SLIDE 1 – **Introduction to the Three Approaches to Value (Cover Page)**

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The Sales Comparison Approach

The sales comparison approach, also known as the *market data approach*, is used for almost all properties. It also serves as the basis for a broker's opinion of value. It is based on the principle of substitution-- that a buyer will pay no more for the subject property than would be sufficient to purchase a comparable property-- and contribution-- that specific characteristics add value to a property.

The sales comparison approach is widely used because it takes into account the subject property's specific amenities in relation to competing properties. In addition, because of the currency of its data, the approach incorporates present market realities.

The sales comparison approach is limited in that every property is unique. As a result, it is difficult to find good comparables, especially for special-purpose properties. In addition, the market must be active; otherwise, sale prices lack currency and reliability.

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Steps in the Approach

The sales comparison approach consists of comparing sale prices of recently sold properties that are comparable with the subject, and making dollar adjustments to the price of each comparable to account for competitive differences with the subject. After identifying the adjusted value of each comparable, the appraiser weights the reliability of each comparable and the factors underlying how the adjustments were made. The weighting yields a final value range based on the most reliable factors in the analysis.

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1. Identify comparable sales.

2. Compare comparables to the subject and make adjustments to comparables.

3. Weight values indicated by adjusted comparables for the final value estimate of the subject

Identifying Comparables

To qualify as a comparable, a property must:

Resemble the subject in size, shape, design, utility and location

Have sold recently, generally within six months of the appraisal

Have sold in an arm's-length transaction

An appraiser considers three to six comparables, and usually includes at least three in the appraisal report.

Appraisers have specific guidelines within the foregoing criteria for selecting comparables, many of which are set by secondary market organizations such as FNMA.

For example, to qualify as a comparable for a mortgage loan appraisal, a property might have to be located within one mile of the subject. Or perhaps the size of the comparable must be within a certain percentage of improved area in relation to the subject.

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An arm's length sale involves objective, disinterested parties who are presumed to have negotiated a market price for the property. If the sale of a house occurred between a father and a daughter, for example, one might assume that the transaction did not reflect market value.

Principal sources of data for generating the sales comparison are tax records, title records, and the local multiple listing service.

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Adjusting Comparables

The appraiser adjusts the sale prices of the comparables to account for competitive differences with the subject property. Note that the sale prices of the comparables are known, while the value and price of the subject are not.

Therefore, adjustments can be made only to the comparables' prices, not to the subject's. Adjustments are made to the comparables in the form of a value deduction or a value addition.

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Adding or deducting value. If the comparable is *better* than the subject in some characteristic, an amount is *deducted* from the sale price of the comparable. This neutralizes the comparable's competitive advantage in an adjustment category.

For example, a comparable has a swimming pool and the subject does not. To equalize the difference, the appraiser deducts an amount, say $6,000, from the sale price of the comparable. Note that the adjustment reflects the contribution of the swimming pool to market value. The adjustment amount is not the cost of the pool or its depreciated value.

If the comparable is inferior to the subject in some characteristic, an amount is added to the price of the comparable. This adjustment equalizes the subject's competitive advantage in this area.

Adjustment criteria. The principal factors for comparison and adjustment are *time of sale, location, physical characteristics, and transaction characteristics.*

Time of sale

An adjustment may be made if market conditions, market prices, or financing availability have changed significantly since the date of the comparable's sale. Most often, this adjustment is to account for appreciation.

Location

An adjustment may be made if there are differences between the comparable's location and the subject's, including neighborhood desirability and appearance, zoning restrictions, and general price levels.

Adjustment criteria. The principal factors for comparison and adjustment are *time of sale, location, physical characteristics, and transaction characteristics.*

Physical characteristics

Adjustments may be made for marketable differences between the comparable's and subject's lot size, square feet of livable area (or other appropriate measure for the property type), number of rooms, layout, age, condition, construction type and quality, landscaping, and special amenities.

Transaction characteristics

An adjustment may be made for such differences as mortgage loan terms, mortgage assumability, and owner financing.

Weighing Comparables

Adding and subtracting the appropriate adjustments to the sale price of each comparable results in an adjusted price for the comparables that indicates the value of the subject. The last step in the approach is to perform a weighted analysis of the indicated values of each comparable.

The appraiser, in other words, must identify which comparable values are more indicative of the subject and which are less indicative.

An appraiser primarily relies on experience and judgment to weight comparables. There is no formula for selecting a value from within the range of all comparables analyzed. However, there are three quantitative guidelines: the total number of adjustments; the amount of a single adjustment; and the net value change of all adjustments.

As a rule, the fewer the total number of adjustments, the smaller the adjustment amounts, and the less the total adjustment amount, the more reliable the comparable.

Number of adjustments – In terms of total adjustments, the comparable with the fewest adjustments tends to be most similar to the subject, hence the best indicator of value. If a comparable requires excessive adjustments, it is increasingly less reliable as an indicator of value.

The underlying rationale is that there is a margin of error involved in making any adjustment. Whenever a number of adjustments must be made, the margin of error compounds. By the time six or seven adjustments are made, the margin becomes significant, and the reliability of the final value estimate is greatly reduced.

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Single adjustment amounts – The dollar amount of an adjustment represents the variance between the subject and the comparable for a given item. If a large adjustment is called for, the comparable becomes less of an indicator of value. The smaller the adjustment, the better the comparable is as an indicator of value.

If an appraisal is performed for mortgage qualification, the appraiser may be restricted from making adjustments in excess of a certain amount, for example, anything in excess of 10-15% of the sale price of the comparable. If such an adjustment would be necessary, the property is no longer considered comparable.

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Total net adjustment amount – The third reliability factor in weighting comparables is the total net value change of all adjustments added together. If a comparable's total adjustments alter the indicated value only slightly, the comparable is a good indicator of value. If total adjustments create a large dollar amount between the sale price and the adjusted value, the comparable is a poorer indicator of value. Fannie Mae, for instance, will not accept the use of a comparable where total net adjustments are in excess of 15% of the sale price.

For example, an appraiser is considering a property that sold for $100,000 as a comparable. After all adjustments are made, the indicated value of the comparable is $121,000, a 21% difference in the comparable's sale price. This property, if allowed at all, would be a weak indicator of value.

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Sales Comparison Approach Example

The subject property is:

8 rooms-- 3 bedrooms, two baths, kitchen, living room, family room; 2,000 square feet of gross living area; 2-car attached garage; landscaping is good. Construction is frame with aluminum siding.

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Comparison property A:

Sold for 100,000 within previous month; conventional financing at current rates; located in subject's neighborhood with similar locational advantages; house approximately same age as subject; lot size smaller than subject; view similar to subject; design less appealing than subject's; construction similar to subject; condition similar to subject; 7 rooms-- two bedrooms, one bath; 1,900 square feet of gross living area; 2-car attached garage; landscaping similar to subject.

Comparison property B:

Sold for $120,000 within previous month; conventional financing at current rates; located in subject's neighborhood with similar locational advantages; house six years newer than subject; lot size smaller than subject; view not as good as subject; design is more appealing than subject's; construction (brick and frame) better than subject's; better condition than subject;

10 rooms – four bedrooms, three baths; 2,300 square feet of gross living area; 2-car attached garage; landscaping similar to subject.

Comparison property C:

Sold for $115,000 within previous month; conventional financing at current rates; located in subject's neighborhood with similar locational advantages; house five years older than subject; lot size larger than subject; view similar to subject; design and appeal similar to subject's; construction similar to subject; condition similar to subject; 8 rooms – three bedrooms, two baths; 2,000 square feet of gross living area; 2-car attached garage; landscaping similar to subject.

Comparison property D:

Sold for $109,000 within previous month; conventional financing at current rates; located in a neighborhood close to subject's, but more desirable than subject's; house approximately same age as subject; lot size same as subject; view similar to subject; design less appealing than subject's; construction (frame) poorer than subject's; poorer condition than subject; 7 rooms – two bedrooms, one and one half baths; 1,900 square feet of gross living area; 2-car attached garage; landscaping similar to subject.

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Sales Comparison Approach Example

	Subject	A	B	C	D
Sale price		100,000	120,000	115,000	109,000
Financing terms		standard			
Sale date	Now	equal	equal	equal	equal
Location		equal	equal	equal	-2,000
Age		equal	-1,200	+1,000	equal
Lot size		+1,000	+1,000	+1,000	equal
Site/view		equal	-1,000	equal	equal
Design appeal		-1,000	-1,200	equal	+1,000
Construction Quality	good	equal	-3,000	equal	+1,000
Condition	good	equal	-5,000	equal	+2,000

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	Subject	A	B	C	D
No. of rooms	8				
No. of bedrooms	3	+500	-500	equal	+500
No. of baths	2	+1,000	-1,500	equal	+500
Gross living area	2,000	+1,000	-5,000	equal	+1,000
Other space					
Garage	2 car/Att	equal	equal	equal	equal
Other improvements					
Landscaping	good	equal	equal	equal	equal
Net adjustments	good	+4,500	-17,400	0	+3,500
Indicated value	112,000	104,500	102,600	115,000	112,500

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Comparable A

The appraiser has made additions to the lot value, design, number of bedrooms and baths, and for gross living area. This accounts for the comparable's *deficiencies* in these areas relative to the subject. A total of five adjustments amount to $4,500, or 4.5% of the purchase price.

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Comparable B

The appraiser has made additions to the lot value, design, number of bedrooms and baths, and for gross living area. This accounts for the comparable's *deficiencies* in these areas relative to the subject. A total of five adjustments amount to $4,500, or 4.5% of the purchase price.

Comparable C

the appraiser has added value for the age and deducted value for the lot size. The two adjustments offset one another for a net adjustment of zero.

Comparable D

One deduction has been made for the comparable's superior location. This is offset by six additions reflecting the various areas where the comparable is inferior to the subject. A total of seven adjustments amount to $3,500, or 3.2% of the sale price.

Conclusion

In view of all adjusted comparables, the appraiser developed a final indication of value of $112,000 for the subject. Underlying this conclusion is the fact that Comparable C, since it only has two minor adjustments which offset each other, it is by far the best indicator of value. Comparable D might be the second best indicator, since the net adjustments are very close to the sale price. Comparable A might be the third best indicator, since it has the second fewest number of total adjustments. Comparable B is the least reliable indicator, since there are numerous adjustments, three of which are of a significant amount. In addition, Comparable B is questionable altogether as a comparable, since total adjustments alter the sale price nearly 15%.

The Cost Approach

The cost approach is most often used for recently built properties where the actual costs of development and construction are known. It is also used for special-purpose buildings which cannot be valued by the other methods because of lack of comparable sales or income data. The strengths of the cost approach are that it:

Provides an upper limit for the subject's value based on the undepreciated cost of reproducing the improvements

Is very accurate for a property with new improvements which are the highest and best use of the property.

The cost to create improvements is not necessarily the same as market value

Depreciation is difficult to measure, especially for older buildings

Types of Cost Appraised

The cost approach generally aims to estimate either the reproduction cost or the replacement cost of the subject property.

Reproduction cost is the cost of constructing, at current prices, a precise duplicate of the subject improvements. Replacement cost is the cost of constructing, at current prices and using current materials and methods, a functional equivalent of the subject improvements.

Replacement cost is used primarily for appraising older structures, since it is impractical to consider reproducing outmoded features and materials. However, reproduction cost is preferable whenever possible because it facilitates the calculation of depreciation on a structure.

Depreciation

A cornerstone of the cost approach is the concept of depreciation. Depreciation is the *loss of value in an improvement over time*. Since land is assumed to retain its value indefinitely, depreciation only applies to the improved portion of real property. The loss of an improvement's value can come from any cause, such as deterioration, obsolescence, or changes in the neighborhood. The sum of depreciation from all causes is accrued depreciation.

An appraiser considers depreciation as having three causes: physical deterioration, functional obsolescence, and economic obsolescence.

Physical deterioration – Physical deterioration is wear and tear from use, decay, and structural deterioration. Such deterioration may be either curable or incurable.

Curable deterioration occurs when the costs of repair of the item are less than or equal to the resulting increase in the property's value. For example, if a paint job costs $3,000, and the resulting value increase is $4,000, the deterioration is considered curable.

Incurable deterioration is the opposite: the repair will cost more than can be recovered by its contribution to the value of the building.

For example, if the foregoing paint job cost $5,000, the deterioration would be considered incurable.

Functional obsolescence – occurs when a property has outmoded physical or design features which are no longer desirable to current users. If the obsolescence is curable, the cost of replacing or redesigning the outmoded feature would be offset by the contribution to overall value, for example, a lack of central air conditioning.

If the functional obsolescence is incurable, the cost of the cure would exceed the contribution to overall value, for example, a floor layout with a bad traffic pattern that would cost three times as much as the ending contribution to value.

Economic obsolescence – Economic (or external) obsolescence is the loss of value due to adverse changes in the surroundings of the subject property that make the subject less desirable. Since such changes are usually beyond the control of the property owner, economic obsolescence is considered *an incurable value loss.*

Examples of economic obsolescence include a deteriorating neighborhood, a rezoning of adjacent properties, or the bankruptcy of a large employer.

Steps in the Approach

The Cost Approach

1. Estimate land value.

2. Estimate reproduction or replacement cost of improvements.

3. Estimate accrued depreciation.

4. Subtract accrued depreciation from reproduction or replacement cost.

5. Add land value to depreciated reproduction or replacement cost.

Estimate land value – To estimate land value, the appraiser uses the sales comparison method: find properties which are comparable to the subject property in terms of land and adjust the sale prices of the comparables to account for competitive differences with the subject property.

Common adjustments concern location, physical characteristics, and time of sale. The indicated values of the comparable properties are used to estimate the land value of the subject. The implicit assumption is that the subject land is vacant (unimproved) and available for the highest and best use

Estimate reproduction or replacement cost of improvements – There are several methods for estimating the reproduction or replacement cost of improvements. These are as follows.

Unit comparison method (square-foot method)

The appraiser examines one or more new structures that are similar to the subject's improvements, determines a cost per unit for the benchmark structures, and multiplies this cost per unit times the number of units in the subject. The unit of measurement is most commonly denominated in square feet.

Unit in place method

The appraiser uses materials cost manuals and estimates of labor costs, overhead, and builder's profit to estimate the cost of constructing separate components of the subject. The overall cost estimate is the sum of the estimated costs of individual components.

Quantity survey method

The appraiser considers in detail all materials, labor, supplies, overhead and profit to get an accurate estimate of the actual cost to build the improvement. More thorough than the unit-in-place method, this method is used less by appraisers than it is by engineers and architects.

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Cost indexing method

The original cost of constructing the improvement is updated by applying a percentage increase factor to account for increases in nominal costs over time.

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Estimate accrued depreciation – Accrued depreciation is often estimated by the straight-line method, also called the economic age-life method. This method assumes that depreciation occurs at a steady rate over the economic life of the structure. Therefore, a property suffers the same incremental loss of value each year.

The *economic life* is the period during which the structure is expected to remain useful in its original use. The cost of the structure is divided by the number of years of economic life to determine an annual amount for depreciation. The straight-line method is primarily relevant to depreciation from physical deterioration.

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Subtract accrued depreciation from reproduction or replacement cost – The sum of accrued depreciation from all sources is subtracted from the estimated cost of reproducing or replacing the structure. This produces an estimate of the current value of the improvements.

Add land value to depreciated reproduction or replacement cost – To complete the cost approach, the estimated value of the land "as if vacant" is added to the estimated value of the depreciated reproduction or replacement cost of the improvements. This yields the final value estimate for the property by the cost approach.

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Cost Approach Illustration

I. LAND VALUE	
Land value, by direct sales comparison	40,000
II. IMPROVEMENT COSTS	
Main building (by one or more of the four methods)	130,000
Plus: other structures	+ 8,000
Total cost new	138,000
III. ACCRUED DEPRECIATION	
Physical depreciation	
Curable	5,000
Incurable	7,000
Functional obsolescence	3,000
External obsolescence	
Total depreciation	15,000

Cost Approach Illustration

IV. IMPROVEMENTS COST MINUS DEPRECIATION

Total cost new 138,000		138,000
Less: total depreciation	15,000	-15,000
Depreciated value of improvements		123,000

V. OVERALL ESTIMATED VALUE

Total land value	40,000
Depreciated value of improvements	123,000
Indicated value by cost approach	**163,000**

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The Income Capitalization Approach

The income capitalization approach, or income approach, is used for income properties and sometimes for other properties in a rental market where the appraiser can find rental data. The approach is based on the principle of anticipation: the expected future income stream of a property underlies what an investor will pay for the property. It is also based on the principle of substitution: that an investor will pay no more for a subject property with a certain income stream than the investor would have to pay for another property with a similar income stream.

The strength of the income approach is that it is used by investors themselves to determine how much they should pay for a property. Thus, in the right circumstances, it provides a good basis for estimating market value.

The income capitalization approach is limited in two ways. First, it is difficult to determine an appropriate capitalization rate. This is often a matter of judgment and experience on the part of the appraiser. Secondly, the income approach relies on market information about income and expenses, and it can be difficult to find such information.

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Steps in the Approach

The income capitalization method consists of estimating annual net operating income from the subject property, then applying a capitalization rate to the income.

This produces a principal amount that the investor would pay for the property.

1. Estimate potential gross income.
2. Estimate effective gross income.
3. Estimate net operating income.
4. Select a capitalization rate.
5. Apply the capitalization rate.

Estimate potential gross income. Potential gross income is the scheduled rent of the subject plus income from miscellaneous sources such as vending machines and telephones. Scheduled rent is the total rent a property will produce if fully leased at the established rental rates.

> Scheduled rent
>
> + Other income
>
> Potential gross income

An appraiser may estimate potential gross rental income using current market rental rates (market rent), the rent specified by leases in effect on the property (contract rent), or a combination of both.

Market rent is determined by market studies in a process similar to the sales comparison method. Contract rent is used primarily if the existing leases are not due to expire in the short term and the tenants are unlikely to fail or leave the lease.

Estimate effective gross income – Effective gross income is potential gross income minus an allowance for vacancy and credit losses.

> Potential gross income
>
> - Vacancy & credit losses
>
> Effective gross income

Vacancy loss refers to an amount of potential income lost because of unrented space. Credit loss refers to an amount lost because of tenants' failure to pay rent for any reason.

Both are estimated on the basis of the subject property's history, comparable properties in the market, and assuming typical management quality.

The allowance for vacancy and credit loss is usually estimated as a percentage of potential gross income.

Estimate net operating income. Net operating income is effective gross income minus total operating expenses.

> Effective gross income
>
> - Total operating expenses
>
> Net operating income

Operating expenses include fixed expenses and variable expenses. Fixed expenses are those that are incurred whether the property is occupied or vacant.

For example, real estate taxes and hazard insurance. Variable expenses relate to building operation.

Variable expenses relate to building operation.

For example, utilities, janitorial service, management, and repairs.

Operating expenses typically include an annual reserve fund for replacement of equipment and other items that wear out periodically, such as carpets and heating systems. Operating expenses do not include debt service, expenditures for capital improvements, or expenses not related to operation of the property.

Select a capitalization rate – The capitalization rate is an estimate of the *rate of return* an investor will demand on the investment of capital in a property such as the subject.

The judgment and market knowledge of the appraiser play an essential role in the selection of an appropriate rate for the subject property. In most cases, the appraiser will research capitalization rates used on similar properties in the market.

Apply the capitalization rate. An appraiser now obtains an indication of value from the income capitalization method by dividing the estimated net operating income for the subject by the selected capitalization rate.

$$NOI \;/\; capitalization\ rate = value$$

Using traditional symbols for income (I), rate (R) and value (V), the formula for value is: I / R = V

Income Capitalization Method Illustration

I. ESTIMATE POTENTIAL GROSS INCOME

Potential gross rental income	48,000
Plus: other income	500
Potential gross income	48,500

II. ESTIMATE EFFECTIVE GROSS INCOME

Less: vacancy and collection losses	2,400
Effective gross income	46,100

III. ESTIMATE NET OPERATING INCOME

Real estate taxes	8,000
Insurance	1,100
Utilities	3,000
Repairs	1,000
Maintenance	4,000
Management	3,000
Reserves	400
Legal and accounting	500
Total expenses	21,000

Income Capitalization Method Illustration

Effective gross income	46,100
Less: total expenses	21,000
Net operating income	25,100

IV. SELECT CAPITALIZATION RATE

Capitalization rate
11%

V. APPLY CAPITALIZATION RATE

I / R = V   25,100/.11 = 228,000
(ROUNDED)

Indicated value by income approach: 228,000

Gross Rent and Gross Income Multiplier Approach

The gross rent multiplier (GRM) and gross income multiplier (GIM) approaches are simplified income-based methods used primarily for properties that produce or might produce income but are not primarily income properties. Examples are single-family homes and duplexes.

The methods consist of applying a multiplier to the estimated gross income or gross rent of the subject. The multiplier is derived from market data on sale prices and gross income or gross rent.

The advantage of the income multiplier is that it offers a relatively quick indication of value using an informal methodology. However, the approach leaves many variables out of consideration such as vacancies, credit losses, and operating expenses. In addition, the appraiser must have market rental data to establish multipliers.

Steps in the gross rent multiplier approach. There are two steps in the gross rent multiplier approach.

First, select a gross rent multiplier by examining the sale prices and monthly rents of comparable properties which have sold recently. The appraiser's judgment and market knowledge are critical in determining an appropriate gross rent multiplier for the subject. The gross rent multiplier for a property is:

Price/*Monthly rent = GRM*

Second, estimate the value of the subject by multiplying the selected GRM by the subject's monthly income.

GRM x Subject monthly rent = estimated value

In the illustration, the indicated GRM for the subject is 160, based on the appraiser's research and judgment. Applying the GRM to a rental rate of $1,000, the indicated value for the subject is $160,000

Property	Sale price	Monthly rent	GRM
Comparable A	125,000	830	151
Comparable B	124,000	750	165
Comparable C	162,000	1,100	147
Comparable D	152,000	900	169
Subject	160,000	1,000	160

Steps in the gross income multiplier approach. The GIM approach is identical to the GRM approach, except that a different denominator is used in the formula. Step one is to select a gross income multiplier by examining the sale prices and gross annual incomes of comparable properties which have sold recently. The gross income multiplier for a property is:

Price/Gross annual income = GIM

Step two is to estimate the value of the subject by multiplying the selected GIM by the subject's gross annual income:

GIM x Subject gross annual income = estimated value

In the illustration, the indicated GIM for the subject is 13.5 , based on the appraiser's research and judgment. Applying the GIM to the property's gross annual income gives an indicated value for the subject of $162,000.

Property	Sale price	Gross income	GIM
Comparable A	125,000	9,960	12.55
Comparable B	124,000	9,000	13.78
Comparable C	162,000	13,200	12.27
Comparable D	152,000	10,800	14.07
Subject	162,000	12,000	13.50