

Quiz 2: Financial Management

Answer all questions and show necessary work. Please be brief. This is an open books, open notes exam.

1. Zip Cola, a beverage company, has asked you to assess the cost of capital to use in evaluating a new project that they are considering in the retailing business. You have collected the following information:

- Zip Cola has \$ 100 million in face value (and book value) of 5-year debt outstanding, on which it is paying \$ 5 million in interest expenses currently.
- Zip Cola also has lease commitments of \$ 25 million a year for the next 8 years.
- Zip Cola has 50 million shares outstanding, trading at \$10 a share; the book value of equity is \$ 200 million.
- The unlevered beta for the beverage business is 0.60 and the unlevered beta of the retail business is 1.20.
- Zip Cola is rated BBB and the default spread for BBB rated bonds is 1.5%
- The treasury bond rate is 4.5%, the equity market risk premium is 4% and the marginal tax rate is 40%.

a. Estimate the market value of the interest bearing debt. (1 point)

b. Estimate the “debt” value of leases outstanding. (1 point)

c. Estimate the cost of capital for the retailing project.

(2 points)

2. Now assume that you are called upon to assess a new investment in a social networking site by Yahoo. The company estimates that they will have to invest \$ 1 billion in initial infrastructure and capital investments. While the company believes that it has enough excess server capacity to meet the needs of the networking site for the next two years, it will have to invest \$ 500 million in expanding capacity at the end of year 2; It normally (without the networking site expansion) would have run out of capacity at the end of year 5. The company estimates the following revenues and pre-tax operating income (in millions) for the next 5 years:

<i>Year</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Revenues	\$800	\$800	\$800	\$800	\$800
- Operating Expenses	\$450	\$450	\$450	\$450	\$450
- Depreciation	\$150	\$150	\$150	\$150	\$150
Operating Income	\$200	\$200	\$200	\$200	\$200

Yahoo's cost of capital for investments in the networking business is 15% and its marginal tax rate is 40%.

a. Estimate the after-tax operating cashflow each year for the next 5 years. (2 points)

b. Assuming that the cost of investing in server capacity remains unchanged over time and that you can expense (rather than capitalize) this cost, estimate the opportunity cost of using excess server capacity on this investment. (1 point)

c. Assuming that Yahoo plans to leave the networking business at the end of year 5 and that the assets in the project can be sold at book value, estimate the net present value of this project. (2 points)

d. We could analyze this project by assuming that it will last beyond year 5. If we make this assumption, which of the following is the most likely consequence for the NPV?

- i. The NPV will go down since there will be no salvage value
- ii. The NPV will go up because the terminal value will be higher than salvage value
- iii. The NPV should not change
- iv. The NPV can increase, decrease or remain unchanged depending upon the reinvestment that will be needed to keep the project going after year 5.
- v. None of the above