BUS312: Introduction to Corporate Finance

Assignment #2

Question #1

ABC Inc. had a year-end 2007 balance sheet as follows:

2007			
Current Assets	$500,000	Accounts Payable	$300,000
Net Fixed Assets	$1,500,000	L.T. Debt	$800,000
		Owner's Equity	$900,000
	$2,000,000		$2,000,000

ABC's contribution-margin per dollar-sales is 17%. (Contribution-margin is defined as unit price less unit variable cost divided by unit-price.) ABC has fixed costs per annum of $450,000. (Fixed costs are those costs which do not vary with sales, but nonetheless, these expenses are tax-deductible.) The interest rate on ABC's long-term debt is 10% per annum. ABC does not expect to make any major increments to its investment into business activity this year. No sales of financial assets are expected. ABC's tax-rate is 40%. Dollar sales in 2008 for ABC are predicted to be:

pessimistic	most-likely	optimistic
$3,100,000	$3,650,000	$4,600,000

a. Calculate the after-tax rate-of return on invested-capital in each of the above sales scenarios. (In calculating after-tax ROIC multiply the before-tax ROIC by one minus the tax-rate.) Calculate ROE for each of the three sales scenarios. (In this problem, you can presume that a negative tax is a refund associated with taxes paid in prior years.)
b. Redo part (a) of this question with a contribution-margin of 20%.
c. Suppose that ABC "re-capitalizes" by selling $500,000 of new common shares and uses the proceeds to pay down this amount of principal for its long-term debt. Redo part (a) of this problem. Does the range of after tax ROIC increase or decrease? Explain. Does the range of ROE increase or decrease? Explain.

Question #2

Consider the following financial information for 2006 and 2007 for ABC Co. Limited.

	2006	2007
Sales	1,785	1,877
Depreciation	194	194
Cost of Goods Sold	690	770
Other Expenses	165	150
Interest	122	148
Cash	955	1190
Receivables	1444	1555
Short-term notes payable	179	149
Long-term debt	3,475	4300
Net fixed assets	8106	8315
Accounts Payable	1050	1000
Inventory	2188	2275
Dividends	150	165

ABC has a tax rate of 36%. Using the information available, draw up an income statement and balance sheet for ABC for 2006 and 2007. Draw up the invested capital balance sheet (i.e., both definitions of invested capital) for ABC for 2006 and 2007. Find the ROIC after tax and after depreciation for 2007 using the beginning of period invested capital. (Find ROIC after depreciation but before tax and then multiply by 1 minus the corporate tax rate). In this problem, presume that depreciation is the same as CCA.

Question #3

In the above problem, for 2007, find free cash flow using both the operating and the financial definitions. In this problem, treat notes payable as short-term debt.

Question #4

If a firm has an 8 percent profit margin (i.e., net income divided by sales), an asset turnover of 2 and a debt to asset ratio of 0.4, what is its ROA (i.e., rate of return on assets), and its ROE (i.e., rate of return on equity). ROA is net income dividend by assets.

<u>Question #5</u>

The XEROC company has a current ratio of 2. Its inventory is $15,000. If current liabilities are $30,000, what is the quick ratio?