

CAP Rate vs. Cash Flow: What's The Difference?

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1 Introduction: CAP Rate

When we read Commercial Real Estate (CRE) listings we are usually given the price, the Capitalization Rate (CAP Rate [1]) and sometimes the Annual Net Operating Income (NOI [2]).

For example, in the Albertson's listing shown in Figure 1 we are given the price (\$6,435,000.00) and the CAP Rate (6.0%) but not the NOI. The CAP Rate is calculated as follows:¹



Albertsons - Baker City, OR

| Offering summary | Investment highlights |
|------------------------------------|--|
| Price: \$6,435,000 | • Over 15 years of remaining firm term |
| Price PSF: \$133 | • Rare 2% annual rent escalations |
| Cap rate: 6.00% | • 2nd largest grocer in the nation - \$60.5 billion in revenue |
| Rentable SF: 48,239 | • Strong performing store |
| Size (acres): 4.07 | • Rent is 57% below most recent Baker City grocery lease comp |
| Lease type: Absolute NNN | • 2001 build-to-suit for Albertsons |
| Lease term: 15+ years | |
| Annual rent PSF: \$8.00 NNN | |

[View listing](#)

Figure 1: Albertsons Baker City, OR Listing

¹Note that some investors may calculate the cap rate differently.

$$\text{Capitalization Rate} = \frac{\text{Annual net operating income}}{\text{Cost (or value)}}$$

or

$$\text{CAP Rate} = \frac{\text{NOI}}{\text{Cost}}$$

For the Albertson's example, since we are given the Cost and the CAP rate, we can calculate the NOI:

$$\text{NOI} = \text{CAP Rate} \times \text{Cost} = 0.06 \times \$6,435,000.00 = \$386,100.00$$

But now the question is: **How is the NOI computed?**

- NOI = Net income - Operating Expenses
 - Net Income (usually) consists of the rent we receive.
 - Importantly, **depreciation and mortgage payments** (both interest and principal) are not considered to be operating expenses and so **are not considered to be part of the NOI**.
- Cash Flow = NOI - Debt service
 - Debt Service includes mortgage principal and interest payments.
 - Cash Flow is the money we will actually see.

Luckily, there is a metric that we can use to look at Cash Flow (what we are concerned about in the near term): The Cash-on-Cash Return [3].

2 Cash-on-Cash Return

In investing, the *cash-on-cash return* is the ratio of annual before-tax cash flow to the total amount of cash invested, expressed as a percentage.

$$\text{cash-on-cash return} = \frac{\text{annual before-tax cash flow}}{\text{total cash invested}}$$

or

$$\text{cash-on-cash return} = \frac{\text{NOI} - \text{Debt Service}}{\text{total cash invested}} \quad (1)$$

The cash-on-cash return is often used to evaluate the cash flow from income-producing assets. Generally considered a quick napkin test to determine if the asset qualifies for further review and analysis. Cash on Cash analyses are generally used by investors looking for properties where cash flow is paramount (such as in our case), however, some use it to determine if a property is undervalued, indicating instant equity in a property.

2.1 Example

Suppose we purchased a \$1,200,000 apartment complex with a \$300,000 down payment. Further, suppose that for each month, the cash flow from rentals, less expenses, is \$5,000. Then the annual before-tax income (NOI) would be $\$5,000 \times 12 = \$60,000$, so the NOI-on-cash return would be

$$\frac{\$60,000}{\$300,000} = 0.20 = 20\%$$

This gives us a bit better idea of the return on our investment (\$300,000). However, because we will have used debt to acquire some portion of the asset (the property), we are required to make debt service payments (that is, mortgage payments).

Because of this debt service the cash-on-cash return will be less than the CAP Rate, since the cash-on-cash return is computed by dividing the NOI minus all mortgage payments by the total cash invested (see Equation 1).

For example: If we had made total mortgage payments (principal+interest) of \$2,000 a month then the Debt Service and hence Cash Flow in this example would be:

- Debt Service: $\$2,000 \times 12 = \$24,000$
- Cash Flow: $\text{NOI} - \text{Debt Service} = \$60,000 - \$24,000 = \$36,000$

So the cash-on-cash return in this case would be

$$\frac{\$36,000}{\$300,000} = 0.12 = 12\%$$

Here the difference (20% vs. 12%) is accounted for by the required debt service.

This example also shows why it is much better to own these properties outright: in that case **Cash Flow = NOI**.

2.2 A Few Limitations of cash-on-cash return

- Because the calculation is based solely on before-tax cash flow relative to the amount of cash invested, it cannot take into account an individual investor's tax situation (much less eight of them) the particulars of which may influence the desirability of the investment. However an investor can usually deduct enough Capital Cost Allowance to defer the taxes for some period of time.
- The formula does not take into account any appreciation or depreciation. When some cash is a return of capital (ROC) it will falsely indicate a higher return because ROC is not income.
- cash-on-cash return does not account for other risks associated with the underlying property.
- Finally, notice that cash-on-cash return is essentially a simple interest calculation and so ignores the effect of compounding interest. The implication for investors is that an investment with a lower nominal rate of compound interest may be superior in the long run to an investment with a higher cash-on-cash return.

BTW, it is possible to perform an after-tax cash-on-cash calculation, but that would depend on an accurate estimate of our adjusted taxable income to correctly address how much tax payment is being saved through depreciation and other losses.

References

- [1] Wikipedia contributors, "Capitalization rate — Wikipedia, the free encyclopedia," 2019. [Online; accessed 21-January-2020].
- [2] Wikipedia contributors, "Net operating income — Wikipedia, the free encyclopedia," 2006. [Online; accessed 21-January-2020].
- [3] Wikipedia contributors, "Cash on cash return — Wikipedia, the free encyclopedia," 2017. [Online; accessed 21-January-2020].