

Keep Your Powder Dry, Your Cap Rates Unloaded, and Your Values Correct

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Application of the capitalization rate, whether loaded or unloaded, is one of the concluding steps in the appraisal analysis of income properties. Most assessors and appraisers learn early that there are three traditional approaches to value—the cost approach, the sales comparison approach, and the income approach. Using the income approach often involves using the IRV formula (Income = [Capitalization] Rate × Value). Also known as the direct cap approach, this formula is basic to the direct capitalization of a single stabilized year's income.

If any two variables of the IRV formula are known, the appraiser can determine the missing element. In appraisal, value is the variable most sought, so the income and rate variables need to be determined. Income is usually the net operating income (NOI), which is the money remaining after the payment of all property expenses, but before the payment of debt

service or profit to the owner. To calculate the NOI, the vacancy and credit loss is first subtracted from the potential gross income, resulting in the effective gross income. Any operating expenses are then deducted from the effective gross income, yielding the NOI.

The rate variable in the formula is the capitalization, or cap, rate. The capitalization rate is defined in *Property Assessment Valuation* as “a composite rate used for converting income into a property value” (IAAO 1996). There are various ways to estimate the appropriate capitalization rate. These include extracting the information from analysis of recent sales of similar local properties, subscribing to published sources that periodically release the capitalization rates for various property types, calculating the rate from a band-of-investment formula, or underwriting a capitalization rate study. For the purpose of this article, the method used

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to obtain the cap rate is not essential. Note that this rate may also be referred to in appraisal texts as the overall rate (OAR) or by the symbol R_o .

ETR SOLVES THE PROBLEM

In nearly all appraisal assignments not involving ad valorem taxation, real estate taxes are properly included as part of the operating expenses. How, then, should the appraiser treat the real estate tax when analyzing income properties for ad valorem valuation? Should the estimated income using the real estate taxes as an expense item be capitalized? In ad valorem valuation, the

taxes are not known—a method prescribed by IAAO—is to load the capitalization rate with the effective tax rate (ETR). The ETR is defined by IAAO as “the rate expressing the ratio between the property value and the current tax bill; the official tax rate of the taxing jurisdiction multiplied by the assessment ratio.” The ETR is usually provided to the appraiser before embarking on the appraisal assignment. In many instances, various state or county governments publish a list of the ETRs for each jurisdiction annually. Unlike many items assessors and taxpayers disagree on, such as income, vacancy, expenses, cap rates, and so on, the ETR percentage is seldom the subject of an ad valorem tax appeal. However, the application of the ETR could well be the subject of a hearing or trial.

Typically, the ETR is added to the overall cap rate to provide a loaded cap rate, which is then used to capitalize, or convert income into a value. It should be added (or loaded) to the OAR when valuing income-producing properties in which the owner or lessor is responsible for the payment of real estate taxes.

TYPES OF LEASES

In commercial real estate, there are several terms used to describe leases, including gross, gross plus electric, modified gross, net, single-net, double-net, triple-net, pure net, and absolute net. These terms all are meant to convey the intentions of the lessor and lessee regarding payment of property operating expenses and replacement reserves. However, use of the terms often varies by market areas, and even within markets, there is not unanimous agreement as to their meanings. The clearest and most direct method for an appraiser is to determine simply who pays what, either by interviewing the parties or reviewing actual leases or lease summaries.

Apartment rentals and the lease terms illustrate gross leases. With apartments,

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phrase “it’s circular” is often employed to describe the use of present real estate taxes as an expense item. This circularity is seldom explained further. How can the value of an income property be estimated with real estate taxes in the expenses without knowing for certain what the real estate taxes should be? Conversely, how can the real estate taxes be estimated if the value of the property is unknown?

The most expedient method for forming an opinion of value when property

the tenant usually pays one check to the landlord for the use and occupancy of the premises, while the landlord pays real estate taxes, property management, casualty insurance, landscaping, rubbish removal, painting and decorating, and so forth. The further the landlord gets from paying all property expenses and the closer the tenant gets to paying for these expenses, either directly or through a reimbursement program, the greater the degree of netness. Eventually, the tenant is responsible for paying all expenses associated with the property. It should be verified that the lease for the subject property is typical of market rates and terms for similar properties within that market, especially if the value being sought is the market value of the fee simple, as opposed to the market value of the leased fee.

SMALL RETAIL BUILDING AND LOADED CAP RATES

The following is an example of how the ETR is added to the OAR. The sample subject illustrated here is a 15,000 square-foot, single-tenant retail building. The assessor studies the market for similar properties in similar or competing locations and determines that the market rent should be \$18.00 per square foot (gross) for this property. It is also determined that the market vacancy and credit loss allowance is 10 percent for similar properties, and operating expenses, exclusive of real estate taxes, are \$4.50 per square foot. Analysis of recent sales shows that a capitalization rate of 9.5 percent is appropriate for this property at this location, and the jurisdiction has a published effective tax rate of 2.0 percent. The income approach to value is illustrated by the following:

$$\begin{aligned} \text{Potential Gross Income (PGI)} &= \\ 15,000 \text{ sq. ft.} \times \$18.00 &= \$270,000 \end{aligned}$$

$$\begin{aligned} \text{Vacancy \& Credit Loss} &= \text{PGI} \times 10\% \\ \$270,000 \times 10\% &= \$27,000 \end{aligned}$$

$$\begin{aligned} \text{Effective Gross Income (EGI)} &= \\ \$270,000 - \$27,000 &= \$243,000 \end{aligned}$$

$$\begin{aligned} \text{Operating Expenses} &= \\ 15,000 \text{ sq. ft.} \times \$4.50 &= \$67,500 \end{aligned}$$

$$\text{NOI} = \$243,000 - \$67,500 = \$175,500$$

$$\begin{aligned} \text{Loaded cap rate} &= \text{OAR} + \text{ETR} \\ &= 9.5\% + 2.0\% = 11.5\% \end{aligned}$$

$$\begin{aligned} \text{Indicated value} &= \text{NOI} \div \text{Loaded cap rate} \\ &= \$175,000 \div 11.5\% \\ &= \$1.525 \text{ million} \end{aligned}$$

However, there are triple net tenants, properties typically occupied by tenants responsible for the payment of real estate taxes. This is the norm for single-tenant, freestanding buildings occupied by retail tenants such as Walgreens, Kroger, Staples, or similar creditworthy tenants. In the case of a tax appeal, the assessor quite often will be presented with a model similar to the preceding, with the

The application of the ETR could well be the subject of a hearing or trial.

ETR added to the overall cap rate to get a loaded rate, and the NOI capitalized by the result, producing the illustrated value of \$1.525 million. However, this is wrong.

In cases in which the tenant is responsible for property taxes, there is no need to add the 2.0 percent ETR to the 9.5 percent OAR. To load the ETR to the OAR in this instance would give the taxpayer credit for the portion of the operating expenses normally represented by

real estate taxes. However, the tenant, not the owner, is responsible for the payment of the taxes. Loading the cap rate in this example creates a double-dip for the property owner, allowing the real estate tax to be counted twice—once when the tenant pays the taxes, and once when the ETR is added to the overall rate. Loading the ETR produces an artificially low value indication in this example.

If the local market dictates that the sample property would most likely be rented under terms making the tenant responsible for all real estate taxes, the assessor should use the following:

$$\begin{aligned}
 \text{PGI} &= \$270,000 \\
 \text{Vacancy \& Credit Loss} &= \text{PGI} \times 10\% \\
 &= \$270,000 \times 10\% = \$27,000 \\
 \text{EGI} &= \$270,000 - \$27,000 = \$243,000 \\
 \text{OAR} &= 9.50\% \\
 \text{ETR} &= 0.00\% \\
 \text{Cap Rate Used} &= 9.5\% \\
 \text{NOI} &= \$175,500 \\
 \text{Indicated value} &= \text{NOI} \div \text{Cap rate} \\
 &= \$175,000 \div 9.5\% \\
 &= \$1.85 \text{ million}
 \end{aligned}$$

The difference in the indicated value with the ETR added (\$1.525 million) and the value without the ETR added (\$1.85 million) to the cap rate is \$325,000, or approximately 21 percent. The difference between 11.5 percent (loaded rate) and 9.5 percent (unloaded rate) is also 21 percent. Therefore, loading the ETR to the OAR unnecessarily reduces the indicated value of the property by 21 percent when the tenant pays the real estate taxes.

SUPER-REGIONAL MALLS AND LOADED CAP RATES

The above examples are centered on a 15,000 square-foot, freestanding retail building. This demonstrates the effect of loading the OAR with the ETR when

there is a tenant paying (or likely to pay) on a gross rental basis—not loading the overall rate with the ETR when there is a tenant likely to pay on a net rental basis. The single-tenant concept facilitates the central point of the argument. However, consider the appraisal of a super-regional enclosed mall with 400,000 square feet of in-line (non-anchor) stores. For a newer, well located mall, it would not be unusual for the NOI to be \$30.00 per square foot, due to the high base rental rate per square foot and the high common area maintenance (CAM) recovery. Quite often, the lessor or owner is faced with very few out-of-pocket expenses once the mall has attained stabilized occupancy.

A 400,000 square-foot newer mall, with an NOI of \$30.00 per square foot would have an annual NOI of \$12 million. The current overall rate for malls with an investment grade of A is 8.25 percent, according to the *Korpacz/Real Estate Investor Survey* (PricewaterhouseCoopers 2003). Applying the 8.25 percent to an NOI of \$12 million results in a value of more than \$145 million. The principle applied in rejecting the loaded cap rate for the 15,000 square-foot, single-tenant retail store also applies to the newer mall. Using or not using the ETR in the cap rate would affect the value estimate by approximately 21 percent if the ETR were 2.0 percent. For this sample mall with a value of \$145 million, loading the cap rate unnecessarily lowers the value as well—by 21 percent, or \$30.45 million. If the sample ETR were faithful to its definition, it would truly express the ratio between the annual property tax and the market value. Then, with the sample ETR at 2.0 percent, the loading of the ETR to the OAR causes a \$30.45 million improper reduction in the mall’s value. In this case, the loaded cap rate would cause a needless \$609,000 underpayment in taxes to the community or taxing jurisdiction.

FURTHER REFINING THE CONCEPT

To demonstrate this theory in as simple a

manner as possible, some details that might be encountered in real world situations were omitted. One such detail is allowing for vacancy losses to be applied to the ETR. In the clearest example, with a property anticipating a 10 percent vacancy loss, the owner will expect to pay 10 percent of all expenses the tenant(s) might otherwise pay. With a 10 percent vacancy projection, the owner would anticipate paying 10 percent of the real estate taxes or 10 percent of the ETR. Thus, it would be proper to load the overall rate by 10 percent of the ETR. In the sample 15,000 square foot retail store, 10 percent of the 2.0 percent ETR, or 0.20 percent, would need to be added to the 9.5 percent OAR, resulting in a loaded cap rate of 9.7 percent. Applying the 9.7 percent loaded cap rate to the NOI of \$175,500 now results in an indicated value of \$1.8 million. The difference between the partially loaded rate that provides for the vacancy portion of the ETR produces a value that is not significantly different from the unloaded 9.5 percent cap rate, which produced a rounded value of \$1.85 million.

A second actual refinement would be in the case of a multitenant property. Whether it is a two-tenant retail strip center or a super-regional mall, the same vacancy provision for the ETR should be considered. If these properties are typically tenanted on a net lease basis, but they are less than an A investment grade or if occupancy is a problem, they are less likely to recover the same degree of CAM charges than a newer, higher-quality property. For example, in the case of a C grade mall with a 40 percent vacancy rate, the appraiser's judgment might be that a likely buyer might only expect to recover 50 percent of real estate taxes due to the declining quality and creditworthiness of the tenant mix. In this case, the appraiser might select 50 percent of the ETR to be added to the overall cap rate, producing the correct partially loaded cap rate.

A third refinement is found when a new mall has tenants with lease provisions stipulating that as long as occupancy is

maintained at a certain level—85 percent, for example—then the tenants achieving the designated percentage would be responsible for 100 percent of the real es-

Whether the subject is a two-tenant retail strip center or a super-regional mall, the same vacancy provision for the ETR should be considered.

tate taxes. Despite a 15 percent vacancy, the owner still has no real estate tax liability, and the ETR would not be added to the OAR. The unloaded OAR would capitalize the NOI, and real estate taxes would be excluded from the income, via the CAM payments, as well as being excluded from the operating expenses.

MASS APPRAISAL IMPLICATIONS AND CAMA MODELING

To accurately reflect the proper use of the ETR in the capitalization process in mass appraisal, the modeler must first be persuaded that there are two mutually exclusive ETR-loading possibilities. The first possibility results when there are income properties in his or her jurisdiction that should be valued by loading the ETR to

the OAR because these typically have gross leases, and the owner pays the real estate tax. The second possibility is when there are income properties that should be valued without loading the ETR to the OAR because these typically have net leases, and the tenants pay the real estate tax.

In many jurisdictions, it would not be unusual to find single-tenant retail stores, newer distribution or storage facilities, newer strip centers and malls, and some office buildings where the tenants are responsible for the payment of real estate taxes, either directly or via a CAM charge. It would also not be unusual to find older retail stores, older warehouses, non-investment grade shopping centers or malls, and nearly all apartment buildings, and all hotels and motels where the owner is responsible for the payment of real estate taxes. In the former case, the ETR would not be loaded, but in the latter, it would.

If there is not a sufficient number of each major property type being appraised, the simplest solution might be to treat each property individually, outside of the modeling process. It is in larger jurisdictions, where there might be many thousands of each property type, that mass appraisal is appropriate. This presents a challenge for model construction and calibration. The modeler must consider not only variations in investment grades, age of improvements, neighborhood or region, rental rates, vacancy allowances, expense ratios, and capitalization rates, but also whether or not the property is suitable for ETR loading. Depending on the ETR and the OAR used, loading the ETR when it is not proper can result in values that are 20 to 25 percent lower than they should be.

The possible number of variables for each major property type may be limited by the capability of the computer-assisted mass appraisal (CAMA) system used. If there is no limit, the modeler's task is easier. For example, for warehouse properties, the modeler constructs a series of gross-leased and net-leased properties,

with five gradients in each, with A as the best and E as the worst and possibilities of using plus and minus for each. This would result in a total of ten possible grades or models, each carrying its appropriate rent, vacancy, expense ratio (expense per unit), ETR factor, and cap rate. These items would be driven by the market adjustment factors of the age of the warehouse, neighborhood appeal, gross building area, percentage of office space, wall height, investment grade, and so on. However, if the design of the CAMA system does not permit this number of variables, the modeler may adjust by condensing to fewer variables and still allow for the mass appraisal of all warehouses in the jurisdiction. This would result in variables from the new, net-leased, and large A grade to the older, gross-leased, low ceiling, and poorly maintained E warehouse. One way to achieve this would be to omit the gross aspect of the newer, better grade properties, as well as the net aspect of the lower grade properties in markets where newer properties are usually net-leased, and older properties are typically leased on a gross rental basis.

CONCLUSION

Every appraiser charged with forming an accurate and defensible opinion of an income property for ad valorem tax purposes needs to assign the correct value to property. This is not only the right thing to do, but the *Uniform Standards of Professional Appraisal Practice* requires the appraiser in Standards Rule 1-1(a) to, "be aware of, understand, and correctly employ those recognized methods and techniques that are necessary to produce a credible appraisal." Also, Standards Rule 1-4(c) (i), (ii), and (iii) require that appraisers analyze comparable rental data, operating expenses, and capitalization rates to estimate the income potential of the subject (Appraisal Foundation 2002).

When appraisers stop routinely loading the cap rate with the ETR in net lease situations, they also stop reducing the value of these properties incorrectly. This

holds true whether the property is a free-standing pharmacy or a super-regional mall. Therefore, appraisers must keep their rates unloaded unless necessary.

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