Monday January 7th, 2013

Please indicate your:
NAME :
GIVEN NAME :
SECTION :

1. The exam will last 3 hours.
2. Answer clearly to the questions in the spaces provided therefore at the end of the questionnaire. Try to be structured, confusion doesn't help…
3. Make sure to write full sentences (limit abbreviations).
4. Whenever needed, write down the formula used
5. *All* answers should be rounded off and displayed with *2 decimal places*.
6. Make sure your questionnaire has 10 pages.
7. Good Luck!

GEST S 410
CORPORATE VALUATION AND FINANCING EXAM

Question	1	2	3	4	Total
MAXIMUM	5	5	5	5	
Your Result					

Question 1: Company and Project valuation

Tongoland (the country with no taxes and perfectly efficient markets) is not anymore the place to be. Your boss wants you to value another Hotel company located in Octopusville, which has the same growth perspectives as Tongoland, but where companies have to pay corporate tax rates.

You have received the following information regarding a company you may want to acquire:

- Its current EBIT is equal to 1.750.000€ and in view of the sector in which the company is active, may be viewed as a perpetuity.
- The company has a perpetual debt valued at 5.000.000€ paying a yearly coupon of 4%
- The marginal corporate tax rate of the company is equal to 30%.
- The risk free rate is equal to 3%
- An unlevered company in the same sector has an expected return on equity worth 9%

a) What is value of the unlevered company?

b) What is then the value of the levered company and of its equity?

c) What are the expected return on equity and the wacc worth?

d) In the (very improbable) case that the taxes would be put at 0%, what would be the wacc in this case? Can you explain the difference with the wacc computed in c?

e) The company plans to expand its activities by acquiring a television channel. This would require additional financing to launch this risky venture. Analysts inside the company are trying to compute the NPV of the project. To do so they use the wacc computed in c. Do you believe this is a good idea? Explain why in detail.

Question 2: Callable bonds

After a very challenging casting you have been selected to participate to 'Investing with the stars', a financial reality show broadcasted on all the best known financial channels. Every week you are assigned a new case study you have to prepare with your investment idol. You will work together with Paradise Investment Management Company (PIMCO)'s Chief Investment Officer, Teddy B.

The first case you are presented deals with an insurance company which in order to avoid any reinvestment risk invested into several zero-coupon bonds over the last years. A significant portion of their portfolio is in invested in a zero-coupon bond with a face value of 107 and which matures in 3 years from now. This bond is callable by the issuer in 2 years at 100. You are told that the current 1-year rate is 5.5% and its annual variance is 0.04.

Teddy B, your mentor advises you to use a binomial interest rate tree, with 3 steps, to value this bond. He is willing to help you and managed to figure out that the first period lower interest rate ($r_{1,L}$) is 4.85% and the second period lower interest rate is 4.00% ($r_{2,L}$). The company uses the Kalotay-Williams-Fabozzi (1993) interest rate model where $r_{1,H} = r_{1,L}(e^{2\sigma})$

Teddy B has to leave for a key board meeting in Copertinu and gives you a 'Fedex' mission. You have to deliver overnight and compute the following items:

a) The value of the callable bond
b) The value of the call option.

Question 3: Behavioral finance

Your boss has recently followed a finance course and is a bit puzzled. The speaker detailed a series of observations related to how people actually manage their portfolio. He wonders whether you can help him understand the following themes and their impact on trading behavior: overconfidence, gender bias, sensation seeking, disposition effect and mood.

Question 4 : Varia

a) Your boss has heard of a new way to value equity: the Merton Model. Draw a graph explaining this model. Do not forget to label the axes (no label = no points) and to show the main points of interests on the graph.
b) What are event studies and what are they used for. Explain with an example
c) Why are close-end fund IPO’s less underpriced than IPOs from other companies? Explain.

Question 1:

Question 1 (continued):

Question 2:

Question 2 (continued):

Question 3:

Question 4:

Question 4 (contiuned):