

## Cap Rate Follies

Avoid These Pitfalls When Calculating Commercial Property Values.  
 By John Simpson, CCIM, MAI, and Eileen Simpson

Capitalization rates are often controversial and misunderstood variables in commercial real estate valuation equations. To value properties, most buyers and sellers prefer an income approach, which analyzes cash flows to determine debt service and investor return — typically the internal rate of return — so it's easy to see why cap rates are scrutinized.

In fact, no other valuation aspect is debated as heavily as cap rates because unsupported data often lead to inaccurate commercial property valuations. By understanding the fallacies that exist, real estate professionals can perform more thorough financial analyses for their clients.

**Valuation Primer** Essentially, a cap rate converts income into value: A property's net operating income is divided by the cap rate, and the resulting figure reflects a return on and of capital. The income approach begins by estimating property income and subtracting a vacancy/collection loss allowance and expenses to achieve the NOI. Then the NOI is divided by the cap rate to obtain the property's value.

Commercial real estate owners, lenders, analysts, appraisers, and assessors typically obtain similar projections for a property's income, vacancy/collection loss, and expenses. Minor variances in these figures have little effect on a property's value, especially when compared to historical projections on a stabilized income stream. However, value opinions usually differ in the cap rate selection.

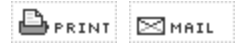
The importance of the cap rate to a property's value conclusion using the income approach is significant. In Table 1, the value conclusion ranges from \$3.6 million to \$5.3 million — 44 percent — depending on the cap rate. Even a 1 percent or 0.5 percent difference in the cap rate can affect a transaction's outcome.

	9% cap rate	11% cap rate	13% cap rate
Potential gross income	\$1,000,000	\$1,000,000	\$1,000,000
less vacancy/collection loss (5%)	\$50,000	\$50,000	\$50,000
Effective gross income	\$950,000	\$950,000	\$950,000
less expenses (50%)	\$475,000	\$475,000	\$475,000
Net operating income	\$475,000	\$475,000	\$475,000
Divided by cap rate	9%	11%	13%
Value conclusion	\$5,277,778	\$4,318,182	\$3,653,846

**Cap Rate Fallacies** Since cap rates strongly affect properties' values, commercial real estate professionals should avoid the following fallacies that can blunt their projections' accuracy.

*The Cap Rate Is Always 10 Percent.* Many in the industry consider a 10 percent cap rate as a good rule of thumb for a quick estimate of a property's performance. Although this shortcut may be helpful at times, even a small variance is critical to the actual value. Set cap rates should not be relied upon as a firm industry benchmark.

*Data Services Are Accurate.* A decade ago, obtaining sales transaction data from a national or local service was almost impossible, but today several companies gather and sell comparable sales data. Though services may claim to provide verified data, commercial real estate professionals should conduct their own due diligence by carefully reviewing financial details, such as income, vacancy rates, expenses, NOI, and cap rates,



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in data service reports. Beware round numbers: If the income is a round \$200,000, vacancy an even 5 percent, and the expense-to-income ratio a flat 50 percent, the data cannot be trusted.

Data services' use of unique terms also points to inconsistencies. For instance, data probably are unreliable if the service provides potential gross income when the property owner only reported effective gross income. Potential gross income typically indicates the service has used rounded figures in the cap rate calculation, which likely results in inaccurate data.

*Sale Disclosures Are Valid.* About a dozen non-disclosure states do not require sellers and buyers to document sales prices. Unless a state requires a separate disclosure instrument for determining the sales price, actual sales prices must be verified.

A problem in many non-disclosure states is inconsistent sales data. The buyer, seller, or another party involved in the transaction should be a reliable source for verification. At least two different sources should confirm the sales price.

*All Cap Rate Components Are Included.* Data services usually only report sales above a certain dollar amount — generally \$500,000 to \$1 million minimum. These sales frequently include business elements that are not denoted in the sales price. For example, car dealerships often include a business value component as part of the price, but this is rarely separate from the real property value. Comparing sales prices that mix real estate and business values to real-estate-only situations produces skewed results.

*Historical Projections Are Reliable.* Real estate professionals frequently overlook this fallacy, but differences become magnified when using older data. Cap rates usually are calculated based on the prior year's income and expenses. Although the income projection is for the next 12 months, the cap rate is based on the prior 12 months. This discrepancy can produce inaccurate results when the economy or the local real estate market is changing.

*Buyer Expectations Are Clear.* A common explanation for low cap rates is unclear buyer expectations. Did the buyer expect to expand a business or renovate the building? Was the purchase price heavily based on upside potential? Was there a particular reason why the buyer needed this property, such as its unique location? Buyer compulsions might result in higher selling prices and lower cap rates. Therefore, if a market shows a wide range of cap rates, rely on the median rate for the most accurate assessment.

*Cap Rates Reflect Total Value.* Some types of real estate, such as hospitality properties and marinas, allow owners to pocket cash that does not appear on financial statements. Such properties' listing prices may reflect value that is both on and off the books. When data services use financial information that reflects only value on the books, the resulting cap rate may be skewed significantly lower.

*The Math Is Correct.* Investors often want to know an appropriate cap rate for a particular property type or market. However, real estate professionals' cap rate conceptions can result in market values that do not provide buyers with sufficient return on investment.

For instance, consider the investor's requirements in Table 2. The property has a 70 percent loan-to-value ratio, an 8.5 percent interest rate, monthly mortgage payments, and a 25-year amortization rate.

Net operating income	\$475,000	\$475,000	\$475,000
less mortgage payments (70%)	\$356,984	\$292,078	\$247,143
Income before taxes	\$118,016	\$182,922	\$227,857
Divided by purchaser equity (30%)	\$1,583,333	\$1,356,818	\$1,148,077
Equity return*	7.45%	14.12%	20.79%
* The equity return is the equity dividend rate for a one-year return. It is not a yield rate in that it does not consider appreciation.			

The investor's equity return ranges from 7.45 percent to 20.79 percent depending upon the cap rate. The equity return then must be compared to more-liquid, safer investments to determine if capital would be attracted to this investment. If the first-year equity return is not sufficient for investors to compare it with other investment vehicles, the only way to generate that return is to bank on appreciation, which no longer is considered a good

investment strategy.

When real estate is listed at prices resulting in poor equity returns, financially savvy owners and investors may make significantly below-market offers. These low-ball offers reflect the purchaser's return on investment requirements without considering appreciation factors. Many potential buyers refuse to make an offer on properties in these situations because the spread for negotiation is too great.

Frequently when a property's projected equity return is very low or negative, the cap rate also is too low to attract capital to the project.

*Cap Rates Always Should Be Developed From Sales.* Several techniques other than sales prices, such as the band of investment technique, mortgage equity technique, and hybrids of these two approaches, can be used to derive cap rates.

Like sales-based calculations, these techniques build cap rates from the components necessary to create a deal. Each attempts to model investor and lender requirements by weighting the cap rate for each deal participant. For example, using the loan terms in Tables 1 and 2 and a 15 percent return for the purchaser, a built-up cap rate would be calculated as shown in Table 3.

Table 3: Band of Investment Cap Rate					
Participant	Loan-to-value ratio		Return		Component cap rate
Lender	70%	x	9.66%*	=	6.76%
Purchaser/owner	30%	x	13.00%	=	3.90%
Built-up cap rate					10.66%

\* The return to the lender is the mortgage constant or mortgage cap rate. It is the ratio of the annual debt service to the principal amount of the loan. To calculate it, multiply the monthly mortgage payment by 12 to derive an annual payment and divide by the loan principal.

Mortgage equity and other techniques use the general calculations shown in Table 3 with modifications for variables such as equity increases for paid-down loans and property value appreciation if applicable.

In today's low interest rate environment, it is critical to note that the calculations in Table 3 imply cap rates are heavily dependent upon the current mortgage interest rate. Although this is accurate to some degree, risk parameters are difficult to gauge. For instance, examining the cap rates reported in the Korpacz Investment Survey during the past five years shows relatively little variation, yet during this time a recession began and several other factors affected many commercial real estate markets' performances. Therefore, when relying on these cap rate calculation techniques, fully consider the risks inherent in the equity rate portion of these equations.

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