

Excerpt from
***Introduction to Real Estate Finance and Investment:
Sample Problems, Student Edition, by Frank Gallinelli***

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Chapter 9: Net Operating Income

Net Operating Income (NOI) is what is left after you go one step further and reduce your Gross Operating Income by the total of all operating expenses.

$$\text{Net Operating Income} = \text{Gross Operating Income less Operating Expenses}$$

Again, you may find it easier to visualize this in a top-down format, as on a spreadsheet:

$$\begin{aligned} &\text{Gross Operating Income} \\ &\text{less Operating Expenses} \\ &= \text{Net Operating Income} \end{aligned}$$

Even more useful is to take it all the way from the top line, Gross Schedule Income.

$$\begin{aligned} &\text{Gross Scheduled Income} \\ &\text{less Vacancy and Credit Loss} \\ &= \text{Gross Operating Income} \\ &\text{less Operating Expenses} \\ &= \text{Net Operating Income} \end{aligned}$$

When doing this calculation, keep in mind that not all costs you may encounter qualify as operating expenses. You should not treat mortgage payments, depreciation, or capital improvements as operating expenses, even though they may, to some extent, be tax deductions. See this writer's book, *What Every Real Estate Investor Needs to Know About Cash Flow...*, for a more complete discussion.

Most experienced investors will use some variation of an "Annual Property Operating Data" or "APOD" form to work out their property's NOI. You can find a sample of such a form at www.realdatal.com/book. You'll also see a trimmed-down version of the APOD in the solutions to the sample problems below.

Problem 9-1:

You own an apartment complex with Gross Scheduled Income of \$536,400. You estimate that you will lose 2% in the next year due to vacancy and credit losses. You project that you will have the following costs next year:

Insurance	29,300
Property Management	38,400
Repairs and Maintenance	25,700
Taxes	42,600
Electricity	12,200

Build a form showing your expected income, vacancy and credit allowance, operating expenses and Net Operating Income.

Problem 9-2:

In the scenario of Problem 9-1, you also project the following additional costs related to your ownership and operation of the property:

Accounting	2,500
Mortgage Interest	153,200
Snow Removal	7,400
Sewer and Water	29,500

Adjust your form from Problem 9-1 to show your revised estimates of operating expenses and Net Operating Income.

Answer 9-1:

Your total Gross Scheduled Income is \$536,400.

Next, figure your Vacancy and Credit Loss Allowance:

$$536,400 \times 0.02 = 10,728$$

Subtract this amount from your Gross Scheduled Income for a GOI of \$525,672. Finally, subtract your operating expenses, which total \$148,200, and put everything into an APOD form to find your NOI of \$377,472.

INCOME	
Gross Scheduled Rent Income	536,400
Other Income	0
TOTAL GROSS INCOME	536,400
VACANCY & CREDIT ALLOWANCE	
	10,728
GROSS OPERATING INCOME	525,672
EXPENSES	
Accounting	0
Advertising	0
Insurance (fire and liab.)	29,300
Janitorial Service	0
Lawn/Snow	0
Legal	0
Licenses	0
Miscellaneous	0
Property Management	38,400
Repairs and Maintenance	25,700
Resident Superintendent	0
Supplies	0
Taxes	
Real Estate	42,600
Personal Property	0
Payroll	0
Other	0
Trash Removal	0
Utilities	
Electricity	12,200
Fuel Oil	0
Gas	0
Sewer and Water	0
Telephone	0
Other	0
TOTAL EXPENSES	148,200
NET OPERATING INCOME	377,472

Answer 9-2:

Mortgage interest is not an operating expense, so it does not affect your Net Operating Income. The remaining additional costs increase your operating expenses by \$39,400, bringing the total to \$187,600. Your Net Operating Income decreases by the same amount, to \$338,072.

INCOME	
Gross Scheduled Rent Income	536,400
Other Income	0
TOTAL GROSS INCOME	<u>536,400</u>
VACANCY & CREDIT ALLOWANCE	<u>10,728</u>
GROSS OPERATING INCOME	<u>525,672</u>
EXPENSES	
Accounting	2,500
Advertising	0
Insurance (fire and liab.)	29,300
Janitorial Service	0
Lawn/Snow	7,400
Legal	0
Licenses	0
Miscellaneous	0
Property Management	38,400
Repairs and Maintenance	25,700
Resident Superintendent	0
Supplies	0
Taxes	
Real Estate	42,600
Personal Property	0
Payroll	0
Other	0
Trash Removal	0
Utilities	
Electricity	12,200
Fuel Oil	0
Gas	0
Sewer and Water	29,500
Telephone	0
Other	0
TOTAL EXPENSES	<u>187,600</u>
NET OPERATING INCOME	338,072