

Financial Formulas

- **Loan to Value Ratio (LTV%)** = Loan Amount \div Value
- **Debt Coverage Ratio (DCR)** =
Net Operating Income (NOI) \div Annual Debt Service (ADS)
- **Margin of Safety (MOS)** =
Net Operating Income (NOI) – Annual Debt Service (ADS)
- **Free-and-Clear Rate of Return** = Net Operating Income (NOI) \div Value
- **Loan Constant (k%)** = Annual Debt Service (ADS) \div Loan Amount
- **Cash-on-Cash Rate of Return (\$/\$%)** =
Before-Tax Cash Flow (BTCF) \div Initial Equity
- **Maximum Loan Amount** = NOI \div (k% x DCR)
- **Minimum Break-Even Point** =
(Operating Expenses + Annual Debt Service) \div Gross Potential Income
- **Investor's Break-Even Point** =
(Operating Expenses + Annual Debt Service + Return on Investment) \div Gross Potential Income
- **Capitalization**
Value (V) = Income (I) \div Capitalization Rate (R)
Capitalization Rate (R) = Income (I) \div Value (V)
Income (I) = Capitalization Rate (R) x Value (V)
- **Mortgage Equity Analysis**
 $k\% \times LTV\% + \$/\$ \% \times (1 - LTV\%)$
- **Value Enhancement** = Value at End of Holding Period –
Value at Beginning of Holding Period – Cost of Capital Improvements
- **Mid-Stream Cash Out Potential** =
Current Market Value – Selling Costs and Taxes – Current Loan Balance
- **Mid-Stream Equity** =
Cash-Out Potential + Capital Improvements – New Loans + New Points and Fees

IREM Pro Forma Statement of Cash Flow

Gross Potential Income (GPI)
– Loss to Lease
– Vacancy and Collection Loss
= Net Rent Revenue
+ Miscellaneous Income
+ Expense Reimbursements
= Effective Gross Income (EGI)
– Operating Expenses
= Net Operating Income (NOI)
– Annual Debt Service (ADS)
= Before-Tax Cash Flow (BTCF)