Inconsistency: It's Hiding in Plain Sight in Your Appraisal

PS898SH--A

FOR General APPRAISERS

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The Appraisal Institute was established when the American Institute of Real Estate Appraisers (AIREA) and the Society of Real Estate Appraisers (Society) unified in January 1991. AIREA and the Society, founded in 1932 and 1935, respectively, were created to help standardize the appraisal process by promoting professional education and upholding high ethical standards.

1932
AIREA is formed as an affiliate of the National Association of Realtors. *The Appraisal Journal* is launched. The Metro New Jersey Chapter becomes the first chartered chapter.

1935
The U.S. Building and Loan League sponsors the Society, which establishes appraisal guidelines and standards. After completing education and experience requirements, the first SRA designation is conferred.

1945
The MAI designation program is introduced (AIREA's MAI designation dates back to the 1930s)

1951
The first edition of *The Appraisal of Real Estate* is published.

1961
The Society opens a Washington, DC, office to establish a voice among the leaders of Congress and the federal government.

1969
The Society initiates the Young Advisory Council (YAC), a series of roundtable discussions on topics of interest to appraisers and analysts, now known as LDAC.

1981
The Appraisal of Real Estate is translated and published in German. 14 additional international editions have been published since then.

1987
AIREA and the Society are founding sponsors of The Appraisal Foundation, which is established to work with the government to create a self-regulatory system.

1989
Congress passes the Financial Institutions Reform, Recovery and Enforcement Act (FIRREA), which establishes state appraisal certification/licensing for federally related transactions.

1991
AIREA and the Society formally merge into the Appraisal Institute.

1992
The Y. T. and Louise Lee Lum Library is established.

1996
The first quarterly issue of *Valuation Insights & Perspectives* (now *Valuation*) is introduced.

2000
The Appraisal Institute introduces *Appraiser News Online* (ANO).

2003
The first MAI designations are conferred upon Korean appraisers.

2014
The Appraisal Institute begins issuing two review designations: the AI-GRS and AI-RRS.

With more than 85 years of history, the Appraisal Institute continues to serve as the nation's largest professional organization of real estate appraisers. Through its designation programs, educational offerings, advocacy efforts and publishing endeavors, the Appraisal Institute maintains its leadership position within the real estate industry and continues to be a leader in the global valuation profession.

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Table of Contents

SECTION 2

Part 4. The Three Approaches

Part 5. Functional and External Obsolescence

Part 6. Reconciliation

Suggested Solutions

Overview

Seminar Description

This fast-paced seminar is packed with thought-provoking material to which every appraiser and reviewer can relate. *Inconsistency: It's Hiding in Plain Sight in Your Appraisal* contains content that brings about lively discussions on topics that can have a major impact on the credibility of the appraiser and the value opinion. Inconsistency in data, analysis, and reporting can escape the notice of even seasoned appraisers, and significant inconsistencies can affect any part of the appraisal process. Thus, the scope of the discussion is broad rather than highly focused, and this seminar contains active learning assignments that appraisers might have in everyday circumstances.

The seminar focuses on inconsistencies that can cause issues in the following general categories:

- Definition of *market value*
- Highest and best use
- The three approaches
- Functional and external obsolescence
- Reconciliation

The seminar spans the appraisal process and was written for commercial appraisers and reviewers, including agricultural appraisers and reviewers. The combination of lecture, discussion questions, and problem solving includes a few agricultural problems. Participants should have working knowledge of commercial appraisal procedures.

Learning Enhancements

The seminar has been designed with a variety of elements to enhance your learning experience.

- ***Preview.*** To give you a taste of what is to come, each part begins with a Preview page, which includes a brief overview of the content, learning objectives to consider as you move through the content, and learning tips that will assist you in understanding the material you're about to cover.
- ***Learning Objectives.*** Each learning objective covers information required for understanding the concepts in the seminar. Look them over before the part begins so that you have a frame of reference as you move through the material. At the end of each part, reread the objectives. Are you able to do what is stated? If not, this is the time to ask your instructor for help or review the concepts that you do not understand.

- ***Examples and Problems.*** Supplementing the discussions, we've included examples and problems to provide everyday illustrations and help you visualize and practice what you are learning. Almost all of the problems come from actual appraisers' files. Therefore, they are practical and realistic.

- ***Discussion Questions.*** To foster further discussion, we have included discussion questions that may or may not have a definitive correct answer, but they will elicit opinions.

- ***Review.*** Each part concludes with a Review page, which repeats the learning objectives and may include key terms and concepts that have been covered. Also, where applicable, we've provided recommended readings from textbooks, which will reinforce what you have learned in class.

- ***Solutions.*** A tabbed section of Suggested Solutions appears at the end of the Seminar Handbook. This section contains solutions to the discussion questions and problems. Working through the problems before looking at the suggested solutions helps you determine if you understand the concepts or if you need to ask additional questions.

USPAP References in this Seminar

All references in this seminar to the Uniform Standards of Professional Appraisal Practice (USPAP) are taken from the 2020–2021 edition (Washington, D.C.: The Appraisal Foundation).

Classroom Guidelines

To make the seminar a positive experience for everyone attending, please follow these guidelines when class is in session:

- 100% attendance is required. No exceptions.

- Limit use of computers and wireless devices to classroom projects.

- Communicate with business associates during break time instead of class time.

- Put away reading materials such as newspapers and books that are not used in class.

- Please silence cell phones and other communication devices.

- Please do not record the lectures. Recordings are not permitted.

- Refrain from ongoing conversations with those seated near you and other distracting behavior.

Learning Objectives

After completing this seminar, participants will be better able to

- ☐ Recognize inconsistencies with the definition of *market value* and the need to stay consistent with the type of value opinion developed.
- ☐ Understand how the highest and best use decision drives the remainder of the appraisal process and how to stay utterly consistent with the highest and best use.
- ☐ Recognize the need for consistency within and between the three approaches to value.
- ☐ Determine what constitutes functional and external obsolescence and how to maintain consistency with both types of obsolescence in all three approaches.
- ☐ Complete a thorough, meaningful, and consistent reconciliation.

General Information

- ***Calculator.*** A financial calculator is required. The accepted model used in the seminar is the HP-12C. Other calculators may be used if participants know how to operate them. No class time will be used to cover the operation of other calculators.
- ***Breaks.*** There will be two 10-minute breaks during the morning session and two 10-minute breaks during the afternoon session unless noted otherwise by the course sponsor. The lunch break is one hour.
- ***Attendance sheets*** will be distributed during class to verify your attendance during the morning and afternoon sessions.
- ***Certificates of completion*** may be downloaded after completion of the seminar.
- ***Attendance during the entire seminar*** is required.

Recommended Textbooks

The Appraisal of Real Estate, 15th ed. Chicago: Appraisal Institute, 2020.

The Dictionary of Real Estate Appraisal, 6th ed. Chicago: Appraisal Institute, 2015.

Schedule

Course Schedule

Section 1

Registration	
	Registration
	Introduction/Orientation (Overview, Classroom Rules)
Part 1. Introduction	
	The Effect of Inconsistency
	Relevant References in USPAP
	Definition of Inconsistent
	When Does Inconsistency Occur
	Review Part 1
Part 2. Definition of Market Value	
	Market Value and Definitions
	The Market
	Other Types of Value
	MORNING BREAK
	The Principle of Contribution
	Cash Equivalency
	Buyer Motivations
	Review Part 2
	MORNING BREAK
Part 3. Highest and Best Use	
	Definition
	Highest and Best Use Analysis
	Proper Reporting of Highest and Best Use
	Comparable Sales Selection
	Interim Use
	Theory of Consistent Use
	Contributory Value of Improvements
	Review Part 3
	LUNCH

Section 2

Part 4. The Three Approaches	
	Consistency Within the Approaches; Sales Comparison Approach
	Consistency Within the Approaches: Income Capitalization Approach
	AFTERNOON BREAK
	Consistency Within the Approaches: Cost Approach
	Consistency Between the Approaches
	Review Part 4
Part 5. Functional and External Obsolescence	
	Consistency With the Definitions
	Functional Obsolescence
	AFTERNOON BREAK
	External Obsolescence
	Review Part 5
Part 6. Reconciliation	
	Reconciliation Is a Procedure
	What Reconciliation Is Not/Averaging
	Rounding
	Final Reconciliation
	Review Part 6
	Seminar Wrap-up/Questions

Section 1

1

Part 1. Introduction

Part 2. Definition of Market Value

Part 3. Highest and Best Use

Part 1 Preview

Introduction

The seminar begins with a short discussion of the effects inconsistencies can have on an appraisal and on an appraiser and then takes a brief look at some relevant industry standards. To open the discussion, the class will look at an example of an actual appraisal report with obvious inconsistencies.

Learning Objectives

To prepare for Part 1, read the following learning objectives and refer back to them as you study this part of the handbook.

- ☐ Understand the effects of inconsistency.
- ☐ Recognize the relevant sections of USPAP.
- ☐ Identify when inconsistency can occur.

Learning Tips

As you go through the seminar, be sure you understand the definitions of the terms that are presented. You may want to commit some of them to memory since knowing these terms will help you avoid inconsistencies in your reports.

Part 1.
Introduction

I. The Effect of Inconsistency

Inconsistency can cause a fatal flaw in an appraisal and can result in multiple conclusions at various steps in the appraisal process, including the final value opinion, being skewed at best and, at worse, being completely erroneous.

A. Credibility Issues

1. Some consequential inconsistencies can go unnoticed to the untrained eye.

    a. Even a trained appraiser reviewer can overlook some serious inconsistencies.

    b. If inconsistencies are not brought to the appraiser's attention, the inconsistencies become habits, and the process repeats.

2. When it is least expected, these inconsistencies could come to light and could gravely and negatively impact the appraisal's credibility.

B. Quality Issues

1. The quality of the appraiser's service is negatively impacted by inconsistencies, even if the final value opinion is not.

    a. Inconsistency can occur in the analysis, methodology, and reporting.

    b. Often, an inconsistency in one area or approach affects other subsequent areas of analysis.

2. Quality could be impacted to the extent that it could generate a complaint being filed with regulatory agencies, thus affecting the appraiser's life far beyond the one appraisal implicated.

1.1 Discussion Question

Can you think of any rules or Standards that address inconsistencies in an appraisal?

C. Ethics

1. Many inconsistencies can expose the appraiser to the accusation of intentional bias.

2. A trained appraiser should have known better than to allow this inconsistency into the appraisal, so it can be assumed that it was an intentional attempt to favor the client's cause.

II. Relevant References in USPAP

A. Competency Rule

1. An appraiser who does not take care to avoid inconsistency in the appraisal process could be in violation of the Competency Rule which states "An appraiser must not render appraisal services in a careless or negligent manner."

2. Being in violation of the Competency Rule is even more likely if there are multiple inconsistencies that subsequently affect multiple parts of the appraisal or analysis.

B. USPAP Standards Rule 1

1. The Comment to Standards Rule 1-1(b) states "An appraiser must use sufficient care to avoid errors that would significantly affect his or her opinions and conclusions." And Standards Rule 1-1(c) states "In developing a real property appraisal, an appraiser must not render appraisal services in a careless or negligent manner, such as by making a series of errors that, although individually might not significantly affect the results of an appraisal, in the aggregate affects the credibility of those results."

2. Since some inconsistencies can carry through to other parts of the appraisal or analysis, just ***one*** initial inconsistency could qualify as a violation because it can become or cause a "series of errors" to occur.

3. Inconsistencies in a report, especially ones that cause conflicting statements or analysis, can also cause the report to be confusing to the point of being misleading.

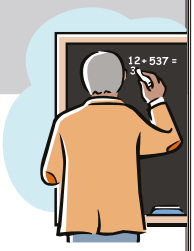
4. This is not an exhaustive list of possible USPAP Rules or Standards that could be violated by an inconsistency in an appraisal.

III. Definition of Inconsistent

Many appraisers can define the word *inconsistent*. Let's take a look at a dictionary definition that contains a few examples.

> **Inconsistent:** "Lacking consistency: such as (a) not compatible with another fact or claim, as in *inconsistent statements*; (b) containing incompatible elements, as in an inconsistent argument; (c) incoherent or illogical in thought or actions (CHANGEABLE); (d) not satisfiable by the same set of values for the unknowns, as in *inconsistent* equations, *inconsistent* inequalities. (www.merriam-webster.com/dictionary/inconsistent)

1.2 Problem. Just to Get Things Started



Your assignment is to review an appraisal completed by a Certified General Real Property Appraiser. The appraisal assignment pertained to two adjoining commercial properties held in the same ownership, which were acquired together in 2015. The two properties are located in an active commercial corridor south of the downtown area of a large metroplex. It is in an area approved for medical use only cannabis cultivation and sales. The smaller of the two parcels contains 4,500 square feet and is improved with a 1905 vintage one-story, single-unit residence. The appraiser concluded that these improvements add no value to the land.

The larger of the two parcels contains 6,510 square feet and is improved with a 1942 vintage, brick and block, two-story commercial building in use for active cannabis operations on the date of value. The layout of this building is sales/display/dispensary in front, grow rooms behind, processing/storage and delivery area in the back with alley access. There is an apartment on the upper level rented to one of the company's employees. There is attic storage also on the upper level. The client was the property owner. The report was labeled "Restricted Report" with a recent date of value. The entire valuation section of the appraiser's report is provided below.

> A copy of the comparable sales chart, a sales map, and photographs are in the Addenda. All of the comparable sales are older commercial buildings located along South Street. There are five comparable sales. The comparable sales range in price from $181 per square foot to $276 per square foot with a mean of $218 per square foot and a median of $229 per square foot. The comparable sales sold within the last two years. The size range is between 4,495 square feet and 11,300 square feet. The market has improved over the time frame of the sales. In our analysis, we have concluded that the subject property's land value is $115 per square foot or $1,266,150.

1.2 Problem, cont.

Based on our analysis of the comparable improved sales, the comparable sales' adjusted values ranged from $181 to $245 per square foot of gross building area with a mean of $235 per square foot and a median of $236 per square foot. We have concluded a market value of $236 per square foot as applied to only the commercial building's square footage, or **$1,888,000.**. (Note: the value of the single-unit home portion was valued as land value at $115 per square foot of land or $517,500.) The cost to demolish the single-unit home, including profit, is estimated at $10,000. This is subtracted from the subject property's initial market value in the following chart and results in an as-is market value estimate of **$1,875,000**, rounded.

Sales Summary		
Price Range	**Unadj. Price Per Sq. Ft.**	**Adj. Price Per Sq. Ft.**
Low	$181	$181
High	$276	$245
Average	$218	**$235**
Median	$229	**$236**

Value Conclusion – Fee Simple	
Indicated value per square foot	**$236**
Gross building area in square feet	× 8,000
Indicated fee simple value	**$ 1,888,000**
Less: SFR Demolition & profit	10,000
Indicated market value	$1,878,000
Rounded	**$1,875,000**
Per square foot	**$234**

1.2 Problem, cont.

What inconsistencies do you see in this report?

Note: This problem is based on an example from a reviewer's actual file.

IV. When Does Inconsistency Occur?

A. Examples

1. In analysis

   Analyzing the subject properties' income stream differently than that of the comparable sales

   For example, deducting replacement reserves from the subject property's income as an expense, but not deducting it from the income statements of the comparable sales when extracting capitalization rates

2. In methodology

   Not making a property rights adjustment in the cost approach when the assignment is to value the leased fee interest

3. In reporting

   Making inconsistent statements

   For example, reporting the subject property as "average" in the Property Productivity Analysis, Step 1, of the Market Analysis section, then referring to it as "superior" or "above average" in another section of the report

B. The three approaches

Appraisal education is typically organized in a way that teaches each of the three approaches separately. While each of the approaches is thoroughly covered in each separate course, possibly not enough time is devoted to considering how an inconsistency in one approach could affect the other two approaches. One of the focuses of this seminar is to address that issue to the extent possible.

> The signature of mediocrity is not an unwillingness to change.
> The signature of mediocrity is chronic inconsistency.

—James C. Collins

Review Part 1

Learning Objectives

Now that you've completed Part 1, you should be able to

- ☑ Understand the effect of inconsistency.
- ☑ Recognize the relevant sections of USPAP.
- ☑ Identify when inconsistency can happen.

Terms and Concepts to Remember

Inconsistent

Recommended Resources

The Appraisal of Real Estate, 15th ed. Chicago: Appraisal Institute, 2020.

Part 2 Preview

Definition of Market Value

Consistency with the concept of market value is the topic in Part 2. Some critical concerns with consistency with the definition of market value include the principle of contribution, cash equivalency, and buyer motivations. The class will also discuss several other types of value.

Learning Objectives

To prepare for Part 2, read the following learning objectives and refer back to them as you study this part of the handbook.

- ☐ Understand what the term *the market* means.
- ☐ Recognize the difference between market value and other types of value.
- ☐ Understand the principle of contribution.
- ☐ Work with cash equivalency.
- ☐ Realize the importance of buyer motivations.

Learning Tips

There are several important definitions in this part. You may want to flag the pages in the handbook where the definitions are found so that you can refer back to them as you go through the seminar.

Part 2.
Definition of Market Value

I. Market Value and Definitions

A. Commonalities

There are many definitions of market value, but these definitions have some commonalities in that they say or imply some of the same things. Some of these commonalities are the following items:

1. Cash equivalency. Nearly all the definitions say something like "in terms of cash" or "in terms equivalent to cash."[1]

2. Buyer and seller motivations. Nearly all the definitions say something like "buyer and seller are typically motivated"[2] or "the buyer is willing to buy, but does not have to buy, and the seller is willing to sell, but does not have to sell."

3. Highest and best use. The concept says or implies that market value is based on the highest and best use, as determined by the market, and not the use to which the buyer plans or wants to utilize the property, or the use to which it has historically been put. Although not explicitly stated in most definitions, this concept is codified into law in most states, and case law is replete with the concept.

B. A common definition, included in *The Appraisal of Real Estate*, 15th ed., P. 48, represents that *market* value is a value in exchange. The definition also requires variation from the all-cash market value to be quantified in terms of cash or cash equivalency.

> **Market value.** T*he 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 a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.*

Once the appraiser identifies the proper definition of market value and puts it in the report, the appraiser is utterly tied to that definition. After all, that is the value the appraiser has said is being developed in that appraisal.

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1. *The Dictionary of Real Estate Appraisal*, 6th ed. Chicago: Appraisal Institute, 2015. See Definition 1.
2. 12 C.F.R. Part 34,42(g) Federal Register 29499, June 7, 1997.

II. The "Market"

A. The key word in the phrase *market value* is the word *market*.

1. When appraisers say the *market*, they are not referring to some ethereal sphere of mystery. Though it is delineated, they are not even referring to a geographical area.

2. Appraisers are referring to the actions of buyers and sellers and what is motivating them to do what they do. The actions and motivations of buyers and sellers is what appraisers study, analyze, model, and include in their reports.

B. Responses to challenges

1. If appraisers are challenged on the way they analyzed or did not analyze something, they should be in a position to respond, "I did it this way because that is the way buyers and sellers in this market are doing it." It will be hard to argue with that response.

2. Market value is all about the market. Studying the market, the actions and motivations of buyers and sellers, will lead an appraiser to the value.

   a. An appraisal is an opinion of value, and value is, by definition, an opinion. So, an appraisal is an opinion of an opinion. (SVP, Definitions section)

   b. However, the process is not all about the appraiser's opinion. It is about what the appraiser is seeking: "the market's" opinion.

3. Consistency with this line of thinking is imperative throughout the appraisal process.

III. Other Types of Value

An appraiser is qualified and can certainly develop values other than market value, but it would be inconsistent with the definition to call any other type of value *market value*.

> **Value.** The monetary relationship between properties and those who buy, sell, or use those properties. Value expresses an economic concept. As such, it is never a fact but always an opinion of the worth of a property at a given time in accordance with a specific definition of value. In Valuation Practice, value must always be qualified—for example, market value, liquidation value, or investment value. (SVP, Definitions section)

A. Use value or value in use

1. Definitions

There is no rule against an appraiser accepting an assignment where the client dictates that the value is premised on the property being restricted to a certain use, though it might be inappropriate, depending on the intended use of the appraisal.

> **Use value.** *The value of a property assuming a specific use, which may or may not be the property's highest and best use on the effective date of the appraisal. Use value may or may not be equal to market value but is different conceptually.* See also value in use.[3]

> **Value in use.** *The value of a property assuming a specific use, which may or may not be the property's highest and best use on the effective date of the appraisal. Value in use may or may not be equal to market value but is different conceptually*. See also use value.

2. Although the definitions are identical, technically, these terms are conceptually different; however, they are often used interchangeably by appraisers. These technical differences are beyond the scope of this seminar but are clearly discussed in *The Appraisal of Real Estate*, 15th ed., P. 53, with references to the *International Valuation Standards*.

    a. *Value in use,* as described in the *International Valuation Standards*, refers to the value of a facility or an asset relative to its value as part of an enterprise. Internationally, *value in use*, is a term used in much the same way as appraisers in the U.S. use the term *contributory value*.

    b. *Use Value,* on the other hand, is not associated with a specific enterprise but a generic use category. The user may not be the highest and best use occupant; instead, the user may be an occupant that could use the property or adapt the space to its occupancy. From here on, in this seminar, we will only use the term *use value*.

3. When an appraiser agrees to perform this kind of assignment, there are two ways for the appraiser to proceed:

    a. Develop *market value* based on the hypothetical condition that the given use is the only allowable use of the property.

    b. Develop the *use value* for the property.

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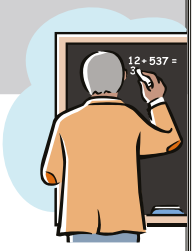
3. Unless otherwise noted, all definitions in italics are taken from *The Dictionary of Real Estate Appraisal,* 6th ed. Chicago: Appraisal Institute, 2015.

c. Though this is rare, it is sometimes necessary to meet the client's goals and intended use of the appraisal. In any event, as you can plainly see, it would be inconsistent if the appraiser were to call the opinion of value developed, absent the use of a hypothetical condition, under either definition or concept, *market value*.

d. If *use value* is what the assignment calls for, an analysis of highest and best use is not undertaken because it is not needed. The use being appraised is given. If the assignment calls for an opinion of *market value*, an analysis of highest and best use is always required.

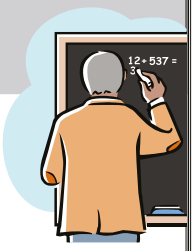
2.1 Problem. Market Value or Use Value



An appraiser receives an assignment from National Ag Lenders, Inc., which is a federally insured depository institution. The assignment is to appraise an 80-acre farm for mortgage lending purposes. Upon agreeing to perform the assignment, the appraiser goes to view the property and the surrounding market. She determines that the farm tract is adjacent to city limits with frontage on the highway. Market analysis reveals that the commercial market is expanding along the highway and, in fact, the land adjacent to the subject property has already been developed with retail and hotel properties. It is evident that the subject property is directly in the path of this expansion and is the next property in line. The subject property is currently and has historically been used for agricultural operations. After completing a highest and best use analysis, she notifies her client that the highest and best use of this tract is commercial retail along the highway and multiunit residential on the backland, and the timing of that highest and best use is now. Her client informs her that they do not make commercial loans and tells her that they want her to develop "the farm value" of the property.

1. *What type of value will she be developing?*

2.1 Problem, cont.



She completes her assignment and submits her report to her client. Two days later, she receives a phone call asking her to please change her value conclusion from "farm value" to "market value" and resubmit her appraisal. She objects, but they insist because, by law, they must base their loan decision on the "market value" of the collateral.

2. *What should she do?*

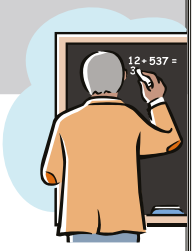
B. Investment value

There is no rule against an appraiser accepting an assignment where the value is based on an investor's specific requirements, though it might be inappropriate, depending on the intended use. It is sometimes necessary to meet the client's goals and intended use of the appraisal.

> **Investment value.** *The value of a property to a particular investor or class of investors based on the investor's specific requirements. Investment value may be different from market value because it depends on a set of investment criteria that are not necessarily typical of the market.*

As you can clearly see by the definition, it would be inconsistent if the appraiser were to call the opinion of value developed, *market value*.

2.2 Problem. Investment Criteria



John Jones, MAI, receives a call from a potential client who informs him that he is a portfolio manager for a large group of investors who specialize in buying and selling hotels. The investors would like to bring an MAI-designated appraiser on board to consult with them regarding how much they should pay for certain properties to ensure they meet their particular investment goals. The position would entail appraising potential hotels for purchase based on the group's investment criteria of requiring a 12% yield.

1. *What type of value will John be developing?*

2. *Could investment value be equal to market value?*

3. *Why is investment value not the same as market value?*

C. Additional types of value

Appraisers are also called upon by clients to develop opinions of a variety of other types of value such as the following:

1. Fair value
2. Assessed value
3. Insurable value
4. Liquidation value
5. Disposition value

These types of value will not be covered in this seminar because of time constraints. Suffice it to say that none of these types of value should be confused with market value and should never be labeled as such.

IV. The Principle of Contribution

The principle of contribution states that *the value of a particular component* is *measured in terms* of its contribution *to the value of the whole property or as the amount that its absence would detract from the value of the whole*. The cost of an item or component does not necessarily equal its value.[4]

A. Contributory value

For many assignments, the question the client needs to have answered is "How much does Part A contribute to the market value of the whole?" instead of "What is the value of the property?" Inconsistency can easily worm its way into an analysis of the contributory value of a particular item or component of real estate.

> **Contributory value.** 1. *A type of value that reflects the amount a property or component of a property contributes to the value of another asset or to the property as a whole.*
>
> 2. *The change in the value of a property as a whole, whether positive or negative, resulting from the addition or deletion of a property component. Also called* deprival value *in some countries.*

4. The italicized words were taken from *The Dictionary of Real Estate Appraisal*, 6th ed. Chicago: Appraisal Institute, 2015. See Definition 2. The other information was paraphrased from *The Appraisal of Real Estate*, 15th ed. Chicago: Appraisal Institute, 2020, P. 51.

1. The contributory value of a particular component or property feature is often a consideration in the development of an opinion of market value, but the distinction between the two types of value should not be confused.[5]

2. The adjustments made in the sales comparison approach for the presence or absence of a property component in a comparable property are examples of an analysis of contributory value. Similarly, the cost approach to value employs an analysis of the contributory value of individual building components to value the whole property.

3. The opportunity for inconsistency to enter the foray is that the cost of an item or component is rarely equal to its contributory value.

    a. While the cost of an item can easily be a known fact, the contributory value of an item can only be discovered by careful market analysis.

    b. In essence we are asking what the market will pay for the inclusion of that component. We are ***not*** asking what the cost of the item or component is.

    c. What the market is willing to pay may be more or less than the cost of the item or component.

B. Determining contributory value

1. The most often employed analytical tool for measuring the contributory value of a particular component is paired data analysis. This analysis is simple and easy as an academic exercise but is often more difficult to perform in a real market setting. Nevertheless, the task must be to determine the market's opinion of the value of a component rather than the cost of that component. Paired data analysis is not covered in this seminar.[6]

2. A second method for determining contributory value is called *allocation*.

> **Allocation.** 1. *The process of separating the contributory value of a component or part of an asset from the total value of the asset.*
>
> 2. *A method of estimating land value in which sales of improved properties are analyzed to establish a typical ratio of land value to total property value and this ratio is applied to the property being appraised or the comparable sale being analyzed.*

In 2.3 Problem, on the next page, the class will work with the method described in the first definition above.

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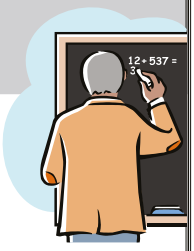
5. These two concepts of contributory value are discussed in detail in *The Appraisal of Real Estate*, 15th ed. Chicago: Appraisal Institute, 2020, P. 51 and 53.
6. Paired data analysis is covered in detail in the following courses: *General Appraiser Sales Comparison Approach* and *Residential Appraiser Sales Comparison*.

2.3 Problem. Principles of Contribution



James B. Good, MAI, has been hired to provide appraisal and consultation services for litigation support. The case involves a high-end residential property that is impaired with construction defects.

The owners purchased an older property in a very desirable neighborhood for $375,000. Their intention was to demolish the existing house and build their dream home on the site. After consultation with their contractor, and upon his advice, they decided to retain the existing slab and a small part of the existing skeletal components. The new house has a completely different design and room layout than the original home and contains two stories where the original home was 1.5 story. The owners equipped the new house with exorbitant designer fixtures and equipment, which involved installing a fully computerized smart home system that controls every other mechanical system, including automatic power window shades. The existing swimming pool was completely refurbished, which included new plaster, paint, and tile. The gourmet kitchen was equipped with commercial grade built-in appliances. While there are a few comparable homes scattered throughout this older neighborhood, the subject home is substantially superior to most surrounding properties.

Besides the original purchase price, the owners spent approximately $600,000 to build the new house and $35,000 to refurbish the existing pool. A new similar pool would cost $48,000.

Upon moving into the home, the owners discovered numerous construction defects and realized that the contractor had failed to apply for an occupancy permit. Upon application, the city denied the occupancy permit. Because of the substantial nature of the defects, the owners were forced to vacate the property.

An analysis by other experts, including an engineering firm and a plumbing firm, resulted in estimates for a cost-to-cure the defects of $1,069,000.

The owners consider the property a total loss and expect to be paid the original purchase price and all the money they have spent to date. They have communicated this to Appraiser Good.

Appraiser Good has been asked to determine damages to the property and provide expert witness testimony to support the lawsuit. He determined that the assignment would require the allocation of value between the components of land and improvements. His analysis resulted in reporting the following opinions:

Value of the whole property as if unimpaired	$ 800,000
Value of the site as if vacant (based on comparable sales)	$ 183,000
Value of the pool (since it is like new)	$ 48,000

2.3 Problem, cont.

1. *Based on the appraiser's analysis, what is the contributory value of the house as if unimpaired?*

2. *What mistake has the appraiser made?*

3. *Are the owner's expectations reasonable?*

Upon further thought, the appraiser decided to conduct a paired data analysis to determine the contributory value of the pool. He has adjusted his opinion as follows:

Value of the whole property as if unimpaired	$ 800,000
Value of the site as if vacant (based on comparable sales)	$ 183,000
Contributory value of the pool	$ 20,000

4. *Based on the appraiser's updated analysis, what is the contributory value of the house as if unimpaired?*

2.3 Problem, cont.

Since the cost-to-cure the defects exceeds the value of the house, the functional obsolescence caused by the defects is incurable. In this jurisdiction, the law requires that damages, if incurable, be based on the diminution in market value of the property. A cost estimate for the demolition of the house is $15,000.

5. *What is the diminution in the market value of the property??*

Note. In this problem, you can see how the mistake on the contributory value of the pool affected the contributory value of the house. This illustrates how one inconsistency in an appraisal can cause subsequent conclusions to be in error.

2.4 Discussion Question

Subsequent to Appraiser Good, in 2.3 Problem, submitting his report, the attorney and all the experts met for the purpose of preparing for depositions. During discussions of the appraiser's opinion, the engineer offered $350,000 for the property as is. While there might be other possible buyers who would be in the same position as the engineer, they do not represent the most likely purchaser for the highest and best use conclusion in this market. Even so, in anticipation of the other side in the case producing a witness who would make a similar offer at trial, the attorney turned to Appraiser Good and asked him how he would respond to such a challenge, since his opinion was that the property was only worth $188,000 as is.

How would you answer this question?

V. Cash Equivalency

A. One of the commonalities between most definitions of market value is that they require or imply that the value opinion be expressed "in terms of cash" or "in terms equivalent to cash."

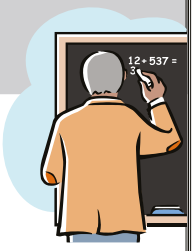
1. If the subject property or a comparable sale received favorable financing or financing with unusual conditions at the time of sale, a cash equivalency analysis is required.

> **Cash equivalency analysis.** *An analytical process in which the sale price of a transaction with nonmarket financing or financing with unusual conditions or incentives is converted into a price expressed in terms of cash or its equivalent.*

2. If a comparable sale received favorable financing, the sale price is not cash equivalent because it was affected by the value of the favorable financing. It would be improper to compare it as an indicator of value for the subject property because that would be inconsistent with the definition of market value, which requires that the opinion of value be cash equivalent. So, before comparison, a cash equivalent sale price must be calculated.

> **Cash-equivalent price.** *The price of a property with nonmarket financing expressed as the price that would have been paid in an all-cash sale.*

2.5 Problem. Cash Equivalency



The appraiser is analyzing a comparable sale that sold two years ago. The sale price was $1,050,000. The seller provided the following financing terms:

- 80% loan-to-value ratio
- 4% annual interest rate
- Amortized over 20 years, with monthly payments.
- Balance due at the end of 5 years

The financing terms match the available market terms except that the market interest rate at the time of sale was 6%. Use the grid provided below to calculate an answer for the following questions.

1. *Is this sale a cash equivalent sale?*

2. *What is the balance due at the end of five years?*

3. *What is the cash equivalent sale price?*

4. *What is the amount of the financing adjustment to be used in the sales comparison approach?*

5. *Is the adjustment positive or negative?*

2.5 Problem, cont.

6. *The net operating income (I_o) produced by this sale is $75,000. Extract a cash equivalent capitalization rate from this sale.*

n	i	PV	PMT	FV
20 g	4 g	840,000 CHS		
5 g				
	6 g			

2.6 Discussion Question

During the process of verification of the comparable sale analyzed in the previous problem, the appraiser interviewed the buyer. The buyer indicated that he paid $60,000 more for the property than he would have paid, save for the favorable financing.

How would this news affect your cash equivalency analysis?

B. Some clients may only accept a paired sales analysis or other market evidence as support for a financing adjustment. The appraiser should confirm that any adjustments made, with precise calculations, conform with market evidence of the appropriateness of the adjustment. This point is made in The *Appraisal of Real Estate*, 15th ed., P. 382.

Financing adjustments derived from precise, mathematical calculations of cash equivalency must be tested against market evidence. Strict mathematical calculations may not reflect market behavior. It is necessary for appraisers to talk with the buyers and sellers to determine if the financing terms affected the price. Market evidence must support the adjustment made. If the cash discount indicated by the calculations is not recognized by buyers and sellers, the adjustment is not justified.

Appraisers should also recognize that in some situations financing and conditions of sale are interdependent, and they should be careful not to double-count the influence of these factors when making quantitative adjustments.

VI. Buyer Motivations

A. Buyer motivations are integral to market value. Most definitions of market value include a statement such as "buyer and seller are typically motivated" or "the buyer is willing to buy, but does not have to buy, and the seller is willing to sell, but does not have to sell."

> It's good to know what he paid, but you gotta know how come he paid it.
>
> —Watson Bowes, MAI, 1953 AIREA President

B. If your investigation reveals that the comparable sale you are considering sold to a buyer who was atypically motivated, for whatever reason, the sale is not consistent with the definition of market value. Likewise, if your investigation reveals that the seller was atypically motivated, the sale is not consistent with the definition of market value.

1. Any sale that occurs with any kind of atypical motivations on the part of either the buyer or the seller cannot be considered reflective of market value because the sale is inconsistent with the very definition.

2. That sale would not be meaningful in a market value appraisal unless the appraiser is able to derive market support for a conditions of sale adjustment for the atypical motivations. Interviews with the market participants would be the place to start.

2.7 Discussion Question

An appraiser is considering the sale of a vacant commercial site for use as a comparable sale. The sale occurred one year ago. The site is situated in a small commercial development located at the corner of an interchange of two interstate highways. When the appraiser goes to view the site, he notices that it now has a parking lot constructed on it that appears to be incorporated into the site plan of the adjacent hotel. He decides to go in and see if the hotel owner or manager is available for an interview.

The manager connected the appraiser with the owner who indicated that soon after building the hotel, he realized that his lack of parking space for trucks, RVs, and vehicles with trailers was hurting his business. When the adjacent site was listed for sale, he immediately purchased it for that purpose. He thinks he may have paid a small premium because he paid list price without any attempt to negotiate. He further admits that he would have been willing to pay even more because of his need for additional parking space.

The appraiser recognizes that this sale represents an assemblage, but based on his other research, it appears to have sold at near market levels. Because of its similarity to the subject property, he decides that it is relevant as a comparable sale in his appraisal.

Is this sale relevant for direct comparison analysis in this appraisal?

2.7 Discussion Question, cont.

Note. If an appraiser is appraising in a market with limited sales, a good source of help is the Appraisal Institute's Guide Note 11: Comparable Selection in a Declining Market. It discusses limited data situations and poorly performing markets.

Consistency with the definition of market value is imperative in every market value appraisal. Sometimes appraisers state the definition of value they are developing and then do something later in the analysis that is completely inconsistent with that definition. Appraisers should ask this question at every step of the appraisal process: "Is what I'm doing here consistent with the definition of value I am developing?"

Review Part 2

Learning Objectives

Now that you've completed Part 2, you should be able to

- ☑ Understand what the term *the market* means.
- ☑ Recognize the difference between market value and other types of value.
- ☑ Understand the principle of contribution.
- ☑ Work with cash equivalency.
- ☑ Recognize the importance of buyer motivations.

Terms and Concepts to Remember

Allocation	Investment value	Value
Cash equivalency analysis	Market value	Value in use
Cash-equivalent price	Principle of contribution	Use value
Contributory value		

Recommended Resources

The Appraisal of Real Estate, 15th ed. Chicago: Appraisal Institute, 2020, Chapter 6, P. 47–50, 53–54.

Part 3 Preview

Highest and Best Use

In Part 3, the topic moves to the importance of consistency with highest and best use. The class will discuss highest and best use analysis and the proper reporting of highest and best use. Interim use and the theory of consistent use will also be covered.

Learning Objectives

To prepare for Part 3, read the following learning objectives and refer back to them as you study this part of the handbook.

- ☐ Recognize the methodical steps of highest and best use analysis.
- ☐ Understand the proper reporting of highest and best use.
- ☐ Recognize how highest and best use drives comparable sale selection.
- ☐ Understand interim use.
- ☐ Recognize the importance of the theory of consistent use.

Learning Tips

You will notice as you as you go through the course that referring to the definitions can be helpful as you answer the discussion questions and work the problems.

Part 3.
Highest and Best Use

This course does not extensively cover the concept of highest and best use. Part 3 begins with a brief overview and focuses on consistency issues with highest and best use. A comprehensive discussion of highest and best use can be found in The Appraisal of Real Estate, 15th ed., and in Appraisal Institute courses and seminars.

Highest and best use is the foundation on which the appraisal is built. Once determined, highest and best use drives the remainder of the appraisal process, so the remainder of the process must be utterly consistent with the highest and best use conclusion. If the highest and best use determination is wrong, virtually everything after it will also be wrong.

I. Definition

The concept of highest and best use is so important to the development of an opinion of market value that the definition is one that every appraiser should be able to quote from memory. It is critical that consistency with this definition be maintained throughout the appraisal process.

> **Highest and best use.** *The reasonably probable use of property that results in the highest value. The four criteria that the highest and best use must meet are legal permissibility, physical possibility, financial feasibility, and maximum productivity.*

The phrase "reasonably probable" has caused debate in the industry as to the exact meaning of the term. Some consensus has formed around the idea that a particular use would have to meet the first three criteria – legal permissibility, physical possibility, and financial feasibility – for the use to be considered as reasonably probable.

The fifth edition of *The Dictionary of Real Estate Appraisal* also contained the following definition of highest and best use:

"Alternatively, the probable use of land or improved property – specific with respect to the user and timing of the use – that is adequately supported and results in the highest present value." According to *The Appraisal of Real Estate*, 15th ed., P. 306, debate continued for some time over terms in the earlier definitions.

II. Highest and Best Use Analysis

A. Sometimes the highest and best use of a property is obvious and requires little analysis. An example would be a vacant industrial site located in the middle of a

large industrial development that is 80% developed and is experiencing current, active, and ongoing construction of new industrial buildings. Even in these situations, the "what" and "when" parts of highest and best use may be obvious, but the "who" (most likely purchaser/user) may not be.

B. Sometimes the highest and best use is not obvious, and the existing improvements are not necessarily a clue to the real highest and best use of the property. The truth is that there is a lot of land out there that is not improved to its highest and best use. In this instance, the process for determining the highest and best use of the property is not a guessing game: it is a process of elimination. The process is one of testing different uses, all of which meet the criteria of legal permissibility, physical possibility, and financial feasibility, to determine which use is maximally productive.

C. The first concern for consistency with the highest and best use conclusion is the necessity to follow a consistent and methodical process to arrive at the conclusion. It is imperative that the highest and best use conclusion be well supported in any appraisal, and market analysis is the support that is needed. A detailed highest and best use analysis entails an eight-step process. The first six steps replicate the six-step process of market analysis. Therefore, the proper application of the eight steps results in a market and marketability analysis that should provide adequate support for the highest and best use conclusion.

It is beyond the scope of this seminar to thoroughly cover each step of this eight-step process, but it is included, for your reference, in the figure below.[7]

3.1 Figure. Eight Steps of the Highest and Best Use Analysis Process

Step 1.	Property productivity analysis	Analyze property productivity attributes (site, legal, and location) to eliminate uses and determine most probable uses	▪ Physical possibility ▪ Legal permissibility
Step 2.	Delineate the market	Perform market studies to determine the economic demand and timing for probable alternative uses	Data required for analysis of financial feasibility
Step 3.	Demand analysis		
Step 4.	Supply analysis		
Step 5.	Residual demand analysis		
Step 6.	Subject capture analysis	Perform marketability analysis	
Step 7.	Financial analysis of alternative uses	Complete a financial analysis of alternative land uses to determine which use has the highest residual land value	Financial feasibility
Step 8.	Highest and best use conclusions	Perform highest and best use reconciliation and draw conclusions ▪ Use ▪ Timing ▪ Market participants – Users of space – Most probable buyer type	Maximum productivity

7. This figure was excerpted from *The Appraisal of Real Estate,* 15th ed. Chicago: Appraisal Institute, 2020, P. 318.

III. Proper Reporting of Highest and Best Use

What some appraisers fail to recognize, and indeed some appraisal forms do not acknowledge, is that the concept of highest and best use involves more than just "use." The questions of timing and the most likely user/buyer must also be addressed. To be thoroughly consistent with the concept of highest and best use, basically four things must be determined and reported:

- Highest and best use of the land as though vacant
- Highest and best use as improved
- Timing of the use
- Most likely user/buyer

A. Determining the highest and best use of the land as though vacant, and available for development, involves analyzing various uses that are reasonably probable in the market. This process can entail substantial research and analysis as can be seen in the 3.1 Table.

B. Determining the highest and best use as improved is somewhat less involved. It is simply a matter of determining if the existing improvements continue to add any contributory value. If the improvements still add value, the highest and best use as improved is its existing use.

1. In some cases, further analysis may be required. If demolition is ruled out, the highest and best use question then becomes whether changes to the property (conversion, renovation, or alteration) are necessary to achieve its true highest and best use as improved.

2. Additional investment in the property may provide a greater return (through enhanced property value) than is already provided by the property.

3. In arriving at the highest and best use conclusion for an improved property, the analyst must consider the following possibilities (collectively referred to as CRA):

   a. **C**onversion of the property to alternative use

   b. **R**enovation of the space

   c. **A**lteration of the property

4. In order for a CRA to be financially feasible, it must add at least as much value to the property as it costs (including entrepreneurial incentive).

C. The timing of the use is supported by the results yielded in Step 5, Residual Demand Analysis.

D. The motivation of the user/buyer will be discussed under Roman numeral IV.

IV. Comparable Sales Selection

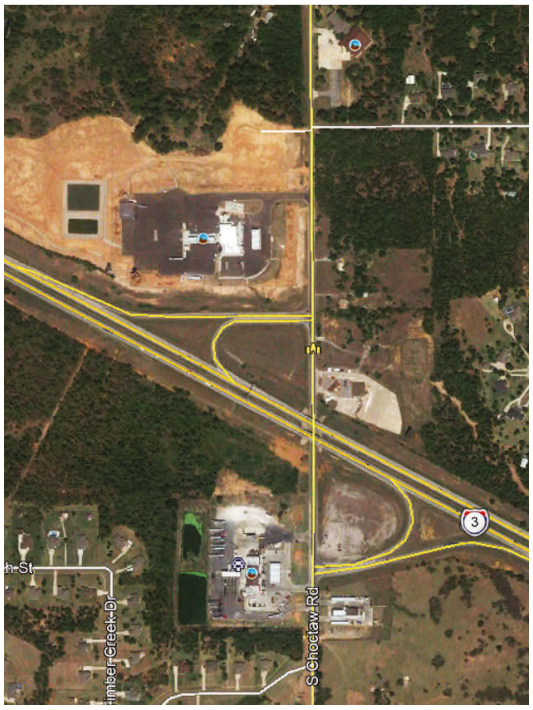
A. Obviously, the highest and best use determination drives the selection of comparable sales. It is not overstated to say that the comparable sales selected must be consistent with the highest and best use, which is the most important criteria for consistency. This seems to be clearly understood by appraisers when appraising an improved property. No appraiser is likely to compare an auto repair garage with a big box store.

B. Inconsistencies with highest and best use most often occur with the appraisal of vacant land.

1. The rules are not suspended, however, when appraising vacant land. Highest and best use of vacant land still needs to be the same or similar.

2. An overgeneralized determination of highest and best use does not excuse comparing the subject property to sales of vacant land that were sold for a different highest and best use. For example, determining the highest and best use of a vacant site to be *commercial* does not open the door for comparing it to sales that occurred for any type of commercial use.

3.2 Discussion Questions. Comparable Sales Selection



The subject property is a newly constructed national brand travel/truck stop located on the interstate coming into a major metroplex. The interchange is being redesigned by the Department of Transportation. It is necessary for the DOT to acquire a small strip of land from the travel/truck stop property. The subject interchange is outside city limits and city utilities are not available, requiring water wells and sewer lagoons. Another truck stop is located across the interstate. The other two corners at this interchange are vacant, and there are no frontage roads along this section of the interstate. It is stipulated by both sides that the improvements are unaffected, so the value of the land is the issue.

You have been hired by the DOT to provide appraisal and consultation services in support of condemnation litigation. You are reviewing the appraisal submitted by the appraiser hired by the opposing side. He determined the highest and best use of the subject land as if vacant to be "highway commercial." He selected and used five comparable sales of vacant land to compare to the subject land in the sales comparison approach.

You notice that the sales chosen by the opposing appraiser produced a rather wide range in prices, and you decide to investigate them further. All of his sales occurred within the previous two years and were vacant at the time of sale. All are located adjacent to interstate highways at major interchanges, and all have a full complement of city utilities available to the sites.

Your research of his sales further reveals the following:

- Sale 1 was purchased for the construction of a multitenant office building.
- Sale 2 was purchased for the construction of a retail strip center and is surrounded by high density retail along the frontage road.
- Sale 3 was purchased for the construction of a hospital.
- Sale 4 is substantially larger and was purchased for the construction of a mixed-use retail center with live-above apartments and office center.
- Sale 5 was purchased by a speculative investor who has no plans for development.

3.2 Discussion Questions, cont.

1. *Could all these sales be considered as being purchased for a "highway commercial" use?*

2. *Which sales are meaningful for valuing the subject property?*

3. The 3.2 Discussion Question clearly shows that an investigation into buyer motivations is not only important for aiding the appraiser in staying consistent with the definition of market value, but it is also important for helping the appraiser stay consistent with the definition and principle of highest and best use.

   a. This information is obtained during the process of sale verification and likely requires the appraiser to interview the buyer or someone with intimate knowledge of the transaction. As you know, the appraiser is supposed to verify the comparable sales.

   b. Some appraisal texts opine on making an adjustment to allow for different uses between the comparable sales and the subject property. The likelihood of finding market support for these adjustments – even in large active markets, let alone small or rural markets – is, however, suspect.

   c. Some appraisers choose to live by a simpler, more binary, rule:

      If the comparable sales selected for direct comparison in the sales comparison approach are not the same highest and best use as the subject property, the appraiser is valuing the wrong thing. It really is that simple.

      This is a good rule, but appraisers who routinely appraise in limited markets may find it hard to live by.

V. Interim Use

A. As previously discussed, it is quite possible, especially in a market that is transitioning, that the highest and best use as though vacant could be different from the highest and best use as improved.

   If the highest and best use of the land as though vacant is different from the highest and best use of the property as improved, but the timing of that use is ***not*** now, an **interim use** is created.

> **Interim use.** *The temporary use to which a site or improved property is put until a different use becomes maximally productive.*

B. The highest and best use of any property is always the use that returns the highest value to the land, assuming the use meets the three previous criteria of being physically possible, legally permissible, and financially feasible. The ***land*** is the controlling component of value for the determination of highest and best use. This often misunderstood fact sometimes leads appraisers to inconsistency in their treatment, or lack thereof, of interim use.

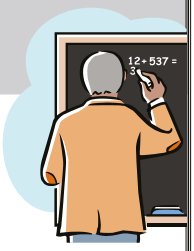
1. Once the value of the land as though vacant exceeds the value of the property as improved less the cost to demolish the existing improvements, the highest and best use is to demolish the existing improvements and redevelop the land to its highest and best use.

2. Timing is an issue here, and *present value* could enter the equation. If the timing of the use under consideration is in the future, the forecasted value must be discounted to present value. Then, the same rule applies. If the present value of the land under that use exceeds the value as improved less the cost to demolish the existing improvements, the highest and best use is that use, and the improvements represent an *interim use,* until the timing for the highest and best use is current.

3. Besides economic or value reasons, highest and best use could be delayed for legal reasons (i.e., it will take five years to get the property replanned, rezoned, and entitled) or physical reasons (i.e., sewer will not be available for a time). In summary, the highest and best use could possibly be delayed for physical, legal, or economic reasons. The same process would be appropriate for any of these reasons.

   Let's see this process in action by working the 3.3 Problem.

3.3 Problem. Interim Use



The subject property is an auto tire store located on a five-acre tract along the highway. The current use represents an underimprovement for the five-acre site and is a legal nonconforming use because the tract's zoning was changed two years ago to multiunit residential at a density of 10 units per acre. The appraiser conducted a Level C market analysis. The current use could remain in operation pending a future change in highest and best use. It generates $40,000 net operating income (I_O). Similar tire stores in the market typically sell at a 10% capitalization rate. Taxes and insurance run $6,000 per year for the property.

The subject land if vacant would be worth $9,000 per buildable unit today for multiunit residential use.

Office use has been expanding in this market, and a residual demand analysis indicates a timing of 5 years for that use to reach the subject property. At that time, the subject property would be worth $4 per square foot if vacant for office use.

Traffic has been increasing in front of the subject property, and multiunit retail use has also been expanding along the highway. The timing for multiunit retail use is determined to be 7 years, and the appraiser forecasts the land would be worth $5.50 per square foot if vacant at that time.

It is likely that zoning could be changed for office or multiunit retail use. An estimate to demolish the subject building is $25,000, and cost is not expected to change over the next 7 years. A 15% discount rate is appropriate for all uses.

1. *What is the highest and best use of the land as though vacant?*

n	i	PV	PMT	FV
5	15		-6,000	871,200

3.3 Problem, cont.

n	i	PV	PMT	FV
7	15		-6,000	1,197,900

2. *Is the auto tire store an interim use?*

3. *What is the current value of the property as improved?*

n	i	PV	PMT	FV
7	15		40,000	1,172,900

3.3 Problem, cont.

4. *How does the answer to Question 3 affect the HBU decision?*

VI. Theory of Consistent Use

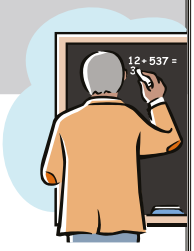
A. When valuing land as if vacant, appraisers must be aware of the theory of consistent use. This is most often an issue when appraising in markets in transition or when the subject property involves an interim use.

> **Consistent use.** *The concept that land cannot be valued on the basis of one use while the improvements are valued on the basis of another use; most often an issue for interim or transitional uses of land. For example, a property in transition from one use to another cannot be valued on the basis of one immediate use for land and another use for improvements because to do so would be inconsistent with elements of valuation. The improvements must enhance the value of the land. A dwelling that may have many years of remaining life for residential use could not possibly enhance the value of the land for which the immediate higher use would be a service station.*

B. Virtually, every city has a street that through the years has become a major arterial. Historically, it was developed with single-unit residential improvements, but it has transitioned to commercial to the extent that most of the homes have been converted to small service-oriented or professional type businesses such as insurance agencies, CPA offices, dentist offices, etc. The conversions are often fairly simple and inexpensive with the living room becoming the reception area, the bedrooms becoming individual offices or exam rooms, and the kitchen becoming the copier and break room or lab.

For the remaining residences that have not been converted, interim use becomes an issue, and consequently, so does the theory of consistent use.

3.4 Problem. Consistent Use: Residential Property



A Certified General Appraiser receives an assignment to appraise a residential property located on a busy street. As is her custom, she pulls the assessor data on the subject property from the assessor's website. Then she downloads some similar sales from the local multi-list service so she can do some preliminary analysis before going to view the subject property.

Based on her preliminary analysis, she expects the subject property will appraise for around $200,000. Her analysis of vacant residential site sales indicates that if the subject site were vacant, it would be worth about $40,000:

1. *Based on her preliminary analysis, what is the contributory value of the house?*

During her field trip to view the subject property and the surrounding market area, she takes note that many of the residential properties on the subject street have been converted to commercial use. Upon returning to the office, she researches vacant commercial site sales in the area and along the subject street. As a result of this research, she determines the highest and best use of the subject site is commercial office use and its value as if vacant is $150,000.

Based on this new determination of highest and best use of the site, she concludes the value of the subject property is $310,000 ($150,000 site value + $160,000 improvement value).

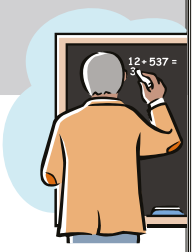
2. *Is her value conclusion correct? If not, why?*

3.4 Problem, cont.

After reviewing her appraisal, the bank decides to hire a different appraiser to conduct a field review. The reviewer agrees with her site value, of $150,000, and her determination of highest and best use, as if vacant, but disagrees with her final value opinion. The reviewer identifies her own comparable sales, using sales of houses along this street that had been converted to commercial office use before the sale. Her final opinion of value for the property is $215,000.

3. *Based on the reviewer's reported value, what is the contributory value of the house?*

3.5 Problem. Consistent Use: Agricultural Tract with House



An appraiser received an assignment to appraise a 160-acre agricultural tract that is improved with older farmstead improvements that have been well maintained over the years. The two-story house is currently occupied and is in good condition. The property is remotely located and is 20 miles from the nearest small town and 50 miles from the nearest major city.

The appraiser's research has identified numerous comparable sales that compare well with the subject property as if vacant. No sales have been found that are similarly improved. With seemingly no way to value the subject house, the appraiser decides to research the nearest small town, which is 20 miles away. She finds three similar houses on lots that have recently sold. Using the process of allocation, she extracts the contributory value of these houses and reconciles to a value of $55,000.

The comparable sales of vacant agricultural land indicate a value of $2,000 per acre for the land to which she adds the $55,000, market-derived contributory value of the house. Her final value opinion is thus: $320,000 + $55,000 = $375,000.

1. *Is there an inconsistency in her analysis? If so, what?*

3.5 Problem, cont.

2. *How should she have solved this problem?*

C. Contributory value of Improvements

In the analysis of real estate, everything begins with the land. With few exceptions, land must always be appraised based on its highest and best use, regardless of how it is improved. The value of any buildings located on the land are analyzed for their contributory value to the land in the context of the highest and best use of that land.

1. Improvements that do not conform to the highest and best use of the land can contribute a smaller or larger value to the land, depending on intensity of use.

2. The value added or lost is usually associated with the improvements and not the land. After all, it is the improvements that are nonconforming.

    a. Nonconforming improvements can contribute a positive contributory value, no value at all, or even a negative value if substantial costs are necessary for their demolition.

    b. Possible exceptions include the case where a historic preservation easement precludes demolition or expansion of existing improvements. In that case, the land value could be based on the use as improved. This issue also arises in some ground use reset assignments, property tax appraisals, and possibly other matters.

3. It is imperative, once a conclusion of highest and best use is reached, that the appraiser remain utterly consistent with that use throughout the remainder of the appraisal process. That consistency begins with the knowledge that highest and best use is much more about the land than the improvements.

> Children are unpredictable. You never know what inconsistency they are going to catch you in next.

—Henry Ward Beecher

Review Part 3

Learning Objectives

Now that you've completed Part 3, you should be able to

- ☑ Recognize the methodical steps of highest and best use analysis.
- ☑ Understand the proper reporting of highest and best use.
- ☑ Recognize how highest and best use drives comparable sale selection.
- ☑ Understand interim use.
- ☑ Realize the importance of the theory of consistent use.

Terms and Concepts to Remember

Consistent use Highest and best use Interim use

Recommended Resources

The Appraisal of Real Estate, 15th ed. Chicago: Appraisal Institute, 2020.

Section 2

2

Part 4. The Three Approaches

Part 5. Functional and External Obsolescence

Part 6. Reconciliation

Part 4 Preview

The Three Approaches

In Part 4, the importance of consistency within and between the three approaches to value will be the main topic. The class will cover all three approaches and discuss how an inconsistency in one approach can possibly affect another. The importance of consistency between each of the approaches will also be covered.

Learning Objectives

To prepare for Part 4, read the following learning objectives and refer back to them as you study this part of the handbook.

- ☐ Understand the necessity of consistency within each of the approaches to value.
- ☐ Recognize consistency issues in the sales comparison approach.
- ☐ Recognize consistency issues in the income capitalization approach.
- ☐ Recognize consistency issues in the cost approach.
- ☐ Understand the importance of consistency between the approaches.

Learning Tips

Reviewing the basic steps of each of the three approaches will help you understand the problems that inconsistences can cause.

Part 4.
The Three Approaches

There must be consistency within each approach and between the three approaches. It is impossible to reconcile to a final value conclusion if there is inconsistency between the values developed by each of the approaches.

I. Consistency Within the Approaches

We have already established that with each approach, the appraiser must always develop a value that is consistent with the definition of market value and consistent with the highest and best use determined for the subject property. Other inconsistencies, however, can also find their way into the three approaches to value.

A. Sales comparison approach

The sales comparison approach is the most commonly used of the three approaches. It is almost always applicable and with proper development can produce highly accurate results.

There must, however, be utter consistency in the analysis of the subject property and the comparable sales. The comparable sales must be analyzed in the same way the subject property is analyzed. For example, gross building areas should be obtained by using the same measuring techniques. Complying with a standard of measurement, such as the BOMA standard, can ensure consistency in building size comparisons.

1. Adjustments

Inconsistency in the proper application of adjustments, especially the transactional adjustments, can cause a substantial error in the value indication. Transactional adjustments are generally applied in the following sequence and should be subtotaled between each adjustment with the subsequent adjustment applied to the previous subtotal:

a. Real property rights conveyed

b. Financing terms

c. Conditions of sale

d. Expenditures made immediately after purchase

e. Market conditions

Property adjustments can be made in any order, and they are cumulative. Property adjustments are property specific and can include any feature or characteristic to which the market reacts. Typically, they will include the following at a minimum:

f. Location

g. Physical characteristics

h. Economic characteristics

i. Non-realty components

2. Elements of comparison

   Aside from the typical elements of comparison, for which adjustments are made, the comparable sales should be as similar as possible in the following:

   a. Highest and best use

   b. Occupancy

   c. Property type

   d. Appeal: Comparable sales should appeal to the same market segment as the subject property appeals.

3. Property type and occupancy

   Consistency in identifying the property type for comparison purposes is essential to proper development of the sales comparison approach.

   a. Occupancy is an important comparison, but it is not determinate for identifying the property type. In fact, it can mislead the appraiser in either direction. For example, a building originally built and designed for use as a fast-food restaurant, but which is now occupied by a florist, most likely would no longer be considered a fast-food restaurant for comparison purposes, depending on the results of market analysis and the marketability study. On the other hand, a bay in a strip shopping center that is currently occupied by a religious congregation is not a church; it is still a bay in a strip shopping center.

   b. Consideration of how a property would be offered on the market and to what kind of buyer it would appeal can aid in properly identifying the property type to be appraised. It can also aid in identifying appropriate comparable sales.

4. Comparable sales selection

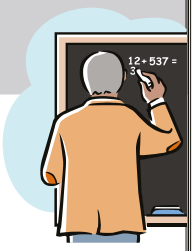
    a. With any type of comparison analysis, a common refrain is often heard about the importance of comparing "apples to apples." This is true for the sales comparison approach. The key word in the phrase *comparable sales* is the word *comparable*. If there are no sales that are truly comparable to the subject property, the approach will produce unreliable results and should not be forced.

    b. This is most often true when appraising special use or special purpose properties that are developed to their highest and best use. Because of their uniqueness, the cost approach may be the most reliable approach if it is properly developed. The cost approach, however, is also subject to abuse in these cases, and it can produce an inflated value if the appraiser is not diligent in its development.

    c. Even with property types that regularly exchange in the market, the selection of appropriate comparable sales is critical to the sales comparison approach. The basic idea is to identify the most similar, most proximate, and most recent sales available. All three are important.

        Note. Sometimes sales that are very recent and proximate must be given no weight because their analysis reveals that the sales are too dissimilar and, therefore, not meaningful as a comparable sale.

4.1 Problem. Comparable Sales Selection



The subject property is a 0.75-acre site located at the corner of an interstate highway and a major arterial street at the edge of a metropolitan area. The subject property has a newly constructed building equipped for use as a sports bar/grille that never opened for business. The building has no windows and no back door, which would preclude it from receiving an occupancy permit. There is also a small A-frame storage building on the property.

The property has single point access requiring ingress and egress via the same drive. There is also a pipeline easement that transects the subject property diagonally. This easement contains two parallel 30" transport pipelines and prohibits the building of any permanent structures within the easement area. The existing buildings have been positioned to avoid the easement.

The Department of Transportation is improving this intersection, which requires the total acquisition of this small property because the single point access drive will be taken.

There are no improved comparable sales in this market that compare to this newly constructed building that does not qualify for an occupancy permit. This will necessitate the development of the cost approach to value the building. Obviously, some consideration will have to be given to functional obsolescence. The sales comparison approach will be used to value the land. Only one vacant land sale has occurred at this intersection in the past 10 years. Adequate numbers of similar vacant land sales have occurred at other similar intersections.

4.1 Problem, cont.

The 4-acre tract adjacent to the east sold one year ago for the purpose of developing it to a large convenience store with 48 fuel dispensers. This vacant site sold for $10 per square foot. Construction is complete, and the convenience store is fully operating as of the date of take. It is unaffected by a pipeline easement or the highway project.

1. *Is the sale of the adjacent property appropriate for use as a comparable sale for the subject property?*

4.1 Problem, cont.

Note. 4.1 Problem is based on an actual case from the seminar developer's files. There were four appraisers involved in this case from the acquisition phase to the condemnation trial, several of which used the adjacent site as a comparable sale in their appraisal. The jury easily grasped the inappropriateness of this sale when it was explained to them.

5. Review of sales comparison approach

   When developing the sales comparison approach, an appraiser should be particularly alert to possible inconsistencies in the following areas:

   a. Applying adjustments

   b. Identifying appropriate elements of comparison from the market

   c. Identifying the property type to be appraised

   d. Identifying and choosing appropriate comparable sales

      Even though it's not an exhaustive list, inconsistency in any of these areas can cause a fatal flaw in the value indicated by the sales comparison approach.

B. Income capitalization approach

Many inconsistencies commonly found in the income capitalization approach revolve around the development of the capitalization rate and conclusions that are inconsistent with the data presented. The income capitalization approach is highly sensitive to incomes and capitalization rates. Consistency is paramount.

1. Consistency in analysis

   The income stream of the subject property must be analyzed in exactly the same way that the income streams of the comparable sales are analyzed. It is not uncommon to find one of the following inconsistencies in appraisal reports:

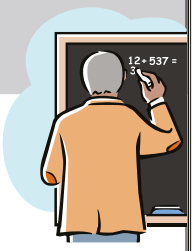
   a. Analyzing income from different years. For example, analyzing income projected for next year for the subject property, but analyzing the income from the year previous to its sale for a comparable sale.

   b. Subtracting last year's taxes as an expense, while basing income on a projection for the next year. There is a way to calculate next year's taxes.

   c. Inconsistency in itemized expenses between the subject property and the comparable sales. For example, expensing reserves for replacements as an above-the-line expense for the subject property, but not deducting it for the comparable sales.

   Any one of these inconsistencies can impact extracted capitalization rates and ultimately substantially impact the value indication provided by the income capitalization approach.

4.2 Problem. Income Analysis



The appraiser's research of the local market indicates that market participants typically subtract reserves for replacements as an above-the-line expense in their income statements. He follows this market convention when he develops the standardized income statement for the subject property. To be consistent, he develops the standardized income statements for each of the comparable sales in the same way. He finishes his report and submits it to his client, who is the property owner.

Two days later, he receives a call from his client who says he never subtracts reserves for replacements on his income statement. He just pays for replacements when they occur out of operating income. He asks the appraiser to remove this line-item expense from the income analysis and resubmit his report.

To keep his client happy, the appraiser complies with the request. Removing this expense increases the net operating income, which, consequently, increases the value indication by the income capitalization approach. He resubmits the report, and the client is happy with the value increase.

1. *Has the appraiser committed an error?*

2. *What did he do wrong? What should he have done?*

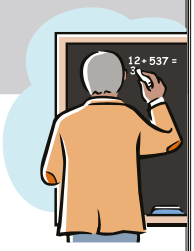
4.2 Problem, cont.

3. *If the appraiser had applied the correct methodology, the value would be the same. What would be different?*

2. Consistency with the data

   The capitalization rate used in the income capitalization approach must be consistent with the data collected and analyzed during the appraisal process. The preferred method for developing a capitalization rate is extraction from the comparable sales. This involves the process of reconciliation. Reconciliation is *not* averaging or statistical analysis.

4.3 Problem. Extracting a Capitalization Rate



The subject property is a multiunit residential property located in one of several suburbs of a large metropolitan city. There are 150 units, which is considered medium sized in this market. The property is within walking distance of a large public lake featuring numerous public recreation areas. The city/suburb is desirable in this market and is known for an excellent public school system.

To help facilitate analysis, the appraiser summarized four sales comparable to the subject property in a grid. The sales bracket the subject property in size (number of units) with Sale 4 being the largest.

	Subject Property	Sale 1	Sale 2	Sale 3	Sale 4
Sale price ($)		14,400,000	15,800,000	18,000,000	22,800,000
R_O (%)		6.5	5.7	6.0	7.9
OER (%)	45.7	50.5	45.2	45.0	55.0
Physical land-to-bldg. ratio	2.0:1	1.9:1	3.0:1	2.0:1	1.9:1

- Sale 1 is across the street from the subject property but in a different suburb. This city/suburb initiated rent controls two years prior to this sale.
- Sale 2 is in the same city/suburb as the subject property and is within walking distance of the same lake. It has surplus land, and the new owner is planning to add additional units to the property.
- Sale 3 is also in the same city/suburb as the subject property and is within walking distance to the same lake. Data is hard to obtain on this sale, and no income or expense history is available. The appraiser estimated the income and expenses for analysis, meaning the data quality is low on this sale.
- Sale 4 is also in the same city/suburb as the subject property but farther from the lake. This sale is in a less desirable area that exhibits some indications of decline. The market has increased since the sale took place, which was over two years ago.

4.3 Problem, cont.

1. *After analyzing the data, the appraiser settled on an R_O of 6.5, which is a simple average of the capitalization rates, as appropriate for applying to the subject property. Is there an inconsistency in this approach?*

2. *Perform a reconciliation of the data to produce a range in which a capitalization rate appropriate for the subject property should fall. Indicate in the grid below whether the subject property's capitalization rate should be lower or higher.*

	Subject Property	**Sale 1**	**Sale 2**	**Sale 3**	**Sale 4**
Sale price ($)		14,400,000	15,800,000	18,000,000	22,800,000
R_O (%)		6.5	5.7	6.0	7.9
OER (%)	45.7	50.5	45.2	45.5	55.0
Physical land-to-bldg. ratio	2.0:1	1.9:1	3.0:1	2.0:1	1.9:1
The subject property's capitalization rate should be either:	***Lower, Same as, or Higher***				

4.3 Problem, cont.

3. *State a brief reason for your reconciliation decision for each sale.*

4.3 Problem, cont.

4. *If the subject property has an I_0 projected to be $900,000 for the upcoming year, how much difference did the appraiser's improper reconciliation make in the value indication?*

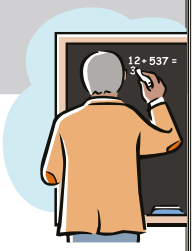
3. Consistency with financing terms

   a. The capitalization rate used must be consistent with prevailing mortgage terms. Underwriters will regularly test the capitalization rate used by applying a process often referred to as the *underwriter's method.* Thus, the method is a useful tool for appraisers to test the reasonableness of the capitalization rate used to value the subject property or a capitalization rate extracted from a comparable sale.

> **Underwriter's method.** *Calculation of an overall capitalization rate (R_O) using a debt-coverage ratio,* loan-to-value ratio, and mortgage constant. Note that values for each of these variables can be acquired from a lender.[8]

8. The italicized words were taken from *The Dictionary of Real Estate Appraisal*, 6th ed. The words in Roman type were added by the course developer.

4.4 Problem. Underwriter's Method



The subject property is a stabilized multitenant office building in good condition. The appraiser has extracted a capitalization rate of 8.8% from comparable sales but wants to test the capitalization rate for reasonableness.

The appraiser called his friend at First State Bank and was told the following commercial loan terms were available:

- 80% loan-to-value ratio (*M*)
- 6% annual interest rate (*i*)
- Amortized over 20 years with monthly payments.
- Due in 5 years
- 0.08597 mortgage constant (R_M)
- 1.20 debt coverage ratio (*DCR*)

1. *What is the indicated capitalization rate based on the underwriter's method?*

$$R_O = (M \times R_M \times DCR)$$

2. *Is the extracted capitalization rate of 8.8% reasonable based on the underwriters method?*

4.4 Problem, cont.

3. *Is there an inconsistency here?*

4. *Why is the capitalization rate indicated by the underwriter's method lower than the one extracted from comparable sales?*

4.4 Problem, cont.

5. *What is the implied equity capitalization rate based on the overall capitalization rate yielded by the underwriter's method?*

4.4 Problem, cont.

6. *What is the implied equity capitalization rate based on the market-extracted capitalization rate?*

4.4 Problem, cont.

7. *Should the appraiser ever rely solely on the underwriter's method to develop a capitalization rate??*

8. *What is the last problem with this scenario?*

b. The band of investment is another method for testing the reasonableness of capitalization rates extracted from the market for consistency with prevailing mortgage terms. It is the method most often used by appraisers. As with the underwriter's method, it would be unwise in most cases to use it exclusively to develop the capitalization rate. Using it exclusively would be inconsistent with the income capitalization approach methodology because it would ignore the sales data collected in the appraisal process. Market extraction is, by far, the most reliable method of developing a capitalization rate.

4. Consistency with property taxes

   a. Inconsistency with the treatment of property taxes may be the most prevalent inconsistency found in appraisal reports. The following inconsistencies can have a profound effect on the value opinion produced by the income capitalization approach:

      - Using last year's taxes and last year's income
      - Using last year's taxes and next year's income

   b. Since the income capitalization approach is forward looking, it is imperative that the income analysis be performed by projecting next year's income and next year's taxes. This is true regardless of how the relative jurisdiction treats the reassessment of property taxes and regardless of whether the subject property is under contract of sale.

      - The benefit of low property taxes accrues to the current owner, not to the real estate. Because market value presumes a sale, property taxes shown on an operating statement must reflect the taxes a new owner will expect to pay, not those the current owner pays.

   c. The valuation problem is circular in that the anticipated property taxes are a function of the value conclusion, and the value conclusion is a function of the anticipated property taxes. Loading the capitalization rate with the effective tax rate allows the arithmetic solution of this problem.

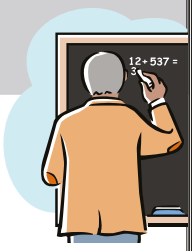
      The effective tax rate is the actual taxes divided by the market value.

      Effective tax rate = Property taxes / Market value

4.5 Table. Technique for Loading the Capitalization Rate

Steps	
1	Calculate the effective tax rate as a percent of market value.
2	Calculate the property's net operating income *without* deducting property taxes as an expense.
3	Add the reconciled overall capitalization rate to the effective tax rate.
4	Apply this loaded capitalization rate to the net operating income that *exclude*s a deduction for property taxes. This provides the property's market value.
5	Multiply the tax rate times the property's market value to get the estimate of property taxes.
6	Calculate the net operating income *including* taxes to complete the operating statement.

4.6 Problem. Consistency with Taxes



A county assessor proposed that in addition to reassessing properties every three years, reassessment would also occur upon sale and be based on sale price if the transaction represents market value.

If the effective property tax rate is 1.014%, and the reconciled overall capitalization rate appropriate for the property is 7.25% with replacement allowances implicit in the rate; what are the hypothetical property taxes and the property's value under this proposal? Use the operating statement below.

	$
Total *PGI*	440,000
Vacancy and collection loss	– 35,200
EGI	404,800
Current property taxes	22,040
Insurance	6,000
Variable expenses	143,214
Replacement allowances	0

4.6 Problem, cont.

C. Cost approach

1. Of the three approaches to value, the cost approach may be the most misunderstood by some appraisers. It seems like a simple approach, but it has been the subject of many myths through the years, which has caused some appraisers to have a foggy perception of it. Of course, the subject of depreciation is deep, and the input into the cost approach is sometimes difficult to support. The topics of functional and external obsolescence are sufficiently complex to have their own sections in this seminar.

The cost approach requires many steps, which makes it susceptible to the inconsistency creeping into even the process. The figure below outlines the many steps in the cost approach.[9]

4.7 Figure. Classic Cost Approach Analysis

Estimated cost new (replacement cost or reproduction cost)			
Direct costs		_____	
Indirect costs		_____	
Entrepreneurial incentive (or profit)		_____	
Subtotal			_____
Less: Depreciation			
Physical deterioration			
Deferred maintenance	_____		
Incurable short-lived items	_____		
Incurable long-lived items	_____		
Subtotal	_____		
Functional obsolescence			
Curable			
Item 1	_____		
Item 2	_____		
. . .	_____		
Incurable			
Item 1	_____		
Item 2	_____		
. . .	_____		
Subtotal		_____	
External obsolescence			
Location	_____		
Market	_____		
Subtotal		_____	
Subtotal			
Plus: Depreciated cost of site improvements (including entrepreneurial incentive or profit)			_____
Plus: Estimated land value			_____
Value indication of fee simple estate by cost approach			_____
Property rights adjustment			_____
Rent-up adjustment			_____
Value indication of cost approach for the interest being appraised			_____

2. Some common inconsistencies are rooted in things appraisers do that are in direct conflict with the very definition of *cost approach,* as shown on the next page.

9. This table was excerpted from *The Appraisal of Real Estate*, 15th ed. Chicago: Appraisal Institute, 2020, P. 527.

> **Cost approach.** *A set of procedures through which a value indication is derived for the fee simple estate by estimating the current cost to construct a reproduction of (or replacement for) the existing structure, including an entrepreneurial incentive or profit; deducting depreciation from the total cost; and adding the estimated land value. Adjustments may then be made to the indicated value of the fee simple estate in the subject property to reflect the value of the property interest being appraised*.

a. The two cost bases mentioned in the definition are reproduction cost and replacement cost. Appraisers must choose, based on the requirements of the assignment and the data available, which cost basis they will be developing and then stay consistent to that basis throughout the analysis.

> **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.*

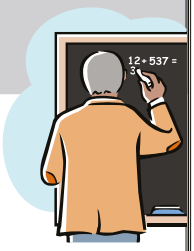
> **Reproduction cost.** *The estimated cost to construct, at current prices as of the effective date of the appraisal, an exact duplicate or replica of the building being appraised, using the same materials, construction standards, design, layout, and quality of workmanship and embodying all the deficiencies,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

b. It should be noted that the market will essentially always build a replacement building, complying with current codes and using modern materials and current standards, design, and layout. Consistency with what the market would do, in any given situation, is usually an appropriate guiding factor. Assignments necessitating reproduction cost, requiring an exact duplicate or replica of the building being appraised, most often entail an insurance claim or litigation involving a dispute over damages.

3. Property rights

In actuality, appraisers do not appraise real estate. Real estate, in itself, has no value. Appraisers really appraise ownership rights (property rights) in real estate, also called real property. It is the rights to real estate that have value. The cost approach, by definition, always develops the value of the fee simple estate. Fee simple in this instance refers to the property being leased at market rents (if the highest and best use is for tenant occupancy) and at the property's average occupancy for its economic life (stabilized occupancy). If the assignment is to develop the value of any other property interest, an adjustment must be considered.

4.8 Problem. Property Rights



The assignment is to value the leased fee interest. The subject property is an industrial building, containing 30,000 square feet, that is burdened by a long-term lease, which has 10 more years to run. The highest and best use analysis indicates the property would typically be purchased by an investor. The current contract rent is $7.50 per square foot, per year, on a net basis, and there are no provisions for it to increase for the remaining term of the lease. The market rent is $9.50 per square foot, per year, on a net basis. The appraiser uses a discount rate of 11% for the fee simple interest and 13% for the leased fee interest. The appraiser's investigation indicates that a proper discount rate to value the leasehold interest is 16%.

The appraiser develops the cost approach and realizes that it values the fee simple interest, so a property rights adjustment is needed. The appraiser solves the problem by discounting the market rent at 11% and the contract rent at 13% and solving for the difference.

1. *Is there an inconsistency in the appraiser's approach?*

2. *Should the discount rate for the leased fee be lower or higher than the rate for fee simple?*

4.8 Problem, cont.

3. *The appraiser has correctly identified the concept that part of the property rights adjustment must account for the below-market contract rent. If the correct discount rate for the leased fee interest is 11% and the correct discount rate for the fee simple interest is 13%, what is the correct adjustment?*

n	i	PV	PMT	FV
10	11		225,000	

n	i	PV	PMT	FV
10	13		285,000	

4.8 Problem, cont.

4. *Could this problem have been solved by valuing the leasehold position using a 16% discount rate?*

4. Entrepreneurial incentive

   a. Failure to include entrepreneurial incentive in any cost approach analysis is a glaring inconsistency with how the market functions. There is risk inherent in any undertaking to build something, and it must be accounted for and compensated for.

   b. There is a difference between incentive and profit. The two are often confused and misstated in appraisal reports. Entrepreneurial incentive is the amount of money it takes, in a specific market, to incentivize an entrepreneur to undertake the risk and trouble of a particular building project. Entrepreneurial profit is how much money was actually earned by the completion of the project. It is basically the difference between the total cost of a property and its market value after completion. In essence, profit is a historical fact; incentive is not.

5. Lease-up adjustment (also known as rent-up adjustment)

> **Entrepreneurial incentive.** *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.*

   a. **Not only does the cost approach, prior to adjustment, always value the fee simple interest, but it could also be valuing an empty building, unless lease-up costs are included in the cost figures,** as indirect costs, **or the highest and best use user/buyer is owner/occupant.** So, if the subject property is new and the assignment is to value it as if it is leased and at stabilized occupancy, the cost approach will require a positive lease-up adjustment. **Again, some appraisers include these costs within the cost approach itself as an indirect cost, in which case a lease up adjustment would, obviously, not be required. Care should be taken so these costs are not included twice.** If the assignment is to value the property as complete, and the comparable sales are all at stabilized occupancy; an adjustment is required to the comparable sales in the sales comparison approach. This reflects the market condition that a leased and occupied building is typically worth more than an empty building, mainly because it poses less risk.

   b. The exception would be the case of a property with an owner-user highest and best use, which would likely have the opposite effect. A leased building would be a detriment to the buyer with owner occupancy in mind. **This is why it is crucial to determine the correct highest and best use of the property, including the correct user/buyer. The cost and length of time of lease-up is a good indication of market acceptance of the property, the improvements, and/or market conditions.**

   c. The positive lease-up adjustment **for an existing non-stabilized property** must account for the time required for leasing, lease-up costs, and the income shortfalls during that time. It answers the question: How much would the property likely sell for given it does not have stabilized occupancy?

      As discussed in detail in Part 12 of the Appraisal Institute's *Advanced Concepts & Case Studies* course, there are five acceptable/supportable methods for calculating a rent-up adjustment. Time does not allow for a

full discussion of each of these methods in this seminar, but there is a brief description of each one below.

Method 1 – Line-Item Entrepreneurial Incentive

In this method, the incentive is included as a separate item. The present value of income shortfalls is calculated; then an appropriate entrepreneurial incentive is added to conclude the rent-up adjustment amount.

Method 2 – Discount Rate Loaded for Risk

In this method, the discount rate for a non-stabilized property is increased to reflect the fact that a non-stabilized property is a higher investment risk than a stabilized property.

Method 3 – Discount Shortfalls at Safe Rate

This method is related to Method 1, but instead of adding entrepreneurial incentive, the discount rate for the shortfalls is decreased, which has a similar impact.

Method 4 – Static Model

In this method, the tenant improvements, leasing commissions, and income shortfalls are simply summed up and added to the entrepreneurial incentive. An example of this method is included below and on the next page.

Method 5 – Loading the Overall Capitalization Rate

In this method, the incentive for purchasing a non-stabilized property is expressed as an increase in the capitalization rate rather than a dollar amount or an increase in the yield rate.

Many appraisers believe Method 4 is the more realistic of the five methods because it may best reflect the attitudes of buyers of non-stabilized properties. The rationale is that potential buyers of non-stabilized properties may not discount the expenses and shortfalls for time but would simply subtract them from the stabilized price. In other words, the mindset of buyers is to ask themselves the question, "How much money am I going to have to throw at this thing? And I'm not discounting it (theoretically the discount rate is zero)."

Let's look at the following example of Method 4.

4.9 Example—Method 4 Static Model

Tenant Improvements	$250,000
Plus leasing commissions	242,400
Plus net operating income shortfalls	613,934
Subtotal	**$ 1,106,334**
Plus entrepreneurial incentive (7.24% of subtotal) (market derived)	80,209
Rent-up adjustment	**$ 1,186,543**

Critical Issues in Derivation of Rent-up Adjustments

1. Must be reasonably supported by market evidence. (To the extent possible, extract from comparable sales and apply to the subject property consistently.)

2. Must provide an incentive for an investor to take on the effort and risk of a non-stabilized property, either by a direct deduction for entrepreneurial incentive or by a higher discount rate.

3. The comparison of stabilized and non-stabilized values used to calculate the adjustment must be at a consistent valuation date.[10]

10. Methods 1-5, 4.9 Example, and Critical Issues were excerpted from *The Appraisal of Real Estate*, 15th ed. Chicago: Appraisal Institute, 2020, P. 170, 174-175.

II. Consistency Between the Approaches

Each of the three approaches must be developed as independently as possible, but the approaches are interdependent in many ways. All three approaches depend on data from largely the same market research. All three depend, in many ways, on comparisons of the data to the subject property. The data and comparisons must be consistently analyzed and applied in each of the three approaches so that there is consistency between the approaches.

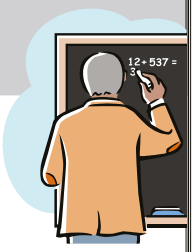
Consistency between the approaches must be maintained so that they are all developing conclusions for the same

- Problem to be solved
- Use valued
- Type of value developed, (market value, use value, etc.)
- Property rights (fee simple, leased fee, etc.)
- Effective date of value (current, retrospective, prospective)

A. Irreconcilable differences

Sometimes an appraiser can get so involved in one of the approaches that the appraiser inadvertently develops some analysis in one approach in a different way than the analysis was developed in another approach. This could cause an unreconcilable inconsistency.

4.10 Problem. The Three Approaches



You are reviewing an appraisal completed by a seasoned certified general appraiser. The subject property is a single-unit office building occupied by a long- term tenant who enjoys only a slightly favorable lease. All of the comparable sales are also single-unit office buildings. You notice the appraiser developed all three approaches in the following manner:

- The income capitalization approach was developed based on contract rent.
- The cost approach was developed with the appraiser stating that no adjustments to the indicated value were necessary.
- In the sales comparison approach, some of the sales were transferred as fee simple and some were transferred as leased fee. No adjustments were applied.
- Some of the comparable sales' income streams were analyzed based on contract rent, and some were analyzed based on market rent for purposes of adjusting the sales for economic characteristics.

His reconciled final value opinion is within the range of values indicated by each of the approaches.

Is his final value opinion credible? If not, why?

B. Effective date of value

1. Most appraisal assignments ask for a current value opinion. However, some assignments call for the development of a prospective value opinion, and some assignments ask for a retrospective value opinion. Retrospective value appraisal assignments are common in the field of litigation support, estate administration, and other matters. Prospective value appraisal assignments are common when asked to value proposed projects. All three approaches must be developed in a way that is consistent with the effective date of value.

> **Prospective opinion of value.** *A value opinion effective as of a specified future date. The term does not define a type of value. Instead, it identifies a value opinion as being effective at some specific future date. An opinion of value as of a prospective date is frequently sought in connection with projects that are proposed, under construction, or under conversion to a new use, or those that have not yet achieved sellout or a stabilized level of long-term occupancy.*

> **Retrospective value opinion.** *A value opinion effective as of a specified historical date. The term* retrospective *does not define a type of value. Instead, it identifies a value opinion as being effective at some specific prior date. Value as of a historical date is frequently sought in connection with property tax appeals, damage models, lease renegotiation, deficiency judgments, estate tax, and condemnation. Inclusion of the type of value with this term is appropriate, e.g., "retrospective market value opinion."*

2. Notice that neither of these terms define a type of value. They are only concerned with the effective date of value. Inconsistencies that can occur with these types of assignments usually concern the data or analysis. It is necessary to maintain consistency with the data and analysis throughout the appraisal process as described below.

   a. The market analysis section must be reflective of the market in the context of the effective date of value.

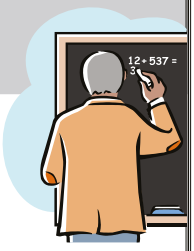
   b. The chosen comparable sales must have occurred at a time, or adjusted to a time, that supports the effective date.

   c. The income capitalization approach must be based on income streams and capitalization rates that are consistent with the effective date.

   d. The cost approach data must be consistent with the effective date.

   It is not uncommon for the appraiser to inadvertently allow some *current* data to creep into the process, somewhere, that does not reflect or support the value in a retrospective or prospective appraisal assignment.

4.11 Problem. Retrospective Value



A lawsuit was filed to solve a dispute over alleged construction defects. A delay in the proceedings was caused by the judge's decisions on several pretrial motions being taken up on appeal. With those issues now settled, both sides would like to move the case along. Because of these delays, the effective date of value will be four years ago.

The subject property is a newly constructed, 4-story, multitenant office building. An MAI designated appraiser was hired by the attorney representing the building owner to complete a retrospective appraisal and provide expert witness testimony at trial.

The appraiser carefully develops the sales comparison approach using comparable sales that all occurred before the effective date of value. All the sales are of similar buildings that were two years old or less at the time of sale. The income capitalization approach is based on rental rates in effect as of the effective date, and the capitalization rate is extracted from the comparable sales used in the sales comparison approach. The cost approach was developed using the current edition of the *Marshall & Swift Commercial Cost Handbook*. The cost approach is highly relevant in this appraisal because the subject building is new and because of the cost-to-cure calculations relevant to the alleged construction defects. These construction defects have not yet been corrected.

1. *Is there an inconsistency between the approaches to value? If so, what is it?*

2. *Should the appraiser use current cost data to develop the cost-to-cure estimates, since they have not yet been cured?*

Review Part 4

Learning Objectives

Now that you've completed Part 4, you should be able to

- ☑ Understand the necessity of consistency within each of the approaches to value.
- ☑ Recognize consistency issues in the sales comparison approach.
- ☑ Recognize consistency issues in the income capitalization approach.
- ☑ Recognize consistency issues in the cost approach.
- ☑ Understand the importance of consistency between the approaches.

Terms and Concepts to Remember

Cost approach	Prospective opinion of value	Retrospective value opinion
Entrepreneurial incentive	Replacement cost	Sales comparison approach
Income capitalization approach	Reproduction cost	Underwriter's method

Recommended Resources

The Appraisal of Real Estate, 15th ed. Chicago: Appraisal Institute, 2020.

Part 5 Preview

Functional and External Obsolescence

Part 5 is about functional and external obsolescence. Understanding the difference between them and the proper application of each is paramount.

Learning Objectives

To prepare for Part 5, read the following learning objectives and refer back to them as you study this part of the handbook.

- ☐ Understand the need for consistency with the definitions.
- ☐ Recognize how to properly apply and calculate functional obsolescence.
- ☐ Recognize how to properly apply and calculate external obsolescence.

Learning Tips

Working through the obsolescence problems will give you the practice you need to identify the type of obsolescence and the steps needed to solve the problems. Problems from the handbook may serve as a useful reference in your appraisal work.

Part 5.
Functional and External Obsolescence

Of the three types of depreciation—physical, functional, and external—functional and external obsolescence are the most often misunderstood and misapplied. For this reason, we will focus on those two in this seminar.

I. Consistency With the Definitions

Functional and external obsolescence are sometimes confused and misapplied, but the two of them are distinctly different. Functional obsolescence is sometimes used as a catchall for items of depreciation that the appraiser identifies but is unsure how to handle.

A. What Is the difference between functional and external obsolescence?

1. Each one is caused by different things, but the main difference is that functional obsolescence is concerned with matters inside the property boundaries, and external obsolescence is concerned with matters outside the property boundaries. The knowledge of that difference alone will usually be enough to keep the appraiser straight in the identification and analysis of either.

2. Some confusion seems to revolve around the instance where the matter appears to be generated in the market itself.

   Is it external obsolescence if tastes change in the market since those changes come from outside the property? The answer is no.

   The key is whether the market is reacting to something inside or outside the property boundaries. If the market's reaction is to something inside the property boundaries (like low ceiling height in an industrial building), the obsolescence is functional, but if the market's reaction is to something outside the property boundaries (like an airport near a house or an economic recession), the obsolescence is external.

II. Functional Obsolescence

A. Definitions

1. As previously stated, functional obsolescence is concerned with matters inside the property boundary. Functional obsolescence can be caused by a deficiency or a superadequacy. If the detrimental issue stems from something outside the property boundaries, it is not functional obsolescence.

> **Functional obsolescence.** *The impairment of functional capacity of improvements according to market tastes and standards.*

It is very closely related to the concepts of functional utility and, particularly, functional inutility.

> **Functional utility.** *The ability of a property or building to be useful and to perform the function for which it is intended according to current market tastes and standards; the efficiency of a building's use in terms of architectural style, design and layout, traffic patterns, and the size and type of rooms.*

> **Functional inutility.** *Impairment of the functional capacity of a property or building according to market tastes and standards; equivalent to functional obsolescence when ongoing change makes layouts and features obsolete and impairs value.*

B. A thorough explanation of functional obsolescence is offered on the following page in an excerpt from *In Defense of the Cost Approach*.

"Functional obsolescence is a loss in value due to something *inside* the property boundaries; it can be an overimprovement, an underimprovement, or something that is not there.

Examples of functional obsolescence in the form of overimprovements include the following:

- The gold doorknobs mentioned on page 9 are too elegant, too luxurious, and just plain too much to charge extra rent for.
- The Enron office building in Houston, Texas, was opulent beyond anything that the Class A market would pay for.
- A luxury hotel with hallways that are 18 feet wide offers more than the market needs or is willing to pay for.

Examples of functional obsolescence in the form of underimprovements include the following:

- A luxury apartment builder who is running out of money cuts corners at the end of the development process. The cheap looking hardware and other details that result make the real estate unacceptable to the targeted renters.
- An office building has a 10-story glass-enclosed atrium with huge HVAC operating costs.

What We Talk About When We Talk About Depreciation

- An apartment building has narrow hallways that tenants do not like. To attract tenants, the building's rent must be below the market rate.
- A four-story apartment building has no elevator. The rent on the upper floors is significantly below that of comparable units in buildings with elevators.
- A hotel in the mountains was built without air-conditioning because the developer mistakenly thought that the mountainous location would not get hot in the summer.
- A two-story does not have escalators."

"Many of these examples lead us to ask, 'What were they thinking?' When we look at a building and find ourselves asking this question, we might want to think about the functional obsolescence present."[11]

11. E. Nelson Bowes, *In Defense of the Cost Approach: A Journey into Commercial Depreciation* (Chicago: Appraisal Institute, 2011) P. 21.

C. Procedure

Once functional obsolescence is identified, there is a specific procedure for calculating its effect. This systematic procedure ensures the consistent treatment of all components of functional obsolescence and also that the impact from functional obsolescence is not exaggerated or the cost of an item double counted. It can be used to calculate all forms of functional obsolescence, regardless of whether it is caused by a deficiency or a superadequacy and whether it is curable or incurable. The procedure is illustrated in the grid below.

5.1 Table. Procedure for Calculating Functional Obsolescence

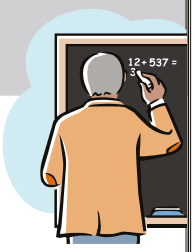
Steps	Procedure	Amount
1	Cost of component included in cost	
2	Less any physical deterioration charged *Plus*	
3A **3B**	Cost to cure (all costs) Or – value added (whichever is less)	
4	Less cost if included in new construction or value	
5	Equals depreciation from functional obsolescence	

Careful use of this procedure will ensure consistency and accuracy in the calculation of functional obsolescence. Detailed instructions for properly applying this procedure can be found in Chapter 31 of *The Appraisal of Real Estate*, 15th Edition. Extensive practice using this grid is part of the *General Appraiser Site Valuation and Cost Approach* course offered by the Appraisal Institute.

D. What is and is not functional obsolescence?

Functional obsolescence is what the definition says it is and nothing more. The appraiser may identify something that appears to be a detriment to the value of a property, but unless it is consistent with the definition, it is not functional obsolescence.

5.2 Problem. Special Use Property



The subject property is a religious facility occupied by a vibrant and growing congregation numbering around 300. About one year ago, serious contamination was discovered on the property. The EPA subsequently declared the property a superfund site, evicted the congregation, and fenced the site because the contaminant is a known carcinogen and is airborne inside the building. The contamination is the result of the historical operation of a refinery on the site in the 1920s.

Three months before the contamination was discovered, the congregation completely remodeled the building, which included adding two more restrooms and remodeling all areas of the building, including the sanctuary and commercial kitchen. The entire building was updated to current market tastes and standards, and it now displays a high degree of functionality for the purpose for which it was designed.

A lawsuit was filed against the responsible party, and both sides hired appraisers with MAI designations. Both appraisers conclude the highest and best use of the property is "Special Use – Religious Facility, as improved and as if vacant." Therefore, highest and best use is not in dispute. A retrospective appraisal will be required as of the date the contamination was discovered.

The appraiser hired by the defendant insists the cost approach is inapplicable because of the age of the building (1988), and he develops the sales comparison approach, for which he says comparable sales are plentiful in the market. He identifies six comparable sales.

5.2 Problem, cont.

The appraiser hired by the plaintiff concludes that there are insufficient numbers of sufficiently comparable sales to credibly develop the sales comparison approach and states that the cost approach is the *only* applicable approach.

Of the six sales identified and compared to the subject property by the defendant's appraiser, none of them are large enough to house a congregation of 300, none of them are located on sites large enough to accommodate parking for a congregation of 300, and all of them are substantially older and of substantially different construction and design. One of them is an industrial building, located in an industrial area, that briefly housed a religious organization during the time around the effective date of the appraisal.

1. *Based on the data so far, which approach is the correct approach to value this special purpose property?*

5.2 Problem, cont.

The defendant's appraiser determines that the subject property suffers from functional obsolescence because "its special design is not easily adaptable to alternative uses." He makes a 40% negative adjustment, which he credits to functional obsolescence.

2. *Keeping in mind that highest and best use is not in dispute, is the appraiser correct in his determination of functional obsolescence burdening the subject property?*

Note. The 5.2 Problem is based on an actual case, but the church pictured is generic and not the subject church, although both churches are of similar construction.

5.3 Discussion Question

When appraising a special purpose property, is there any situation where it is appropriate to interject a discussion or analysis of alternative uses because of functional obsolescence?

III. External Obsolescence

A. If some detriment to value has been identified, but it is not the result of physical deterioration and does not fit the definition of functional obsolescence, it is probably external obsolescence. External obsolescence is a loss in value caused by factors outside the property. It is almost always incurable and beyond the control of the property owner. It can be temporary or permanent. This is described in the book entitled *In Defense of the Cost Approach*:

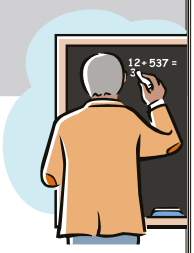
"External obsolescence is a loss in value due to something *outside* the property boundaries. (Please note the word *outside*.) An improvement may have been built just right, but something outside the property causes a loss in value."[12]

According to this text, external obsolescence is caused by problems having to do with the *location* or the *market*. High interest rates could cause external obsolescence to be present in the market. Luxury apartments located near a hog-slaughtering facility would suffer from external obsolescence due to location.

B. The calculation for external obsolescence, like any other adjustment, must have market support. It can be measured by paired data analysis if sufficient comparable sales, with and without the influence, are available. It can also be measured by valuing the loss in income, which was determined to be the result of the negative externality.

12. Ibid.

5.4 Problem. External Obsolescence



The subject property is a detached single-tenant retail building on a busy street with heavy traffic. It is occupied by a menswear and custom tailor shop.

The Department of Transportation is beginning a major street project that will widen the street and convert the nearby intersection to an overpass/underpass configuration. This project will take two years to complete, and access to the tailor shop will never be completely denied but will be very limited and inconvenient during the construction process.

The tailor loves the location and thinks it may be even better once the street improvement project is complete. He is unsure, however, if he can survive for the two years during the project.

In an effort to retain a good tenant and knowing he could not lease the building for the current rent anyway, the landlord offers to reduce the rent by half for the two years that access will be limited. This rent reduction amounts to $1,000 per month.

1. *What is the amount of temporary external obsolescence and reduction in land value caused by the street improvement project if the retail property yield rate (Y_0) is 11%*

n	i	PV	PMT	FV
2	11		12,000	

5.4 Problem, cont.

2. After the construction project commenced, a change was made to the construction plans that puts the temporary nature of this impairment in doubt. After analysis of the new plans, the landlord and the tenant agree that this impairment is now permanent. Further analysis indicates the ratio of building value to total property value is 70%.

   What amount of external obsolescence should be allocated to the building if an appropriate capitalization rate is 8%

Review Part 5

Learning Objectives

Now that you've completed Part 5, you should be able to

- ☑ Understand the need for consistency with the definitions.
- ☑ Recognize how to properly apply and calculate functional obsolescence.
- ☑ Recognize how to properly apply and calculate external obsolescence.

Terms and Concepts to Remember

External obsolescence Functional utility Functional obsolescence

Functional inutility

Recommended Resources

The Appraisal of Real Estate, 15th ed. Chicago: Appraisal Institute, 2020. Chapter 29: P. 539–541.

Part 6 Preview

Reconciliation

In Part 6, the class will discuss what reconciliation is and is not. We will also look at methods that can cause inconsistencies in the reconciliation section of the report.

Learning Objectives

To prepare for Part 6, read the following learning objectives and refer back to them as you study this part of the handbook.

- ☐ Understand the reconciliation procedure.
- ☐ Recognize proper and improper reconciliation techniques.
- ☐ Understand how to property conduct and report a reconciliation.

Learning Tips

Part 6, Reconciliation, gives you the opportunity to think about the entire appraisal process and the importance of reconciliation throughout the process. As you go through this part, write down questions you may have about any part of the process so you can ask your instructor.

Part 6.
Reconciliation

Reconciliation takes place throughout the appraisal process. It must be consistent with the data that is presented and analyzed as part of the appraisal process. Improper reconciliation of the data can result in errors that can have a compounding effect throughout the appraisal.

I. Reconciliation Is a Procedure

A. Definition

1. The class typically thinks of reconciliation happening at the end of the appraisal, the result of which is the final value opinion, but it really happens throughout the appraisal process, including in all three of the approaches to value. It is not random or merely a judgment call. It is a procedure based on criteria, analysis, and reflection on work already accomplished.

> **Reconciliation.** *A phase of a valuation assignment in which two or more value indications are processed into a value opinion, which may be a range of value, a single point estimate, or a reference to a benchmark value.*

2. Though the definition talks about reconciliation relative to values, it is not limited to just market value or the final value. The appraiser actually samples the market and reconciles to a conclusion of values and valuation inputs other than market value during the appraisal process.

   Since reconciliation is the process of resolving differences among various value indications, it is the correct process for determining other indicated values or valuation inputs, though not an exhaustive list, such as:

   - The proper extracted capitalization rate
   - Some items on a reconstructed operating statement
   - Market rent
   - Results of paired data analysis
   - Market interest rate and financing terms
   - Various units of comparison

3. Reconciliation, wherever it happens, provides the appraiser with the opportunity to conduct a quality control assessment of the steps taken that led to this point. *It is more than just resolving several different value indications into one number.* It is the time when the appraiser should revisit some questions that were asked and believed to be answered during the process. Some relevant questions that appraisers could ask themselves as part of the reconciliation process are presented in 6.1 Figure, which is shown below and on the next page.

6.1 Figure. Questions Asked in Reconciling Value Indications Within the Approaches to Value[13]

Regarding Identification of the problem and the subject property:

- Is the building area in the description of improvements generally consistent in all the approaches used in the valuation?*
- Are the property features listed in the description of improvements the same in all the approaches to value?
- Is the effective date of appraisal consistent with the data presented?
- Have the highest and best uses of the land as though vacant and the property as improved been properly analyzed?

Regarding the sales comparison approach:

- Is the approach relevant to the appraisal assignment?
- Was adequate market research conducted to identify sales that are relevant to the valuation problem?
- Are the sales sufficiently verified and relevant to the effective date?
- Would market participants consider them to be reasonably comparable?
- Are there prior sales of the subject property that need to be analyzed?
- Is there adequate market support for the adjustments that were made?
- Were those factors that could not be supported by quantitative adjustment dealt with adequately using qualitative analysis in the reconciliation?
- Are the adjusted sale or unit prices within the range exhibited in the market?
- Are the conclusions of the approach consistent with the conclusions reached in the other approaches or, if not, can inconsistencies be explained?

Regarding land valuation:

- If a sales comparison analysis was performed, was adequate market research performed to identify sales that are relevant to the valuation problem?
- Are the sales sufficiently verified and relevant to the effective data?

13. This figure was excerpted from *The Appraisal of Real Estate*, 15th ed., Page 601.

6.1 Figure, cont.

- Would market participants consider them to be reasonably comparable?
- Are there prior sales of the subject property that need to be analyzed?
- Is there adequate market support for the adjustments that were made?
- Were those factors that could not be supported by quantitative adjustment dealt with adequately using qualitative analysis in the reconciliation?
- Are the adjusted sale or unit prices within the range exhibited in the market?

Regarding the cost approach:

- Is the approach relevant to the appraisal assignment?
- Is the land well supported?
- Was replacement or reproduction cost estimated?
- Is the effective age of the property used in the cost approach consistent with the physical condition reported?
- Are the cost estimates reliable and market-based?
- Do the cost estimates account for all of the costs?
- Are the sales used to extract depreciation from the market reliable?
- What method was used to support depreciation estimates?
- Were physical, functional, and external depreciation estimated accurately?
- Are the conclusions of the approach consistent with the conclusions reached in the other approaches or, if not, can inconsistencies be explained?

Regarding the income capitalization approach:

- Is the approach relevant to the appraisal assignment?
- Is there an adequate number of rental comparables?
- Are the rental properties comparable?
- Is there market support for the adjustments that were made?
- Is historical expense information available? If so, how meaningful is it?
- Are the expense projections in line with market estimates?
- Is there market support for the capitalization or discount rate?
- Does the method of capitalizing income reflect market practices?
- Are the conclusions of the approach consistent with the conclusions reached in the other approaches or, if not, can inconsistencies be explained?

* Note that the building area considered may not be the same in each approach. For instance, gross building area may be used in the cost approach for an office building, but rentable area is typically applied in the income capitalization and sales comparison approaches.

a. The result of the reconciliation process may be the conclusion that more research is needed and a reanalysis performed to shore up some weaknesses, resolve some conflicts, or provide more clear answers to certain questions. This is precisely why it is necessary that reconciliation be properly applied and good that reconciliation takes place at successive points along the path.

b. The procedure involves reexamining data for both quality and quantity, rechecking methodology and calculations, and confirming conclusions, because in the final analysis, the proper weight given to each is determinative.

II. What Reconciliation Is Not

A. Reconciling is not math or averaging, which is part of math. Statistical analysis is statistically meaningless when the number of samples is as small as it is when reconciling. When it comes to reconciliation, consider the following: 1) There is no statistical model that spits out the correct answer, 2) There is no magic algebraic formula, 3) Linear regression is a wonderful tool that provides an exact answer – that can be exactly wrong.

The result of the most careful reconciliation cannot be proven to a mathematical certainty, and finding mathematical certainty is not what appraisers do. Appraising is not an exact science, and neither is reconciliation. Appraisers are not trying to *prove* anything. They are only trying to provide market support for their conclusions and explain the data and analysis that led them to those conclusions.

B. Averaging

1. Averaging is rarely the answer regardless of what is being reconciled. This is the case because samples of data from the market, especially once reduced to the small number of most relevant samples, are rarely deserving of equal weight in any reconciliation process. Since that is exactly what averaging does, gives each data point equal weight, it almost always represents a process that is inconsistent with the data that needs reconciling. Reconciling three adjusted sale prices results in a defensible and supportable indication of value. Averaging three sale prices does not.

2. While averaging is not reconciliation, it certainly does have its place in the appraisal process. Averaging is very helpful in macro analysis and at times when appraisers are dealing with large datasets. Some examples include the following:

a. Average (or median) sale price in one neighborhood versus the average (or median) sale price in another neighborhood can help establish whether a location adjustment is warranted and even provide support for quantifying that adjustment.

b. Average (or median) sale prices of a property type from year to year can provide strong evidence of a trend in the market. This analysis would provide adequate support for a market conditions adjustment.

c. Average household size and growth rate in the market can be determinative when measuring demand for residential properties.

These examples are just a few instances where averaging (or the use of medians) can be an especially useful tool in the appraiser's toolbox. Averaging needs to be kept in its place and brought out at the proper time. Reconciliation is not that time.

III. Rounding

A. Appraisers should not do arbitrary things during the course of developing an appraisal, and rounding may be the most arbitrary thing that appraisers do.

1. The appraiser's job is to analyze and interpret the market, and the market, while not perfect, is highly organized and seldom arbitrary in its actions.

a. The market often overreacts, to undersupply for instance, but that overreaction is not arbitrary. It sometimes gets overexuberant and then overcorrects, but neither is arbitrary.

b. Market participants sometimes make dumb mistakes, but they are not arbitrary mistakes.

c. Sometimes the market is unnecessarily depressed, but it is not the result of arbitrary perceptions.

d. Logic, though possibly ill conceived at times, is what typically drives the market.

B. There is no appraisal standard that requires rounding at any step of the appraisal process. Some appraisers overdo rounding as if being too precise is a problem. They round everything from capitalization rates to rental rates, from vacancy rates to expense ratios, and most things in between. They round the value indication yielded by each of the approaches and then round them again at the final reconciliation. Even though they may be in tune with the market in almost every other way, they round with no thought as to whether this is reflective of market actions.

6.2 Discussion Question

An appraiser completed an appraisal for litigation support and is now providing expert witness testimony to support that appraisal. Her direct testimony went well, and she is now well into the cross-examination phase.

The attorney conducting the cross-examination points out that the final value opinion for the subject property was $1,289,000.

The attorney asks the appraiser this question, “Ms. Appraiser, are you sure the value shouldn’t be $1,290,000? I mean, are you seriously going to sit there and tell this jury that you know, within $1,000, what a 1.2-million-dollar property is worth?”

How should the appraiser answer this question?

---

1. A common refrain heard from appraisers goes something like, “I don’t know within $25,000 what a $2-million-dollar property is worth.” But the truth is, investors who are willing to plop $2 million dollars down to buy an investment property are not likely to throw $25,000 dollars out the window and call it rounding. They are typically doing the same type of analysis and calculations as are appraisers.

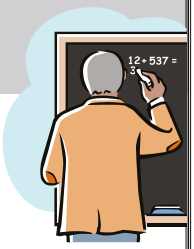
2. Like anything else, rounding should reflect the actions of buyers and sellers in the market.

    a. An objective analysis of the sale prices in the market will give the appraiser some insight on how market participants are rounding. What often happens is that the appraiser discovers that the market operates at a higher level of specificity than appraisers sometimes give it credit for.

    b. Unless the *rounding reflects the level of specificity* present in the market, it is not consistent with the data.

3. The rounding process matters because rounding down at every step of the process can have the effect of producing an underappraisal of the property and vice versa.

6.3 Problem. Rounding



An appraiser reconclies capitalization rates indicated by four comparable sales. The capitalization rates yielded by the four sales range from 5.9 to 6.95. The most similar sale, which is highly similar to the subject property, yields a capitalization rate of 6.45. The appraiser decides the most weight should be given to that sale but does not like to use uneven capitalization rates, so he decides to round the capitalization rate down to 6%. He feels justified because he is still within the range indicated by the comparable sales.

How much difference in value is caused by using the 6% capitalization rate over the 6.45% capitalization rate if the net operating income is $145,000?

6.4 Discussion Question

In 6.3 Problem, the sales comparison approach provides a value indication of $2,460,000, which the appraiser believes supports his decision on rounding the capitalization rate. He reconciles to a final value of $2,450,000.

Does the sales comparison approach support his decision on rounding the capitalization rate, or should the appraiser have been more accurate on his extraction of the capitalization rate, which might have caused him to take a second look at his sales comparison approach?

IV. Final Reconciliation

The final reconciliation is where appraisers, in essence, make their closing statement by providing the reasoning and support for their final conclusion. Mounting a strong defense of the analysis and opinion is not bias. Appraisers are ***not*** taking up the cause of the client by defending their own work. The defense should not be argumentative, however, like an attorney might make in a closing argument. Instead, the defense should be wholly grounded in facts and reasonable analysis.

6.5 Discussion Question

The appraiser in 6.4 Discussion Question includes the following final reconciliation in his report:

> The two approaches to value developed in this appraisal yielded the following indications of value:
>
> Sales comparison approach – $2,460,000
>
> Income capitalization approach – $2,417,000
>
> Based on the foregoing data and analysis and subject to the Certification and Statement of Assumptions and Limiting Conditions herein, I have reconciled to a final value conclusion of:
>
> **$ 2,450,000**

Is this final reconciliation section adequate?

If the appraiser had conducted a thorough process of reconciliation, he may have recognized some conflicts in the analysis that needed to be resolved. The appraiser may have seen the need to provide some additional explanation or reemphasize some points previously made. There seems to be a need here to reconcile some possible doubts in the mind of the reader of the report.

A. The process

1. What should happen in the reconciliation process is a systematic approach to add some *meaning* and context to the final value opinion. It is also an opportunity for the appraiser to exercise some quality control and maybe even reinforce the conclusion in his/her own mind. A specific checklist would be somewhat different for each appraisal, but there are some general criteria for the process.

> **Reconciliation criteria.** *The criteria that enable an appraiser to form a meaningful, defensible conclusion about the final value opinion. Value indications are tested for the appropriateness of the approaches and adjustments applied, the accuracy of the data, and the quality and quantity of evidence analyzed.*

2. At the start of writing the final reconciliation section of the appraisal, the appraiser should try to consider the perspective of the reader of the report and ask, "What questions will be in the mind of the reader when they get to this point in my report?" The final reconciliation section is the place to answer those questions.

B. Resolve, reemphasize, explain

As stated earlier, reconciliation takes place throughout the appraisal process. Typically, the final reconciliation is the place where the value indications yielded by the approaches developed are the primary items under consideration. And it is the place where the following should be reconsidered: How each of those approaches was developed, the strength of the data, and the relevance and appropriateness of each approach.

1. The three approaches

   a. It is insufficient to just state the values yielded by each approach. The appraiser should explain why each of the approaches developed was considered relevant to the appraisal problem and also explain how much weight is given to each approach.

   b. The reasoning behind a decision to eliminate one of the three approaches should also be explained. It is sometimes more important to explain why you did ***not*** do something than it is to explain what you did.

   c. The strength of the data analyzed in each approach, considering both the quantity and the quality of the data, should be discussed. This discussion should lead the reader to the same conclusion arrived at by the appraiser.

2. Reemphasize and explain reasoning

    a. The appraiser should Identify decisions made during the process that may need to be reemphasized or that may need further explanation for the reasoning. For example, recall 4.1 Problem, where it was decided that a sale located adjacent to the subject property and which was the only sale at the same interchange, should likely be eliminated from the analysis as a comparable sale. A decision like this, which is not obvious, should be reemphasized and explained again during the final reconciliation.

    b. For reemphasis: It is sometimes more important to explain why you did *not* do something than it is to explain what you did.

3. Resolve conflicts

    Conflicts can arise in the report writing that can easily escape notice by the appraiser. Appraisers are usually keenly aware of conflicts that arise in the data, analysis, and calculations, but conflicting statements made in the report can easily escape notice.

    a. Conflicting statements

        Part of the reconciliation process is reviewing the report to ensure that statements made in one section of the report are consistent with statements made in later sections. These inconsistent statements can easily arise out of the use of canned statements or boilerplate content.

        Example. In the market analysis section, the appraiser makes the statement that this is an active market with property types similar to the subject property commonly exchanging in arms-length transactions. Then in the sales comparison approach section, the appraiser notes an insufficient number of comparable sales in the market. These kinds of conflicting statements make the reader of the report want to ask, "Well, which is it?" Even rather benign conflicting statements can be an embarrassment to the appraiser and call competence, or at least diligence, into question.

    b. Single words

        The appraiser should also be alert for conflicts that can arise, not from conflicting statements, but from a single word usage that can be easily misinterpreted. Perhaps the most common word appraisers use that can easily be misinterpreted is the word *assume*. This word, arguably, should be taken out of every appraiser's vocabulary when writing a report, except when used in a technically precise way.

Example statement. "Based on the data and analysis, it is reasonable to assume a 7% capitalization rate." It is not uncommon for this phraseology to be used multiple times, in different contexts, in an appraisal. The cross examination will go something like this, "You don't really know anything, do you. You're just making a bunch of assumptions."

The very word, *assume*, conflicts with and is inconsistent with what appraisers do. Appraisers do not make assumptions! Instead, they draw conclusions from data through analysis. A much better statement would be, "Based on the data and analysis, it is reasonable to conclude a 7% capitalization rate is appropriate."

4. Search out inconsistencies

   The final reconciliation is the appraiser's final chance to find and resolve inconsistencies in the appraisal. A thorough and systematic process can help expose any inconsistencies in the data, analysis, and reporting.

   The appraiser should make the reconciliation count!

Review Part 6

Learning Objectives

Now that you've completed Part 6, you should be able to

- ☑ Understand the reconciliation procedure.
- ☑ Recognize proper and improper reconciliation techniques.
- ☑ Understand how to properly conduct and report a reconciliation.

Terms and Concepts to Remember

Reconciliation

Reconciliation criteria

Recommended Resources

The Appraisal of Real Estate, 15th ed. Chicago: Appraisal Institute, 2020. Chapter 34, P. 641-643 (Figure 34.3), Chapter 37.

E. Nelson Bowes, MAI, SRA, *In Defense of the Cost Approach: A Journey into Commercial Depreciation.* Chicago: Appraisal Institute, 2011.

Appraisal Institute Course: *Review Theory–General*

Solutions

1.1 Discussion Question

Can you think of any rules or Standards that address inconsistencies in an appraisal?

USPAP Ethics Rule

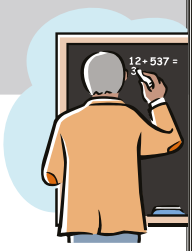
USPAP Competency Rule

Each approach must be developed credibly.

Must not allow a "series of errors"

Provisions against providing a misleading report

1.2 Problem. Just to Get Things Started



Your assignment is to review an appraisal completed by a Certified General Real Property Appraiser. The appraisal assignment pertained to two adjoining commercial properties held in the same ownership, which were acquired together in 2015. The two properties are located in an active commercial corridor south of the downtown area of a large metroplex. It is in an area approved for medical use only cannabis cultivation and sales. The smaller of the two parcels contains 4,500 square feet and is improved with a 1905 vintage one-story, single-unit residence. The appraiser concluded that these improvements add no value to the land.

The larger of the two parcels contains 6,510 square feet and is improved with a 1942 vintage, brick and block, two-story commercial building in use for active cannabis operations on the date of value. The layout of this building is sales/display/dispensary in front, grow rooms behind, processing/storage and delivery area in the back with alley access. There is an apartment on the upper level rented to one of the company's employees. There is attic storage also on the upper level. The client was the property owner. The report was labeled "Restricted Report" with a recent date of value. The entire valuation section of the appraiser's report is provided below.

> A copy of the comparable sales chart, a sales map, and photographs are in the Addenda. All of the comparable sales are older commercial buildings located along South Street. There are five comparable sales. The comparable sales range in price from $181 per square foot to $276 per square foot with a mean of $218 per square foot and a median of $229 per square foot. The comparable sales sold within the last two years. The size range is between 4,495 square feet and 11,300 square feet. The market has improved over the time frame of the sales. In our analysis, we have concluded that the subject property's land value is $115 per square foot or $1,266,150.

1.2 Problem, cont.

Based on our analysis of the comparable improved sales, the comparable sales' adjusted values ranged from $181 to $245 per square foot of gross building area with a mean of $235 per square foot and a median of $236 per square foot. We have concluded a market value of $236 per square foot as applied to only the commercial building's square footage, or **$1,888,000.**. (Note: the value of the single-unit home portion was valued as land value at $115 per square foot of land or $517,500.) The cost to demolish the single-unit home, including profit, is estimated at $10,000. This is subtracted from the subject property's initial market value in the following chart and results in an as-is market value estimate of **$1,875,000**, rounded.

Sales Summary		
Price Range	**Unadj. Price Per Sq. Ft.**	**Adj. Price Per Sq. Ft.**
Low	$181	$181
High	$276	$245
Average	$218	**$235**
Median	$229	**$236**

Value Conclusion – Fee Simple	
Indicated value per square foot	**$236**
Gross building area in square feet	× 8,000
Indicated fee simple value	**$ 1,888,000**
Less: SFR Demolition & profit	10,000
Indicated market value	$1,878,000
Rounded	**$1,875,000**
Per square foot	**$234**

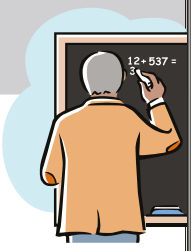
1.2 Problem, cont.

What inconsistencies do you see in this report?

1. *Inconsistent value conclusion: The value of the smaller parcel, though mentioned in the description, did not make it to the conclusion. It mysteriously vanished somewhere along the way. There is no reference to the smaller of the two parcels in the value conclusions. Huh?*
2. *Missing analysis: There is no explanation of any adjustments. The intended users should not have to use their imaginations.*
3. *Inconsistent statement: The report says "The market has improved over the time frame of the sales." It is uncertain whether a market conditions adjustment was made.*
4. *Inconsistency with the data: There is no reconciliation. The entire valuation is based on a central tendency analysis of five sales. Possibly the five sales all deserve equal weight. This is not likely.*
5. *Inconsistent analysis: It appears that the comparable sale that indicated the lowest unadjusted value received no adjustments. The unadjusted price and the adjusted price are equal. If so, the value conclusion is inconsistent with the data because a sale requiring no adjustments should, almost certainly, receive the most weight, though it is possible that one of the sales was adjusted down to $181. The intended user should not have to wonder about this.*
6. *Inconsistency caused by rounding: Rounding inflates the demolition cost by 30%. If the appraiser is going to round, he should round before subtracting the demolition cost. Plus, his rounding is not to the nearest $5,000 or the nearest $10,000. It is to the nearest $25,000. Is this consistent with the market?*

Disclaimer: *This is not intended to be an exhaustive list of inconsistencies present. We acknowledge that may not be possible.*

2.1 Problem. Market Value or Use Value

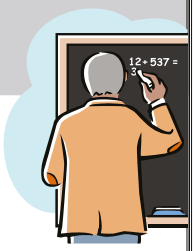


An appraiser receives an assignment from National Ag Lenders, Inc., which is a federally insured depository institution. The assignment is to appraise an 80-acre farm for mortgage lending purposes. Upon agreeing to perform the assignment, the appraiser goes to view the property and the surrounding market. She determines that the farm tract is adjacent to city limits with frontage on the highway. Market analysis reveals that the commercial market is expanding along the highway and, in fact, the land adjacent to the subject property has already been developed with retail and hotel properties. It is evident that the subject property is directly in the path of this expansion and is the next property in line. The subject property is currently and has historically been used for agricultural operations. After completing a highest and best use analysis, she notifies her client that the highest and best use of this tract is commercial retail along the highway and multiunit residential on the backland, and the timing of that highest and best use is now. Her client informs her that they do not make commercial loans and tells her that they want her to develop "the farm value" of the property.

1. *What type of value will she be developing?*

   If she does as requested, she will be providing a use value. However, since this lender is a federally insured depository institution, the appraisal requirements pursuant to FIRREA kick in, and those require market value as defined in the regulation. An appraiser is required to understand applicable laws and regulations. By agreeing to proceed under the lender's instructions, this is the point at which the appraiser makes her first error.

2.1 Problem, cont.



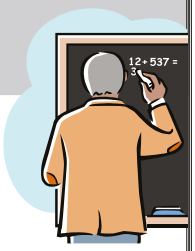
She completes her assignment and submits her report to her client. Two days later, she receives a phone call asking her to please change her value conclusion from "farm value" to "market value" and resubmit her appraisal. She objects, but they insist because, by law, they must base their loan decision on the "market value" of the collateral.

2. *What should she do?*

She should have refused to do this in the first place (see answer to Question 1). She must inform her client that "market value" would require the appraisal to be based on the market-derived highest and best use. If the client dictates the use to be appraised, it is NOT "market value" by definition. It would be improper for her to comply with the request because the result would be inconsistent with the definition of market value. And if she decided to make the change, she would be providing a misleading report.

Note. *The use of a hypothetical condition, as described above, would NOT skirt the regulatory requirements for the lender's need for a properly developed market value.*

2.2 Problem. Investment Criteria



John Jones, MAI, receives a call from a potential client who informs him that he is a portfolio manager for a large group of investors who specialize in buying and selling hotels. The investors would like to bring an MAI-designated appraiser on board to consult with them regarding how much they should pay for certain properties to ensure they meet their particular investment goals. The position would entail appraising potential hotels for purchase based on the group's investment criteria of requiring a 12% yield.

1. *What type of value will John be developing?*

   Investment value

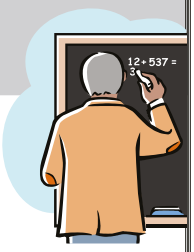
2. *Could investment value be equal to market value?*

   Yes, but only if the market yield rate is also 12%.

3. *Why is investment value not the same as market value?*

   Market value must be based on market-derived financial metrics. The subject property may actually be worth more than the value developed at the investor's required 12% yield rate, but the investor cannot pay more and still achieve the desired 12% return. This scenario is not consistent with the definition of market value. The appraiser should be careful not to label it as such. It should be pointed out that a specific yield rate is not the only investor-specific criteria that would cause the value developed to be investment value. Investment value can be based on other criteria, e.g., GRM, payback period, etc.

2.3 Problem. Principles of Contribution



James B. Good, MAI, has been hired to provide appraisal and consultation services for litigation support. The case involves a high-end residential property that is impaired with construction defects.

The owners purchased an older property in a very desirable neighborhood for $375,000. Their intention was to demolish the existing house and build their dream home on the site. After consultation with their contractor, and upon his advice, they decided to retain the existing slab and a small part of the existing skeletal components. The new house has a completely different design and room layout than the original home and contains two stories where the original home was 1.5 story. The owners equipped the new house with exorbitant designer fixtures and equipment, which involved installing a fully computerized smart home system that controls every other mechanical system, including automatic power window shades. The existing swimming pool was completely refurbished, which included new plaster, paint, and tile. The gourmet kitchen was equipped with commercial grade built-in appliances. While there are a few comparable homes scattered throughout this older neighborhood, the subject home is substantially superior to most surrounding properties.

Besides the original purchase price, the owners spent approximately $600,000 to build the new house and $35,000 to refurbish the existing pool. A new similar pool would cost $48,000.

Upon moving into the home, the owners discovered numerous construction defects and realized that the contractor had failed to apply for an occupancy permit. Upon application, the city denied the occupancy permit. Because of the substantial nature of the defects, the owners were forced to vacate the property.

An analysis by other experts, including an engineering firm and a plumbing firm, resulted in estimates for a cost-to-cure the defects of $1,069,000.

The owners consider the property a total loss and expect to be paid the original purchase price and all the money they have spent to date. They have communicated this to Appraiser Good.

Appraiser Good has been asked to determine damages to the property and provide expert witness testimony to support the lawsuit. He determined that the assignment would require the allocation of value between the components of land and improvements. His analysis resulted in reporting the following opinions:

Value of the whole property as if unimpaired	$ 800,000
Value of the site as if vacant (based on comparable sales)	$ 183,000
Value of the pool (since it is like new)	$ 48,000

2.3 Problem, cont.

1. *Based on the appraiser's analysis, what is the contributory value of the house as if unimpaired?*

   $800,000 – $183,000 – $48,000 = $569,000

2. *What mistake has the appraiser made?*

   He failed to do an analysis to determine if the cost of the pool was equal to its contributory value.. It is not likely that it is. This is inconsistent with the principle of contribution.

3. *Are the owner's expectations reasonable?*

   No. They have not lost the land or the pool. The construction defects only affect the house.

Upon further thought, the appraiser decided to conduct a paired data analysis to determine the contributory value of the pool. He has adjusted his opinion as follows:

Value of the whole property as if unimpaired	$ 800,000
Value of the site as if vacant (based on comparable sales)	$ 183,000
Contributory value of the pool	$ 20,000

4. *Based on the appraiser's updated analysis, what is the contributory value of the house as if unimpaired?*

   $800,000 – $183,000 – $20,000 = $597,000

2.3 Problem, cont.

Since the cost-to-cure the defects exceeds the value of the house, the functional obsolescence caused by the defects is incurable. In this jurisdiction, the law requires that damages, if incurable, be based on the diminution in market value of the property. A cost estimate for the demolition of the house is $15,000.

5. *What is the diminution in the market value of the property??*

$800,000 – ($203,000 – $15,000) = $612,000

OR $597,000 + $15,000 = $612,000

The logic behind this answer is that what the owners are left with is the site and the pool. Since the house is unoccupiable, it no longer has any contributory value. The value of the site as if vacant and the pool is $203,000 ($183,000 + $20,000), but it will cost $15,000 to demolish the house so that the site is indeed vacant and ready for redevelopment. The value of the property remaining, or "as is," is therefore, $188,000 ($203,000 – $15,000).

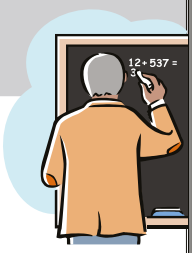
2.4 Discussion Question

Subsequent to Appraiser Good, in 2.3 Problem, submitting his report, the attorney and all the experts met for the purpose of preparing for depositions. During discussions of the appraiser's opinion, the engineer offered $350,000 for the property as is. While there might be other possible buyers who would be in the same position as the engineer, they do not represent the most likely purchaser for the highest and best use conclusion in this market. Even so, in anticipation of the other side in the case producing a witness who would make a similar offer at trial, the attorney turned to Appraiser Good and asked him how he would respond to such a challenge, since his opinion was that the property was only worth $188,000 as is.

How would you answer this question?

Appraiser Good's answer: The $188,000 is based on market value, which has a definition to which the appraiser must be thoroughly consistent. The definition of market value does not say, "The amount a unique buyer, who is in a position to make repairs to the house at a much lower cost than his own estimates, would pay." It does not even say, "The amount one unique buyer would pay." Market value is based on what a typical buyer in this market would do. A typical buyer would say, "Wait, you mean it's going to cost me more to fix this house than it is worth? No, I am not interested in doing that. I'll just buy a substitute that does not need repairs." And that is known as the principle of substitution.

2.5 Problem. Cash Equivalency



The appraiser is analyzing a comparable sale that sold two years ago. The sale price was $1,050,000. The seller provided the following financing terms:

- 80% loan-to-value ratio
- 4% annual interest rate
- Amortized over 20 years, with monthly payments.
- Balance due at the end of 5 years

The financing terms match the available market terms except that the market interest rate at the time of sale was 6%. Use the grid provided below to calculate an answer for the following questions.

1. *Is this sale a cash equivalent sale?*

   No. The financing is favorable; therefore, it is not equivalent to cash.

2. *What is the balance due at the end of five years?*

   $ 688,160

3. *What is the cash equivalent sale price?*

   $773,478 + $210,000 = $983,478

   ($773,478 represents the value of the note on the date of sale.)

4. *What is the amount of the financing adjustment to be used in the sales comparison approach?*

   $ 1,050,000 – $983,478 = $ 66,522

5. *Is the adjustment positive or negative?*

   Negative. The comparable sale has superior financing.

2.5 Problem, cont.

6. *The net operating income (I_o) produced by this sale is $75,000. Extract a cash equivalent capitalization rate from this sale.*

$75,000 / $983,478 = 0.07626

It should be pointed out, that this discount to the rate method is not considered by many appraisers to be as accurate as developing the appropriate rate by interviewing market participants. Some clients do not allow this type of analysis.

n	i	PV	PMT	FV
20 [g]	4 [g]	840,000 CHS	*5,090.23*	
5 [g]				*688,159.78*
	6 [g]	*-773,477.78*		

2.6 Discussion Question

During the process of verification of the comparable sale analyzed in the previous problem, the appraiser interviewed the buyer. The buyer indicated that he paid $60,000 more for the property than he would have paid, save for the favorable financing.

How would this news affect your cash equivalency analysis?

Appraiser's viewpoint:

This is primary data coming straight from the horse's mouth. Primary data trumps any calculation we would do. In this case, forget the calculation and just go with what the market participant revealed about his motivations. This data would be strengthened even further if the appraiser also interviewed the seller about this point and maybe even the selling broker. With some corroboration of the buyer's opinion, this information would be more reliable than the discount to the market method.

Some class participants may see this differently and argue that the calculation is more revealing of the value the market, in general, places on the favorable financing and should, therefore, be given more weight than the motivation of this single buyer. That may be true, but in that discussion, are we talking about the financial market or the real estate market? In any case, either method of determining the cash equivalency adjustment is likely supportable as reasonable. In truth, the two methods, in this case, are supportive of each other. This is exactly where we want to be; two ways to reach a conclusion where the conclusion reached by each method supports the other. Even after this interview, many appraisers would still do the calculation to check the reasonableness of the buyer's opinion. In this case, the buyer's opinion is reasonable.

2.7 Discussion Question

An appraiser is considering the sale of a vacant commercial site for use as a comparable sale. The sale occurred one year ago. The site is situated in a small commercial development located at the corner of an interchange of two interstate highways. When the appraiser goes to view the site, he notices that it now has a parking lot constructed on it that appears to be incorporated into the site plan of the adjacent hotel. He decides to go in and see if the hotel owner or manager is available for an interview.

The manager connected the appraiser with the owner who indicated that soon after building the hotel, he realized that his lack of parking space for trucks, RVs, and vehicles with trailers was hurting his business. When the adjacent site was listed for sale, he immediately purchased it for that purpose. He thinks he may have paid a small premium because he paid list price without any attempt to negotiate. He further admits that he would have been willing to pay even more because of his need for additional parking space.

The appraiser recognizes that this sale represents an assemblage, but based on his other research, it appears to have sold at near market levels. Because of its similarity to the subject property, he decides that it is relevant as a comparable sale in his appraisal.

Is this sale relevant for direct comparison analysis in this appraisal?

No. This buyer was not typically motivated, so the sale is inconsistent with the definition of market value. In order for this sale to be relevant, it would have to be adjusted for conditions of sale. The buyer thinks he paid a small premium. An adjustment could perhaps be derived by answering the question, "What was the highest and best use of the site, if not for parking, and how does the price compare to sales of similar sites with the same highest and best use." Interviewing the seller and the listing and selling brokers would also be good practice.

Some participants may argue that since this sale sold for the listed price and appears to be near market levels, it would be okay to use it without making an adjustment, even though it is an assemblage. However, we still have the problem of buyer motivation.

2.7 Discussion Question, cont.

And we will never know how low the price might have gone if only typically motivated buyers competed for it. In the emergency situation of not enough sales and no reliable market data to support an adjustment, it could still be used, but it would require heavy and detailed disclosure that it is an assemblage. In addition, it has to be given the least weight in the reconciliation of the sales. In that instance, it would probably be better to find a more distant or dissimilar sale that was consistent with the definition of market value, if possible.

3.2 Discussion Questions. Comparable Sales Selection

The subject property is a newly constructed national brand travel/truck stop located on the interstate coming into a major metroplex. The interchange is being redesigned by the Department of Transportation. It is necessary for the DOT to acquire a small strip of land from the travel/truck stop property. The subject interchange is outside city limits and city utilities are not available, requiring water wells and sewer lagoons. Another truck stop is located across the interstate. The other two corners at this interchange are vacant, and there are no frontage roads along this section of the interstate. It is stipulated by both sides that the improvements are unaffected, so the value of the land is the issue.

You have been hired by the DOT to provide appraisal and consultation services in support of condemnation litigation. You are reviewing the appraisal submitted by the appraiser hired by the opposing side. He determined the highest and best use of the subject land as if vacant to be "highway commercial." He selected and used five comparable sales of vacant land to compare to the subject land in the sales comparison approach.

You notice that the sales chosen by the opposing appraiser produced a rather wide range in prices, and you decide to investigate them further. All of his sales occurred within the previous two years and were vacant at the time of sale. All are located adjacent to interstate highways at major interchanges, and all have a full complement of city utilities available to the sites.

Your research of his sales further reveals the following:

- Sale 1 was purchased for the construction of a multitenant office building.
- Sale 2 was purchased for the construction of a retail strip center and is surrounded by high density retail along the frontage road.
- Sale 3 was purchased for the construction of a hospital.
- Sale 4 is substantially larger and was purchased for the construction of a mixed-use retail center with live-above apartments and office center.
- Sale 5 was purchased by a speculative investor who has no plans for development.

3.2 Discussion Questions, cont.

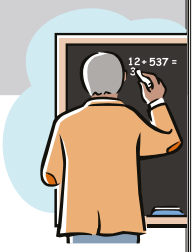
1. *Could all these sales be considered as being purchased for a "highway commercial" use?*

No. The term "highway commercial" seems rather vague and may not be a well-defined or universally understood term. However, it is defined in the Appraisal Institute's Advanced Market Analysis and Highest and Best Use course as a type of shopping center. The market for "highway commercial" use is passing motorists in need of highway-related services. It DOES include truck stops along with motels, restaurants, and service stations. It DOES NOT include office buildings, retail strip centers, hospitals, or apartments.

2. *Which sales are meaningful for valuing the subject property?*

None of them. First, none of them were purchased for development as a travel/truck stop or anything close. He may argue they are all consistent with "highway commercial" highest and best use, but this argument will fall flat if appropriately countered. The problem is a buyer of land for office development has different motivations than a buyer of land for use as a hospital and so on and so forth . . . . and they pay different prices. Land purchased for these uses is inconsistent with the appraiser's determined highest and best use. Also, a speculative sale may not be meaningful for end user sale prices.

3.3 Problem. Interim Use



The subject property is an auto tire store located on a five-acre tract along the highway. The current use represents an underimprovement for the five-acre site and is a legal nonconforming use because the tract's zoning was changed two years ago to multiunit residential at a density of 10 units per acre. The appraiser conducted a Level C market analysis. The current use could remain in operation pending a future change in highest and best use. It generates $40,000 net operating income (I_O). Similar tire stores in the market typically sell at a 10% capitalization rate. Taxes and insurance run $6,000 per year for the property.

The subject land if vacant would be worth $9,000 per buildable unit today for multiunit residential use.

Office use has been expanding in this market, and a residual demand analysis indicates a timing of 5 years for that use to reach the subject property. At that time, the subject property would be worth $4 per square foot if vacant for office use.

Traffic has been increasing in front of the subject property, and multiunit retail use has also been expanding along the highway. The timing for multiunit retail use is determined to be 7 years, and the appraiser forecasts the land would be worth $5.50 per square foot if vacant at that time.

It is likely that zoning could be changed for office or multiunit retail use. An estimate to demolish the subject building is $25,000, and cost is not expected to change over the next 7 years. A 15% discount rate is appropriate for all uses.

1. *What is the highest and best use of the land as though vacant?*

5 × 43,560 = 217,800 sq. ft.

Auto tire store: $40,000 / 0.10 = $400,000 as improved

Multiunit residential: 5 × 10 × $9,000 = $450,000

Value of land as if hypothetically vacant now:

$450,000 / 217,800 = $2.07 per square foot

Office: 217,800 sq. ft. X $4 = $871,200, discounted 5 years

n	i	PV	PMT	FV
5	15	*413,027*	-6,000	871,200

3.3 Problem, cont.

Office: $413,027 or $1.90 per square foot

Retail: 217,800 sq. ft. X $5.50 = $1,197,900, discounted 7 years

n	i	PV	PMT	FV
7	15	*425,372*	-6,000	1,197,900

Multiunit retail: $425,372 or $1.95 per square foot

The value of the land as if hypothetically vacant for multiunit residential is $2.07 per square foot. Office use returns a present value to the land of $413,027 or $1.90 per square foot. This is less than multiunit use, so office is eliminated from consideration. Multiunit retail returns a present value to the land of $425,372 or $1.95 per square foot.

Highest and best use as if vacant = Multiunit residential

2. *Is the auto tire store an interim use?*

   Not when considered as if vacant, because the timing is now for multiunit residential. The most likely user/buyer would be tenant/developer.

   However, the analysis is not complete.

3. *What is the current value of the property as improved?*

   Multiunit retail calculation:

n	i	PV	PMT	FV
7	15	*607,353*	40,000	1,172,900

$607,353 or say, $607,400

(The future value has been adjusted for the demolition cost of the tire store estimated at $25,000. $1,197,900 - $25,000 = $1,172,900)

3.3 Problem, cont.

4. *How does the answer to Question 3 affect the HBU decision?*

The value of the property for continued auto tire store use is $400,000. The present value of the site as improved for multiunit residential use is $425,000 ($450,000 - $25,000 for demolition). The present value of the site as improved for future multiunit retail use is $607,400 because of the added present value of the interim income. Clearly, the maximally productive use as improved becomes "hold for future potential multiunit retail," and the auto tire store becomes an interim use.

HBU as if vacant = Multiunit residential

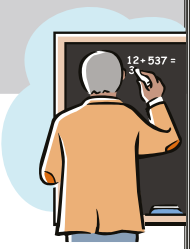
HBU as improved = Hold for potential multiunit retail and continue interim use as an auto tire store.

Timing = 7 years

Likely user/buyer = Tenant/speculative investor

This is an academic exercise intended to show the process of the analysis. It should be acknowledged that in an actual appraisal, any holding costs or interim income as shown in the problem (in this case, the costs are covered by the interim income and it is reported as net income) over the seven-year holding period, would have to be accounted for and the net amount would have to be included in the discounting. Also, the income would likely be less in the seventh year because of the demolition and site preparation necessary to prepare for retail development by the end of Year 7.

3.4 Problem. Consistent Use: Residential Property



A Certified General Appraiser receives an assignment to appraise a residential property located on a busy street. As is her custom, she pulls the assessor data on the subject property from the assessor's website. Then she downloads some similar sales from the local multi-list service so she can do some preliminary analysis before going to view the subject property.

Based on her preliminary analysis, she expects the subject property will appraise for around $200,000. Her analysis of vacant residential site sales indicates that if the subject site were vacant, it would be worth about $40,000:

1. *Based on her preliminary analysis, what is the contributory value of the house?*

   $200,000 – $40,000 = $160,000

During her field trip to view the subject property and the surrounding market area, she takes note that many of the residential properties on the subject street have been converted to commercial use. Upon returning to the office, she researches vacant commercial site sales in the area and along the subject street. As a result of this research, she determines the highest and best use of the subject site is commercial office use and its value as if vacant is $150,000.

Based on this new determination of highest and best use of the site, she concludes the value of the subject property is $310,000 ($150,000 site value + $160,000 improvement value).

2. *Is her value conclusion correct? If not, why?*

   No. She has violated the theory of consistent use, which holds that land cannot be valued based on one use while the improvements are valued based on a different use.

3.4 Problem, cont.

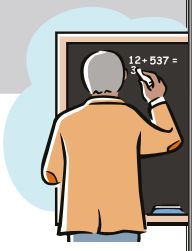
After reviewing her appraisal, the bank decides to hire a different appraiser to conduct a field review. The reviewer agrees with her site value, of $150,000, and her determination of highest and best use, as if vacant, but disagrees with her final value opinion. The reviewer identifies her own comparable sales, using sales of houses along this street that had been converted to commercial office use before the sale. Her final opinion of value for the property is $215,000.

3. *Based on the reviewer's reported value, what is the contributory value of the house?*

   $215,000 – $150,000 = $65,000

   Consistency with the theory of consistent use requires the house to be valued based on its contributory value to the land in the context of the land's highest and best use as if vacant, not the use for which the house/building was originally designed.

3.5 Problem. Consistent Use: Agricultural Tract with House



An appraiser received an assignment to appraise a 160-acre agricultural tract that is improved with older farmstead improvements that have been well maintained over the years. The two-story house is currently occupied and is in good condition. The property is remotely located and is 20 miles from the nearest small town and 50 miles from the nearest major city.

The appraiser's research has identified numerous comparable sales that compare well with the subject property as if vacant. No sales have been found that are similarly improved. With seemingly no way to value the subject house, the appraiser decides to research the nearest small town, which is 20 miles away. She finds three similar houses on lots that have recently sold. Using the process of allocation, she extracts the contributory value of these houses and reconciles to a value of $55,000.

The comparable sales of vacant agricultural land indicate a value of $2,000 per acre for the land to which she adds the $55,000, market-derived contributory value of the house. Her final value opinion is thus: $320,000 + $55,000 = $375,000.

1. *Is there an inconsistency in her analysis? If so, what?*

Yes. This process is inconsistent with the concept of consistent use. The subject house must be valued based on its contributory value to the highest and best use of the land, which is agricultural. This would likely be different from the value a similar house contributes to a city lot.

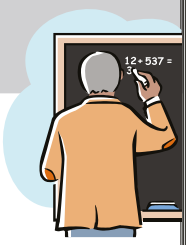
3.5 Problem, cont.

2. *How should she have solved this problem?*

This is a common issue in many rural agricultural markets today. The problem is that typical buyers of agricultural land today are rarely in the market for farmstead improvements on the land. Many of them already have a farm headquarters. The subject house suffers from functional obsolescence because it is no longer the ideal improvement to this remote agricultural land.

The cost approach is the proper methodology needed here to value the subject improvements. Functional obsolescence would be determined by comparing sales of agricultural land with improvements to similar houses in town. These comparable sales do not need to be comparable sales that would qualify for direct comparison in the current appraisal. They are only used to extract a percentage amount of functional obsolescence. The adjustment for functional obsolescence would adjust the value of the house to its contributory value to the agricultural land.

4.1 Problem. Comparable Sales Selection



The subject property is a 0.75-acre site located at the corner of an interstate highway and a major arterial street at the edge of a metropolitan area. The subject property has a newly constructed building equipped for use as a sports bar/grille that never opened for business. The building has no windows and no back door, which would preclude it from receiving an occupancy permit. There is also a small A-frame storage building on the property.

The property has single point access requiring ingress and egress via the same drive. There is also a pipeline easement that transects the subject property diagonally. This easement contains two parallel 30" transport pipelines and prohibits the building of any permanent structures within the easement area. The existing buildings have been positioned to avoid the easement.

The Department of Transportation is improving this intersection, which requires the total acquisition of this small property because the single point access drive will be taken.

There are no improved comparable sales in this market that compare to this newly constructed building that does not qualify for an occupancy permit. This will necessitate the development of the cost approach to value the building. Obviously, some consideration will have to be given to functional obsolescence. The sales comparison approach will be used to value the land. Only one vacant land sale has occurred at this intersection in the past 10 years. Adequate numbers of similar vacant land sales have occurred at other similar intersections.

4.1 Problem, cont.

The 4-acre tract adjacent to the east sold one year ago for the purpose of developing it to a large convenience store with 48 fuel dispensers. This vacant site sold for $10 per square foot. Construction is complete, and the convenience store is fully operating as of the date of take. It is unaffected by a pipeline easement or the highway project.

1. *Is the sale of the adjacent property appropriate for use as a comparable sale for the subject property?*

   No. This sale is really tempting because of its location adjacent to the subject property and because it is the only sale that has occurred at this intersection. The appraiser should ask himself a few questions to aid in the decision process.

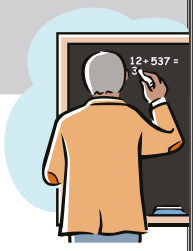
   - *Is this sale the same highest and best use as the subject property?*
   - *Does the subject property compete with this adjacent site?*
   - *Could the subject property accommodate the same improvements built on this adjacent site?*
   - *Would the buyer of the adjacent site have considered the subject property as a substitute site for purchase?*

   The answer to all these questions is no. This is a sale, but it is not a comparable sale. It is over five times larger and vastly superior in utility. It is not meaningful as a comparable sale in the appraisal of the subject property because its use would be inconsistent with the definition of market value and its premise in highest and best use. Additionally, there are other meaningful sales available in more than adequate quantity.

4.1 Problem, cont.

It would, however, be prudent for the appraiser to mention this sale and explain the reasoning behind the decision that it is not meaningful for direct comparison to the subject property. Because this sale meets the "recent" and "proximate" criteria, any reviewer or reader of the report would be interested in the reasoning behind the decision that it fails the "similar" criteria, so an explanation should be provided. Sometimes, it is obvious why certain sales are not meaningful, but when it is not, an explanation should be offered. And, I guess we just ignore the pipeline easement!??

4.2 Problem. Income Analysis



The appraiser's research of the local market indicates that market participants typically subtract reserves for replacements as an above-the-line expense in their income statements. He follows this market convention when he develops the standardized income statement for the subject property. To be consistent, he develops the standardized income statements for each of the comparable sales in the same way. He finishes his report and submits it to his client, who is the property owner.

Two days later, he receives a call from his client who says he never subtracts reserves for replacements on his income statement. He just pays for replacements when they occur out of operating income. He asks the appraiser to remove this line-item expense from the income analysis and resubmit his report.

To keep his client happy, the appraiser complies with the request. Removing this expense increases the net operating income, which, consequently, increases the value indication by the income capitalization approach. He resubmits the report, and the client is happy with the value increase.

1. *Has the appraiser committed an error?*

   Yes.

2. *What did he do wrong? What should he have done?*

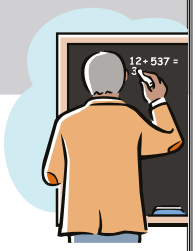
   He has introduced an inconsistency into the income analysis because he did not go back and also remove the expense from the income statements of the comparable sales. He should have done that and re-extracted and reconciled to a new capitalization rate that was based on not expensing the reserves and replacement allowance. This procedure would have produced basically the same value indication as his original calculations.

4.2 Problem, cont.

3. *If the appraiser had applied the correct methodology, the value would be the same. What would be different?*

   The income, obviously, and the rate. The rate has to change. ***The value is the value and does not change****. The appraiser cannot use a capitalization rate that implicitly includes the subtraction of replacement reserves as an expense if that expense is not subtracted from the subject property's income statement. An appraiser cannot control the value by manipulating the income analysis.*

4.3 Problem. Extracting a Capitalization Rate



The subject property is a multiunit residential property located in one of several suburbs of a large metropolitan city. There are 150 units, which is considered medium sized in this market. The property is within walking distance of a large public lake featuring numerous public recreation areas. The city/suburb is desirable in this market and is known for an excellent public school system.

To help facilitate analysis, the appraiser summarized four sales comparable to the subject property in a grid. The sales bracket the subject property in size (number of units) with Sale 4 being the largest.

	Subject Property	Sale 1	Sale 2	Sale 3	Sale 4
Sale price ($)		14,400,000	15,800,000	18,000,000	22,800,000
R_O (%)		6.5	5.7	6.0	7.9
OER (%)	45.7	50.5	45.2	45.0	55.0
Physical land-to-bldg. ratio	2.0:1	1.9:1	3.0:1	2.0:1	1.9:1

- Sale 1 is across the street from the subject property but in a different suburb. This city/suburb initiated rent controls two years prior to this sale.
- Sale 2 is in the same city/suburb as the subject property and is within walking distance of the same lake. It has surplus land, and the new owner is planning to add additional units to the property.
- Sale 3 is also in the same city/suburb as the subject property and is within walking distance to the same lake. Data is hard to obtain on this sale, and no income or expense history is available. The appraiser estimated the income and expenses for analysis, meaning the data quality is low on this sale.
- Sale 4 is also in the same city/suburb as the subject property but farther from the lake. This sale is in a less desirable area that exhibits some indications of decline. The market has increased since the sale took place, which was over two years ago.

4.3 Problem, cont.

1. *After analyzing the data, the appraiser settled on an R_O of 6.5, which is a simple average of the capitalization rates, as appropriate for applying to the subject property. Is there an inconsistency in this approach?*

   Yes. An average is not consistent with this data. Averaging gives all the indicated rates equal weight. Do you think Sale 4 deserves equal weight? How about Sale 2, which has surplus land? Or what about Sale 1, which is burdened by rent controls?

2. *Perform a reconciliation of the data to produce a range in which a capitalization rate appropriate for the subject property should fall. Indicate in the grid below whether the subject property's capitalization rate should be lower or higher.*

	Subject Property	Sale 1	Sale 2	Sale 3	Sale 4
Sale price ($)		14,400,000	15,800,000	18,000,000	22,800,000
R_O (%)		6.5	5.7	6.0	7.9
OER (%)	45.7	50.5	45.2	45.5	55.0
Physical land-to-bldg. ratio	2.0:1	1.9:1	3.0:1	2.0:1	1.9:1
The subject property's capitalization rate should be either:	***Lower, Same as, or Higher***	*Lower than this*	*Higher than this*	*About this, but data is weak*	*Lower than this*

The reconciled range is somewhere between 5.7 and 6.5% but excluding both. It is probably closer to 5.7 because the rent controls are a substantial detractor. 6% is supportable.

4.3 Problem, cont.

3. *State a brief reason for your reconciliation decision for each sale.*

   - *Sale 1 has lower income and value growth potential because of the rent controls. This also explains the higher OER (cities don't cap expenses). If the buyer had the opportunity to raise rent as expenses increase and if the buyer could speculate on value increasing (it's not likely since income is capped), the buyer would have paid more for the same income, making the capitalization rate lower. Therefore, the subject property's capitalization rate should be lower than 6.5%.*
   - *Sale 2 has surplus land. This land has value but likely does not produce any income. Without this surplus land, the price would have been lower for the same income, making its capitalization rate higher. The subject property's capitalization rate should be higher than 5.7%.*
   - *Sale 3 seems to be the most comparable sale, but the data is weak so it's not as reliable as the first two sales. For what it's worth, it supports a capitalization rate around 6%.*
   - *Sale 4 is riskier because of its location and the time period of the sale. Otherwise, it would have sold for more, making its capitalization rate lower. Higher risk means a higher capitalization rate. The subject property's capitalization rate should be substantially lower than 7.9%*

4.3 Problem, cont.

4. *If the subject property has an I_0 projected to be $900,000 for the upcoming year, how much difference did the appraiser's improper reconciliation make in the value indication?*

   $900,000 / 0.065 = $13,846,154
   $900,000 / 0.06 = $15,000,000

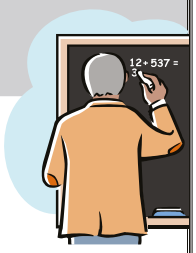
   The appraiser underappraised the property by over $1,150,000. A more appropriate capitalization rate yielded a value indication 8.3% higher.

   It appears the appraiser did a good job of estimating income and expenses for Sale 3, but you wouldn't know that until you did a proper reconciliation of the rates yielded by the other sales, for which more reliable data was available. In any case, it probably would not be advisable for the appraiser to put the most weight on that sale because of the low data quality.

   *Sale 1 was included in this analysis for illustration purposes. Many appraisers would eliminate it from the analysis because even though it is located directly across the street from the subject property, they would view it as **not** being located in a similar competing market. Because of the rent controls, it would probably not compete for the same tenants and maybe not the same buyers. Eliminating this sale would not substantially weaken the reliability of the approach because the remaining three sales still bracket the subject property in the elements of comparison, and the reconciliation would likely lead the appraiser to the same conclusion.*

   Relative comparison analysis necessitates that the sales bracket the subject property in the elements of comparison being analyzed. If all the sales are either superior or inferior, they will not develop a range into which the subject property would fall and can only establish whether the subject property would fall somewhere above or below the indicated range. To attempt this analysis in such an instance would be inconsistent with the premise of the approach and the data.

4.4 Problem. Underwriter's Method



The subject property is a stabilized multitenant office building in good condition. The appraiser has extracted a capitalization rate of 8.8% from comparable sales but wants to test the capitalization rate for reasonableness.

The appraiser called his friend at First State Bank and was told the following commercial loan terms were available:

- 80% loan-to-value ratio (*M*)
- 6% annual interest rate (*i*)
- Amortized over 20 years with monthly payments.
- Due in 5 years
- 0.08597 mortgage constant (R_M)
- 1.20 debt coverage ratio (*DCR*)

1. *What is the indicated capitalization rate based on the underwriter's method?*

$$R_O = (M \times R_M \times DCR)$$

$$R_O = M \times R_M \times DCR$$

$$R_O = 0.80 \times 0.08597 \times 1.20$$

$$R_O = 0.08253$$

2. *Is the extracted capitalization rate of 8.8% reasonable based on the underwriters method?*

Yes. In this case the extracted capitalization rate is higher than the capitalization rate indicated by the underwriter's method but still within the range of being considered reasonable.

4.4 Problem, cont.

3. *Is there an inconsistency here?*

   Yes. The indicated capitalization rate (R_O) is less than the mortgage constant (R_M). This sets up a scenario that has negative first-year leverage. While this could happen in a rapidly increasing market (where value increases are outpacing rent increases), in most markets, it would be a red flag for the appraiser since the subject property is a stabilized property in good condition. But remember, this method is only looking at the capitalization rate from the perspective of the bank lending committee. In that mindset, it sets the low point for a possible capitalization rate. The capitalization rate extracted from the comparable sales is higher than the mortgage capitalization rate, thus indicating positive first-year leverage.

4. *Why is the capitalization rate indicated by the underwriter's method lower than the one extracted from comparable sales?*

   There is nothing in the underwriter's method formula that considers the risk to the equity position. The bank's only concern with equity is that it can provide some buffer to value in the case of a foreclosure, hence the LTV constraint. The bank does not care about the income or return to the equity position, except that it can provide some buffer to ensure the debt can be serviced, hence the DCR constraint.

   The capitalization rate extracted from comparable sales inherently reflects not only the risk associated with the debt but also the risk associated with the return to the equity position.

4.4 Problem, cont.

5. *What is the implied equity capitalization rate based on the overall capitalization rate yielded by the underwriter's method?*

The implied equity capitalization rate can be calculated using a variation of the band of investment formula. This formula is:

$$R_E = \frac{(R_O - M \times R_M)}{(1 - M)}$$

The implied equity capitalization rate is therefore:

$$R_E = \frac{(0.08253 - 0.80 \times 0.08597)}{(0.20)}$$

$$R_E = \frac{(0.08253 - 0.068776)}{(0.20)}$$

$$R_E = 0.06877 \text{ or } 6.88\%$$

If the equity capitalization rate required by the market is higher, this explains the discrepancy between the market-extracted overall rate and the one indicated by the underwriter's method. One, or both, of the bank's loan constraints is not at market. It is not uncommon for lenders to quote a higher LTV ratio than the DCR can support.

4.4 Problem, cont.

6. *What is the implied equity capitalization rate based on the market-extracted capitalization rate?*

$$R_E = \frac{(R_O - M \times R_M)}{(1 - M)}$$

The implied equity capitalization rate is therefore:

$$R_E = \frac{(0.088 - 0.80 \times 0.08597)}{(0.20)}$$

$$R_E = \frac{(0.088 - 0.068776)}{(0.20)}$$

$$R_E = 0.096120 \text{ or } 9.61\%$$

The equity capitalization rate implied by the market-extracted overall capitalization rate is higher and indicates positive first-year leverage. It is likely that it is much closer to market requirements for equity capitalization rates than the one indicated by the underwriter's method because of the non-market loan constraints promoted by this bank.

4.4 Problem, cont.

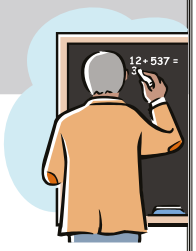
7. *Should the appraiser ever rely solely on the underwriter's method to develop a capitalization rate??*

   No. The discussion in the problem is precisely why. While this formula for developing or testing a capitalization rate may provide some comfort to the bank lending committee, it is less useful to an appraiser, except for testing reasonableness. To rely exclusively on this formula for developing a capitalization rate may introduce an inconsistency with the way the market views and uses leverage.

8. *What is the last problem with this scenario?*

   The appraiser only called one bank. Lenders are very competitive, and there will be a range of commercial terms being offered in the market at any given time. This bank's terms seem to be slightly inconsistent with the prevailing market terms. Reconciling terms obtained from several different banks will increase the reliability of this process.

4.6 Problem. Consistency with Taxes



A county assessor proposed that in addition to reassessing properties every three years, reassessment would also occur upon sale and be based on sale price if the transaction represents market value.

If the effective property tax rate is 1.014%, and the reconciled overall capitalization rate appropriate for the property is 7.25% with replacement allowances implicit in the rate; what are the hypothetical property taxes and the property's value under this proposal? Use the operating statement below.

	$
Total *PGI*	440,000
Vacancy and collection loss	– 35,200
EGI	404,800
Current property taxes	22,040
Insurance	6,000
Variable expenses	143,214
Replacement allowances	0

The steps below correspond to those outlined in the Technique for Loading the Capitalization Rate Table.

1. Effective tax rate is 1.014%, or 0.010140

2. Net operating income before taxes:

EGI: $404,800 – 149,214 = $255,586

3. Loaded capitalization rate:

0.072500 + 0.010140 = 0.082640

4. Capitalized net operating income without taxes:

V = I / R

$255,586 / 0.082640 = $3,092,764

5. Taxes

$3,092,764 X 0.01014 = $31,361

4.6 Problem, cont.

6. Net operating income:

$255,586 - $31,361 = $224,225 (based on an estimate of next year's taxes)

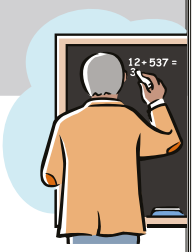
Proof of Value:

Net operating income, including a deduction for property taxes, divided by the unloaded capitalization rate

$224,225 / 0 .0725 = $3,092,759

($5 difference caused by internal rounding in the calculator)

4.8 Problem. Property Rights



The assignment is to value the leased fee interest. The subject property is an industrial building, containing 30,000 square feet, that is burdened by a long-term lease, which has 10 more years to run. The highest and best use analysis indicates the property would typically be purchased by an investor. The current contract rent is $7.50 per square foot, per year, on a net basis, and there are no provisions for it to increase for the remaining term of the lease. The market rent is $9.50 per square foot, per year, on a net basis. The appraiser uses a discount rate of 11% for the fee simple interest and 13% for the leased fee interest. The appraiser's investigation indicates that a proper discount rate to value the leasehold interest is 16%.

The appraiser develops the cost approach and realizes that it values the fee simple interest, so a property rights adjustment is needed. The appraiser solves the problem by discounting the market rent at 11% and the contract rent at 13% and solving for the difference.

1. *Is there an inconsistency in the appraiser's approach?*

   Yes. The discount rates used by the appraiser are not consistent with the relationship between market rent and contract rent in this case.

2. *Should the discount rate for the leased fee be lower or higher than the rate for fee simple?*

   Lower, in this case. When contract rent is below market rent, the leased fee has lower risk than the fee simple. When tenants are paying below market rent, tenants are going to stay and pay the rent. Low risk.

   There must be consistency in the relationships between yield rates used to value different property interests. They are always measured against the risk associated with each property (ownership) interest.

4.8 Problem, cont.

3. *The appraiser has correctly identified the concept that part of the property rights adjustment must account for the below-market contract rent. If the correct discount rate for the leased fee interest is 11% and the correct discount rate for the fee simple interest is 13%, what is the correct adjustment?*

Leased fee: 30,000 sq. ft. × $7.50 = $225,000

n	i	PV	PMT	FV
10	11	*-1,461,389*	225,000	

$1,461,389

Fee simple: 30,000 sq. ft. × $9.50 = $285,000

n	i	PV	PMT	FV
10	13	*-1,620,778*	285,000	

$1,620,778

Property rights adjustment: $1,461,380 - $1,620,778 = -$159,398

This is the property rights adjustment that would be made in the cost approach to adjust the value indication (fee simple) down to a leased fee value. It is a negative adjustment because contract rent is below market rent.

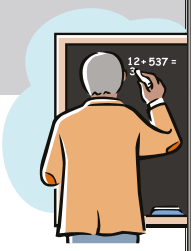
*The assumption is the sum of the parts do **not** equal the whole. Accordingly, this approach does not value the leasehold, which would require a 16% discount rate. So, what is really being calculated here is the difference between the present value of the actual leased fee at contract rent and the present value of the fee simple, which is available for lease at market rent. This approach adjusts the cost approach, fee simple value, down to the leased fee interest at contract rent. The leasehold discount rate is included in the problem as a distractor. It is not used because we are calculating the difference between leased fee value and fee simple value, which is rarely equal to leasehold value.*

4.8 Problem, cont.

4. *Could this problem have been solved by valuing the leasehold position using a 16% discount rate?*

   No. This approach assumes the value of the parts equals the whole, which is generally inconsistent with the market. Market studies have shown that regarding the legal division of the components of value, the value of the leased fee interest plus the value of the leasehold interest rarely equals the value of the fee simple interest.

4.10 Problem. The Three Approaches



You are reviewing an appraisal completed by a seasoned certified general appraiser. The subject property is a single-unit office building occupied by a long- term tenant who enjoys only a slightly favorable lease. All of the comparable sales are also single-unit office buildings. You notice the appraiser developed all three approaches in the following manner:

- The income capitalization approach was developed based on contract rent.
- The cost approach was developed with the appraiser stating that no adjustments to the indicated value were necessary.
- In the sales comparison approach, some of the sales were transferred as fee simple and some were transferred as leased fee. No adjustments were applied.
- Some of the comparable sales' income streams were analyzed based on contract rent, and some were analyzed based on market rent for purposes of adjusting the sales for economic characteristics.

His reconciled final value opinion is within the range of values indicated by each of the approaches.

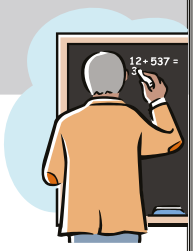
Is his final value opinion credible? If not, why?

No. There is inconsistency between the three approaches because they are not developing the same type of value.

- *The income capitalization approach was based on contract rent: that's leased fee.*
- *Unless adjusted to reflect the value of the leased fee interest, the cost approach always develops fee simple, and the appraiser did not make that adjustment.*
- *The sales comparison approach is a mixed bag.*

These three value indications cannot be credibly reconciled to a final value conclusion regardless of whether the assignment is to appraise fee simple interest or leased fee interest.

4.11 Problem. Retrospective Value



A lawsuit was filed to solve a dispute over alleged construction defects. A delay in the proceedings was caused by the judge's decisions on several pretrial motions being taken up on appeal. With those issues now settled, both sides would like to move the case along. Because of these delays, the effective date of value will be four years ago.

The subject property is a newly constructed, 4-story, multitenant office building. An MAI designated appraiser was hired by the attorney representing the building owner to complete a retrospective appraisal and provide expert witness testimony at trial.

The appraiser carefully develops the sales comparison approach using comparable sales that all occurred before the effective date of value. All the sales are of similar buildings that were two years old or less at the time of sale. The income capitalization approach is based on rental rates in effect as of the effective date, and the capitalization rate is extracted from the comparable sales used in the sales comparison approach. The cost approach was developed using the current edition of the *Marshall & Swift Commercial Cost Handbook*. The cost approach is highly relevant in this appraisal because the subject building is new and because of the cost-to-cure calculations relevant to the alleged construction defects. These construction defects have not yet been corrected.

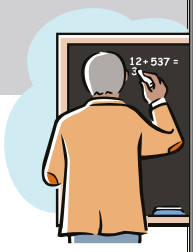
1. *Is there an inconsistency between the approaches to value? If so, what is it?*

   Yes. Unless adjusted, the current edition of the cost handbook will develop a current replacement cost, not a retrospective replacement cost.

2. *Should the appraiser use current cost data to develop the cost-to-cure estimates, since they have not yet been cured?*

   This is a legal question that would depend on the jurisdiction. The appraiser should clarify with the attorney/client. The appraisal report should clearly state whether the cost-to-cure estimate is based on costs that are current or as of a prior time period.

5.2 Problem. Special Use Property



The subject property is a religious facility occupied by a vibrant and growing congregation numbering around 300. About one year ago, serious contamination was discovered on the property. The EPA subsequently declared the property a superfund site, evicted the congregation, and fenced the site because the contaminant is a known carcinogen and is airborne inside the building. The contamination is the result of the historical operation of a refinery on the site in the 1920s.

Three months before the contamination was discovered, the congregation completely remodeled the building, which included adding two more restrooms and remodeling all areas of the building, including the sanctuary and commercial kitchen. The entire building was updated to current market tastes and standards, and it now displays a high degree of functionality for the purpose for which it was designed.

A lawsuit was filed against the responsible party, and both sides hired appraisers with MAI designations. Both appraisers conclude the highest and best use of the property is "Special Use – Religious Facility, as improved and as if vacant." Therefore, highest and best use is not in dispute. A retrospective appraisal will be required as of the date the contamination was discovered.

The appraiser hired by the defendant insists the cost approach is inapplicable because of the age of the building (1988), and he develops the sales comparison approach, for which he says comparable sales are plentiful in the market. He identifies six comparable sales.

5.2 Problem, cont.

The appraiser hired by the plaintiff concludes that there are insufficient numbers of sufficiently comparable sales to credibly develop the sales comparison approach and states that the cost approach is the *only* applicable approach.

Of the six sales identified and compared to the subject property by the defendant's appraiser, none of them are large enough to house a congregation of 300, none of them are located on sites large enough to accommodate parking for a congregation of 300, and all of them are substantially older and of substantially different construction and design. One of them is an industrial building, located in an industrial area, that briefly housed a religious organization during the time around the effective date of the appraisal.

1. *Based on the data so far, which approach is the correct approach to value this special purpose property?*

   The cost approach. It is often the only approach that can practically be used to value special use properties, which are developed to their highest and best use, because of their unique design features and because they do not often exchange in the marketplace in a way that is consistent with the definition of market value.

5.2 Problem, cont.

The defendant's appraiser determines that the subject property suffers from functional obsolescence because "its special design is not easily adaptable to alternative uses." He makes a 40% negative adjustment, which he credits to functional obsolescence.

2. *Keeping in mind that highest and best use is not in dispute, is the appraiser correct in his determination of functional obsolescence burdening the subject property?*

   No. First, any analysis of alternative uses is completely inconsistent with the determination of highest and best use. Once highest and best use is determined, what justifies any consideration of other uses? The highest and best use is Special Purpose – Religious facility. It is not in dispute. To be consistent with highest and best use, any functional obsolescence analysis must be directed at the functional capacity of the property to efficiently provide utility for that use only.

   Second, analyzing the property for alternative uses falls completely outside the parameters of an analysis of functional obsolescence. Obviously, any property will have functional limitations if it is expected to efficiently perform a purpose for which it was not designed or intended. The analysis for functional obsolescence involves comparing the subject property with the ideal improvement, not alternative uses.

   Since an analysis of "alternative uses" concerns the design of the building and other items that are inside the property boundaries, it is also eliminated from consideration as causing external obsolescence.

   The church building had very recently been completely updated to the point of being in full compliance with current market tastes and standards. It is highly functional for the purpose for which it was designed. The appraiser cannot support any functional obsolescence present in this building.

5.3 Discussion Question

When appraising a special purpose property, is there any situation where it is appropriate to interject a discussion or analysis of alternative uses because of functional obsolescence?

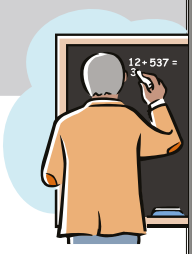
Maybe a better question is: Is it ever appropriate to consider other uses once a determination of highest and best use is made? It seems the answer would be no. After all, that is the use you said you were valuing. Where do other uses have a part in the discussion after the highest and best use decision is made? That competition is over and the other uses lost.

If the appraiser decides and market analysis supports that the church building is no longer contributing to value or would contribute more to value if converted, and that the only buyers in the market are buyers who would convert it to an alternative use, such as an office building; shouldn't the highest and best use conclusion be "convert to office use"?

If that was your highest and best use conclusion, then you would have functional obsolescence and the cost of conversion would be in play. The analysis of the alternative use would be consistent with the highest and best use conclusion. Of course, that use would have to be maximally productive, and the value added by the conversion would have to exceed the cost of conversion for it to be financially feasible.

This consistency thing can get complicated.

5.4 Problem. External Obsolescence



The subject property is a detached single-tenant retail building on a busy street with heavy traffic. It is occupied by a menswear and custom tailor shop.

The Department of Transportation is beginning a major street project that will widen the street and convert the nearby intersection to an overpass/underpass configuration. This project will take two years to complete, and access to the tailor shop will never be completely denied but will be very limited and inconvenient during the construction process.

The tailor loves the location and thinks it may be even better once the street improvement project is complete. He is unsure, however, if he can survive for the two years during the project.

In an effort to retain a good tenant and knowing he could not lease the building for the current rent anyway, the landlord offers to reduce the rent by half for the two years that access will be limited. This rent reduction amounts to $1,000 per month.

1. *What is the amount of temporary external obsolescence and reduction in land value caused by the street improvement project if the retail property yield rate (Y_0) is 11%*

$ 20,550 total diminution in value

n	i	PV	PMT	FV
2	11	-20,550.28	12,000	

To complete an analysis of external obsolescence, this amount would need to be allocated between the land and the improvement. By definition, external obsolescence affects only the building. The land devaluation, caused by this temporary impairment is not "obsolescence."

5.4 Problem, cont.

2. After the construction project commenced, a change was made to the construction plans that puts the temporary nature of this impairment in doubt. After analysis of the new plans, the landlord and the tenant agree that this impairment is now permanent. Further analysis indicates the ratio of building value to total property value is 70%.

   What amount of external obsolescence should be allocated to the building if an appropriate capitalization rate is 8%

   $12,000 / 0.08 = $150,000

   $150,000 × 0.70 = $105,000

6.2 Discussion Question

An appraiser completed an appraisal for litigation support and is now providing expert witness testimony to support that appraisal. Her direct testimony went well, and she is now well into the cross-examination phase.

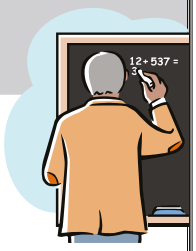
The attorney conducting the cross-examination points out that the final value opinion for the subject property was $1,289,000.

The attorney asks the appraiser this question, "Ms. Appraiser, are you sure the value shouldn't be $1,290,000? I mean, are you seriously going to sit there and tell this jury that you know, within $1,000, what a 1.2-million-dollar property is worth?"

How should the appraiser answer this question?

Based on the appraiser's final value, she should be in a position to answer, "Maybe not, but the market seems to know. You will notice that my Comparable Sale 1 sold for $1,284,000, my Comparable Sale 2 sold for $1,269,000, and my Comparable Sale 3 sold for $1,295,500. It seems that market participants are rounding to no more than the nearest $1,000, so that's what I did." It will be hard to argue with that answer.

6.3 Problem. Rounding



An appraiser reconclies capitalization rates indicated by four comparable sales. The capitalization rates yielded by the four sales range from 5.9 to 6.95. The most similar sale, which is highly similar to the subject property, yields a capitalization rate of 6.45. The appraiser decides the most weight should be given to that sale but does not like to use uneven capitalization rates, so he decides to round the capitalization rate down to 6%. He feels justified because he is still within the range indicated by the comparable sales.

How much difference in value is caused by using the 6% capitalization rate over the 6.45% capitalization rate if the net operating income is $145,000?

$145,000 / 0.06 = $2,416,667

$145,000 / 0.0645 = $ 2,248,062

Difference = $168,605 or 7.5% higher

6.4 Discussion Question

In 6.3 Problem, the sales comparison approach provides a value indication of $2,460,000, which the appraiser believes supports his decision on rounding the capitalization rate. He reconciles to a final value of $2,450,000.

Does the sales comparison approach support his decision on rounding the capitalization rate, or should the appraiser have been more accurate on his extraction of the capitalization rate, which might have caused him to take a second look at his sales comparison approach?

Each approach should be developed independently and as accurately as possible. We don't know how much confidence the appraiser has in the data in the sales comparison approach, but his rounding of the capitalization rate weakens the credibility of the income capitalization approach. If the sales comparison approach is slightly inflated, or if he reconciled to the very top of the range indicated by the comparable sales, then rounding the capitalization rate compounds the problem for the final reconciliation.

If he had used the more accurate capitalization rate, he may have reconciled to a final value conclusion in the range of $2,300,000, 6.12% lower.

This question illustrates how rounding, even less than one half of one percent (45 basis points) on the capitalization rate, can impact the final reconciliation and possibly skew the final value. His conclusion may very well be inconsistent with the data.

6.5 Discussion Question

The appraiser in 6.4 Discussion Question includes the following final reconciliation in his report:

> The two approaches to value developed in this appraisal yielded the following indications of value:
>
> Sales comparison approach – $2,460,000
>
> Income capitalization approach – $2,417,000
>
> Based on the foregoing data and analysis and subject to the Certification and Statement of Assumptions and Limiting Conditions herein, I have reconciled to a final value conclusion of:
>
> **$ 2,450,000**

Is this final reconciliation section adequate?

No. He obviously put more weight on the sales comparison approach, but why?

And that's just for starters, but it is enough said.