

Capitalization Rate

Excerpt from *Mastering Real Estate Investment: Examples, Metrics and Case Studies* by Frank Gallinelli
Copyright © RealData, Inc., 2008 All Rights Reserved Worldwide

This file may not be republished, posted online, or redistributed in any form without the prior written permission of RealData, Inc.

Capitalization Rate (or “cap rate”) expresses the relationship between an income-property’s value and its Net Operating Income. This writer admittedly made a big deal in the last chapter about getting the NOI right – about not contaminating the calculation with costs that weren’t really operating expenses. That’s because it is a big deal. If you compute the NOI incorrectly then much of what follows, including your estimate of value, will also be incorrect.

You calculate a property’s simple or market capitalization rate as follows:

$$\text{Capitalization Rate} = \text{Net Operating Income} / \text{Value}$$

As a practical matter, the “value” here may be the price at which a property is offered, and your purpose is to perform the calculation to determine if the resulting cap rate meets your investment objectives. Or it may be the price at which the property was actually sold, and your purpose is to discover the cap rate (or rates) at which transactions in your market are occurring.

Often you will want to transpose this formula to estimate what a property is worth, given a required cap rate:

$$\text{Value} = \text{Net Operating Income} / \text{Capitalization Rate}$$

Occasionally you might want to see what a property's NOI would have to be in order to yield a given cap rate at a given price:

$$\text{Net Operating Income} = \text{Value} \times \text{Capitalization Rate}$$

Problem 10-1:

A property has a Gross Scheduled Income of \$100,000, a Vacancy and Credit Loss Allowance of 3%, and operating expenses of \$34,000. What cap rate would you realize if you purchased the property for \$600,000? For \$800,000? For \$1,000,000?

Problem 10-2:

You are considering the purchase of one of four income properties. The first has a NOI of \$78,000 and is offered for sale at \$760,000. The second has a NOI of \$84,000 and is offered at \$925,000. The third has a NOI of \$72,000 and is offered at \$650,000. The fourth has a NOI of \$90,000 and is offered at \$795,000. You're looking for a property with no less than an 11% cap rate. Which if any of these properties meets your criterion? For the properties that do not, at what price would they yield 11%?

Problem 10-3:

You had a dream that all of the other people in your investment club would laugh at you behind your back if you settled for less than a 12% cap rate. At what price would have to buy each of the properties in Problem 10-2 to satisfy that requirement and get a good night's sleep?

Problem 10-4:

You meet someone at your yoga class who intrudes on your serenity and tries to sell you an office building. He wants \$3 million for the property and boasts that the lucky buyer will be getting it at a 10% cap rate. You fan away his cigar smoke, then shift the focus of your meditation to calculating mentally the Net

Operating Income that would be necessary to achieve a 10% cap rate at his asking price. What is that NOI?

Answer 10-1:

You begin by calculating the property's Net Operating Income. Use this formula from Chapter 9:

Gross Scheduled Income
 less Vacancy and Credit Loss
 = Gross Operating Income
 less Operating Expenses
 = Net Operating Income

100,000 Gross Scheduled Income
 less 3% of 100,000, or 3,000 Vacancy and Credit
 = 97,000 Gross Operating Income
 less 34,000 Expenses
 = 63,000 Net Operating Income

Now you can apply the formula above for capitalization rate, using each of the three values specified in the problem.

Capitalization Rate = Net Operating Income / Value

Capitalization Rate = 63,000 / 600,000

Capitalization Rate = 10.5%

Capitalization Rate = 63,000 / 800,000

Capitalization Rate = 7.875%

Capitalization Rate = 63,000 / 1,000,000

Capitalization Rate = 6.3%

Answer 10-2:

Again, apply the formula for capitalization rate to each of the four properties:

$$\text{Capitalization Rate} = \text{Net Operating Income} / \text{Value}$$

$$\text{Capitalization Rate} = 78,000 / 760,000 \quad (\text{Property 1})$$

$$\text{Capitalization Rate} = 10.27\%$$

$$\text{Capitalization Rate} = 84,000 / 925,000 \quad (\text{Property 2})$$

$$\text{Capitalization Rate} = 9.08\%$$

$$\text{Capitalization Rate} = 72,000 / 650,000 \quad (\text{Property 3})$$

$$\text{Capitalization Rate} = 11.08\%$$

$$\text{Capitalization Rate} = 90,000 / 795,000 \quad (\text{Property 4})$$

$$\text{Capitalization Rate} = 11.32\%$$

Properties 3 and 4 meet your 11% criterion. To calculate the price at which Properties 1 and 2 would yield 11%, use this formula:

$$\text{Value} = \text{Net Operating Income} / \text{Capitalization Rate}$$

$$\text{Value} = 78,000 / 0.11 \quad (\text{Property 1})$$

$$\text{Value} = 709,091$$

$$\text{Value} = 84,000 / 0.11 \quad (\text{Property 2})$$

$$\text{Value} = 763,636$$

Answer 10-3:

To find the price (i.e., the value) at which each of the properties in Problem 10-2 would yield a 12% capitalization rate, you use exactly the same procedure as in the second half of that problem.

$$\text{Value} = \text{Net Operating Income} / \text{Capitalization Rate}$$

$$\text{Value} = 78,000 / 0.12 \quad (\text{Property 1})$$

$$\text{Value} = 650,000$$

$$\text{Value} = 84,000 / 0.12 \quad (\text{Property 2})$$

$$\text{Value} = 700,000$$

$$\text{Value} = 72,000 / 0.12 \quad (\text{Property 3})$$

$$\text{Value} = 600,000$$

$$\text{Value} = 90,000 / 0.12 \quad (\text{Property 4})$$

$$\text{Value} = 750,000$$

Answer 10-4:

The formula you need is $\text{Net Operating Income} = \text{Value} \times \text{Capitalization Rate}$. You can remain in your lotus position and do this in your head.

$$\text{Net Operating Income} = \text{Value} \times \text{Capitalization Rate}$$

$$\text{Net Operating Income} = \$3 \text{ million} \times 10\%$$

$$\text{Net Operating Income} = \$300,000$$