

# APPENDIX A

## TAXES

### ANSWERS TO QUESTIONS:

1. The operating, or ordinary income of a corporation is the income that results from the firm's normal business activities.

Capital gains income basically occurs as a result of the sale of fixed corporate assets. As a general rule, when a corporate asset is held for longer than one year and then sold, the resulting gain or loss is classified as a long-term capital gain or loss.

Corporations that own stock in another corporation may receive cash dividends on their stock; these dividends represent dividend income.

Operating income is taxed at varying marginal rates between 15% and 38%. The largest corporations, with taxable incomes in excess of \$18,333,333 pay a top marginal rate of 35%. Capital gains are taxed at the same rate as ordinary income. Intercompany dividends are normally entitled to a 70% exclusion; therefore, for corporations in a 35% tax bracket, dividend income is taxed at an effective rate of 10.5%.

2. An S corporation has its business income taxed directly to the shareholders at individual income tax rates, regardless of whether any income is actually received. Basically, to qualify for S corporation status the firm may not have more than 100 shareholders. As a result, most S corporations are relatively small.

3. Dividends are paid out of after-tax earnings by corporations, and individuals pay taxes on dividends. Thus, dividends normally are taxed twice. When dividends are received by a second company that owns stock in the first company, this dividend income would also be taxable to the receiving company, thus resulting in the potential for triple taxation of dividend income. The 70 percent dividend exclusion is designed to partially offset the impact of triple taxation of dividends.

## SOLUTIONS TO PROBLEMS:

1. Taxable income = Ordinary income + capital gains income + (dividend income - 70% dividend exclusion) = \$2,000,000 + \$500,000 + [\$50,000 - 0.7(\$50,000)] = \$2,515,000

$$\text{Tax computation: } \$113,900 + 0.34(\$2,515,000 - \$335,000) = \mathbf{\$855,100}$$

2. Tax computation:  
 Ordinary income = EBIT - Interest = \$1,000,000 - \$100,000 = \$900,000 = taxable income  
 $0.40 \times \$900,000 = \mathbf{\$360,000}$

(Dividend payments to stockholders and debt principal repayment have no impact on taxable income and hence on taxes.)

3. a. **39%**  
 b. Total tax due = \$22,250 + 0.39 (\$290,000 - \$100,000) = **\$96,350**  
**Average tax rate = \$96,350/\$290,000 = 33.22%**  
 c. For \$410,000 of taxable income, both the average and the marginal tax rates are the same, **34%**.

4. Year	Taxable income	Tax calculation	Tax due
2006	\$30,000	$0.15 \times \$30,000$	<b>\$4,500</b>
2007	\$80,000	$\$13,750 + 0.34(\$80,000 - \$75,000)$	<b>\$15,450</b>
2008	(\$150,000)	Tax refund = \$4,500 + \$15,450 (Carry forward unused tax loss of \$40,000)	<b>(\$19,950)</b>
2009	\$125,000 less \$40,000 tax loss carryforward = \$85,000	$\$13,750 + 0.34(\$85,000 - \$75,000)$	<b>\$17,150</b>
2010	\$150,000	$\$22,250 + 0.39(\$150,000 - \$100,000)$	<b>\$41,750</b>
2011	(\$75,000)	Carryback to 2009 Tax refund = \$17,150 $-0.15(\$10,000^*)$	<b>(\$15,650)</b>

\*Adjusted 2009 taxable income = \$85,000 - \$75,000(loss carryback) = \$10,000.

5. a. EBT = \$25,000,000 - 0.15(\$10,000,000) = \$23,500,000  
 EAT = \$23,500,000(1 - 0.4) = **\$14,100,000**  
 b. EAT = \$25,000,000(1 - 0.4) = \$15,000,000  
 Earnings available for common stockholders:  
 \$15,000,000 - \$1,400,000 preferred dividends = **\$13,600,000**

6. Taxable dividend income =  $\$3,000,000 \times 0.3 = \$900,000$   
 Tax owed =  $\$900,000 \times 0.4 = \$360,000$   
 After-tax dividends received =  $\$3,000,000 - \$360,000 = \mathbf{\$2,640,000}$

7. a. Gain =  $\$150,000 - \$100,000 = \mathbf{\$50,000}$   
 b. Ordinary gain (recapture of depreciation)  
 c. Tax =  $\$50,000 \times 0.35 = \mathbf{\$17,500}$

8. a.

Sales (\$ millions)	\$400.0
Cost of goods sold	-150.0
Operating expenses	<u>-100.0</u>
EBIT (operating income)	\$150.0
Gain on asset sale	3.0
Interest expense	<u>-100.0</u>
Earnings before taxes	\$53.0
Tax (35%)	<u>-18.55</u>
Earnings after taxes but before dividend receipts	\$34.45
After-tax dividend receipts [\$10 - \$10(1 - 0.7)(.35)]	<u>8.95</u>
Earnings after taxes	\$43.40
Preferred dividends	<u>-10.00</u>
Earnings available for common stockholders	<b>\$33.40</b>

b.

Sales (\$ millions)	\$400.0
Cost of goods sold	-150.0
Operating expenses	<u>-100.0</u>
EBIT (operating income)	\$150.0
Loss on asset sale (\$20-\$25)	-5.0
Interest expense	<u>-100.0</u>
Taxable income	\$45.0
Tax (35%)	<u>-15.75</u>
Earnings after taxes but before dividend receipts	\$29.25
After-tax dividend receipts	<u>8.95</u>
Earnings after taxes	\$38.20
Preferred dividends	<u>-10.00</u>
Earnings available for common stockholders	<b>\$28.20</b>