach.
- ✓ be able to complete non-complex problems using the capitalization approach.

The income approach is concerned with the present worth of future benefits which may be derived from the property, i.e., the property is valued on the basis of its capacity to continue to produce an income stream. This method is particularly important in the valuation of income-producing property, although rarely can it be taken as the only pertinent approach. An important consideration in this approach is the net income which a fully informed person using good management is warranted in receiving, assuming the property will produce during the remaining useful life of the improvement. An alternative where gross income may be used, rather than net income, is found in the use of the Gross Rent Multiplier (GRM) which is explained later on in this course.

The process of calculating the present worth of a property on the basis of its capacity to continue to produce an income stream is called capitalization. The capitalization approach is based primarily on the appraisal concepts of comparison, substitution and anticipation.

Income Property Appraiser's and Owner's Viewpoints

It is important that the real estate professional realize there are frequent differences in the appraiser's and the owner's viewpoints on income property.

An owner purchases income property as an investment based upon personal desires and tax position. The owner frequently views the investment as an equity in a financed property. "Equity" is the owner's down payment or the difference between the loan amount and the value or price of the property. The owner calculates the payments on the loan as an expense of owning the property, and in turn deducts from income tax the interest paid on the loan and the "book" depreciation from the purchase price or cost basis. The owner can deduct only actual expenses but not reserves for future expenses, and can compute gross income only from income actually collected (or owed) not just projected. The owner looks for a profitable resale or exchange at a higher price or favorable tax position. The owner evaluates the property by its effect on the owner's personal investment and tax position. In most cases, the appraiser must disregard nearly all these personal consideration.

The appraiser reconstructs expense and income into the amounts that the well informed investor would anticipate without specific regard for personal equity, spendable income, or tax consequence.

Both the owner's and appraiser's positions are correct, but for different purposes.

The appraiser, using methods outlined below, views the income property at its value to the market generally. The owner subjectively sees the property investment affecting his or her own personal investment strategy. These personal strategies are infinite, including financing and equity combinations, value appreciation projections, tax consequences, etc. It is the collective effect of all these personal views of probity which will give "general" value levels of the Fair Market Value as offered to the market generally. This is the value the appraiser seeks.

With this general statement that the appraiser customarily disregards individual personal investment tax consideration, there is one exception. There is a growing practice in real estate appraisal

of appraising equity positions in a variety of appreciation and capitalization rate models. This called the "Elwood" method. The discussion of this method is beyond the scope of this course.

CAPITALIZATION

Capitalization is the mathematical process of estimating the present value of income property based on the amount of anticipated annual net income it will produce. Capitalization converts the future income stream into an indication of present worth of property. There are several methods of capitalizing net income (e.g., annuity and equity yield methods) but our discussion will deal with the direct method.

Capitalization Rates. There four types of capitalization rates used in the appraisal process: (1) Interest Rate--the rate of return on invested capital. It is the same as the yield rate or risk rate. It does not include any provision for the return of investment capital. (2) Recapture Rate--the rate at which the original invested funds are being returned to the owner. (3) Capitalization Rate--the rate comprised of both the interest rate and the recapture rate, each rate being separately determined. (4) Overall Rate--a rate derived from the relationship between net income and value for the total property and theoretically provides in one rate for both return on the investment and recapture of the capital investment. The overall cap rate is an income rate. Any interest in income producing property can be valued by using direct capitalization, but most commonly fee simple estates are valued by this method.

Capitalization rates may be estimated by several methods, e.g., market or sales data (direct comparison), band of investment, or summation. The band of investment method uses a weighted average rate by combining a rate for mortgage loan money and a rate for the investor's equity. The summation method has very limited use but employs building up an interest rate base on various risk/investment factors, which rate is considered to be a "safe rate."

Of course the sales (market) comparison technique involves the appraiser's systematic comparison of recent sales of similar properties found in the market place. The appraiser analyzes each comparison property's sales price, rents, expenses, net income and cap rate, makes needed adjustments and finally selects an appropriate indicated cap rate for the property being appraised, and this rate represents both the return *on* and the return *of* the investment. To assure the reliability of the selected rate, the appraiser uses his judgment and experience to make certain the recent sales comparables from the market have similar age, physical, location, income, expense and risk characteristics as those of the subject property.

CAPITALIZATION RATE

The capitalization rate is a combination of the interest rate (return on the investment) and the recapture rate (return of the investment in the improvements). If the land only produces the income, the cap rate and interest rate are the same. However, when improvements contribute to the income production, a provision must be made for the recapture of the value of the improvements before the end of their economic life. Land has no limited economic life--it will never wear out and thus will always be able to produce income. The building is a wasting asset and cannot be used indefinitely.

The most common method of providing for recapture of the investment in the improvements is the "straight line" method, building value recaptured in equal annual installments. The recapture rate is computed by dividing the remaining economic life of the improvements into 100%. Thus the annual recapture rate for a building with an estimated remaining economic life of 40 years is 2.5% (100% divided by 40 = 2.5%); if the remaining economic life is 25 years, the recapture rate is 4% (100% divided by 25 = 4%).

To find the indicated value of income property, divide the net annual income by the capitalization rate:

Net Annual Income divided by Capitalization Rate = Property Value

Property Value x Capitalization Rate = Net Annual Income

Net Annual Income divided by Property Value = Capitalization Rate

INCOME APPROACH PROCESS

The three main steps used in the capitalization approach involving income-producing property are as follows:

- A. Determine the net income yearly;
- B. Select the appropriate capitalization (cap) rate by market comparisons; and
- C. Capitalize the income (divide the net annual income by the cap rate).

A. A net annual income is derived by:

- (1) estimating potential gross income the property is capable of producing;
- (2) deducting from item (1) an annual allowance for vacancy factor and rent collection loss.

This amount is called "effective" gross income or adjusted gross income.

(3) deducting from item (2) the estimated probable future annual expenses of operation (fixed expenses, variable expenses, reserves for replacements for building components or short-lived items) to obtain.

- (4) the net income of the investment property.

Income and Expenses. The relevant potential gross income that should be used in the income approach is the expected future income. Past income is not a consideration, except insofar as it may be a guide to future income. When property is transferred the buyer does not acquire the income that it has already yielded but buys the right to the income which it will yield after acquisition. In many cases, the immediate past or current income may be a good indication of a likely future income. However, reliance upon past or current income is incorrect. Equally wrong is the use of the average of incomes received during the past years. The proper income to be used is the one which the typical purchaser and seller would anticipate over the remaining productive life of the improvement. Income forecasts should be based upon recent past and present income, derived from the subject property and other similar type properties and modified by foreseeable economic changes.

Income Estimates. The gross income estimate for an income property is the potential or anticipated gross income from all sources (economic rents, services, parking space fees and rentals, and coin-operated equipment, etc.). Gross income is estimated as of the date of the appraisal. Contract rent is the actual, or contracted, rent received from the property. Economic rent is the rent the property should bring in the open market at the date of appraisal. Rents and vacancy factors and collection losses are based on current economic rent data. The appraiser uses his judgment of the area in arriving at an allowance for vacancy and collection losses. Two to 10% of gross income is customary.

Rent data is obtained from the subject property's rent schedule and the appraiser's survey of rents from similar recent sales in the area of similar age and construction. Individual apartments or units of the comparables are compared with the subject's using square footage, number of bedrooms, or similar items of comparison. It is assumed management for all properties is adequate. Cost of deferred maintenance or repairs is an adjustment item.

Economic rent schedules and expenses are usually maintained on a monthly basis. Both must be converted to an annual basis.

Expenses Must Be Realistic. The operating expenses (all expenditures necessary to produce income) are to be deducted from the effective gross income to find the net operating income expected from the property. The appraiser must use caution in extracting expense information from owner's operating statements as some items included on the operating statements, such as principal and interest payments on mortgages and depreciation allowance for income tax purposes, must be disregarded by the appraiser as not being allowable expense items.

These non-allowables may include entertainment expenses and other items of personal expense, and capital improvements expenditures. Since most owners' operating statements are prepared by accountants for tax and accounting purposes, appraisers usually must reconstruct them to properly forecast annual expenses.

Expenses are generally classified as being one of the following:

(1) Fixed expenses. These expenses are incurred annually with relatively little change from, year to year. They are to be paid whether the property is occupied fully or not. These items include taxes, insurance, licenses and permits.

(2) Variable expenses. These expenses are incurred continually in order to maintain and give service to the property. They are variable depending upon the extent of occupancy, and include items such as utilities, management fees, security, costs of administration, maintenance and repairs for structures, grounds and parking area maintenance, contracted services (rubbish removal) and payroll.

(3) Reserves for replacements. Annual allowance for replacing worn out equipment and building components, such as stoves, carpets, draperies, roof covering.

B. Selecting the Cap Rate. A selection is made of an appropriate capitalization rate, or "present worth" factor. This is the crux of the matter and is a most important step. By market analysis of similar properties, selection is made of a proper capitalization rate (the cap rate provides for the return of invested capital in the improvements plus a return on the investment) and method for the subject property. This commonly called the overall cap rate.

The rate is dependent upon the return which investors will actually demand before they will be attracted by such an investment. The greater the risk of recapturing the investment price, the higher will be the accompanying rate as determined in the market for such properties. By analyzing market prices, these rates can be approximated at any given time.

A variation of only 1 percent may make a substantial difference in the capitalized value of the income.

For example, based on an annual net income of \$30,000, and a capitalization rate of 6 percent, the resultant capitalized property valuation would be \$500,000. Capitalizing this same income at a rate of 7 percent would result in a value of only \$428,500 (rounded) in valuation due to a difference in the capitalization rate of only 1 percent.

C. Capitalizing (or discounting) Net Annual Operating Income. The final step after having determined the net annual income and the capitalization rate is to capitalize the income. This may be merely the mathematical calculation of dividing the income by the rate if the income is considered to be in perpetuity.

For example, the valuation of property which has an assumed perpetual annual net income of \$30,000 and a capitalization rate of 5 percent is \$600,000. The lower the rate, the greater the valuation, and the greater the assumed security of the investment. So-called annuity tables are used in capitalizing incomes for fixed periods of varying duration.

As stated earlier, an important element in all capitalization rates is provision for a return of the investment on the improvements to the property during their remaining economic life. This may be called an amortization of such investments. It may be provided for by straight-line depreciation, which recovers a definite sum every year for the period of years estimated to be the economic life of the improvement, at the end of which time the cost of improvement will be accrued. It may also be provided for by other methods, such as establishing "sinking funds", or a declining balance depreciation. These are more technical procedures which are used by professional appraisers.

INCOME APPROACH APPLIED

Using procedure just discussed, here are two examples for finding estimated value using the Income Approach.

Example: How much should an investor pay for a 10 unit apartment house, 24 years old, estimated fair economic rent per unit being \$300 per month. Indicated vacancy factor is 10%, acceptable cap rate is 8 percent. Fixed expenses are: taxes of \$1,920 and insurance of \$480. Operating expenses are: management--\$2,400; utilities--\$800; waste removal--\$360; reserves for replacement--\$800.

Gross scheduled income (annual)	\$36,000.
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10x\$300x12=\$36,000

Less Vacancy Factor and Collection Loss	3,600.
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.10x\$36,000=\$3,600

Effective Gross Income	\$32,400.
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Less Expenses

Fixed

Taxes	\$1,920
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Insurance 480	\$2,400
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Operating

Management	\$2,400
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Utilities	800
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Waste Removal 360	\$3,560
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Reserves for Replacement

Roof	500
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Painting	100
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Carpeting 200	800
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TOTAL

6,760

Net Operating Income (NOI)	\$25,640
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Capitalization Rate Furnished By Owner is 8%. Using formula: value = Yearly net income divided by cap. rate

\$25,640 divided by .08 = \$320,500

Indicated Value By Income Approach

\$320,500

EXAMPLE #2

A small commercial building has rental income of \$27,650 annually and suffers vacancy/collection losses of 5%. Expenses include: taxes--\$3,780; utilities---\$850; roof reserve--\$1,500; insurance--\$1,100; maintenance---\$2,000; repainting and fixture reserve--\$500; and management--\$2,000. The appraiser finds similar properties have cap rates ranging from 8.75% to 9.37%. Based on this market data the appraiser selects an indicated overall capitalization rate for the subject property of 9%. Using the Income Approach, what is the indicated value of the property?

Gross scheduled income (annual)	\$27,650
Less Vacancy Factor and Collection Loss..(5%)	1,383
Effective Gross Income	26,267

Less Expenses

Fixed

Taxes	\$3,780
Insurance	1,100

Operating

Management	\$2,000
Utilities	850
Maintenance	2,000

Reserves for Replacement

Roof,repainting, fixtures	2,000
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TOTAL 11,730

Net Operating Income (NOI). \$14,537

Capitalization Rate Furnished By Owner is 8.75% TO 9.37% Using formula: value = Yearly net income divided by cap. rate

Indicated Overall Capitalization Rate.....9%

\$14,537 divided by .09 = \$161,522 or \$161,500

Indicated Total Value by Income Approach \$161,500

RESIDUAL TECHNIQUES

Suppose vacant land returns net income of \$6,000 a year to the owner and the applicable interest rate for this type of real property is 7 percent. By using the income method, the property has a value of:

\$6,00 divided by .07 = \$85,715 value.

However, income from improved property is the result of the contribution of both land and buildings. The buildings have limited economic life and their value must be recaptured over their

remaining economic life, the period over which income is attributable to the improvements. Income attributable to land is deemed perpetual.

There are three methods used in capitalization of income from improved property. They are all called residual techniques since the capitalization is to the residual (left-over or unknown) net income attributable to the property as a whole, to the land, or to the building. The appraiser selects the appropriate technique based on market data. The same net income figure is used in whichever method is used.

Property residual technique

This is the simplest method of capitalizing the net income from improved property because the property is value as a single unit (used when the value of neither land nor improvements can be estimated independently). The property's total net income is capitalized directly at an "over-all" rate developed from the market data, comparing similar income producing properties which are also similar in the way net income is estimated.

Example: The net income generated from real property is \$32,000 annually and the over-all cap rate selected from the market data approach is 9%. What is the value of the property?

Solution: $\$32,000 \text{ divided by } .09 = \$355,556 \text{ property value.}$

Building residual technique

If the value of the land is known and the value of the building is unknown, the property's value may be determined by the building residual technique. This technique allocates the net income of the property to both land and building. The procedure is: (1) multiply the known land value by the applicable interest (return) rate on the land to determine the income attributable to land only; (2) deduct income to the land from total net income to determine the balance ("residue") of the net income which represents the portion of the income attributable to (or earned by) the building; (3) capitalize the building's income at the interest rate plus the recapture rate (which now becomes the cap rate) to derive the value of the building; (4) add the capitalized value of the building to the land value to arrive at the value of the whole property.

Example

An appraiser estimates that a 60 unit apartment building has an estimated remaining economic life of 25 years. The annual net income of the property is forecast at \$216,000. On the basis of several comparable data the appraiser estimates the land value to be \$60,000 and the applicable rate of interest for this type of investment property is 8%. What is the indicated value of the property by the income approach?

Solution:

Annual net income of property		\$216,000
Less interest on \$60,000 land value at 8% ($60,000 \times .08$)		4,800
Net income attributable to building		\$211,200
interest rate	8%	
recapture rate	4%	
Capitalization rate	12%	
Indicated building value ($211,200 \text{ divided by } 12$)		\$1,760,000
Land value (by comparison)		60,000
Indicated property value		\$1,820,000

LAND RESIDUAL TECHNIQUE

If the building value is known and the land value is unknown and cannot be determined separately, the value of the property as a whole may be estimated by using the land residual technique. The land residual technique is similar to the building residual technique except that the appraiser must first find the income attributable to the improvements and the residual (balance) of the income is then attributable to the land. The procedure is: (1) multiply the known improvement value by the applicable building capitalization rate (interest rate plus recapture rate) to determine the income attributable to the building only; (2) deduct income to the building from the total net income to determine the residue (balance) of the net income attributable to (or earned by the land); (3) capitalize the land's income at the interest rate only (since it is not necessary to recapture the permanent land value) to derive the value of the land; (4) add the capitalized value of the land to the building value to arrive at the value of the whole property by the land residual technique.

Example: (using same figures as in the building residual technique example)

Solution:

Annual net income of property	\$216,000
Less income attributable to building	
\$1,760,000 x .12 (.08 interest rate + .04 recapture rate)	<u>211,200</u>
Net income attributable to land	4,800
Indicated land value (\$4,800 divided by .08)	\$60,000
Building value	<u>\$1,760,000</u>
Property value indicated by land residual technique	\$1,820,000

FINDING THE OVERALL CAP RATE

Example

A property sells for \$250,000. Building value is \$190,000. Remaining economic life is 25 years. Annual net income from building is \$28,000. What is the interest rate for the building? What is the overall cap rate?

Recapture rate is 4% (100% divided by 25).

Building's net income	\$28,000
Recapture of building (.04 x \$190,000)	<u>\$7,600</u>
Net income after recapture	\$20,400

Interest rate = \$20,400 divided by \$250,000 = .08+ or 8%

The overall cap rate is the sum of the interest rate and recapture rate.

interest rate.....	.08
recapture rate.....	.04

Overall Cap Rate..... .12 or 12%

GROSS RENT MULTIPLIER

Value is the present worth of all rights to future benefits. The rights being obtained through the payments of rents are the use of the physical structure as well as the intangibles (amenities or satisfactions). Income properties such as large apartments and commercial stores are purchased for the income stream they produce, whereas single-family homes are purchased for shelter plus the satisfaction (amenities of home ownership).

Standard capitalization techniques used for income producing properties do not measure intangibles such as pride of ownership and other amenities found in home ownership.

The indirect method of capitalization or gross rental multiple will measure the market value of the combination of intangibles and tangibles found in single family and small income properties.

The gross rent multiplier is found by dividing the sales price of a house or other small income property by its monthly rent (\$90,000 sales price divided by a monthly rent of \$600 results in a rent multiplier of 150). If homes in that area were selling at prices equivalent to 150 times the monthly rental, then the 150 multiplier would apply to other comparable homes in the area.

Method of Approach in Using the Gross Rent Multiplier

A. Determine the fair or economic rent of the subject being appraised by comparison with similar rental properties.

B. The gross rent multipliers of the sales one investigates are calculated by divide the sales prices by the monthly rents.

C. The rent multipliers may then be tabulated showing how these properties varied from the subject--better or poorer.

D. The gross multipliers are not averaged to arrive at one final multiplier.

1. Each property and its multiplier is compared to the subject as to the fair rent obtainable, location of property, size, condition, and utility of the house, and the amenities to be desired.

2. After proper analysis, one rent multiplier should be obtained.

E. The gross rent multiplier selected, multiplied by the fair rental of the subject property results in the value estimate by means of the Income Approach.

SUMMARY

In summarizing it may be said that all three appraisal approaches to value--Cost, Sales Comparison, and Income Capitalization--should be considered and used when practical. The results are reconciled into one final estimate of value. As independent approaches, the sales comparison method is the most widely used of all valuation methods. Investment property is frequently appraised by the income capitalization method while the replacement cost method best lends itself to special purpose properties.

The purpose of the appraisal will have a definite bearing in determining the method of valuation. For example, if the purpose is for sale, purchase, exchange or condemnation, the value concept sought is current market value.

Reconciliation of the three indications of value derived through the market data, cost and income approaches leads to the final estimate of value or final value conclusion, which is the final step in the appraisal process. Reconciliation is a method of interpreting the data which have been gathered

throughout the entire appraisal process into one final value conclusion. The primary facts which are analyzed and brought together are the estimates of value arrived at by reason of the three approaches to value.

Each approach to value results in only a preliminary estimate or an indicated value of the property. The indications resulting from each of the approaches give a range within which the final value conclusion lies. The result obtained by each of the methods of valuation will not be the same due to the many variables which are encountered.

A complete, thorough review of each of the approaches is made in order to narrow the range of preliminary answers. If the results from one particular approach appear to be at a great divergence from the other two, each phase of this approach should be reconsidered to account for the difference.

Greater weight, however, is generally given to one of the approaches over the other two.

The final conclusion of value is not an average of the three approaches to value. After giving full consideration to each approach the appraiser uses judgment and reasoning to arrive at one conclusion. The greatest confidence is placed on the approach which seems to produce the most reliable solution to the specific appraisal problem, realizing that it must be reasonable and capable of being supported convincingly.

The final value conclusion should not be reported in odd dollars and cents. If the final answer approximates \$1,000 the answer could be rounded to the nearest \$100; if \$10,000 to the nearest \$500; and, if \$50,000 to the nearest \$1,000 or more.



Credits: California Department of Real Estate; Hanes Investment Co., Sherman Oaks, California; Brad Hanes.