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Adjustments to Capitalization Rates: Why not?

Abstract

Typical appraisal practice for development of the capitalization rate is that the appraiser narrativize economic and physical differences between the comparable sales and the subject property with non-specific, general, and subjective verbiage such as "*The subject property is located in a better location than Comparable #2 and is in worse condition than Comparable Sale # 3, so therefore I conclude to a capitalization rate of X%.*"

This paper discusses why this type of broad-brush analysis of capitalization rates is not sufficient; and that a more structured and internally consistent methodology is necessary; and that this type of methodology is already supported by the content of *The Appraisal of Real Estate* textbook as well as a review of economic research literature.

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Introduction

As we are in the third decade of the 21st Century, many aspects of the appraisal process have become more objective and quantifiable instead of mostly subjective such as this phrase that has been written in countless appraisals over the years: *"Based on my years of experience and knowledge of the area, it is my opinion that the property value is $XYZ…"*

The appraisal and lending industries are on the threshold of bringing statistical modeling, artificial intelligence (AI), and analyses of large datasets into the forefront of valuation practice including using models for primary value conclusions as well as deriving contributory value of physical or economic characteristics for comparable sales adjustments.

In an income-producing property, the transactions used in the Sales Comparison Approach to develop the value in that section of a real estate appraisal are typically the same sales that the appraiser uses as the basis for the development of the capitalization rate. The underlying rationale is that if these are the best sales from which to observe and estimate the market's reaction to the subject's location, condition, configuration, and utility on a per-unit basis, then these are also the best from which to observe and estimate the market's reaction to the investment risk of the subject property, as measured by each sale's capitalization rate.

However, the development and analysis of capitalization rates in the Income Approach is still primarily based on a "witches' brew" of subjective statements by the appraiser such as *"Well, I will place most weight on the capitalization rate from Sale #1 because it is closest to the subject and secondary emphasis on Sale #4 because it is of similar condition, so I conclude that the capitalization rate is X%."* [1]

This type of subjective capitalization rate development has the potential for a wide error and inconsistency, as well as the lack of transparency and objectivity that users of appraisals expect, but it is the norm in today's appraisal practice.

[1] Specific real-world examples of typical appraisal verbiage can be found in a later section of this paper.

This paper offers a solution to help triangulate the appraiser's data and analysis into a more rigorously supported capitalization rate conclusion which, in turn, results in a more credible opinion of value. The foundation of the suggestion solution can be found in a review of real estate economic research as well as solid support from the textbook, *The Appraisal of Real Estate (15th edition),* and should be incorporated into current appraisal industry best practices.

What are capitalization rates? [2]

In simple terms, a capitalization rate is an indicator of a property's investment rate of return and is used to convert that property's net operating income (NOI) to a value using the formula:

Value = Net Operating Income ÷ Capitalization Rate

Or re-written as: $\frac{NOI}{Rate} = Value$

For example, assuming that a small office building has NOI of $100,000 per year and that the appropriate capitalization rate is 5.25%, then the estimated value of the property is $1,905,000:

$$\frac{\$100{,}000}{5.25\%} = \$1{,}905{,}000$$

In this example, a riskier property would require a higher rate of return, say, 6.0% and would result in a lower indication of value and, conversely, a less risky rate of return, say 4.5%, would yield a higher indicated value:

$$\frac{\$100{,}000}{6.0\%} = \$1{,}670{,}000 \quad \text{Vs.} \quad \frac{\$100{,}000}{4.5\%} = \$2{,}220{,}000$$

[2] It not the intent of this paper to be a primer on the development of the Income Approach, capitalization rates, or the Sales Comparison Approach. There is significant education content through the Appraisal Institute and other appraisal education providers for background material and perspective on these methods, but a brief overview of this material is appropriate for this discussion.

An observation: A 25bps difference in capitalization rate results in a 5%± difference in value at this level so concluding to the more aggressive or conservative end of the observed range would have a material impact on the value conclusion, which is all-the-more reason to assure adequate support and analyses for the appraisal's capitalization rate.

There are five basic methods for deriving a capitalization rate by appraisers, depending on the quality and quantity of available data:[3]

1) Derivation from comparable sales
2) Weighted average techniques such as the Band of Investment
3) Debt coverage ratio analysis (DCR)
4) Published national or regional surveys, typically reported by property type
5) Personal surveys conducted by the appraiser in their local market

Each method/data source has positives and negatives, so it is usually a best practice that the appraiser use most, if not all, of these techniques to support their concluded capitalization rate.

For example, a downside about the use of published capitalization rate surveys is that they might not be uniform in their survey methodology, including:

- Are the same participants consistently surveyed quarter-over-quarter? If not, are the resulting trends meaningful?
- Is the survey's income assumptions clearly stated, such as forward-looking proforma, or in-place or retrospective T-12 income? If not, how does the appraiser/analyst apply the indicated survey rates to their appraisal's estimated net operating income?
- Is it clear who the survey's respondents are? Are these firms questioning brokers, appraisers. or lenders, or a mix of real estate professionals?

[3] *The Appraisal of Real Estate 15th edition* (Chicago: Appraisal Institute, 2020) 460.

- Is the survey comparing apples-to-apples? For example, the survey might not differentiate between answers that include a small locally owned "Mom and Pop" self-managed multifamily property in a secondary or tertiary location versus a larger, institutionally owned professionally managed property in a major metropolitan area. Or, might not differentiate between prime downtown properties vs. suburban properties.

And, many of these surveys are not transparent in their methodologies but meanwhile appraisers take the "figures on the page" at face value without fully understanding the limitations of the published material.

In contrast, analysis of local sales is generally probably the best indicator of a capitalization rate since the appraiser typically has personal knowledge of each specific sale, its location, configuration, and condition, as well as the terms and motivations of the parties to the transaction. As such, appraisers tend to place primary or significant weight on the capitalization rates derived from the comparable sales in most appraisals of income-producing property.

It is incumbent on the appraiser to synthesize this volume of observations and derive a single capitalization rate that best reflects the investment risk of the subject property. In current practice, the appraiser's concluded capitalization rate is not necessarily the midpoint of the observed range of comparable sales (median or mean) but, rather, it is a subjective selection based on the appraiser's judgment, expertise, and the quality of the data.

Appraisers have a wide latitude in their analysis of their data and are not constrained by the midpoint or even selecting a rate from within the range of observations, which is why an additional, more transparent method to help refine their capitalization rate analysis from the comparable sales is important, especially since a small variation (25bps) has a large impact on value (5%).

Current state of the industry

Appraisers try to be specific in their quantitative and qualitative in their adjustments for multiple factors in the appraisal including, but not limited to:

- Comparable sales, both as individual line-items and price per unit/sf
  - Line items derived via paired sales or statistical methodology
  - Qualitative adjustments based on ranking of features
- Property tax analysis
- Rental comparables
- Expense comparables, both specific line-items and overall expense ratios

However, when it comes to the capitalization rate, appraisers 'ballpark it' with subjective language (not to be confused with a qualitative ranking methodology). Why? Why do appraisers make specific analytical adjustments and quantitative analyses in the majority of the appraisal but broad-brush their analysis in the development of the capitalization rate? And, especially since the development of the capitalization rate is a ("the"?) key component in the valuation of an income-producing property?

The following paragraphs are examples from recent narrative appraisals of appraisers' analyses of comparable sales in their development of the capitalization rate with which the author of this paper is familiar. These paragraphs are the total verbiage in these appraisals for the conclusion of the rate based on comparable sales, with this paper's author only editing property, MSA, or appraiser identification indicators for confidentiality.[4] These were extracted by the author from multifamily, retail, commercial, and office appraisals, and the firms represented are large national companies as well as small local appraisal shops. This type of limited narrative is so pervasive in the industry that most appraisers reading this paper will recognize that this language is probably similar to something they have written, or that is in their firm's current report-writing template, or that they have seen come across their desk from another firm. Although there are exceptions, these are typical of current practice in the appraisal industry:

[4] Note: All these also included at least one other method of developing capitalization rates, typically either the Band of Investment and/or published national survey data.

Example #1

The lowest capitalization rate is reported by Sale #6, which is the oldest sale. The highest capitalization rate is reflected by Sale #2 which is one of the more recent sales. The subject represents a small property, although of older vintage it is considered to be in above average condition due to recent renovations with nominal upside potential. Therefore, the subject should achieve a capitalization rate near the average of the sales. All things considered, the subject warrants a capitalization rate near the median.

Example #2

Our concluded overall rate must also take into consideration that our rent projections include a significant increase over the actual rent collections, as well as significant additional upside potential with both the indicators based on actual operations and pro forma being considered. Based on all the indicators discussed and considering the estimated rents and expenses at the subject property, an overall rate for the subject of **X.XX%** is considered appropriate based upon the income and expense projections presented. This conclusion is bracketed and supported by the previously analyzed comparable sales

Example #3

Based on discussions with market participants, properties in the XYZ area would likely trade at a 75bp premium over similar quality product in the Metro area. We have placed strong reliance on comparables 1 and 3 with this information in mind. Comparables 2 and 5 also show strong support for cap rate outside of major metropolitan areas. Overall, we have utilized all of the comparables in determining our concluded cap rate.

Example #4

The comparables above have capitalization rates ranging from 5.4% to 8.2% and average 6.7%. Primary consideration was given to Comparables 2, 3, and 4. These comparables range from 6.0% to 7.2% and the subject is likely to fall within this range.

Example #5

Shown above are national sales of affordable housing properties. Based on this information, a capitalization rate within a range of 5% to 7% could be expected for the subject.

Example #6

In the chart below, we have summarized transactions of mixed-uses of similar size to the subject from which financial data and/or capitalization rate information was available. We have provided this information as support for the foregoing income and expense analysis for the subject property. This survey is presented below. The subject is a Class C facility that is currently in average overall condition. As such, we have projected a rate that falls towards the upper middle of the range.

Example #7

Most of these properties are modern office buildings in good condition and are elevator-equipped, thus being more attractive to the investment and leasing community. The most recent sale listed is an older building but is occupied by the state government. Its location in the downtown area of the capitol city and the financial strength of its tenant would tend to indicate that this capitalization rate is lower than would be the subject's.

Example #8

These sales indicate that a reasonable, market derived capitalization rate for a stabilized property should be within the range of 6.0% to 8.25%, as indicated by these sales. Comparables 1, 2 and 3 indicate a level of sales success similar to the subject, as measured by the retail sales per square foot. And, these comparable sales are the most recent, too. Sale 1, is the closest sale, both geographically and demographically, to the subject.

Remember: This verbiage is the only analysis of the sales in the capitalization rate sections of these reports.

In today's lending and litigation environments, is this sufficient support/analysis to derive an analytical component that has a material impact on the appraiser's conclusions?

With today's advancement in data availability, analytics, and quality, is this limited depth of discussion appropriate?

And, given that a small 25bps swing in the chosen capitalization rate could yield a 5% differential in value, is this type of limited narrative and analytical support the best that the industry can put forth?

Most appraisers and users of appraisals reading this paper would recognize similar-looking samples and magnitude/variance of ranges from comparable sales in their recent reports.

Rationale for Adjustments in the Sales Comparison Approach

As stated in *The Appraisal of Real Estate 15th edition*:

"In the sales comparison approach, an opinion of market value is developed by comparing properties similar to the subject property that have recently sold, are listed for sale, or are under contract (i.e., for which purchase offers and a deposit have been recently submitted). A major premise of the sales comparison approach is that an opinion of the market value of a property can be supported by studying the market's reaction to comparable and competitive properties.

Comparative analysis of properties and transactions focuses on similarities and differences that affect value, called elements of comparison, which may include variations in property rights, financing terms, conditions of sale, market conditions, locational influences, and physical characteristics, among others. Appraisers examine market evidence using paired data analysis, trend analysis, statistics, and other recognized and accepted techniques to identify which elements of comparison within the data set of comparable sales are responsible for value differences."[5]

In the Sales Comparison Approach, once the appraiser identifies the pool of most comparable sales properties, they analyze and adjust each of these sales to reflect identifiable differences between the sale and the subject property. The types of adjustments that are typically made may include *"variations in property rights, financing terms, conditions of sale, market conditions, locational influences, and physical characteristics, among others.*"[6]

These adjustments can be subjectively based on the appraiser's opinion of the magnitude of their impact on each sales price, or they can be more objectively derived

[5] *The Appraisal of Real Estate*, 351.

[6] *The Appraisal of Real Estate*, 351.

using paired market data (sales or rent observations), statistical analysis, or other methods.

Industry practice is to array the comparable sales in a grid format and include separate lines in the grid for each element of comparison and adjustment to ensure that adjustments are made in a consistent manner.[7]

The appraiser then correlates the adjusted sales prices into a single estimate of value based on their opinion of the best comparable or comparables, typically based on the net or gross amount of adjustments to each sale.[8]

The formalized process for analyzing and adjusting comparable sales to arrive at an indication of value for the subject property is a long-established analytical technique that has application in residential, commercial, retail, and industrial property analysis.

Rationale for Adjustments in the Development of Capitalization Rates

The transactions used in the Sales Comparison Approach to develop the value are primarily the same sales that appraisers use as the basis for the development of the capitalization rate for an income-producing property. The underlying rationale is that if these are the best sales from which to observe and estimate the market's reaction to the subject's location, condition, configuration, and utility on a per-unit basis, then these are also the best from which to observe and estimate the market's reaction to the investment risk of the subject property, as measured by each sale's capitalization rate.

Why, then, do appraisers treat the analysis of these same transactions differently in the Sales Comparison Approach than in the development of the capitalization rate in the Income Approach? The premise of this paper is that they should not.

Literature Review

Influences on underlying comparability of capitalization rates have been rigorously studied in a wide range of peer-reviewed economic literature. The importance of

[7] *The Appraisal of Real Estate*, 364.

[8] For examples of sales adjustment grids, see *The Appraisal of Real Estate* pages 403, 408, and 411, and their accompanying discussion and explanation.

understanding the causes of variations in capitalization rates can be summarized by Wincott:

"If four properties in the same location were fully leased at current market rents, had identical expense structures, and were in identical physical condition, then the simultaneous sale of all four properties would most likely reflect almost identical capitalization rates. If the capitalization rates did vary, it might be reflective of differences in the average remaining lease terms or creditworthiness of the lease portfolio. Investor perception of these factors could be reflected in a subjective adjustment to the capitalization rate in the mind of the individual investor. If the four properties did have different specific issues (such as lease contracts, occupancy rates, current physical condition, or atypical financing) the differential impacts on value of those factors could be quantified. Understanding those items can describe the majority of pricing differentials between the four properties allowing them to be placed on a more level playing field for analytical purposes."[9]

A review of the real estate valuation and peer-reviewed economic literature clearly indicates that many of the same factors that are considered by appraisers in the comparative and adjustment process in the Sales Comparison Approach are also factors that influence an investor's required rate of return, i.e., the capitalization rate. Table 1, below, summarizes the findings of a review of economic literature into factors that influence capitalization rates which shows that the influencing factors of capitalization rates closely align with the categories of adjustments that appraisers typically make in their analyses in the Sales Comparison Approach.

[9] D. Richard Wincott, MAI, "The Stabilized Capitalization Rate," *The Appraisal Journal* (Fall 2016): 338

Table 1[10]

Literature Review: Factors that influence capitalization rates		
Age	**Location**	**Operations (Inc & Exp)**
Gunnelin (2004)	Bialkowski (2023)	Bullock (1996)
Janssen (2001)	Chichernea (2008)	Gunnelin (2004)
Chuangdumrongsomsuk (2017)	Chuangdumrongsomsuk (2017)	McDonald (2009)
McDonald (2009)	Dokko (1991)	Netzell (2009)
	Dunse (2007)	
Asset Category	Fisher (2021)	**Time / Δ Market Conditions**
Ambrose (1993)	Gunnelin (2004)	Ambrose (1993)
Devaney (2005)	Janssen (2001)	Chichernea (2008)
Jud (1995)	Netzell (2009)	Dokko (1991)
Sivitanides (2001)	Sivitanidou (1996)	Netzell (2009)
	Sivitanidou (1999)	Sivitanidou (1999)
Asset Quality	Unbehaun (2018)	Sivitanidou (1999)
Devany (2005)		
Mooney (1998)		

It would be logical, then, that since the factors in Table 1 are observed in economic literature as influencing capitalization rates, ***and*** that appraisers already quantify or rank the influence of these factors on the subject property in the analysis of the Sales Comparison Approach, then for internal consistency in the appraisal report these same factors could be/should be specifically/analytically considered by the appraiser in the development of the capitalization rate in the Income Approach.[11]

The Appraisal of Real Estate (15th edition)

The Appraisal of Real Estate identifies multiple places in the development of an appraised value where there is a need for connectivity and consistency between the Sales Comparison Approach and the Income Approach. Although the textbook does not directly state that capitalization rates should be subject to the same adjustment

[10] For ease of reading, a bibliography of these research papers may be found as endnotes at the end of this paper instead of in-line or as footnotes.

[11] Note the primacy that location has in the study, research, and analysis of influence in capitalization rates, followed by comparative market conditions. Not that a location or market conditions adjustments need to be made for every comparable sale or that the adjustment needs to be of a magnitude, but that this research demonstrates that investors place significant weight on location and comparative market conditions when analyzing investment risk of commercial real estate and less weight on all of the other factors for which appraisers tend to sometimes adjust by rote in their reports, such as unit or property size, condition, economies of scale, on-and off-site amenities, and the like.

considerations as in the Sales Comparison Approach (after all, the subject of this paper is an unexplored appraisal concept), the underlying valuation development concepts noted in the text reflect support the adjustment of capitalization rates:

The Appraisal of Real Estate (15th edition) states:

- "If differences between a comparable property and the subject property that could affect the selection of the overall capitalization rate are concluded, an appraiser must account for these differences. In that case, the appraiser must decide whether the rate selection for the subject property should be higher or lower than the rate indicated by a specific sale or group of sales. Appraisal judgment is also needed to determine whether the rate selected for the subject should fall within the range established by the sales or be set above or below the range. If there are wide differences between a comparable property and the subject property that could affect the overall capitalization rate, the appraiser must be able to explain the market behavior or property elements that account for these differences."[12]

- Appraisers should "consider all issues relevant to the valuation problem in a manner that is consistent and reflects local market conditions…"[13]

- "A capitalization rate derived from a comparable sale property is valid only if it is applied to the subject property on an equivalent basis."[14]

- "When rates derived from comparable sales are used, the capitalization rate is applied to the subject property in a manner consistent with its derivation."[15]

- Extract capitalization rates from comparable data and "apply them to the subject property using consistent treatment…"[16] and "…consistency in

[12] *The Appraisal of Real Estate,* 461.

[13] *The Appraisal of Real Estate*, 352.

[14] *The Appraisal of Real Estate*, 455.

[15] *The Appraisal of Real Estate*, 461.

[16] *The Appraisal of Real Estate*, 674.

extraction from market data and application to the subject property is key."[17]

- For replacement reserves: "The calculation method used should be consistent with the manner in which replacement allowances were treated for purposes of extracting capitalization rates from the comparable sales…"[18] and that it is important to derive and apply rates consistently.[19]

- Reconciliation: "In arriving at a final value indication in the sales comparison approach, appraisers must ensure that the value concluded is consistent with the value indications derived from the other approaches to value"[20] and, similarly, the appraiser should ensure that the conclusions of each valuation approach are consistent with the conclusions reached in the other approaches.[21]

- Final Reconciliation: "In the final reconciliation, an appraiser reconsiders the entire appraisal, making sure that the data available and the analytical techniques and logic applied have led to consistent judgments."[22]

Clearly, *The Appraisal of Real Estate* encourages the appraiser to ensure that there is consistency between the Sales Comparison Approach and the Income Approach, and that the development of the capitalization should include considerations for adjustments to account for property differences.

[17] *The Appraisal of Real Estate*, 676.

[18] *The Appraisal of Real Estate*, 454.

[19] *The Appraisal of Real Estate*, 462 and 453.

[20] *The Appraisal of Real Estate*, 368.

[21] *The Appraisal of Real Estate*, 601.

[22] *The Appraisal of Real Estate*, 600.

Support for Making the Same Adjustments in the Development of the Capitalization Rate

Why should appraisers not make the same analytical adjustments to the sales in the development of the capitalization rate as to the same sales in the Sales Comparison Approach?

In the Sales Comparison Approach, appraisers quantifiably adjust for non-realty items, property rights conveyed, atypical terms of sale, changing market conditions, and physical differences between the sales and the subject property but they systematically broad-brush or overlook these same factors that affect sales prices when developing the capitalization rate. Why? Appraisers apply factors for these physical and economic differences in the Sales Comparison Approach, and the review of literature indicates that these same factors affect properties' capitalization rates. That is, buyers/investors are considering the same physical, economic, and market factors in the analyses of potential purchases and their anticipated rates of return and investment risk profiles.

When comparing sales in the development of the capitalization rate, it is clear that these same factors should be considered by the appraiser in the comparison of the sales to the subject property. Why, though, are appraisers broad-brushing or ignoring these factors? Why are they not using the same quantification methods to adjust capitalization rates as they use in the Sales Comparison Approach?

For example, if a sale is given a 10% adjustment for Changing Market Conditions, that might mean that the lending climate is somehow different from the date of its sale to the date of the appraisal.

- Is that a change in Federal Reserve lending policy?
- A change in regional employment?
- A change in economic conditions such as inflation?
- Would these types of changes also affect the loan terms that a buyer could acquire such as interest rate?
- Or perhaps improving or deteriorating market conditions would change the required equity rate of return that an investor would require to purchase this property?

So, if the appraiser notes Changing Market Conditions in the Sales Comparison Approach, why wouldn't those changes also affect the components that affect the sale's capitalization rate?

Or, if the appraiser makes an adjustment in the sales grid for Location of, say, +20% (i.e., an inferior location to the subject), wouldn't that indicate that an investor would consider that sale's location to be a riskier investment? If so, it follows that that risk also translates to a differential in the capitalization between that sale and the subject property. An appraiser might say that they have already considered location in their market rent analysis but that is not sufficient since the rental comparables are typically from the subject's immediate area but the sales generally come from a wider geographic sampling.

The same can be extrapolated when discussing a property's condition: If an appraiser makes an adjustment for relative condition in the Sales Comparison Approach, the property's condition would also affect an investor's opinion of the risk of the investment – so why not adjust for it the same way in the capitalization rate development as in the sales comparison grid?

Importantly, there should be an analytical link between the development of the capitalization rate and the adjustment grid in the Sales Comparison Approach, and the appraiser should use an iterative process to correlate the adjustments in both sections of the report. For example, say that the appraiser makes a series of adjustments to the comparable sales in the Sales Comparison Approach, but when those same adjustments are applied to the capitalization rates, the resulting adjusted rates indicate a wide range of results. The appraiser can then go back to the sales grid and re-think/re-analyze their sales adjustments to see how the resulting capitalization rates are affected, and repeat the iterative process as necessary to achieve a "best fit" solution in both approaches to value. The goal is to use an iterative process to the range of adjusted observations in the Sales Comparison Approach and in the capitalization rate development to conclude to a solution that is optimized for each section of the report.

The sales data are the same; the adjustments to these same sales should be consistent between analytical sections and the conclusions linked.

Proposed Methodology

Location, unit size, condition, quality of construction, asset age, and the like are characteristics that affect relative investment risk.

- It is important that these risks be reflected in the analysis of the subject's Sales Comparison Approach *AND* in the development of the capitalization rate
- Applying adjustments to each comparable sales' capitalization rates will help identify and correlate/triangulate the adequacy of the adjustments in the Sales Comparison Approach.
  - And, this technique can be used by the appraisal reviewer to test the reasonableness of the appraiser's sales adjustments ***and*** choice of capitalization rate

As a reminder of basic sales adjustment methodology:

- If a sale property has an ***inferior*** characteristic than the subject, we adjust ***upward***
- If a property has a ***superior*** characteristic, we adjust ***downward***.

Here is a simplified, scaled-down example of an adjustment grid with five sales for a 50-unit multifamily property, with the following total adjustments, in percentages:

Table 2

Sample Subject Property -- Multifamily Apartments						
Sale #:	**1**	**2**	**3**	**4**	**5**	
Unadjusted Unit Price	$120,000	$85,000	$105,000	$155,000	$119,500	
Total Adjustments	0%	25%	10%	-20%	5%	
Adjusted Unit Price	$120,000	$106,250	$115,500	$124,000	$125,475	
				Average Adjusted Unit Price:		**$118,200**
				# of Units:		**50**
				Indicated Value:		**$5,910,000**

The indicated total value is $5,910,000.

The methodology proposed in this paper is to apply the same adjustments to each sales' capitalization rates since the same economic and physical property characteristics affect their investment profile as they did in the Sales Comparison Approach.

However, there is a caveat: The direction of the adjustments for this capitalization rate analysis is *the opposite* than in the Sales Comparison Approach.

- If a sale property is a ***riskier*** investment (i.e., inferior occupancy, inferior location, condition, etc.), it would have a ***higher*** capitalization rate than the subject.

Maybe the comparable has inferior location and condition, and sold at an 8.0% capitalization rate. It can be implied, then, that the subject's rate would be below 8.0% to, say, 7.0%.

As such, the capitalization rate from the ***riskier*** sale property must be adjusted ***downward in comparison to the subject.***

- Conversely, if a sale property is a ***less risky*** investment (i.e., superior physical or economic characteristics, it would have a ***lower*** capitalization rate than the subject would need to be adjusted ***upward***, say from 4.25% to 5.0%.

Using the same sales and adjustments from Table 2, the resulting adjustment grid for each sales' capitalization rate can be generated, as in Table 3, remembering to change the direction of each adjustment, as described above:

Table 3

Sample Subject Property -- Multifamily Apartments						
Sale #:	**1**	**2**	**3**	**4**	**5**	
Unadjusted Capitalization Rate	7.25%	8.80%	7.25%	6.75%	7.50%	
Adjustments (from above)	*0%*	*-25%*	*-10%*	*20%*	*-5%*	
Adjusted Capitalization Rate	7.25%	6.60%	6.53%	8.10%	7.13%	
			Avgerage Adjusted Capitalization Rate:			**7.12%**
					NOI:	**$422,200**
					Indicated Value:	**$5,930,000**

Please note that, as with many analyses in the report, the appraiser might have to perform several iterations between the adjustments in the Sales Comparison Approach and in the capitalization rate section to achieve an analytical alignment between the two sections.

Suggested Verbiage for Appraisal Reports

Naturally, clients have not seen this type of analysis before, so the appraisal needs enough discussion to introduce this topic to the reader. Something like:

"*As discussed in the Sales Comparison Approach, there were several adjustments made to the sales comparables to correlate the differences between those sales and the subject property in terms of transactional and physical characteristics.*

The Appraisal of Real Estate (15th edition, p. 461) states: 'If differences between a comparable property and the subject property that could affect the selection of the overall capitalization rate are concluded, an appraiser must account for these differences. … If there are wide differences between a comparable property and the subject property that could affect the overall capitalization rate, the appraiser must be able to explain the market behavior or property elements that account for these differences.'

The Appraisal of Real Estate (15th ed, pl 674, 676) also requires that appraisers extract capitalization rates from comparable data and *'apply them to the subject property using consistent treatment…' and '…consistency in extraction from market data and application to the subject property is key.'*

Additionally, regarding reconciliation amongst the approaches to value: 'In arriving at a final value indication in the sales comparison approach, appraisers must ensure that the value concluded is consistent with the value indications derived from the other approaches to value (p. 368).'

To accomplish this level of consistency and transparency in this appraisal, the adjustments of the comparable sales from the Sales Comparison Approach have been applied to each sale's capitalization rates, as shown in the accompanying chart.

Conclusion

Location, unit size, condition, quality of construction, asset age, and the like are representative of characteristics that affect relative investment risk, so it is important that these relative risks be reflected in the analysis of the subject's capitalization rate and in the Sales Comparison Approach. Applying adjustments to each comparable sales' capitalization rates will help identify and correlate/triangulate the adequacy of the adjustments in the Sales Comparison Approach.

This concept can be visualized as:

$$\frac{Subject\ Property's\ NOI}{Capitalization\ Rate\ Conclusion} = \boldsymbol{Value}$$
$$= (Sales\ Approach\ Conclusion\ x\ Number\ of\ Units)$$

The appraiser's sample of sales is common to both sides of the equation, so it is not clear why appraisal methodology would only necessitate quantitative adjustments to the sales on right side of the equation but ignore the quantification of adjustments for those same property and investment influences to those same sales on the left side of the equation.

The triangulation/iterative process between the development of the capitalization rate and the adjustments to the sales comparables will link these two sections of the appraisal and provide internal consistency in the analysis. That is, maybe this triangulation/iterative process would help demonstrate that, say, a XX% location adjustment for a sale (or condition or size or quality of construction, etc.) is not supported by its capitalization rate and vice versa, so the appraiser can further refine their valuation conclusion.

Adjustments made to sales in the Sales Comparison Approach should be mirrored in the development of the capitalization rate in the Income Approach for clarity, transparency, consistency, and the development of a credible valuation. Given the support for this analytical technique in economic research and in *The Appraisal of Real Estate*, it is not clear why this type of methodology is not part of standard appraisal education programs and incorporated into current industry best practices.

Why not?

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