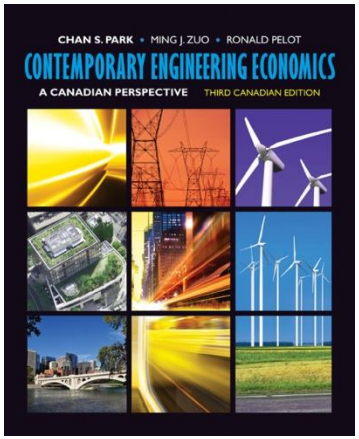
Corporate Income Taxes



Lecture No. 25
Chapter 9
Contemporary Engineering Economics
Third Canadian Edition

Chapter Opening Story: Total Revenues and Income Taxes

- The total revenues and income taxes paid by five well-known companies for the tax year ending in 2008 are summarized below (dollars in millions):

Company	Revenues	Earnings Before Income Taxes	Income Taxes	Net Income*	Effective (Average) Tax Rate (%)
BCE Inc.**	$17,698	$1,820	$469	$1,351	25.8%
Bombardier Inc.	$17,506	$439	$122	$317	27.8%
Encana Corp.	$30,064	$8,577	$2,633	$5,944	30.7%
SNC-Lavalin Group Inc.	$7,107	$403	$85	$318	21.1%
RBC Capital Trust	$21,582	$6,005	$1,369	$4,636	22.8%

* Before extraordinary items.
** All amounts in U.S. dollars.

21.1%-30.7%

Total Revenues and Income Taxes

- A business, whether it incurs profits or losses, is subject to income tax.
- Federal and provincial/territorial tax laws are exceptionally complex. The overall conceptual framework for income tax calculation changes little from year to year; however, the specific details are subject to frequent changes.
- The approach presented in this chapter is a simplistic, but reasonably accurate method of calculating corporate income taxes, which reflects the basic structure of the Canadian tax system.

Chapter 9 Objectives

- What is the general scheme of Canadian corporate taxes?
- How do you determine ordinary gains and capital gains?
- How do you determine the appropriate tax rate to use in project analysis?
- What is the relationship between net income and net cash flow?
- What is the availability of investment tax credits (ITC) for certain types of expenditures?
- How do you calculate the disposal tax effect when selling off assets?

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Tax Rate Definitions

As a corporation

- Three different tax rates can be defined :

1. The average or effective tax rate is that value which gives the total income taxes payable by a corporation divided by the total taxable income
   - Average tax rate = total income taxes / total taxable income
2. The marginal tax rate represents the tax rate that is applicable to the next dollar of taxable income.
3. The incremental tax rate is the tax rate that applies to a specified increment of taxable income over and above the existing level of taxable income and results in a corresponding increment of income tax.

New Proj. Analysis

Capital Gains (Losses)

- Capital gains (losses) must be considered in the calculation of taxable income.
- When capital assets are sold for more than the purchase price, a profit or capital gain may be realized. If the selling price is less than the purchase price, a capital loss may result for a non-depreciable asset.
- The determination of gain or loss is as follows:

  Capital gain (loss) = selling price – cost base.

  - The selling price represents the sale proceeds minus any selling expense, and the cost base usually includes the purchase price plus the cost of improvements and expenses incurred in acquiring the capital asset.

Example 9.1: Capital Gain on Land Transactions

- In 2005, Senstech of Winnipeg acquired land in three locations within the province to construct supply/distribution facilities. By 2009, only one of these facilities had been constructed and the company decided to sell the other two pieces of property.

a) Property 1: Purchased for $65,000 with an additional $5,000 in associated acquisition costs. Sold in 2009 for $95,000 with $3,500 in legal costs.

b) Property 2: Purchased for $45,000 and sold for $35,000. The associated acquisition and selling costs were $3,000 and $1,500 respectively.

- Determine the net capital gain (loss) in 2009 for the land transactions.

Example 9.1: Solution

- Given: Land purchase and selling price and associated costs.
- Find: Net capital gain (loss) for 2009.

Capital	Actual Selling Price	–	Associated Costs of Sale	=	Adjusted Selling Price for Gains Purposes
Property 1	$95,000		$3,500		$91,500
Property 2	$35,000	–	$1,500	=	$33,500

	Purchase Price	+	Associated Costs of Acquisition	=	Cost Base
Property 1	$65,000	+	$5,000	=	$70,000
Property 2	$45,000	+	$3,000	=	$48,000

Property 1 capital gain = $91,500 - $70,000 = $21,500

Property 2 capital loss = $33,500 - $48,000 = ($14,500)

Net capital gain = $7000

Net Income

- If project revenues exceed project costs, we say it has generated a profit, or income.
- If project costs exceed project revenues, we say that the project has resulted in a loss.
- The accounting measure of a project's after-tax profit during a particular time period is known as net income.

Calculation of Net Income

- Net income is calculated by subtracting expenses from revenues.
- Project revenue is the income earned by a business as a result of providing products or services to customers.
- Project expenses are the cost of doing business to generate the revenues of the specified operating period.
- Accountants treat interest and income tax expenses separately but place the other expenses in two broad categories – cost of goods sold and operating expenses.
  - Operating expenses include all the general, administrative, and selling expenses. Cost of goods sold includes all other expenses, including depreciation, labour, materials, and manufacturing overhead.

Taxable Income and Income Taxes

Item
Gross Income (revenues)
Expenses
Cost of goods sold
Capital cost allowance (CCA)
Operating expenses
Interest
Taxable income
Income taxes
Net income

Statement of Income over a period of time

Example 9.2: Net Income Within a Year

- A company buys a machine for $40,000 and uses it for five years, after which it is scrapped.
- Equipment classified as Class 43 (CCA rate = 30%)
- Tax rate = 40%
- The company has the following revenues and expenses for the first year of operation:

Sales revenue	$52,000
Costs of goods sold	$20,000
CCA on Machine	$6,000
Operating expenses	$5,000

- What is the net project income during the first year?

Example 9.2: Solution

- Given: Gross income and expenses as stated, income tax rate = 40%.
- Find: Net income.

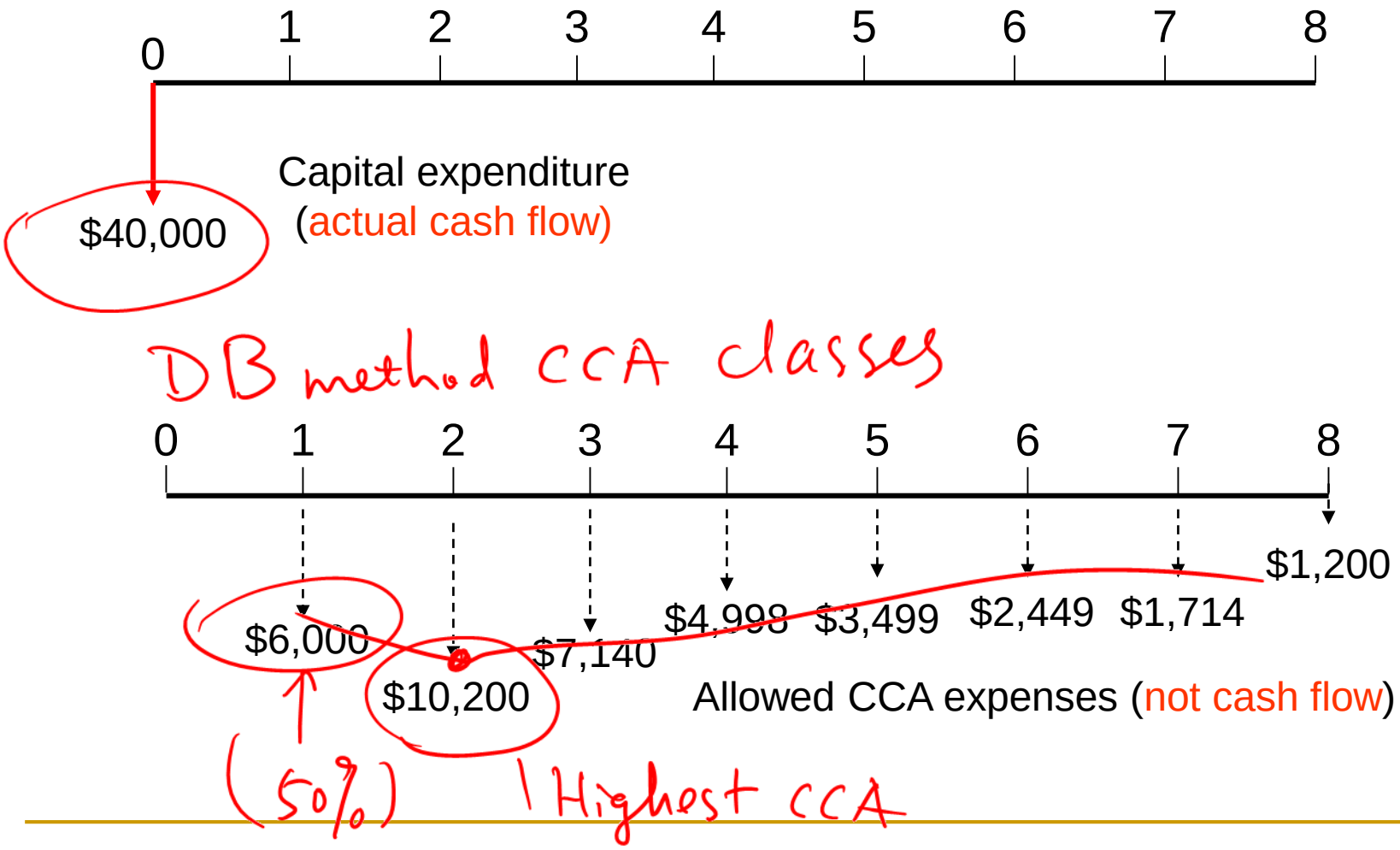
Item	Amount
Gross income (revenue)	$52,000
Expenses	
Cost of goods sold	20,000
Capital Cost Allowance	6,000
Operating expenses	5,000
Taxable income	21,000
Taxes (40%)	8,400
Net income	$12,600

Net Income versus Cash Flow

Net income: Net income is an accounting means of measuring a firm's profitability based on the matching concept. Costs become expenses as they are matched against revenue. The **actual timing of cash inflows and outflows are ignored**.

Cash flow: Considering the **time value of money**, it is better to receive cash now than later, because cash can be invested to earn more money. So, cash flows are more relevant data to use in project evaluation.

Cash Flow versus CCA Expenses



Example 9.3: Cash Flow versus Net Income

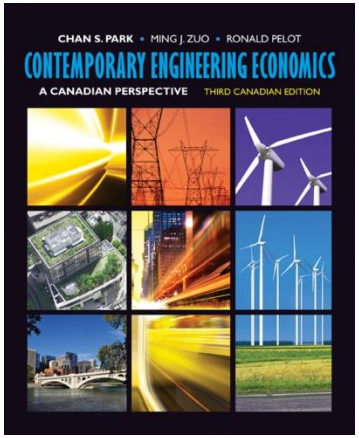
- Using the situation described in Example 9.2, assume that (1) all sales were cash sales and (2) all expenses except depreciation were paid during year 1. How much cash would be generated from operations?

Example 9.3: Solution

Item	Income Statement	Cash Flow
Gross income (revenue	$52,000	+ $52,000
Expenses		
Cost of goods sold	20,000	-20,000
CCA	6,000	
Operating expenses	5,000	-5,000
Taxable income	21,000	
Taxes (40%)	8,400	-8,400
Net income	$12,600	
Net cash flow		$18,600

+ Add back depreciation (CCA)

Summary



Explicit consideration of taxes is a necessary aspect of any complete economic study of an investment project. Income taxes equal a taxable income amount multiplied by an appropriate tax rate.