

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.realdata.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.