

KINGSTON PROPERTIES LIMITED

Top 5 Real Estate Financial Calculations



Real estate investors use a variety of mathematical tools to analyze the performance of their investment properties. We've taken some of the most popular ones and explain their purpose and how to do these real estate investment calculations.

The top 5 are *Gross Potential Income, Gross Operating Income, Net Operating Income (NOI), Capitalization or Cap Rate and Cash-on-Cash Return.*

The methods described are very basic analysis tools that can give us insights on a property in which we choose to invest. Look at each of the numbers individually as well as a total. Also remember that these numbers cannot always tell you everything. Every property is different and must be looked at on its own merits.

1. Gross Potential Income

Gross potential income is the expected income a property will produce without deductions for expected vacancy or credit loss.

Calculation: Price per square foot x No. of square feet = gross potential income

2. Gross Operating Income

This calculation takes into account losses due to vacancy and non-payment. This is the actual income generated by the property.

3. Net Operating Income (NOI)

Net Operating Income is the income after operating expenses of the property, such as management, repairs, janitorial, insurance, property taxes, etc.

Calculation: **Gross Potential Income**
Less: vacancy and non-payment
= Gross Operating Income
Less: operating expenses
= Net Operating Income (NOI)

Real estate professionals need to be very familiar with NOI as it is also one of the quick methods of valuation of income properties. NOI is used with [cap rate](#) to determine the value of a property.

4. Capitalization or Cap Rate

A common method used, among others, is the capitalization rate, or cap rate to value income properties. The NOI divided by the price of the property gets the cap rate. The lower the cap rate the more expensive is the property when compared to other properties, all things being equal.

Additionally, you can take the NOI and divide it by the capitalization rate you want to achieve and that would give the approximate current value of the property that you would be willing to pay. However, as with all real estate transactions, the final sale/purchase price is determined ultimately by the seller and the buyer.

Cap Rate is expressed as a percentage. For example:
NOI \$10,000,000/property value of \$100,000,000 = 10% cap rate

5. Cash-on-Cash Return

This is a very useful tool in analyzing real estate investments. It gives a basic look at how much cash we are receiving in any given year versus the amount of cash we initially invest in the property. Please note that the Cash-on-Cash return does not include property appreciation until the year of sale.

Cash-on-Cash Return calculation: NOI less Total Debt Service gives Net Operating Cashflow. Divide that by the initial cash investment to get cash-on-cash return.

Downpayment = \$1,023,344

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Total Gross Income | \$365,472 | \$372,443 | \$370,410 | \$376,040 | \$384,217 | \$414,321 |
| Less: Vacancy & Credit Loss | 19,084 | 3,202 | 14,620 | 5,049 | 3,501 | 50,321 |
| Effective Income | \$346,387 | \$369,241 | \$355,790 | \$370,992 | \$380,717 | \$364,000 |
| Total Operating Expenses | \$69,400 | \$71,244 | \$73,141 | \$75,094 | \$77,103 | \$79,170 |
| Net Operating Income | \$276,987 | \$297,997 | \$282,649 | \$295,898 | \$303,614 | \$284,830 |
| Total Debt Service | \$230,823 | \$230,823 | \$230,823 | \$230,823 | \$230,823 | \$230,823 |
| Net Operating Cash Flow | \$46,164 | \$67,174 | \$51,826 | \$65,075 | \$72,791 | \$54,007 |
| Cash on Cash Before Tax | 4.51% | 6.56% | 5.06% | 6.36% | 7.11% | 5.28% |

In this case the 2010 Cash-on-Cash was calculated by:

| | |
|---------------------------------|-------------|
| 2010 Net Operating Income (NOI) | \$46,164 |
| divide by the Downpayment | \$1,023,344 |
| equals the 2010 Cash-on-Cash | 4.51% |

Considers: Down Payment, Scheduled Income (Current Year Only), Debt Payment (Current Year Only), Vacancies (Current Year Only), Expenses (Current Year Only)

Ignores: Time Value of Money, Sale Proceeds, Loan Balance repayments, Other Years NOI and Debt Service.

... and a lot of other things

<http://www.planease.com/RealEstateCashFlowAnalysis/Ratios/CashonCash.aspx>

Summary

The methods described here are very basic analysis tools that can give us insights on a property in which we choose to invest. However, they ignore some of the more complicated aspects of real estate investments: such as calculating tax benefits, estimating equity and so on. Look at each of the numbers individually as well as a total. Also remember that these numbers cannot always tell you everything. Every property is different and must be looked at on its own merits.

Next time we will feature “**Calculating Internal Rate of Return (IRR)**”, a more rigorous calculation that takes into consideration the time value of money.