

Quiz 2: Corporate Finance

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

1. Supra Inc, a US company in the travel services and hotel businesses, has asked you to compute a cost of capital to use in assessing a joint venture to build new hotels along the US-Mexico border, with 20% of the revenues coming from the US and 80% from Mexico. You are given the following additional information:

- a. The beta for Supra is given below, with a business breakdown:

	D/E Ratio	Levered Beta
Supra Travel Services	20%	1.008
Supra Hotels	50%	1.430
<i>Supra Overall</i>	<i>30%</i>	<i>1.062</i>

- b. The equity risk premium for the US is 6% and the equity risk premium for Mexico is 9%.
- c. The US treasury bond rate is 2.5% and the inflation rate in US \$ is 2%. The expected inflation rate in Mexico (in pesos) is 4.5%.
- d. Supra's pre-tax cost of debt is 4% (in US\$) and the tax rate is 40%.

If Supra plans to fund this joint venture entirely with equity, and wants to do the analysis in Mexican pesos, estimate the cost of capital for the project. (3 points)

2. You run a restaurant that is expected to generate \$100,000 in EBITDA each year for the next five years (after which your lease terminates). If you invest \$250,000 in renovating the restaurant today (depreciable straight line over five years to a salvage value of zero), you expect to increase your EBITDA to \$175,000 a year for the next five years. If you face a tax rate of 40% and a cost of capital of 12%, would you invest in the renovation? (3 points)

3. You own a movie theater and have to replace all the seats in the theater. You have two choices.
- a. Option 1: You can spend \$250,000 on cheaper seats that will cost \$10,000 to clean each year and last four years.
 - b. Option 2: You can spend \$400,000 on better quality seats that will cost only \$5000 to clean each year and last seven years.

Ignoring taxes and depreciation, which option would you pick, if your cost of capital is 8%?
(2 points)

4. You are planning to make an investment of \$10 million in new servers for your business and expect to be able to depreciate that investment, straight line over five years down to a salvage value of zero. If your tax rate is 40% and you were able to expense the investment today instead, what effect will that have on your NPV (assuming a cost of capital of 12%)? (2 points)