Monday January 9th, 2012

Please indicate your:

NAME :
GIVEN NAME :
SECTION :

1. The exam will last 3 hours and 30 minutes.
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. Make sure your questionnaire has 10 pages.
6. 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

Following your studies at Solvay, you have just been hired by the famous Belgian Big Bank. Your job there is to assess the value of companies which are not yet listed but would like to come to the market. The first company you need to analyze is the Huge Bakery of Special Cakes (HSBC). You have been provided with some data. Its current EBIT is equal to 2.500.000€ 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 6.000.000€ paying a yearly coupon of 3%. The marginal corporate tax rate of the company is equal to 30%. The risk free rate is equal to 3% and an unlevered company in the same sector has an expected return on equity worth 8%.

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) What would the company be worth if it had a clear policy regarding leverage and wished to rebalance the debt continuously so as to reach the target leverage of 25%? What is then the value of the wacc ?

e) How can you explain the difference in value for the company between b and d? Give the intuition.

Question 2:

In view of your brilliant performances, you have been asked to work on risky debt valuation. The current head of this department has heard of the Merton Model but fails to grasp its subtleties. He nonetheless would like to see such a model applied in practice. He wants to analyze a company which has a market value of 1.000.000€. The sector in which the company is active is highly volatile, with yearly volatility equal to 50%! The company has currently no debt but would like to issue a two year zero-coupon with a face value of 500.000€. The current risk-free rate (annual equivalent rate) is worth 5%.

a) Before you proceed to value the debt, your boss would like to see a graph representing the concept (do not forget to label the axes and to stress any special point if needed).

b) In this case, what should the bond be worth when issued (t=0, consider a binomial tree with one year steps)?

c) What is then the required rate for this bond? And the risk-premium?

<u>Question 3:</u>

Detail the different theories related to share price reaction following IPOs.

<u>Question 4 : Varia</u>

a) Your boss needs to price a callable bond. He has decided to use the Black and Scholes formula. Would this be a good idea? Explain.

b) In view of the poor performance of his investments your boss has now decided to turn to alternative investments. He considers investing in artworks. Could you help him by pointing out what is known about investment in artworks when compared to other investments?

c) What are the main insights from Meulbroek L. K., (1992), "An Empirical Analysis of Illegal Insider Trading", *The Journal of Finance*, 47, 5, pp. 1661-1699?

Question 1:

Question 1 (continued):

Question 2:

Question 2 (continued):

Question 3:

Question 4:

Question 4 (contiuned):