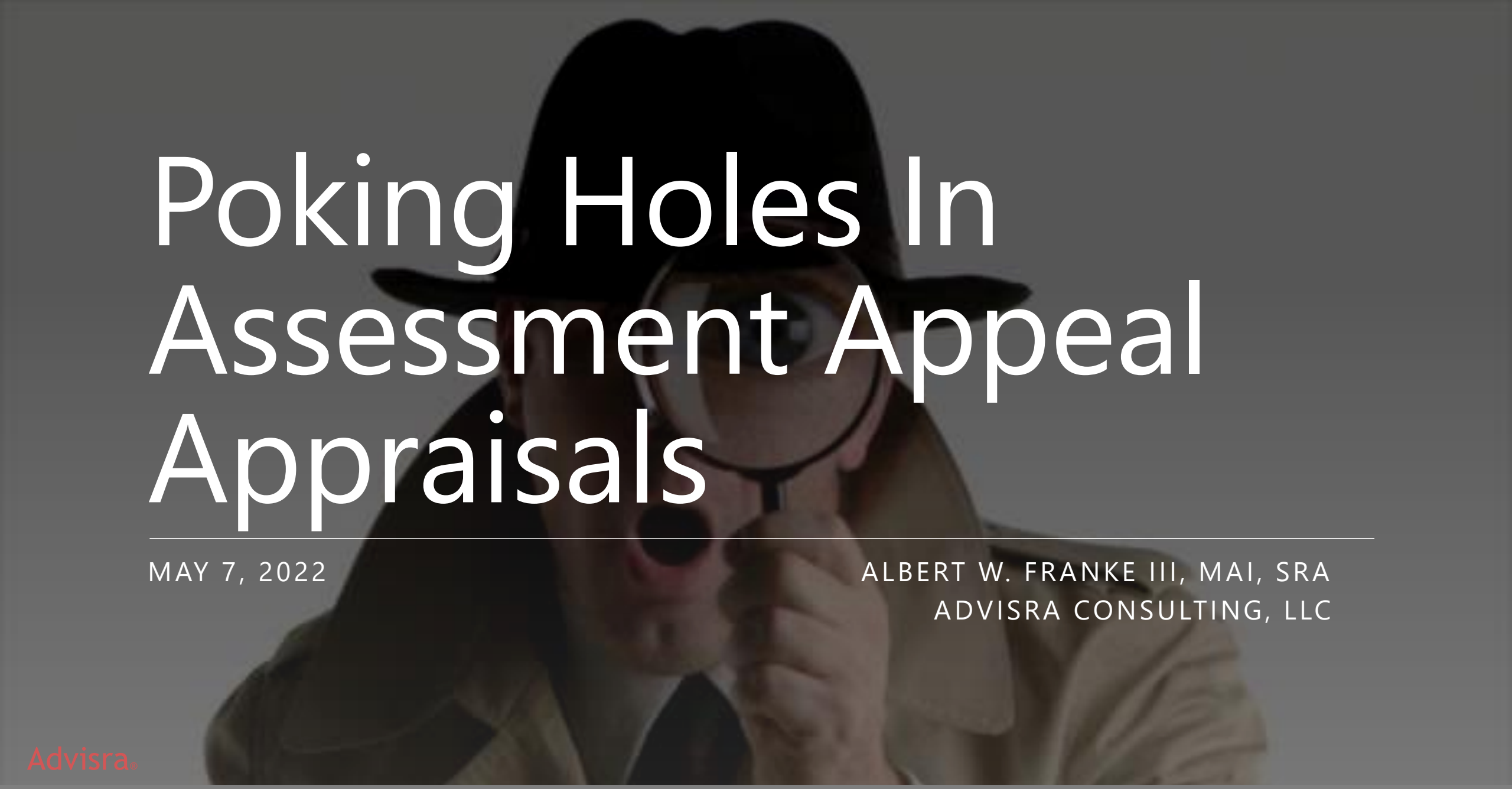

Poking Holes In Assessment Appeal Appraisals

MAY 7, 2022

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Advisra®

Objectives

- Recognize strengths and weaknesses
- Finding inconsistencies and errors
- Big deal? Or not so much?
- Turning it around to your advantage
- Brief overview of methodology

Market Value: What We're Seeking

Market value is defined in the appraisal rules of the U.S. Federal Financial Institution Regulatory Agencies as:

> *The most probable price a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably and assuming the price is not affected by undue stimulus.*

Market value is defined in *The Appraisal of Real Estate* (Appraisal Institute, 15th Edition, 2020, Page 48) as:

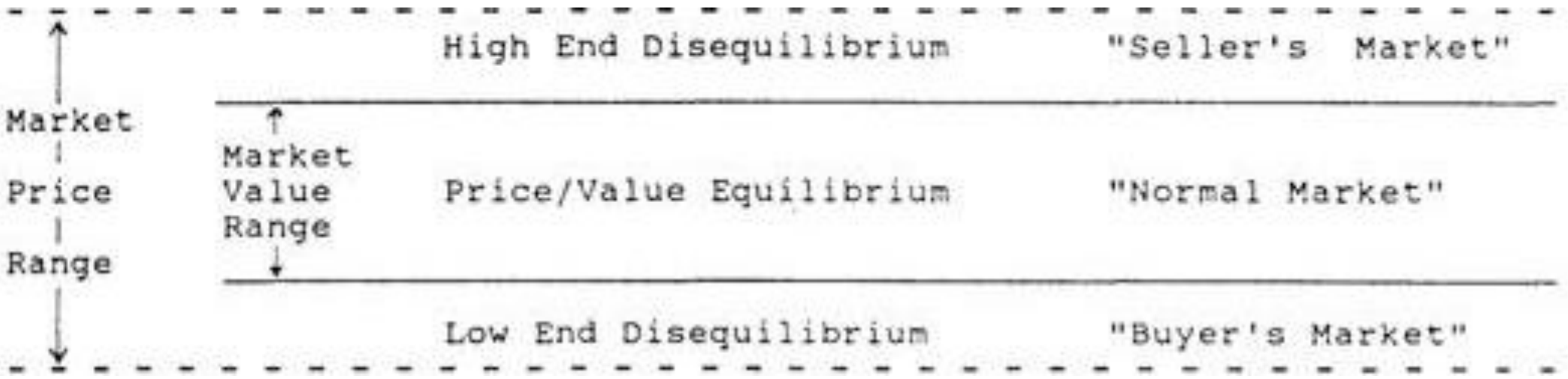
> *The most probable price, as of a specified date, in cash, or in terms equivalent to cash, or in other precisely revealed terms, for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.*

Market Value: What We're Seeking

Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- Buyer and seller are typically motivated.
- Both parties are well informed or well advised and are acting in what they consider their best interests.
- A reasonable time is allowed for exposure in the open market.
- Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto.
- The price represents the normal consideration for the property sold, unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

The Price / Value Relationship



Courtesy: John J. Leary, MAI, CRE

Overview of the Cost Approach

The cost approach is based largely on

- the principle of substitution and holds that a prudent, knowledgeable purchaser would pay no more for a specific property than the cost to acquire a comparable site and construct improvements of a similar utility, less any accrued depreciation.

The cost approach is also based upon

- the principle of contribution, recognizing that the property's components contribute to the overall property value. This principle also acknowledges that the lack of a certain component may detract from the property value.

In modeling this theory in actual appraisal practice…

- the cost approach is developed by estimating the cost to construct the subject improvements, including entrepreneurial incentive, subtracting accrued depreciation from all sources, adding the value contribution of any site improvements, and finally adding the value of the site, to arrive at an indication of value for the entire property.
- the cost approach is most effective when estimating the value of proposed, new, or recently constructed improvements to a finished site. This approach is also useful when valuing unique properties that are not frequently traded in the market.

Components of the approach

Site Value

Cost new of the dwelling or building

Depreciation

Value contribution of the site improvements

Entrepreneurial incentive / profit

Site Value

Site value is estimated through one of six techniques:

1. Sales comparison (direct comparison with similar parcels)
2. Extraction (estimate of depreciated cost of the improvements is deducted from sale price leaving the site value)
3. Allocation (ratio of site value to property value is extracted from comparable sales)
4. Ground rent capitalization (direct capitalization of ground rent)
5. Subdivision development analysis (yield capitalization)
6. Land residual (direct capitalization of NOI attributable to the land at a market-derived land capitalization rate)

Cost New of the Improvements

Replacement Cost versus Reproduction Cost

Replacement Cost

The estimated cost to construct, at current prices as of a specific date, a substitute for a building or other improvements, using modern materials and current standards, design and layout.

Reproduction Cost

The estimated cost to construct, at current prices as of the effective date of the appraisal, an exact duplicate or replica of the building being appraised, using the same materials, construction standards, design, layout and quality of workmanship and embodying all the deficiencies, superadequacies, and obsolescence of the subject building.

The Appraisal Institute; The Dictionary of Real Estate Appraisal; 6th Ed., 2015 Pages 197 & 198

Replacement Cost

Replacement Cost

- Using replacement cost may simplify the depreciation analysis by eliminating the need to measure some forms of functional obsolescence, including superadequacies and poor design.
- If reproduction costs cannot be estimated, use of replacement costs may be the only alternative.
- Where does one obtain replacement costs?
- Most common source for appraisers is *Marshall Valuation Service* (a.k.a. Marshall & Swift)
- Three methods in Marshall's: Calculator, Segregated and Unit-In-Place.
- What do the *Marshall* costs include? In the Calculator section, the actual costs used are the final costs to the owner for average architecture and engineering fees, building permits, surveying, normal site preparation, utilities, labor and materials, including taxes, normal interest on building funds, and contractor's overhead and profit. The architect's fees are omitted in the Segregated and Unit-In-Place cost sections.

Reproduction Cost

Reproduction Cost

- Best source of reproduction costs are actual costs, trended to the valuation date, actual costs of comparable improvements, trended to the valuation date, or builders and developers
- Reproduction cost will include all deficiencies and superadequacies in the structure, including design, layout, materials, etc.
- Reproduction costs can be more closely simulated using the Segregated and Unit-in-Place sections of *Marshall Valuation Service*
- Reproduction cost is the classic starting point in the cost approach, but replacement cost is more commonly used
- It can be difficult to estimate reproduction cost due to the fact that certain materials may no longer exist, or construction methods, standards and codes may have changed
- Reproduction cost is usually the best basis for measuring depreciation from all sources.

Types of Costs

Types of Costs

- Direct Costs (Hard Costs): *Expenditures on the labor and materials used in the construction of improvements.*

- Indirect Costs (Soft Costs): *Expenditures or allowances for items other than labor or materials that are necessary for construction, but are not typically part of the construction contract. May include administrative costs, professional fees, financing costs and the interest paid on construction loans, taxes and the builder's or developer's all-risk insurance during construction. Also includes marketing, sales and lease-up costs incurred to achieve occupancy or sale.*

• *The Appraisal Institute; The Dictionary of Real Estate Appraisal; 6th Ed., 2015*

Depreciation

What is depreciation?

A loss in value from any cause; the difference between the cost of an improvement on the effective date of appraisal and its market value on the same date.

How many types of depreciation are there and what are they?

There are three general categories of depreciation:

Depreciation: Physical Deterioration

1. Physical deterioration

The wear and tear that begins when a building is completed and placed into service. Physical deterioration is caused by use, neglect and elements of the weather. May be curable or incurable.

Physical deterioration consists of wear and tear of the building components due to use, neglect and elements of weather. It is a factor of depreciation that may be curable or incurable. Curable physical deterioration is defined as "*a form of physical deterioration that can be practically and economically corrected as of the date of appraisal; excludes vandalism and damage, which are curable conditions but are not accounted for in an estimate of replacement cost or reproduction cost*". Examples of curable physical deterioration would include a broken window, peeling paint, etc. Components that make up curable physical deterioration, also known as deferred maintenance, are deemed fully depreciated.

Incurable physical deterioration is "*a form of physical deterioration that cannot be practically or economically corrected as of the effective date of the appraisal*". Incurable physical deterioration can be broken down further into short-lived and long-lived items. A short-lived item is "*a building component with an expected remaining economic life that is shorter than the remaining economic life of the entire structure*" and "*an item that will probably be replaced one or more times during the life of the improvements, such as painting or flooring*". It is an item that is not fully depreciated at the time of valuation, but may require replacement in the near future. Other examples of short-lived items include a roof and kitchen appliances. A long-lived item is "*a building component or site improvement expected to have the same useful life as the entire structure*". An example of this would be a building's foundation, framing and structure.

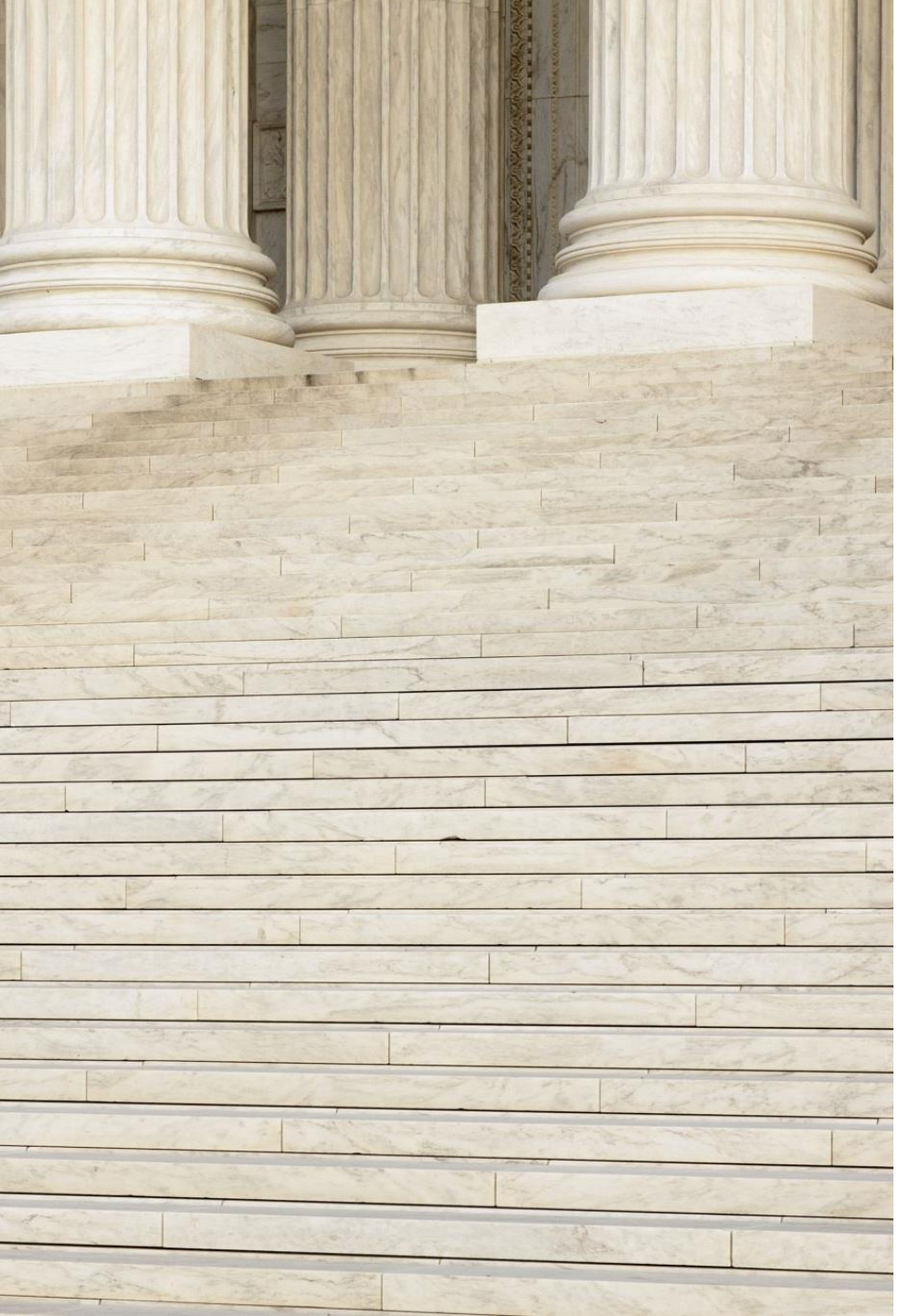
Depreciation: Functional and External Obsolescence

2. Functional Obsolescence

Functional obsolescence is defined as "*The impairment of functional capacity of improvements according to market tastes and standards*". This type of obsolescence usually results from poor design, inefficient layout and floor plan, dated or personalized décor, outmoded mechanical systems, obsolete or inappropriate building materials, etc. Functional obsolescence also may be curable or incurable.

3. External Obsolescence

External obsolescence is "*a type of depreciation; a diminution in value caused by negative external influences and generally incurable on the part of the owner, landlord, or tenant. The external influence may be either temporary or permanent*". External obsolescence may be economic or locational.



Age Concepts

Actual Age

The number of years that have elapsed since construction of an improvement was completed; also called historical or chronological age.

For example, if the valuation date was 2021 and the house was constructed in 1872, the actual age was 149 years.

Effective Age

The age of a property that is based on the amount of observed deterioration and obsolescence it has sustained, which may be different from its chronological age.

For example, the house has an actual age of 60 years old but underwent a substantial renovation, reducing its effective age to 25 years.

Note: If a building has been adequately maintained, its effective age should be close to its actual age.

Life Concepts

Economic Life (Total)

The period over which improvements to real estate contribute to property value.

Economic Life (Remaining)

The estimated period over which existing improvements are expected to contribute economically to a property; an estimate of the number of years remaining in the economic life of a structure or structural components as of the effective date of the appraisal; used in the economic age-life method of estimating depreciation.

Physical Life

An estimate of how old a building or improvement will be when it is worn out; The total period a building lasts or is expected to last as opposed to its economic life.

Useful Life

The period of time over which a structure or component of a property may reasonably be expected to perform the function for which it was designed. Useful life may be developed from a variety of sources, including observation, historical data, published cost surveys, manufacturer's warranties, and discussions with builders, property managers, and others.

The Appraisal Institute; The Dictionary of Real Estate Appraisal; 6th Ed., 2015

Estimating Depreciation

Economic Age-life Method

Market Extraction Method

Breakdown Method

Age-life Method

Estimating Depreciation

Effective Age divided by Total Economic Life = Depreciation

- Encompasses all types of depreciation
- Simplest to understand but not always the most accurate

Example: A house is 39 years old, has a total economic life of 65 years, and an effective age of 27 years.

Answer:

What is the total accrued depreciation?	41.5% (27 years divided by 65 years)
What is the remaining economic life?	38 years (65 years minus 27 years)

Note: A variant to the age-life method is the modified age-life method, using the effective age after curable physical deterioration has been addressed.

Market Extraction Method

Estimating Depreciation

Depreciation is extracted directly from the market using sales data

Example: 371 Thames Street sells today for $500,000. The sale includes a 0.25 acre lot, improved with a 10-year old, 2,000 square foot dwelling in good condition. The construction cost new of the dwelling is $180.00 per square foot. Neighborhood lot sales indicate a site value of $175,000 and site improvements have an estimated value of $15,000. What percentage of depreciation is indicated for the dwelling?

Answer: Sale price of $500,000 minus the site value of $175,000 leaves $325,000 as the value contribution of the improvements. Site improvements total $15,000., leaving $310,000 for the dwelling. Cost new of the dwelling is $360,000 (2,000 sq.ft. x $180) so total accrued depreciation is 13.9%. ($360,000 minus $310,000 divided by $360,000). Equates to straight-line depreciation of 1.39% per year.

Bonus: What is the indicated economic life of the house?

Pros: Highly supportable as it comes directly from the market

Cons: You need good site sale and construction cost data

Breakdown Method

Estimating Depreciation

The Breakdown Method is the most complete and detailed analysis of depreciation

The breakdown method is the most complete and detailed analysis of depreciation, and serves to isolate and allocate depreciation by its components:

physical deterioration (curable and incurable),

functional obsolescence (curable and incurable), and

external obsolescence, which is usually incurable.

Curable depreciation items are "*items of physical deterioration or functional obsolescence that are economically feasible to cure. Curing an item of depreciation is economically feasible if the cost to cure is equal to or less than the anticipated increase in the value of the property that would result after curing the depreciation*". Incurable depreciation refers to items of physical deterioration, functional obsolescence and/or external obsolescence that cannot be economically cured.

- Appraisal Institute; The Dictionary of Real Estate Appraisal, 6th Edition, 2015, Page 57.

Breakdown Method

Estimating Depreciation

Steps in the Breakdown Method

1. Identify and measure curable physical deterioration. The proper quantification of curable physical deterioration is simply the cost to cure, or remedy the item(s).
2. Identify items of short-lived, incurable physical deterioration. Apply an age/life ratio to each component using the actual age and useful life of the item to derive the amount of depreciation attributable to that item. Useful life has replaced the concept of physical life, as it relates to depreciation. Add the depreciation of all items to obtain total depreciation from incurable physical deterioration of short-lived items.
3. Identify long-lived items, and measure incurable physical deterioration. This is also done through application of an age/life ratio, using the actual age of the building (components) and the estimated useful life of the building. This age/life ratio is applied to all building costs that have not already been depreciated, and results in a lump sum estimate of deterioration attributable to all long-lived items. When considering long-lived items, useful life will generally be longer than economic life. As stated in *The Appraisal of Real Estate*, "total useful life for long-lived components can be estimated using neighborhood data, information from structural engineers, analysis of demolition permits, or market extraction".

- Appraisal Institute; The Appraisal of Real Estate, 11th Edition, 1996, Page 385

Breakdown Method

Estimating Depreciation

Steps in the Breakdown Method

4. Identify all items of curable functional obsolescence. Determine whether this obsolescence is a deficiency requiring substitution or modernization, a deficiency requiring an addition, or is curable functional obsolescence caused by a superadequacy.
5. Identify items of incurable functional obsolescence. These might include elements of incurable functional obsolescence caused by a deficiency or caused by a superadequacy.
6. Identify and measure external obsolescence. External obsolescence can be quantified by paired data (sales and/or rents) analyses and/or through capitalization of income loss.
7. Sum the totals of all components of depreciation to develop an estimate of the entire depreciation to the property.

- Appraisal Institute; The Appraisal of Real Estate, 11th Edition, 1996, Page 385

Entrepreneurial Incentive vs. Entrepreneurial Profit

Entrepreneurial incentive is the expected reward to be paid by the market for undertaking the risk, and providing the capital, coordination and expertise needed to develop a project.

It is not to be confused with entrepreneurial profit (the actual reward received) and contractor's overhead and profit.

Entrepreneurial incentive is further defined as:

> *"the amount an entrepreneur expects to receive for his or her contribution to a project. Entrepreneurial incentive may be distinguished from entrepreneurial profit (often called developer's profit) in that it is the expectation of future profit as opposed to the profit actually earned on a development or improvement. The amount of entrepreneurial incentive required for a project represents the economic reward sufficient to motivate an entrepreneur to accept the risk of the project and to invest the time and money necessary in seeing the project through to completion".*
>
> *- Appraisal Institute; The Dictionary of Real Estate Appraisal, 6th Edition, 2015, Page 76*

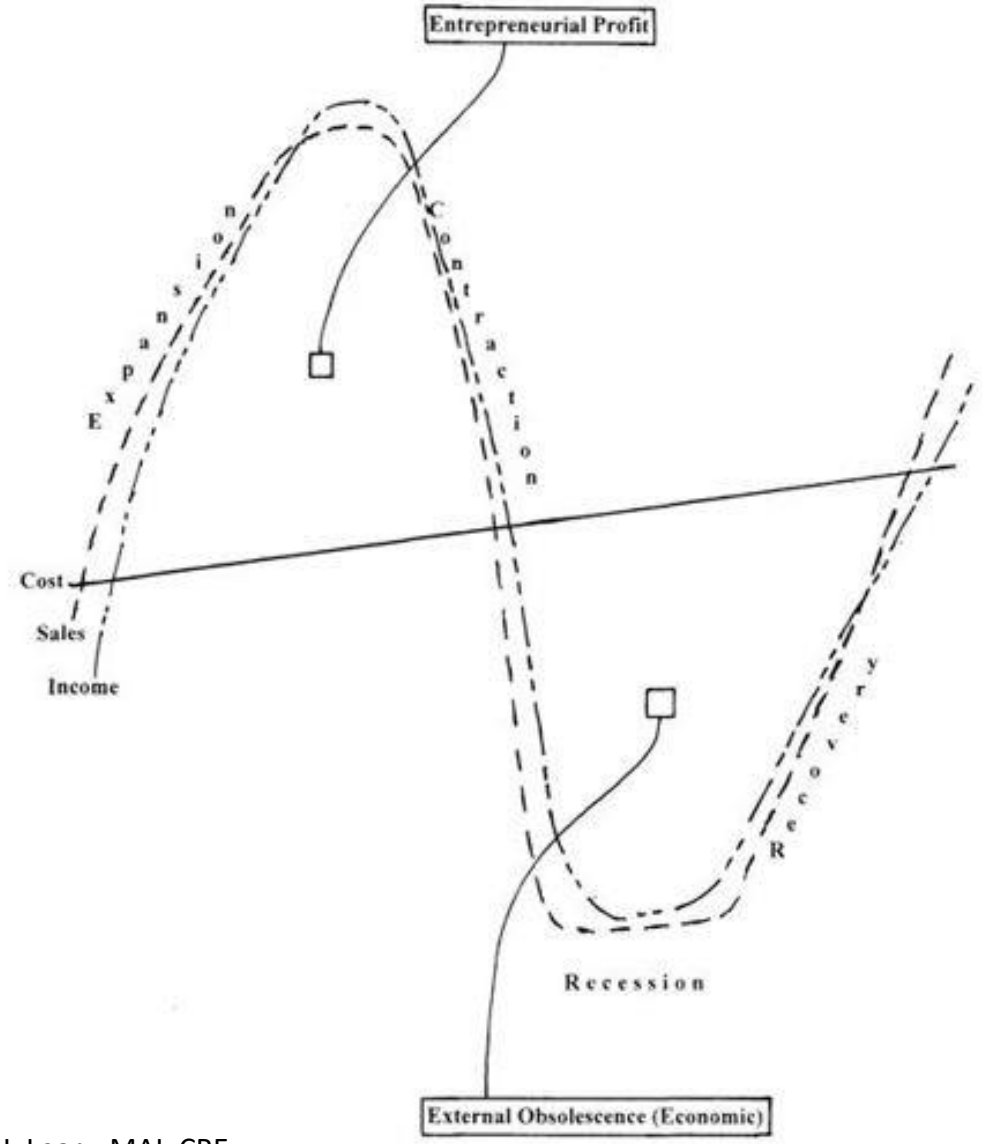
Estimates of entrepreneurial incentive may be developed through interviews with developers.

Estimates of entrepreneurial profit may be developed through interviews with developers and extraction from sale transactions.

Also of Importance

The cost approach indicates the value of the fee simple interest. Property rights adjustments can be made to account for leased fee or leasehold property.

Entrepreneurial profit cannot co-exist with economic obsolescence



Courtesy: John J. Leary, MAI, CRE

The Real Estate Market Cycle

Reality Check

- The cost approach is most useful for houses under 10 or 15 years of age. After that, depreciation becomes difficult to accurately measure.
- Replacement costs are almost always lower than reproduction costs.
- Economic lives of houses will vary depending upon construction quality and the market. Typically range between 60 and 85 years for single family residences. This suggests between 1.18% and 1.67% depreciation per year, straight-line.
- Tear-downs, if a trend (and usually found in a hot market), indicate that the improvements have ceased to contribute to value. Market conditions can significantly impact economic life.
- The cost approach is generally not appropriate for non-conforming structures, as it will not capture value that exists due to the non-conformity.
- It can also be troublesome when valuing properties where the land is held in common (e.g. condominium).
- In theory, reproduction cost and replacement cost should give you the same value indication, if depreciation is handled properly. In reality, that's frequently not the case.

Quiz Question #1

The cost approach provides the market value for which property interest?

a. Leased Fee Interest

b. Compound Interest

c. Fee Simple Interest

d. I Have No Interest, I Just Want To Be Sitting By The Pool

Quiz Question #2

Which is the simplest method of estimating depreciation?

a. Market extraction

b. Economic Age-Life Method

c. Modified Economic Age-Life Method

d. I’m Having A Breakdown Method

Quiz Question #3

Replacement Cost Typically Does Not Include Which Type of Functional Obsolescence?

a. Superadequacies

b. Deficiencies Requiring Modernization

c. Deficiencies Requiring An Addition

d. Wait…What is Functional Obsolescence?

Case Study: Find the Issues

In an appraisal report done for an assessment appeal, we are told that an industrial building is 22 years old and has been well maintained. The assessor has estimated the property's market value at $2,800,000. The appraiser states that the building is modern, in good condition and the layout is functional. The ceiling heights and electrical power conform with current market standards. Its effective age is estimated at 10 years, according to the report. Further, it suggests market conditions are deteriorating. The report also indicates that industrial buildings such as this have an economic life of 50 years. The cost approach calculations in the report are as follows:

Replacement Cost New (RCN) of the Building	$2,000,000	
Depreciation		
Physical Deterioration	($ 250,000)	
Functional Obsolescence	($ 180,000)	
External Obsolescence (Economic)	($ 100,000)	
Total Depreciation	($ 530,000)	(26.5% of RCN)
Value Contribution of Site Improvements	$ 75,000	
Entrepreneurial Profit	$ 390,000	
Site Value	$ 500,000	
Indicated Market Value Via Cost Approach	$2,435,000	

Case Study: Find the Issues

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The narrative suggests that functional obsolescence is minimal to nil.

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External obsolescence (economic) and entrepreneurial profit cannot co-exist

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10/50 = 20% depreciation. 26.5% is used in the calculation

Overview of the Sales Comparison Approach

The sales comparison approach is also grounded

- in the principle of substitution, holding that similar properties in a certain market will command similar prices. More specifically, it is based on the theory that prudent, knowledgeable purchasers would pay no more for a particular property than the cost to acquire a similar property, affording comparable utility and amenities. This approach is also constructed on the principle of anticipation, which states that value is created by the expectation of benefits to be derived in the future.

In processing this approach in actual appraisal practice…

- the appraiser researches recent offerings and sales of properties that are similar to the subject property, for direct comparison with the property. The sales deemed comparable are of the same property type, and typically have similar property rights and highest and best uses. These sale properties are then compared with the subject on an item-by-item basis to identify any value influencing variances. Appropriate market-derived adjustments are then applied to the sale prices of the comparable transactions to develop an indicated value range, or adjusted value range, for the subject property. This range of value may be expressed as such, or may be reconciled into a single point value estimate through the weighting of the quality of the comparable sales.

Basics of the approach

Comparable Sales

What makes a comparable sale comparable?

Same property type (e.g. single family residential, industrial, retail, apartment, etc.)

Same or similar highest and best use? Why?

Similar property rights (e.g. fee simple, leased fee, leasehold)

Similar location, building size, condition, etc.

What other factors?

Sources of comparable sale data

- Assessment sales databases, appraisers' work files, multiple listing service (MLS), CoStar, Conn-Comp, Compstak, The Warren Group, etc.
- Sales data needs to be verified. How? Land and assessment records, data services, buyers, sellers, attorneys, real estate agents and brokers. Any party familiar with the transaction. Multiple sources are best.
- Are non-arm's length transactions suitable for use as comparable data? What about distressed or foreclosure sales? What about short sales? Estate or probate sales? Tax sales? Inter-corporation or inter-family sales?
- What's an arm's length transaction?
- *A transaction between unrelated parties who are each acting in his or her own best interest**

**Appraisal Institute; The Dictionary of Real Estate, 6th Ed. 2015, Page 13*

Sales Data Sources and Verification

Adjustments

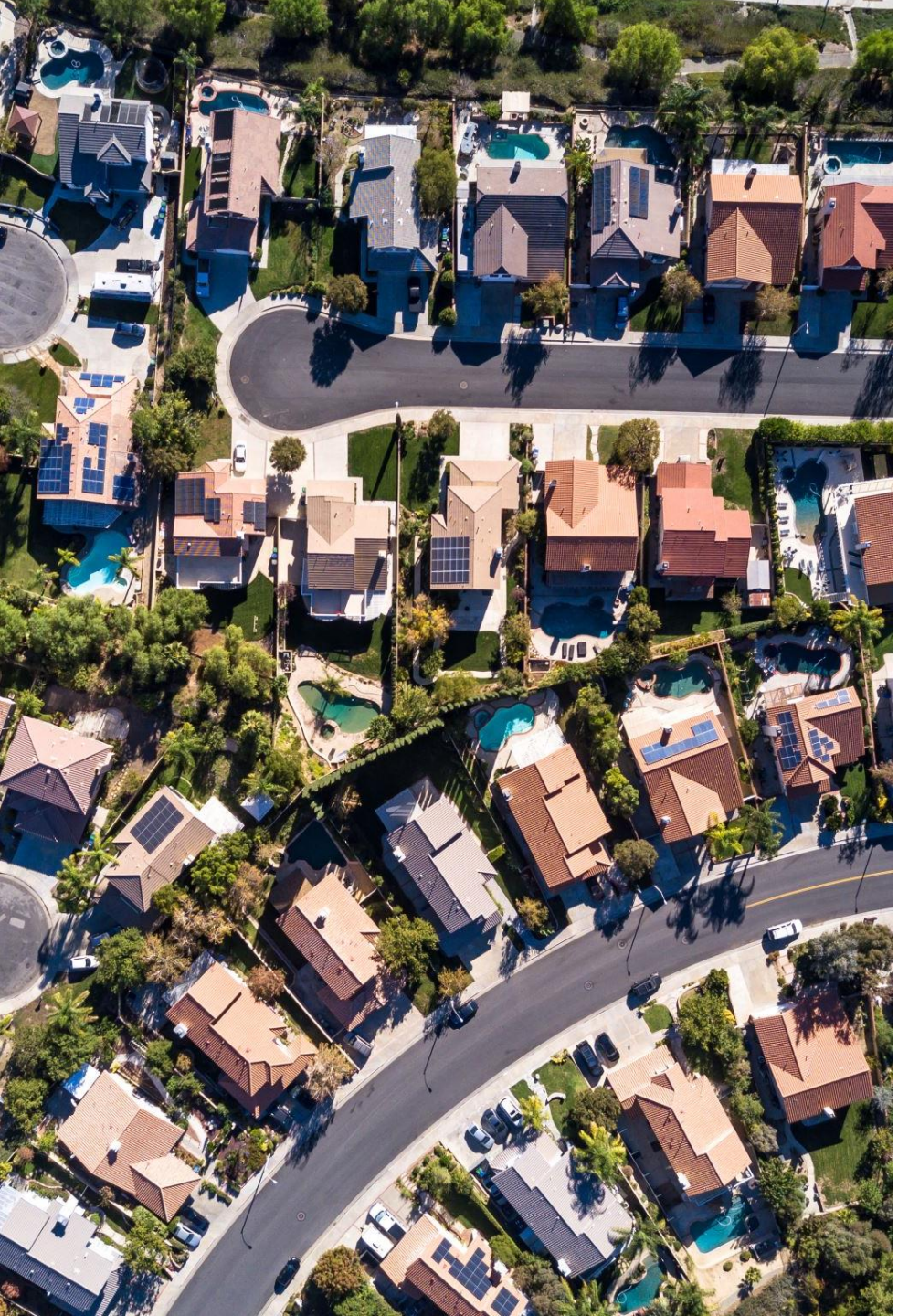
Adjustments to the Sale

- Quantitative vs. Qualitative
- The comparable sales are ALWAYS adjusted to the subject
- If the comparable sale has an inferior attribute, the adjustment direction is POSITIVE
- If the comparable sale has a superior attribute, the adjustment is NEGATIVE
- Adjustments may be expressed as dollar amounts or percentages (Quantitative) or may be expressed as positive/negative or superior/inferior ranking (qualitative)
- Where do adjustments come from?
- Amazon Prime?
- Santa Clause?
- Thin Air?
- One's derriere?
- The market (ideally)

Adjustments

There are several ways to derive adjustments in the sales comparison approach

- Paired sales analysis
- Depreciated cost
- Capitalization of rent loss
- Market participant surveys
- Regression analysis



Adjustments

Paired sales analysis– Preferred method as it comes directly from the market. Difficult to isolate to a single variable. Usually able to isolate two or three variables.

Example:

House A, a 1952 Ranch in average condition on 0.26 acres, sells in March 2022 for $250,000. House B, a 1953 Ranch, also in average condition, on a 0.24 acre lot, also sells in March 2022 for $256,000. The only significant difference between House A and B is that House B has a fireplace. The fireplace contributes $6,000. That's your adjustment.

Ideally, one would have several paired sales (sometimes called "matched pairs") indicating a value contribution range for a certain attribute.

Adjustments

Depreciated cost – Estimate the cost new of the component and deduct depreciation using an age-life method.

The subject house has central air conditioning that would cost $15,000 to install today. The system was put in when the house was built 8 years ago and has an expected life of 25 years. It is 32% depreciated (8 years divided by 25 years = 0.32). Total depreciation is $4,800 (0.32 x $15,000) so the contributory value of the central air conditioning system is $10,200 ($15,000 minus $4,800)., which would be rounded to $10,000.

Adjustments

Capitalization of Rent Loss – Multiply the rent loss by the gross rent multiplier to derive your adjustment.

Same example…House A is a 1952 Ranch on 0.26 acres in average condition. It sells for $250,000 in March 2022. At the time of sale, the house is rented for $2,100 per month, excluding utilities. The gross rent multiplier (GRM) is 119.05, say 119. You have found other GRMs in the neighborhood ranging from 115 to 120.

House B is a 1953 Ranch on a 0.24 acre lot, in similar condition to House A. It also sells in March 2022 for $256,000. At the time of sale, the house is rented for $2,150 per month, exclusive of utilities. This indicated a GRM of 119.07, say 119. The only difference between House A and House B is that House B has a fireplace and rents for $50 more per month than House A.

$50 x 119 = $5,950., round to $6,000 (value contribution of fireplace)

Adjustments

Example: Size Differences

House A, a 2,234 square foot Colonial, sells in April 2022 for $425,000. House B, a 2,566 square foot Colonial on the same street, sells a week later for $440,000. The houses were built at the same time by the same builder. What's the indicated adjustment for the size difference?

Answer: House B is 332 square feet larger than House A. It sold for $15,000 more. The market is paying $45.18 per additional square foot. An adjustment of $45 per square foot of size difference is appropriate.

Note: There is usually no need to adjust for small size differences within 100 square feet.

Adjustments

Market Surveys

Deriving adjustments through market surveys is acceptable, but primarily as a secondary or tertiary means of support.

The technique involves interviewing market participants (buyers and sellers) and asking the proper questions so as not to elicit a pre-determined answer.

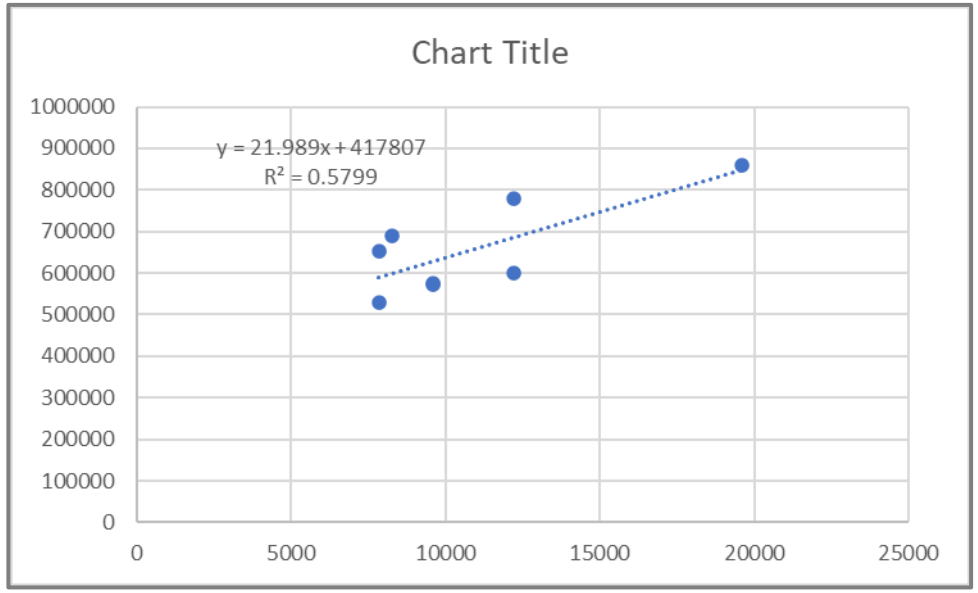
Probably the weakest support method and that is subject to the most exposure. That said, it may a primary technique when dealing with stigma or diminution cases.

Adjustments

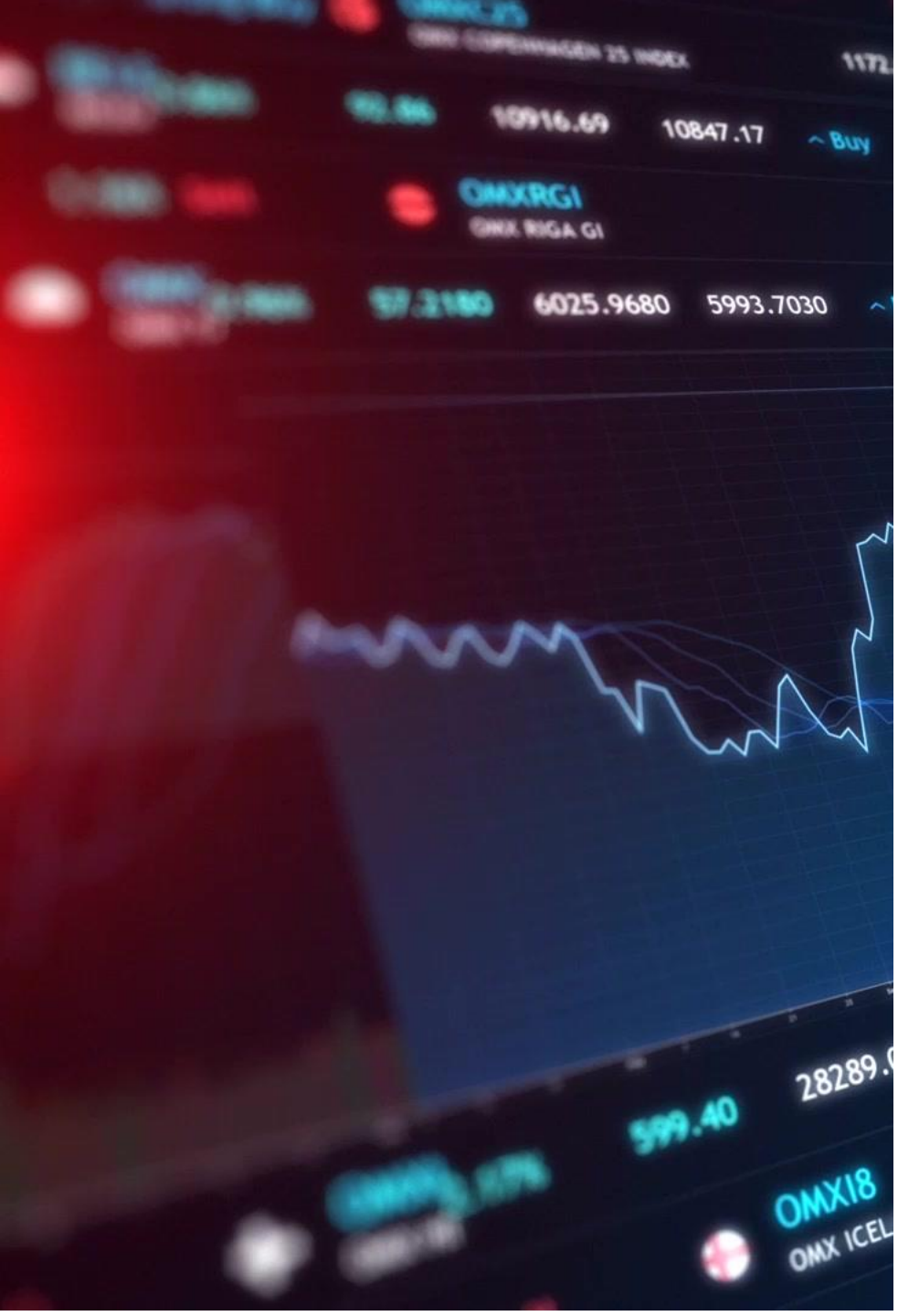
Regression Analysis

Simple linear regression to establish a relationship between a property characteristic and sale price.

Generally would like to use multiple data points (old rule of thumb was not less than 30)



Example of a scatter diagram of land sales showing the y-intercept equation.



Reconciliation Within The Approach

- ❑ Is the final opinion of value within the adjusted value range?
- ❑Is the math correct? Don't assume there can't be an Excel or software error.
- ❑Have the adjustments been applied in the right direction?
- ❑Are the adjustments in the proper sequence (i.e. transactional adjustments and property adjustments)?
- ❑ Have the sales been weighted or is the appraiser simply averaging?
- ❑The fewer the adjustments, the greater the comparability

Red Flags in the Sales Comparison Approach (In No Particular Order)

- Problems in the sales comparison approach usually arise in improper comparable sale selection and/or inappropriate adjustments.

- Check to ensure that adjustments applied in the analysis grid are consistent with the narrative in the report. For example, the appraiser makes no positive market conditions (time) adjustments in the grid yet includes a graph in the addenda of the report showing that prices have been increasing over the last few years.

- Does the appraisal report contain adjustments with an improbable level of precision? (e.g. A gross living area adjustment of $13,427?)

- Is the information about the subject property and sale properties factual? Gross living area, gross building area, land size, age, condition, etc. What sources are cited? Did the appraiser inspect the property?

- Are large quality of construction and condition adjustments made?

- Are specific adjustments buried or concealed in a catch-all property adjustment?

- Adjustments were made for Age and Condition

- Is the subject property bracketed by the sales?

- Were the same property rights conveyed with the sale properties as the rights being valued (e.g. fee simple v. leased fee)?

Quiz Question #1

One Way of Supporting An Adjustment Is…

a. Capitalization of Net Income

b. Regression Analysis

c. Depreciated Value Calculations

d. Experience and Judgment

Quiz Question #2

Flawed Analysis Can Be The Result Of:

a. Improper Comparable Selection

b. Inappropriate Adjustments

c. Intentional Fraud

d. All of the Above

Quiz Question #3

What is the appropriate cut-off date for use of sales for an October 1, 2021 valuation date?

a. October 1, 2021

b. December 31, 2021

c. September 30, 2021

d. It Depends

Case Study: Find the Issues

The subject is a 4,800 square foot, direct waterfront residence being valued for assessment appeal purposes. The dwelling is 15 years old and occupies a 0.46-acre lot with a boat dock. It also has an inground pool and the condition of the improvements is good. The valuation date is October 1, 2020 and the Town's market value is $1,316,000.

In her analysis, the appraiser, retained by plaintiff's attorney, uses three "comparable" sales. The first is a 12-year old, 3,200 square foot house, occupying a 0.38-acre, direct waterfront site in subject's immediate neighborhood. It sold six months after the valuation date for $1,200,000. The second sale is an indirect waterfront property improved with an older, seasonal cottage in inferior condition, but also in subject's neighborhood. It sold three months before the valuation date for $525,000. The third transaction is a 0.79-acre, marshfront parcel improved with a 7,600 square foot, brand new estate-type dwelling. It sold two years before the valuation date for $1,510,000.

What are some of the obvious issues with the sales selection?

Which appears to be the most comparable sale? Why?

Which appears to be the least comparable sale? Why?

Overview of the Income Capitalization Approach

The income capitalization approach is also steeped in the principle of substitution in that it holds that similar properties in a specific market should command a similar income stream. Taking it a step further, it recognizes that a prudent purchaser would pay no more for a specific property than the cost to acquire a comparable property offering similar utility and which has similar income and expenses. This valuation technique is also based on the principle of anticipation as it measures the anticipated future benefits, specifically rental income (or potential rental income) and a future reversion, inherent in property ownership.

Basics of the approach

Income ÷ Rate = Value

Value x Rate = Income

Income ÷ Value = Rate

Direct Capitalization

Converting a single year's net operating income into an estimate of value by applying a capitalization rate

Direct Capitalization

- Capitalizes a property's single year net operating income (NOI) into **perpertuity.**
- As you know, in an appraisal done for assessment appeal purposes, the NOI excludes the real estate tax expense. Why?
- Because real estate taxes are omitted from the NOI, the effect of taxes are accounted for by "loading" the overall capitalization or "cap" rate with the effective tax rate, unless the rents are net. What's an effective tax rate (ETR)?
- The effective tax rate is the mill rate multiplied by the equalization rate. It is the equivalent of the amount paid out in taxes every year, expressed as a percentage of the property's value. For example, Connecticut has a statewide equalization rate of 70%. Real property assessments are 70% of the property's market value. If the projected mill rate is 27.58, what's the ETR?
  - Answer: 0.02758 x 0.70 = 0.01931 or 1.93%

Direct Capitalization

- Why did I say projected mill rate? Why not current mill rate?
- In direct capitalization, when reconstructing the operating statement (pro forma), one is projecting the following year's income and expenses.
- If the overall capitalization rate (OAR) is 7.50%, using the ETR we just developed, what is our tax-loaded cap rate to be applied to the property's projected NOI?
- Answer: 7.50% (OAR) + 1.93% (ETR) = 9.43%, rounded to 9.50% for practical purposes
- How many of you see cap rates carried out to six decimal places? What does this imply?
- As stated, when leases are net, there is no tax load added to the cap rate.
- Partial loading of the cap rate for vacancy, tax escalations, etc.

Capitalization Rates

A capitalization rate, or cap rate for short, is “a ratio of one year’s net operating income provided by an asset to the value of the asset; used to convert income into value in the application of the income capitalization approach”.*

Capitalization rates are a measure of perceived risk. Lower capitalization rates, signifying less perceived risk, result in higher values and vice versa.

When cap rates increase, what happens?

When cap rates decrease, what happens?

**The Appraisal Institute; The Dictionary of Real Estate Appraisal, 6th Ed., 2015, Page 31*

Capitalization Rates

Cap rates will vary by asset class. According to RERC, Q4 2021 expected rate ranges were:

	Office		Industrial			Retail			Apt	Student Housing	Hotel	Average All Types	RERC Port Index
	CBD	SUB	WHSE	R&D	FLEX	RGNL MALL	PWR CNTR	NEIGH/ COMM					
Pre-Tax Yield Rate (IRR) (%)													
Range[2]	4.9 - 8.3	5.8 - 8.5	4.5 - 7.2	5.0 - 8.7	5.0 - 8.9	6.5 - 10.0	6.8 - 10.0	6.0 - 10.0	4.8 - 7.2	7.3 - 8.5	9.0 - 11.6	4.5 - 11.6	4.5 - 11.6
Average	7.0	7.5	5.8	7.1	7.3	8.2	8.1	7.2	5.9	7.8	10.1	7.5	6.6
Weighted Average[3]	7.2			5.8			7.9						
BPS Change[4]	0	-20	-10	-20	-20	-10	-10	-10	-10	-10	-10	-10	-20
	-10			-10			-10						
Going-In Cap Rate (%)													
Range[2]	4.1 - 7.0	3.7 - 8.0	2.9 - 6.0	5.0 - 8.0	5.0 - 8.0	4.8 - 8.0	5.4 - 8.0	4.0 - 8.8	3.3 - 6.0	4.3 - 6.7	7.0 - 9.6	2.9 - 9.6	2.9 - 9.6
Average	5.6	6.4	4.3	6.1	6.2	6.5	6.8	5.9	4.3	5.8	8.2	6.0	5.1
Weighted Average[3]	5.9			4.4			6.3						
BPS Change[4]	0	0	-10	0	-20	0	-20	-10	-20	-20	-10	-10	-20
	0			-10			-10						
Terminal Cap Rate (%)													
Range[2]	4.8 - 7.5	5.8 - 9.0	3.5 - 6.3	5.8 - 8.5	5.8 - 8.5	5.3 - 8.0	6.0 - 8.5	5.5 - 8.0	4.3 - 6.3	5.0 - 7.2	8.0 - 10.1	3.5 - 10.1	3.5 - 10.1
Average	6.2	7.0	5.0	6.6	6.8	6.9	7.3	6.3	4.9	6.4	8.8	6.6	5.7
Weighted Average[3]	6.5			5.1			6.8						
BPS Change[4]	0	10	-10	0	-10	-10	-20	-20	-10	-20	-10	-10	-10
	0			-10			-10						

Yield Capitalization

A method used to convert future benefits into present value by (1) discounting each future benefit at an appropriate yield rate, or (2) developing an overall rate that explicity reflects the investment's income pattern, holding period, value change, and yield rate.

Yield Capitalization

- Select an appropriate projection period
- Forecast all explicit future benefits/cash flows, including the reversion, if any
- Select an appropriate yield or discount rate
- Convert the cash flows and reversion to a present value through discounting

Yield Capitalization – Key Terms

Discounted Cash Flow Analysis (DCF) – The procedure in which a discount rate is applied to a set of projected income streams and a reversion. The analyst specifies the quantity, variability, timing, and duration of the income streams and the quantity and timing of the reversion, and discounts each to its present value at a specified yield rate.

Yield Rate – A rate of return on capital, usually expressed as a compound annual percentage rate. A yield rate considers all expected property benefits, including the proceeds from sale at the termination of the investment. A catch-all term that may describe a discount rate (when anticipated cash flows are used) or the internal rate of return (when actual past cash flows are used). Discount rates are primarily based on perceived risk.

Reversion – A lump-sum benefit that an investor receives or expects to receive upon termination or sale of an investment.

Going-In Capitalization Rate – The overall capitalization rate obtained by dividing a property's net operating income for the first year after purchase by the present value of the property.

Terminal Capitalization Rate – The capitalization rate applied to the expected net income for the year immediately following the end of the projection period to derive the re-sale price or value of a property.

**Appraisal Institute; The Dictionary of Real Estate, 6th Ed. 2015*

Yield Capitalization – Take-Aways

- DCF analysis contains a lot of moving parts.
- Longer projection periods are problematic (maintenance expenses increase as buildings get older, functional issues could arise, etc.)
- A universal truth is that expenses almost always increase at a faster rate than income. Is the projection forecasting increasing income and expense patterns? Are the rates of increase the same? Different?
- Are the projections consistent with what was said in the narrative of the appraisal report?
- Is the discount rate appropriate? Can different portions of the income projection have different discount rates?
- Most appropriate for some property types and not others. Do market participants / investors use DCF in their purchase decisions?

Quiz Question #1

Adding the effective tax rate to the overall capitalization rate is not appropriate with what type of lease?

a. Gross lease

b. Modified Gross Lease

c. Net Lease

d. Month-to-month tenancy

Quiz Question #2

Direct capitalization usually excludes which two expenses? Choose the best answer.

a. Replacement reserves and management

b. Leasing commissions and tenant improvements

c. Utilities and replacement reserves

d. Dinner and a movie

Quiz Question #3

The projected sale proceeds of a property at the termination of an investment is the…

a. Reservation

b. Regression

c. Reversion

d. Revelation

Case Study: Find The Issues

You are reviewing an appraisal of a shopping center, submitted with an assessment appeal. It's an older, multi-tenant center, 252,000 square feet (NRA) on 24.1 acres. All of the tenants are on net leases. The average actual vacancy for the last three years has been 7.2% and market vacancy is running about 6%. The center needed about $400,000 in repairs and upgrades as of the valuation date.

Case Study: Find The Issues

Reconstructed Operating Statement

Operating Income	**Per SF NRA**	
Potential Gross Annual Rental Income	$3,780,000	$15.00
Expense Reimbursements (Excl. RE Taxes)	$ 499,000	$ 1.98
Other Income	$ 0	$ 0.00
Total Potential Gross Annual Income (PGI)	$4,279,000	$16.98
Less Vacancy & Collection Loss (12.5% PGI)	-($ 534,875)	($ 2.12)
Effective Gross Annual Income (EGI)	$3,744,125	$14.86
Operating Expenses		
Real Estate Taxes	$ 0	$
Fire and Liability Insurance	$ 92,000	$0.37
Utilities	$ 79,000	$0.31
Repairs and Maintenance	$ 302,000	$1.20
Trash Removal	$ 26,000	$0.10
Legal and Professional Fees	$ 65,500	$0.26
Security	$ 51,000	$0.20
Management	$ 165,500	$0.66
Tenant Improvements (TIs)	$ 132,000	$0.52
Leasing Commissions	$ 47,000	$0.19
Reserves for Replacement	$ 386,000	$1.53
Miscellaneous	$ 5,000	$0.02
Total	$1,351,000	$5.36 (36.1% EGI)
Net Operating Income (NOI) Before RE Taxes	**$2,393,125**	**$9.50**

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Case Study: Find The Issues

Net Operating Income	$2,393,125
Overall Capitalization Rate	0.0775
Effective Tax Rate	0.0210
Tax-Loaded Capitalization Rate	0.0985
Indicated Market Value	$24,295,685
Round To	$24,300,000

Case Study: Find The Issues

Reconstructed Operating Statement

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Total	$1,351,000	$5.36 (36.1% EGI)
Net Operating Income (NOI) Before RE Taxes	**$2,393,125**	**$9.50**

Actual vacancy as of the valuation date was 7.2% and market vacancy was running around 6%. No apparent justification for 12.5% V & C factor

Case Study: Find The Issues

Reconstructed Operating Statement

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Total	$1,351,000	$5.36	(36.1% EGI)
Net Operating Income (NOI) Before RE Taxes	**$2,393,125**	**$9.50**	

Tenant improvement costs and leasing commissions are typically excluded when using direct capitalization.

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Case Study: Find The Issues

Reconstructed Operating Statement

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Total	$1,351,000	$5.36	(36.1% EGI)
Net Operating Income (NOI) Before RE Taxes	**$2,393,125**	**$9.50**	

Reserves for replacement should reflect market-based reserves, not immediate expenditures for repairs.

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Case Study: Find The Issues

Net Operating Income	$2,393,125
Overall Capitalization Rate	0.0775
Effective Tax Rate	0.0210
Tax-Loaded Capitalization Rate	0.0985
Indicated Market Value	$24,295,685
Round To	$24,300,000

Appraisal report indicated that all of the leases were structured on a net basis. While the appraiser could have added a percentage of the ETR for vacancy, the appraiser should not have applied the full load to the cap rate.

Questions?

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About the Instructor

Al Franke, MAI, SRA has 31 years of real estate valuation, brokerage and consulting experience. He is a Connecticut-licensed real estate broker and certified general real estate appraiser. Mr. Franke is president of Advisra Consulting, LLC, a regional real estate valuation, brokerage and advisory firm based in Milford, Connecticut. Franke has served as New England Director of Valuation for international firm Avison Young, Connecticut Managing Director for Grubb & Ellis Landauer Valuation Advisory Services, and was president of real estate appraisal firm, Albert W. Franke Associates, Inc. He currently sits on the Appraisal Institute's national Board of Directors as Vice Chair of Region IV.

Mr. Franke's appraisal practice is litigation-centric, focusing on forensic consulting, impact studies, diminution in value and stigma assignments, assessment appeals, litigation support and expert testimony. His experience has involved commercial, industrial, residential, special purpose and open space properties as well as complex, high-value and celebrity properties. Franke has authored several real estate and valuation seminars and co-authored *USPAP in Plain English™: A Guidebook to the 2006 Uniform Standards of Professional Appraisal Practice for Real Estate Appraisers and Clients* and *USPAP in Plain English 2008-2009™: Updates from the 2006 Uniform Standards of Professional Appraisal Practice*