BUS312: Introduction to Corporate Finance

Assignment #1

Question #1

Below are the Income Statement and Balance Sheets for DEF Corporation.

Income Statement for the year ending Dec 31st, 2009	
Revenue	3,450.00
COGS	2,900.00
Other expenses	315.00
EBITDA	235.00
Depreciation	9.00
EBIT	226.00
Interest	8.00
Earnings before tax	218.00
Tax	87.20
Net Income	130.80

Balance Sheets for the years ending December 31st		
	2008	2009
Cash	119.00	112.00
Accounts Receivable	322.00	489.00
Inventory	166.00	200.00
Net Fixed Assets	90.00	81.00
Total	697.00	882.00
Accounts Payable	224.00	200.00
Income Taxes Payable	25.00	45.00
Long Term Debt	74.00	70.00
Share Capital	210.00	263.00
Retained Earnings	164.00	304.00
Total	697.00	882.00

Calculate the following ratios:

a. EBITDA Margin
b. Profit Margin
c. Return on Assets$_{bop}$
d. Return on Invested Capital$_{bop}$
e. ROIC$_{bop}$ after depreciation
f. ROIC$_{bop}$ after depreciation and taxes
g. Asset Turnover (sales/assets)
h. Inventory Turnover
i. Accs. Rec. Turnover
j. Accs. Payble Turnover
k. Inventory Conversion Period
l. Accs. Rec. Conversion Period
m. Accs. Payable Deferral Period
n. Cash Conversion Cycle
o. Current Ratio
p. Acid Test
q. Times Interest Earned
r. Debt to Equity (include all cur. liab. in "debt")
s. Debt to Assets (include all cur. liab. in "debt")
t. Return on Equity (not BOP)
u. Assets-to-equity
v. Return on Equity (not BOP) – use the Du Pont Identity

Question #2

ABC Co. Ltd. has the following year-end accounting balance sheet.

Current Assets	$500,000	Accounts Payable	$400,000
Net Fixed Assets	$1,600,000	Short-Term Debt	500,000
		Equity	1,200,000

Equity on the balance sheet represents the sum of all the accounting "equity" accounts. Expected sales for the upcoming year are $3,600,000. Costs of goods sold are 65% of sales and other operating expenses are $850,000. The interest rate on ABC's short-term debt is 10% per annum. ABC's tax-rate is 23%.

a. Calculate ABC's invested capital turnover, EBITDA margin, and rate of return on invested capital (before tax, no depreciation in this problem).
b. ABC anticipates no capital expenditure in the upcoming year and no incremental investment in trade capital. ABC expects to pay dividends equal to net income. ABC also expects to

maintain the current level of its short-term debt. Find free cash flow using both the operational and the financial definitions. Does ABC have a free cash flow surplus or deficit? If ABC has a free cash flow deficit, how is it financed? If ABC has a free cash flow surplus, how is it distributed?

c. ABC intends to expand its operations. Sales are expected to increase by $1,000,000 per annum. In addition, “other” operating expenses will increase by $200,000 per annum. Costs of goods sold as a fraction of sales is not expected to change. This expansion requires a one-time incremental investment of $400,000 in trade capital and a capital expenditure in the amount of $300,000. ABC expects to pay dividends equal to net income. ABC intends to finance these expenditures with long-term debt (financing is at the end of the year). ABC also expects to maintain the current level of its short-term debt. Find free cash flow using both the operational and the financial definitions. What is the rate of return (before tax) on ABC’s *incremental* investment in business activity? Does ABC’s before tax rate of return on invested capital (for the entire firm) increase or decrease as the result of the expansion?