

Quiz A for 1:00 Class: 2/6/13

Name Key

Assume that the firm where you work is trying to decide whether or not to build a new retail store. Your boss has asked you to check a few numbers by calculating (or setting up to calculate) the store's unlevered net income and free cash flow both today and three years from today.

The store could be built at a cost of \$15 million today, but it would be depreciated over the next few years using the 10-year MACRS class. The \$15 million would come from using \$6 million of available cash, issuing \$5 million of bonds, and issuing \$4 million of new shares of common stock. The facility would be built on land which was purchased one year ago at a cost of \$3 million. This land could be sold today for an after-tax cash flow of \$2 million. If the store is built, it would generate revenues of \$40 million a year from today and would grow at a rate of 1% per year after the first year. The cost of goods sold would equal 70% of revenues. The cost of salaries and utilities would equal \$8 million per year. The corporate tax rate equals 35% and the working capital (millions) associated with the project is as follows:

	t=0	t=1	t=2	t=3	t=4	t=5
Cash	0.0	0.7	0.8	1.0	1.15	1.2
Inventory	1.5	3.5	3.7	3.8	4.1	4.15
A/R	0.0	0.5	0.65	0.7	0.8	0.9
A/P	1.3	3.2	3.5	3.7	3.9	4.0

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

$$UNI_0 = 0$$

$$CE_0 = 15 + 2 = 17$$

$$+1 (\Delta NWC_0 = (1.5 - 1.3) - 0 = 0.2)$$

$$+1 (FCF_0 = 0 + 0 - 17 - 0.2 = -17.2)$$

$$R_3 = 40(1.01)^2 = 40.804$$

$$E_3 = .7(40.804) + 8 = 36.563$$

$$D_3 = 15(1.440) = 2.16$$

$$+1 (UNI_3 = (40.804 - 36.563 - 2.16)(1 - .35) = 1.353)$$

$$NWC_3 = 1 + 3.8 + 0.7 - 3.7 = 1.8$$

$$NWC_2 = 0.8 + 3.7 + 0.65 - 3.5 = 1.65$$

$$+1 (\Delta NWC_3 = 1.8 - 1.65 = 0.15)$$

$$+1 (FCF_3 = 1.353 + 2.16 - 0 - 0.15 = 3.363)$$