United Investors

Key Real Estate Definitions

Gross Rent Multiplier (GRM)
Capitalization Rate (Cap Rate)
Net Operation Income (NOI)
Cash on Cash Return
Internal Rate of Return (IRR)
Modified Internal Rate of Return (MIRR)
Loan to Value (LTV)
Debt Coverage Ratio (DCR)

Gross Rent Multiplier (GRM)

The Gross Rent Multiplier (GRM) is another way to value and compare income properties. The GRM is much like the Capitalization Rate except the gross rental income rather than the net operating income (NOI) is used to determine the value of a property. The GRM is calculated by dividing the fair market value of the property by the monthly gross rental income. This is arguably the most common method for valuing investment properties because the gross income and price are normally easily obtained.

The Gross Rent Multiplier is also used to determine the number of years the property would take to pay for itself in gross received rent. All else being equal, the lower the GRM, the better the investment is assumed to be.

EXAMPLE - GRM

If the sales price for a property is $500,000 and the annual gross rental income for a property is $50,000, the GRM is equal to 10.0 ($500,000 ÷ $50,000). The GRM typically range between 5-20 depending on the desirability of the property, location and condition.

Capitalization Rate (Cap Rate)

The Capitalization Rate ("Cap Rate") is a ratio used to compare income properties with different valuations and is based on the income approach to appraisal. The Cap Rate is computed by taking the rental net operating income (NOI) and dividing it by the property's fair market value (FMV). All else being equal, the higher the Capitalization Rate, the better the investment.

Example – Cap Rate

If the sales price of a property is $100,000 and the property generates net income (NOI) of $7,000 per year, then the cap rate is 7.0%.

Cap Rate = Net Operating Income ÷ Fair Market Value = $7,000 ÷ $100,000 = 0.07

Net Operating Income (NOI)

Net operating income is the property's gross rental income plus any other income, such as late fees or parking income, less vacancies and rental expenses. Essentially, NOI is the net cash generated before mortgage payments and taxes.

A few notes on NOI, it does not include mortgage payments or expenses not typically associated with management of rental property. For example if the property owner owns a Ferrari and drives the car only between his properties the maintenance, miles and fuel charges may be an expense associate with property management for him, but it is not a normal expense and would be excluded when calculating NOI.

NOI is normally calculated on a pre-tax basis but may also be calculated on an after-tax basis (referring to the property owners income taxes, while property taxes are always included in the calculation).

Example – NOI

If the gross income of a property is $150,000 and the annual operating expenses including property tax, insurance, repairs/maintenance, utilities, property management and landscaping are $80,000, then the NOI of the property is $70,000 = $150,000 - $80,000.

Cash of Cash Return

Cash on Cash Return is arguably the most important ratio you need to focus on when evaluating the long-term performance of a property investment. Cash on Cash Return is the property's annual net cash flow divided by your net investment, expressed as a percentage.

Example – Cash on Cash Return:

If the net cash flow from a property is $10,000, and the cash invested in the property is $100,000, then the Cash on Cash return is calculated to be 10% ($10,000 ÷ $100,000). The net investment in property is the cost of the property less the amount you borrowed.

A way to view this ratio is to compare it to a return of a certificate of deposit. You deposit money in the bank and the bank pays you an annual return, say 5%. The 5% is the Cash on Cash return.

Please note that the Cash on Cash return does not include property appreciation which is a non-cash flow item until the year of sale. So therefore, if you are evaluating a property on a long-term basis, you need to focus more on the annual cash flow as it relates to your investment, and focus less on property appreciation.

Internal Rate of Return (IRR)

When you have an investment that creates differing amounts of annual cash flow, you need to determine your rate of return using the Internal Rate of Return (IRR). The basic premise of the IRR is to compute the annual rate of return on your money including all cash in-flows and out-flows while taking into account the time value of money. The formula for computing the IRR is very complicated but essentially an IRR is the rate needed to convert (or discount) the future uneven cash flow to your initial investment or down payment.

Example – IRR:

A very simple example is say that you will have a cash flow of $10 in year 2. Assume that in order to generate that cash flow, you had to invest $50. Thus you have an out flow of $50 the first year, and an inflow of $60 in year two ($10 earnings plus the $50 return of your initial investment). In order to convert or discount the $60 back to today's dollars to equal $50, you must use a discount rate of 20%. Thus, your IRR is 20%.

Another way to look at it is the internal rate of return (IRR) is the discount rate at which the "net" present value of future cash flows is zero (discounted future cash flows = starting investment amount). The "net" meaning you subtract your initial investment.

Leveraged vs. Unleveraged IRR

When debt is used to purchase a property, an investor is using leverage. The calculation is roughly the same, except the cash in-flows and out-flows are adjusted to reflect the use of financing.

Modified IRR

The significant problem with the Internal Rate of Return (IRR) calculation is that the formula assumes that the annual cash flow is re-invested at the same rate as calculated by the IRR. As a result, when you have a property that generates significant cash flow, the calculated IRR will overstate the likely financial return of the property. The MIRR allows an investor to enter a different rate that is applied to the property's annual cash flow. This rate used is generally a bank or savings rate. Using the MIRR will more closely mimic reality as you rarely are able to reinvest the cash flow at the same rate of return as determined by the IRR formula.

The *finance rate* is the annual interest rate that you would pay to cover any negative cash flows incurred during the life of the investment.

The *reinvestment rate* is the interest rate that you would earn on cash that the investment generates during its life.

Loan to Value Ratio (LTV)

The Loan-to-Value Ratio is the amount of a secured loan or mortgage divided by the fair market value of the property. For example, if a property is worth $100,000 and there is a

mortgage balance of $50,000, the Loan-to-Value ratio on the property would be 50%. The LTV is a simple means to determine the degree of leverage on an investment property or portfolio of properties. It is commonly use by banks in determining loan amounts or underwriting guidelines. For example a loan program may state that the maximum loan amount is the lesser of 80% LTV or 1.10 DCR (see Debt Coverage Ratio below).

Debt Coverage Ratio (DCR)

Also known as the Debt Service Coverage Ratio (DSCR), the debt coverage ratio measures the ratio between to NOI generated by the property and the loan payments. Bankers and lenders use this ratio as a guide to help them understand whether the property will generate enough cash to pay rental expenses and whether there will be enough left over to pay them back on the money you borrowed.

The DCR is calculated by dividing the property's annual net operating income (NOI) by a property's annual debt service. Annual debt service is annual total of the mortgage payments (i.e. the principal and accrued interest, but not your escrow payments).

Example – DCR:

Assume the NOI of an investment property is $110,000 and annual debt payments are $100,000. The DCR is 1.10, ($1100,000 ÷ $100,000 = 1.10).

A debt coverage ratio of less than 1 (e.g. .75) indicates that there is not enough cash flow to pay the property's rental expenses. Typically lenders will not loan if the DCR is less than 1, unless the borrower has a plan to increase rents so that the DCR is greater than 1.