

Quiz B for 2:30 Class: 9/17/12

Name Key

Use the following information to calculate unlevered net income and free cash flow today and four years from today.

Your firm is considering building a new factory at a cost today of \$5,000,000. Your firm expects the factory to continue operations for 20 years, but it will fall into the 15-year MACRS class. The factory will be partially funded by issuing \$3,000,000 of long-term bonds at an interest rate of 4.5% per year. The remaining cost will be funded with available cash. The factory will be built on land that was purchased five years ago at a cost of \$500,000 that can be sold today for an after-tax cash flow of \$400,000. If it is built, the factory will generate revenues of \$7,000,000 one year from today. These revenues are expected to grow at a rate of 2.5% per year over its entire life. The cost of goods sold at the factory will equal 55% of sales and salaries will equal \$1,000,000 per year. In addition, \$400,000 of the costs associated with operating your firm's corporate headquarters will be assigned to the new factory. If the factory is built, your firm's cash balances will rise today from \$350,000 to \$400,000, accounts receivable will equal 55% of sales, inventory will equal 40% of sales, and accounts payable will equal 10% of sales. Your firm's marginal tax rate is 35%.

Wall Street Journal Questions are on the back of this page.

+3 $UNI_t = (R_t - E_t - D_t)(1 - T_c)$

+3 $FCF_t = UNI_t + D_t - CE_t - \Delta NWC_t$

+3 $\Delta NWC_t = NWC_t - NWC_{t-1}$

+4 $NWC_t = C_t + I_t + AR_t - AP_t$

+3 $UNI_0 = 0$

+6 $CE_0 = 5,000,000 + 400,000$

+6 $\Delta NWC_0 = 400,000 - 350,000$

+9 $R_4 = 7,000,000 (1.025)^3$

+9 $E_4 = .55(R_4) + 1,000,000$

⑧ $D_4 = .077(5,000,000)$

+3 $T_c = .35$

+6 $AR_4 = .55(R_4); AR_3 = .55(R_3)$

+6 $I_4 = .4(R_4); I_3 = .4(R_3)$

+6 $AP_4 = .1(R_4); AP_3 = .1(R_3)$