



IMPORTANT EQUATIONS AND FORMULAS

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Welcome to Excalibur Commercial Advisors, where we simplify commercial real estate financing with key equations to empower your financial decisions. Below are five fundamental equations, each accompanied by a basic example and workout:



Loan-to-Value Ratio (LTV):

- Equation: $LTV = (\text{Loan Amount} / \text{Property Value}) * 100$
- Example: For a \$1,000,000 loan on a \$1,500,000 property, $LTV = (\$1,000,000 / \$1,500,000) * 100 = 66.67\%$
- Significance: Lenders use LTV to assess risk. Lower LTV ratios indicate less risk for lenders and potentially better loan terms for investors.

Debt Service Coverage Ratio (DSCR):

- Equation: $DSCR = \text{Net Operating Income (NOI)} / \text{Annual Debt Service}$
- Example: If NOI is \$150,000 and Annual Debt Service is \$100,000, $DSCR = \$150,000 / \$100,000 = 1.5$
- Significance: DSCR measures a property's ability to cover its debt obligations. A ratio above 1 indicates positive cash flow, assuring lenders of repayment capacity.

Cap Rate (Capitalization Rate):

- Equation: $\text{Cap Rate} = \text{Net Operating Income (NOI)} / \text{Current Market Value}$
- Example: With NOI at \$120,000 and Market Value at \$1,200,000, $\text{Cap Rate} = \$120,000 / \$1,200,000 = 0.10$ or 10%
- Significance: Cap Rate reflects the return on an investment property. Investors use it to evaluate the property's profitability and compare it to other potential investments.

Cash-on-Cash Return:

- Equation: $\text{Cash-on-Cash Return} = \text{Annual Cash Flow} / \text{Initial Cash Investment}$
- Example: If Annual Cash Flow is \$30,000 and Initial Cash Investment is \$150,000, $\text{Cash-on-Cash Return} = \$30,000 / \$150,000 = 0.20$ or 20%
- Significance: This ratio helps investors assess the return on their actual invested capital, aiding in decision-making on property acquisitions.

Break-even Ratio:

- Equation: Break-even Ratio = (Debt Service / Gross Operating Income) * 100
- Example: If Debt Service is \$80,000 and Gross Operating Income is \$200,000, Break-even Ratio = ($\$80,000 / \$200,000$) * 100 = 40%
- Significance: Lenders use the break-even ratio to determine the level at which gross operating income covers debt service. Lower ratios signify financial strength.

Understanding these equations is paramount for investors and CRE professionals alike, providing insights into risk, profitability, and financial health.

For personalized guidance on your specific deal, contact our expert advisors at Excalibur Commercial Advisors.

Note: All examples are simplified for illustrative purposes. For precise calculations, consult with financial professionals.

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