

**CORPORATE VALUATION FEBRUARY 7TH 2013**

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**Prof. Joe Tanega**

1. What does  $t_0$  represent in the Default Invariance Model?
  - a. Time of delivery
  - b. Time of expiry
  - c. Time to pay
  - d. Time of the formation of the contract
2. What does  $t_1$  represent in the Default Invariance Model?
  - a. Time when contract should be paid
  - b. Time when contract is illegal
  - c. Time to sue
  - d. Time of expiry
3. The Arrow-Debreu-Sharpe Model assumes that
  - a. The contract will be paid
  - b. The contract will not be paid
  - c. No one has enough time
  - d. Contracts will be breached
4. The Arrow-Debreu-Sharpe Model fails to account for:
  - a. Default
  - b. Non-payment
  - c. Both a and b
  - d. Neither a nor b
5. A morphism may be thought of as a
  - a. Arrow
  - b. Operation
  - c. Both a and b
  - d. Neither a nor b
6. What are the two types of models?
  - a. Informal and formal
  - b. Less and more
  - c. True and more true
  - d. Convenient and political
7. A catastrophic risk will cause a business to
  - a. Flourish
  - b. Find corporate governance
  - c. Fail
  - d. Comply with the law
8. If a business announcement in the news about a company is better than expected then the share price should go:
  - a. Up
  - b. Down
  - c. Both a and b
  - d. Neither a nor b
9. Bank loans, commercial paper and bonds are forms of:
  - a. Debt
  - b. Equity
  - c. Derivatives
  - d. Mortgages

10. Preferred shares, common shares and warrants are forms of:

- a. Debt
- b. Equity
- c. Derivatives
- d. Mortgages

11. The following quote comes from which Prospectus?

“The integrity and reputation of our brands are two of our most valuable assets. An important part of our growth strategy has been the expansion of our Directly-Operated Stores (“DOS”) network, growing from 211 DOS as at January 31, 2008 to 319 DOS as at January 31, 2011. If we fail to manage our growth in a way that protects the exclusivity of our brands, we risk becoming over-exposed and the value of our brands may be diluted.”

- a. The Prada Prospectus
- b. The Salvatore Ferragamo Prospectus
- c. Both (a) and (b)
- d. Neither (a) nor (b)

12. The following quote comes from which Prospectus?

“As at December 31, 2010, we distribute our products through our Wholesale Channel in 58 countries through 266 third-party, single-branded points of sale as well as through multi-branded stores. Our Wholesale Channel generated revenue of approximately A223.7 million in 2010 or around 28.6% of our consolidated revenue in that year. In the year ended December 31, 2010, 11% of our Wholesale Channel revenue was attributable to our top 10 clients.”

- a. The Prada Prospectus
- b. The Salvatore Ferragamo Prospectus
- c. Both (a) and (b)
- d. Neither (a) nor (b)

### **Dr. Emilio Tomasini**

13. What are free cash flows to firm (FCFF) ?

- a) They do not take into account the impact of the company financial structure
- b) they take into account the impact of the company financial structure
- c) they are not influenced by risk

14. p/e is a multiple of price and it expresses:

- a) the time that you need to pay back the investment
- b) an esteem of the future ebit
- c) an esteem of the future ebitda

15. In the Gordon' model “g” is:

- a) dividend growth rate
- b) perpetual earnings growth rate
- c) turnover growth rate

16. Usually you have high p/e:

- a) with companies with high earning prospects
- b) with old economy companies
- c) with companies that have lower than average growth prospects

17. What is the relationship between risk and probabilities in DCF valuation ?

- a) expected cash flows must be discounted by a risk adjusted interest rate
- b) guaranteed cash flows must be discounted by a risk-free rate
- c) both of above

18. What is the reason FCFF and FCFE are two different valuation methods that eventually end up to measure the same value ?

- a) There is the huge problem about debt valuation which is always a very difficult to measure since we do not have clear clues about it (interest rates, repayment clauses, etc.) or they are very difficult to collect. So that if we value the firm independently from the financial structure then the analyst's job is much easier. In any case to obtain FCFE you can always deduct from FCFF the book value of debt.

- b) FCFF and FCFE are 2 completely different ways to value a company: if you are a debt claimer you prefer the FCFF since you do not care about equity but just debt and if you are an equity claimer you just care about FCFE.
- c) FCFE is the same as FCFF provided R&D and Operating Leases are deducted from capital in FCFE
19. What is the cost of equity ?
- a)  $\text{Expected return} = R_f + \text{Beta} * (R_m - R_f)$
- b)  $\text{Expected return} = R_f + \text{Beta} * (\text{Equity Risk Premium})$
- c) Dividend / Book value of equity
20. What is the “implied equity risk premium” ?
- a) the expected returns on stocks
- b)  $\text{the expected returns on stocks} - \text{risk free rate}$
- c) the equity risk premium
21. In a stable growth model
- a) earnings are expected to grow less than the general economy
- b)  $\text{earnings are expected to grow not more than then general economy}$
- c) earnings are not expected to grow at all
- c) growth firms should have higher beta than value stocks
22. What does it means a capital and debt “adjustment” ?
- a)  $\text{To add R\&D expenses to Capital and Operating leases to debt}$
- b) To add R&D expenses and Operating leases to debt
- c) To add R&D expenses and Operating Leases to capital
23. what is the effect of the adjustment on capital and debt ?
- a)  $\text{ROC will be lower}$
- b) ROC will be higher
- c) the adjustment does not affect ROC
24. P/e is normally distributed ?
- a)  $\text{No}$
- b) Yes
- c) Sometimes
25. A company has  $\text{Ebit}(1-t) = 100$  millions dollars, a cost of capital = 10%,  $\text{ROC} = 10\%$ , in a stable growth situation  $g = 5\%$ . What is its reinvestment rate ?
- a) 0,5%
- b)  $\text{50\%}$
- c) 200%
- d) none of the above
26. The *asset beta* of a company depends
- a) From financial leverage
- b)  $\text{From operating leverage}$
- c) From both above

## EXERCISES

The Erasmus Harem, a notorious disco dance in Forlì for Erasmus students, has the following FCFE in the following 5 years: 60, 70, 78, 86, 93. Terminal value in year 5 is 1703. The current market value of equity is 1173, book value of debt is 800. Cost of equity is 14% and the firm can borrow long term at 10%. Tax rate is 50%. Student is requested to discount FCFE at cost of equity to get present value of equity (2 points).

$$60 / 1.14 + 70 / (1.14)^2 + 78 / (1.14)^3 + 86 / (1.14)^4 + (93+1703) / (1.14)^5 = 1.142,85$$

If we know that in a FCFE discount model Erasmus Harem has a terminal value in year 5 of 2463, calculate WACC and calculate what is the present FCFE value. (4 points).

**I was very flexible in the marking of this exercise since I put the emphasis on the fact that from FCFE to FCFE you need to update all the cash flows adding interest rates to each of them. So broadly speaking the “theoretical” good answer would be:**

$$800 \text{ (book value of debt)} \times 0.1 \text{ (borrowing cost)} = 80 \text{ (interest expenses per year)}$$

Cash flows become in year 1 (60+80), in year 2 (70+80), in year 3(78+80) etc. etc. then you discount them at WACC which is 12,55. **In marking this calculation did not matter if you want to know more please see page 10 slides file packet1b.pdf**

The Erasmus Delight, a restaurant which is in the same premise than Erasmus Harem, has a Capital Expenditure of 30, a Depreciation of 10, a change in WC of 5. Provided that Ebit is 80 and tax rate 50%, given a ROE of 10%, how much is g, the growth rate in earnings ? (2 points)

**Again I was very flexible in marking and the “theoretical” good answer would be the following:**

$$\text{Capex (30) - Depreciation (-10) + Change in WC (+ 5) = 25}$$

$$g = \text{reinvestment rate} \times \text{ROE}$$

$$\text{Reinvestment rate} = 25 / \text{ebit} (1-t)$$

$$\text{Reinvestment rate} = 25/40 = 62.5\%$$

$$g = 62.3\% \times 10\% = 6.25\%$$

**For more info please see page 128-129 of the Damodaran’s book either the slides file packet1b.pdf page 157**