

# UNIT 12:

## ***ANALYSIS OF CAPITAL GAIN AND CASH FLOW***

**Unit Twelve Learning Objectives:** When the student has completed this unit he or she will be able to:

- Define key capital gain and cash flow analysis terms and describe the specific steps involved in deriving the capital gain or loss of a residential or income property.
- Describe the steps involved in deriving pre-tax cash flow of an income property.
- Explain how investors derive tax liability from an investment property.
- Summarize how to derive after-tax cash flow using pre-tax cash flow and tax liability.
- Explain how a cash flow analysis can be used by investors to evaluate the desirability or feasibility of a given investment.

### **KEY TERMS**

**Depreciation.** Cost recovery, or depreciation, allows the owner of income property to deduct a portion of the property's value from gross income each year over the life of the asset. The "life of the asset" and the deductible portion are defined by law. The amount of deductible value is the value of the property minus the land. When the property is acquired, this amount is the **beginning basis**. When periodic amounts of the improvement value are depreciated, the depreciable basis is lowered by such amount.

**Basis and depreciable basis.** Basis is the cost of a capital asset at a point in time. In real estate, the basis of a property is both the value of the land and any improvements. Since the land portion of the real property is not depreciable, only the improvements acquired can be depreciated. The undepreciated improvement portion of the property is therefore the **depreciable basis**. As the property is depreciated, or new capital improvements are added, the basis is adjusted accordingly and becomes a new **adjusted basis**.

**Capital improvement.** An addition or significant repair to a property that augments the property's value. For tax purposes, capital improvement costs are added to the adjusted basis of the property as opposed to being expensed against income in the year the improvement is made. As an add-on to the property's basis, the improvement is then depreciated along with the rest of the property's depreciable basis. Examples of a capital improvement are a widened garage, a swimming pool, or an upgraded roof.

**Capital gain / loss.** When real estate, whether non-income or income, is sold, a taxable event occurs. If the sale proceeds to the seller exceed the original cost of the investment, subject to some adjustments, there is a capital gain that is subject to tax. If the sales proceeds are less than the original cost with adjustments, there is a capital loss.

**Deductible expense.** An expense incurred by an income property that was paid to keep the property operating and maintained is tax-deductible. This means the owner can deduct the expense against taxable rental income. This effectively lowers the income property's income tax liability. Be careful,

however, not to confuse an income property's income tax liability with the property's capital gain tax liability. The latter is only incurred when the income property is sold. This taxable event triggers either a capital gain or capital loss.

**Taxable income.** Taxable income from investment real estate is the gross income received minus any expenses, deductions or exclusions that current tax law allows. Taxable income from real estate is added to the investor's other income and taxed at the investor's marginal tax rate.

## **CAPITAL GAIN ANALYSIS**

The seller of real property may owe tax on capital gain that results from the sale. Capital gain applies to the sale of both residential and income properties. The gain on the sale of a property is equal to the amount realized from the sale minus the adjusted basis of the home sold. Therefore, to identify the capital gain that will be incurred, one must complete the following steps:

1. Identify the amount realized from the sale of the property
2. Identify the adjusted basis of the property
3. Subtract the adjusted basis from the amount realized to identify the capital gain.

### **Amount realized**

The amount realized, also known as net proceeds from sale, is expressed by the formula:

$$\begin{array}{r} \text{sale price} \\ - \text{costs of sale} \\ \hline = \text{amount realized} \end{array}$$

The sale price is the total amount the seller receives for the home. This includes money, notes, mortgages or other debts the buyer assumes as part of the sale.

Costs of sale include brokerage commissions, relevant advertising, legal fees, seller-paid points and other closing costs. Certain fix-up expenses can be deducted from the amount realized to derive an adjusted sale price.

### **Adjusted basis**

Basis is a measurement of how much is invested in the property for tax purposes. Assuming that the property was acquired through purchase, the beginning basis is the cost of acquiring the property. Cost includes cash and debt obligations, and such other settlement costs as legal and recording fees, abstract fees, surveys, charges for installing utilities, transfer taxes, title insurance, and any other amounts the buyer pays for the seller.

The beginning basis is increased or decreased by certain types of expenditures made while the property is owned. Basis is increased by the cost of capital improvements made to the property. Assessments for local improvements such as roads and sidewalks also increase the basis. Examples of capital improvements are: putting on an addition, paving a driveway, replacing a roof, adding central air conditioning, and rewiring the home.

The basic formula for adjusted basis is:

$$\begin{aligned} & \text{beginning basis} \\ & + \text{ capital improvements} \\ & - \text{ depreciation} \\ & = \text{ adjusted basis} \end{aligned}$$

### Gain on sale

The gain on sale of a primary residence is represented by the basic formula:

$$\begin{aligned} & \text{amount realized (net sales proceeds)} \\ & - \text{ adjusted basis} \\ & = \text{ gain on sale} \end{aligned}$$

Gain on sale, if it does not qualify for an exclusion under current tax law, is taxable.

### Residential capital gain analysis illustration

The following items and amounts illustrate the derivation of the capital gain on a residential property.

<b>Gain on Sale</b>		
Selling price of old home		\$350,000
- Selling costs		35,000
= Amount realized		315,000
Beginning basis of old home		200,000
+ Capital improvements		10,000
= Adjusted basis of old home		210,000
Amount realized		315,000
- Adjusted basis		210,000
= Gain on sale		105,000

### INCOME PROPERTY CASH FLOW ANALYSIS

Besides the capital gain analysis, the other principal type of financial analysis done on real property is the cash flow analysis. A cash flow analysis can be done on a pre-tax or an after-tax basis. The term cash flow is essentially the same as profit. The analysis simply consists of identifying income, expenses, pre-tax profit, tax liability, then after-tax profit.

## Steps in the cash flow analysis

As stated, cash flow analysis of an income property amounts to the identification of the property's income, expenses, tax liability and net profit after tax. The specific steps are:

1. Identify the pre-tax cash flow
2. Identify the tax liability
3. Derive the after-tax cash flow

Investors will then use the after-tax profit number to evaluate a fair value, or price for the property. This will complete the investor's picture of the investment cost (price), the return (net income), and the return percent (yield percent).

### Pre-tax cash flow

Cash flow is the difference between the amount of actual cash flowing into the investment as revenue and out of the investment for expenses, debt service, and all other items. Cash flow concerns cash items only, and therefore excludes depreciation, which is not a cash expense. Pre-tax cash flow, or cash flow before taxation, is calculated as follows:

#### Pre-tax Cash Flow

	potential rental income
-	vacancy and collection loss
=	effective rental income
+	other income
=	gross operating income
-	operating expenses
-	reserves
=	net operating income (NOI)
-	debt service
=	pre-tax cash flow

**Potential rental income** is the annual amount that would be realized if the property is fully leased or rented at the scheduled rate. Vacancy and collection loss is rental income lost because of vacancies or tenants' failure to pay rent.

**Effective rental income** is the potential income adjusted for these losses. To that is added any other income the property generates, such as from laundry or parking charges, to obtain gross operating income.

**Operating expenses** paid by the landlord include such items as utilities and maintenance. These are deducted from gross operating income. Some owners also set aside a cash reserve each year to build up a fund for capital replacements in the future, for example, to replace a roof or a furnace. Cash reserves are not deductible for tax purposes until spent as deductible repairs or maintenance.

The remainder is **net operating income** (NOI). When the annual amount paid for debt service, including principal and interest, is subtracted, the remainder is the pre-tax cash flow.

## Tax liability

The owner's tax liability on taxable income from the property is based on taxable income rather than cash flow. Taxable income and tax liability, with an example, are calculated as follows:

<b>Tax Liability</b>	
	net operating income (NOI) 29,300
+	reserves 3,500
-	interest expense 10,000
-	cost recovery expense 22,000
=	taxable income 800
x	tax rate (24%)
=	tax liability 192

Taxable income is net operating income minus all allowable deductions. Cost recovery, or depreciation expense, is allowed as a deduction, while allowances for reserves and payments on loan principal payback are not allowed. Thus, since reserves were deducted from gross operating income to determine NOI, this amount must be added back in. As only the interest portion of debt service is deductible, the principal amount must be removed from the debt service payments and the interest expense deducted from NOI.

Finally, taxable income, multiplied by the owner's marginal tax bracket, reveals the tax liability.

## After-tax cash flow

After-tax cash flow is the amount of income from the property that actually goes into the owner's pocket *after income tax is paid*. So the analyst must subtract tax liability from pre-tax cash flow. Continuing with the previous example, this is figured as:

<b>After-tax Cash Flow</b>	
	pre-tax cash flow 9,300
-	<u>tax liability</u> 192
=	after-tax cash flow 9,108

## Applying the analysis to investments

The cash flow analysis is essential for investors to understand the property's yield in relation to its value or price. Most investors have a sense for how much yield they require from a property given its various risk factors. Knowing cash flow enables the investor to establish a price range. The formulas are:

1. **Price** = income ÷ rate of return
2. **Rate of return** = income ÷ price
3. **Income** = price x rate of return

These formulas are used to identify the three things an investor needs to evaluate an investment: price, rate of return, and income. The cash flow analysis is necessary to derive income.

**Identifying price.** Applying these formulas, let's assume that an investor's required yield on an income property is a minimum of 10% before tax. Now the investor knows that, if there is a property that produces \$200,000 profit, then it must be priced at no more than \$2 million in order for it to yield 10%.

By contrast, let's assume the same property yielding \$200,000 is located in a deteriorating, transitioning neighborhood. Now the investor wants more yield because the investment is riskier. Let's assume the investor must now yield 15%. What must the price be for this? In other words, what number times 15% equals \$200,000. Per the formula above that solves for price, the answer is  $\$200,000 \div .15$  (15%), or \$1,333,333.

**Identifying rate of return.** Using the formula "rate of return = income  $\div$  price," the investor can use the cash flow analysis to evaluate the yield of varying properties on the market. Assume then a property is priced at \$1.5 million, and the property yields a pre-tax cash flow of \$95,000. What is the property's yield? Will our investor be interested if he or she must get a 10% yield? The answer using the formula is that the rate of return is  $\$95,000 \div \$1.5$  million, or 6.3%. Should this investor buy this property at this price? Clearly not.

To summarize, knowing the cash flow of a property enables a prospective buyer to identify either the yield or required price of a given investment opportunity.

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