NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF COMMERCE
DEPARTMENT OF FINANCE
BACHELOR OF COMMERCE HONOURS DEGREE IN FINANCE
PART II – 2ND SEMESTER FINAL EXAMINATION – MAY 2005
CORPORATE FINANCE II [CFI 2201]
TIME ALLOWED: 3 HOURS

INSTRUCTIONS

ANSWER ALL QUESTIONS

QUESTION ONE [20 MARKS]

1. CFI Holdings is a conglomerate listed on the Zimbabwe Stock Exchange (ZSE) and has three operating divisions as follows:

Division	Subsidiary	%age of firm value
Food Processing	Agrifoods	40
Retail	Town & Country	35
Meats	Hubbard Poultry	25

The Finance Director wishes to establish the divisional costs of capital and has identified three listed companies carrying out similar activities:

Company	Equity beta	Debt/Equity
Natfoods	0.9	0.40
OK Zimbabwe	1.2	0.25
Colcom	1.4	0.50

(i) Estimate asset betas for each of CFI Holdings' divisions on the assumption that debt can be regarded as risk free, and that CFI Holdings' marginal tax rate is 35%. Explain the significance of these values to CFI Holdings. [3],[1]

(ii) If CFI Holdings' debt to equity ratio is 40%, what is its equity beta? What is the significance of this measure? [3]

(iii) Given that debt may be assumed to be risk-free, and is available to CFI Holdings at 2.5% above the Treasury Bill rate which is currently 10% per year and that the expected return on the market is 17.5%; what is the cost of capital for each of CFI Holdings' divisions? [3]

(iv) Establish CFI Holdings' cost of equity. [2]

(v) What critical assumptions have you used in the above calculations and how would they affect the calculated Ke. [4]

(vi) Explain the two major determinants of beta? [4]

QUESTION TWO [25 MARKS]

1. **What is the difference between estimating a project`s beta by the accounting method and the pure play method?**

   A. The accounting beta method attempts to indirectly estimate a project's beta and the pure play method attempts to directly estimate the project's beta.
   B. Accounting betas measure systematic risk and pure play betas measure unsystematic risk.
   C. The accounting beta method attempts to directly estimate a project's beta and the pure play method attempts to identify publicly traded firms that are engaged in the same business.
   D. Accounting betas are calculated using financial statements and pure play betas are calculated using randomly selected distributions of returns.

2. **Which of the following measures of risk is relevant in capital budgeting?**

   A. Project standing alone risk.
   B. Contribution-to-firm risk.
   C. Systematic risk.
   D. Unsystematic risk.

3. **What is the logic of using a risk-adjusted discount rate in capital budgeting?**

   A. If the level of project risk is higher than the typical project, then a higher required rate of return should apply.
   B. Shareholder value will be higher when using the risk-adjusted discount rate for riskier projects.
   C. If the level of project risk is lower than the typical project, then a higher required rate of return should apply.
   D. If a project has less than normal risk, an increase in the required rate of return is appropriate.

4. **How should a financial manager select one of the two mutually exclusive projects that have different risk?**

   A. Select the project with the larger risk-adjusted net present value.
   B. Choose the project with the least relative risk.
   C. Choose the project with greater return even if that project has greater risk.
   D. Choose the project with less risk even though that project has less return.

5. **What is the principal advantage of using simulation to evaluate risk?**

   A. The way that it adjusts for risk in the resulting distribution of net present values.
   B. A range of possible outcomes is presented.
   C. Is good only for single-period investments since discounting is not possible.
   D. Graphically displays all possible outcomes of the investment.

6. **A firm is considering a project with an initial cash outflow of $250,000 that is expected to generate free cash flows [after-tax cash flows] of $75,000 annually for the next 5 years. The normal required rate of return for the firm is 10 percent; however, the minimally acceptable rate of return on riskier projects is 15 percent. Which of the following statements about the way the firm will evaluate the project is true?**

   A. The firm will use 10 percent as the discount rate for analyzing this project.
   B. The firm will use 10 percent as the discount rate for analyzing this project only if it is less risky than the firm's typical endeavor.
   C. The firm will use 15 percent as the discount rate for analyzing this project only if it is riskier than the firm's typical endeavor.
   D. The firm will be unable to analyze this project unless it knows the risk-free interest rate.

7. **For the purpose of capital budgeting analysis, what is the appropriate way to view a project's risk?**

   A. Project standing alone risk, which reflects the amount of risk the project contributes to the firm as a whole.
   B. Contribution-to-firm risk that considers the fact that some of the project's risk will be diversified away and, therefore, reflects effects of diversification to the firm's shareholders.
   C. Systematic risk, which is the risk of the project from the view of a well-diversified shareholder.
   D. All of the above.

8. **What computational or statistical method is used to calculate the accounting beta?**

   A. Simulation.
   B. Regression analysis.
   C. Sensitivity analysis.
   D. Scenario analysis.

9. If bankruptcy costs and/or shareholder under-diversification are an issue for a firm, what measure of risk is relevant in capital budgeting when evaluating project risk?

   A. Total project risk.
   B. Contribution-to-firm risk.
   C. Systematic risk.
   D. Capital rationing risk.

10. What is the capital budgeting procedure called that involves changing one or more of the basic assumptions about cash flow variables and re-computing NPV and IRR to determine how sensitive these criteria are to changes in the input factors.

   A. Pure play method.
   B. Sensitivity analysis.
   C. Skewness estimation.
   D. Scenario analysis.

11. Of the ones listed below, which measure is most similar to beta?

   A. Expected return of an individual stock.
   B. Standard deviation of an individual stock.
   C. Variance of an individual stock.
   D. Covariance of an individual stock and a market index.
   E. Expected return of a market index.

12. If the market index increased by 20% during a period, a stock with a beta of 1.5 would be expected to ……………………… During this same period?

   A. Increase 20%
   B. Increase or decrease by 20% or less.
   C. Increase by 30%
   D. Increase or decrease by 30% or less.
   E. Decrease by 20%.

13. If investors want to invest in stocks, but minimize exposure to market risk, they should:

   A. Diversify.
   B. Hold only low beta stocks.
   C. Hold only low variance stocks.
   D. Hold the market index portfolio.
   E. Hold only internet stocks.

14. The search for a group of macroeconomic factors that can explain the required returns for securities investors resulted in the development of:

   A. The capital asset pricing model.
   B. The arbitrage pricing model.
   C. Inflation adjusted accounting.
   D. The efficient market hypothesis.
   E. The index of leading economic indicators.

15. If Mona invests 60% of her money in a common stock mutual fund with a beta of 1.25, and the rest of her money in T-Bills, her total portfolio beta is:

   A. 0
   B. .75
   C. 1.0
   D. 1.15
   E. 1.25

16. Assume that the risk-free rate is 7%, and the market risk premium is 8%. A stock with a beta of 0.5 should return .

   A. .075
   B. .08
   C. .09
   D. .11
   E. .15

17. Assume that the risk free rate is 7%, and the market risk premium is 8%. Also assume that after careful analysis, you believe that American Media Group common stock will return 17% next year. The beta for the stock is 1.5. You should

   A. Buy it because it earns more than 7%
   B. Buy it because it earns more than 8%
   C. Buy it because it earns more than 15%
   D. Not buy it because it earns less than 18%
   E. Not buy it because it earns less than 19%

18. What should be the price of a preferred stock with a beta of 0.2 that will pay dividends of $15 per share in perpetuity if the riskless rate of interest is 6% and the market portfolio is expected to return 13%.

   A. $115.38
   B. $202.70
   C. $214.29
   D. $242.42
   E. $250.00

19. A profitable business plans to purchase fixed assets at a price of $750,000. The investment also qualifies the company for a 10% investment tax credit. The incremental cash investment required for the company is

A. $75,0000
B. $500,000
C. $675,000
D. $750,000
E. $825,000

20. If a company that is in a 30% tax bracket invests in assets that increase its depreciation expense by $100,000 per year, its cashflow will

A. Be unchanged.
B. Decrease by $70,000
C. Decrease by $100,000
D. Increase by $30,000
E. Increase by $70,000

21. The minimum rate of return that a company needs to earn in order to provide all its investors with their required return is called the

A. Average return on investment
B. Minimum average return.
C. Average cost of debt and equity.
D. Weighted average cost of capital.
E. Minimum cost of borrowing funds

22. One thing that makes debt financing cheaper than other kinds of financing is

A. A strong economy.
B. A high time value of money.
C. The tax deductibility of interest.
D. Creditors do not receive dividends.
E. Yields-to-maturity are less than coupon rates.

23. For most companies, the equity-debt risk premium is in the range of

A. 1% to 3%
B. 3% to 4%
C. 3% to 6%
D. 4% to 8%
E. 5% to 10%

24. **When estimating the discount rate to use in evaluating a capital budgeting project, the most relevant measure of risk is the**

A. Project's standard deviation.
B. Project's beta
C. Company's standard deviation
D. Company's stock beta
E. Average market beta

25. **If Hadley Tree Works preferred stock pays dividends of $9.50 per share, has a par value of $100, and sells today for $73 per share, their cost of preferred stock is**

A. 8%
B. 9.5%
C. 11%
D. 13%
E. 15%

QUESTION THREE [20 Marks]

Explain the concept of overtrading in the context of working capital management. Discuss the early warning signs of overtrading.

QUESTION FOUR [20 Marks]

None of the theories and models solves the dividend puzzle. However, each theory reveals factors influencing dividend policy. Summarize the factors influencing dividend policy under the following headings;

1. Constraints on Dividend Payments [5 marks]
2. Investment Opportunities [5 marks]
3. Alternative Sources of Capital [5 marks]
4. Effects of Dividend Policy on Cost of Equity [5 marks]

QUESTION FIVE [15 Marks]

Capital Structure theory deals with how the firm should choose between the different sources of long term financing. There are various theories regarding whether capital structure decisions affect the value of the firm.

a. Where are the arguments of the traditional approach as to why capital structure decisions affect the value of the firm? [5 marks]
b. The following data is given about two companies quoted on the Zimbabwe Stock Exchange:

	Yahoo Ltd	MSN Ltd
Profit before Interest and Tax	$80,000 000	$80 000 000
Interest on debt	0	15,000 000
Cost of equity of ungeared company	45%	
Risk-free rate	30%	

i. Calculate the values of two companies **[5 marks]**

ii. What does the Miller and Modigliani Theory say about the values you found in [i]? **[5 marks]**