

EASTERN UNIVERSITY, SRI LANKA

FACULTY OF COMMERCE AND MANAGEMENT



3RD YEAR 2ND SEMESTER EXAMINATION IN BUSINESS ADMINISTRATION 2002/2003

(MAY 2004)

MGT 3044 - FINANCIAL MANAGEMENT

All Questions

Time: 03 Hours

a) Joel Manufacturing is interested in measuring its overall cost of capital. Current investigation has gathered the following data. The firm is in the 40% tax bracket.

The firm can raise an unlimited amount of debt by selling Rs.1000 par value, 10% coupon interest rate, 10-year bonds on which annual interest payments will be made. To sell the issue, an average discount of Rs.30 per bond must be given. The firm must also pay flotation costs of Rs. 20 per bond.

The firm can sell 11% (annual dividend) preferred stock at its Rs. 100 per-share par value. The cost of issuing and selling the preferred stock is expected to be Rs.4 per share. An unlimited amount of preferred stock can be sold under these terms.

The firm's common stock is currently selling for Rs.80 per share. The firm expects to pay cash dividends of Rs.6 per share next year. The firm's dividends have been growing at an annual rate of 6% and this rate is expected to continue in the future. The stock will have to be under priced by Rs.4 per share, and flotation costs are expected to amount to Rs.4 per share. The firm can sell an unlimited amount of new common stock under these terms.

The firm expects to have Rs.225,000 of retained earnings available in the coming year. Once these retained earnings are exhausted, the firm will use new common stock as the form of common stock equity financing.

The firm uses the weights shown in the following table, which is based on target capital structure proportions.

Source of capital	Weight
Long-term debt	40%
Preferred stock	15
Common stock equity	<u>45</u>
Total	<u>100%</u>

You are required to calculate the WACC for Joel Manufacturing Firm.

(20 Marks)

- (b) Explain the “**Dividend Irrelevance**” with an example of imaginary figures for the facts that you will consider.

(05 Marks)

- (a) You have decided to invest 40 percent of your wealth in Security A, 30 percent in Security B, and 30 percent in Security C. The following information is available about the possible returns from the three securities.

Security A		Security B		Security C	
Return	Probability	Return	Probability	Return	Probability
10%	0.25	13%	0.30	14%	0.40
12	0.50	16	0.35	18	0.30
14	0.25	19	0.35	22	0.30

Compute the expected return of the Portfolio and the risk of the Portfolio if the correlations between returns from the three securities are $\rho_{AB} = 0.70$; $\rho_{AC} = 0.60$; $\rho_{BC} = 0.85$.

Assume the risk of a three-security portfolio can be computed as follows

$$\sigma_P = \sqrt{w_A^2 \sigma_A^2 + w_B^2 \sigma_B^2 + w_C^2 \sigma_C^2 + 2 w_A w_B \rho_{AB} \sigma_A \sigma_B + 2 w_A w_C \rho_{AC} \sigma_A \sigma_C + 2 w_B w_C \rho_{BC} \sigma_B \sigma_C}$$

(15 Marks)



- (b) Explain the following terms
- Systematic and unsystematic risk
 - Diversification and Correlation
 - Efficient Portfolio and Optimal Portfolio

(10 Marks)

(a) You are an investment advisor who has been approached by a client for help on his financial strategy. He has Rs.250,000 in savings in the bank. He is 55 years old and expects to work for 10 more years, making Rs.100,000 a year. (He expects to make a return of 5% on his investments for the foreseeable future. You can ignore taxes.)

- Once he retires 10 years from now, he would like to be able to withdraw Rs.80,000 a year for the following 25 years. (His actuary tells him he will live to be 90 years old.) How much would he need in the bank 10 years from now to be able to do this?
- How much of his income would he need to save each year for the next 10 years to be able to afford these planned withdrawals (Rs.80,000 a year) after the tenth year?
- Assume that interest rates decline to 4% 10 years from now. How much, if any, would your client have to lower his annual withdrawals, assuming that he still plans to withdraw cash each year for the next 25 years?

(20 Marks)

- b. Explain the following terms with suitable example
- Annuity due
 - Loan Amortization
 - Perpetuity

(05 Marks)

(a) Describe the Baumol model and the Miller-Orr model and how they can be used to determine the optimum quantity in which to convert marketable securities and cash.

(07 Marks)

- (b) KG corporation is attempting to determine whether to lease or purchase research equipment, Costing Rs 40 lakhs, which has an economic life of ten years at the end of which the asset is not expected to have any residual value.

Lease payments are to be made in advance and the lessor requires the asset to be completely amortized over its useful period and the asset will yield him a return of 10%.

The cost of debt is worked at 16% per annum. The lender requires the loan to be re-paid in 10 equal annual installments, each installment becoming due at the beginning of the year. Average rate of income tax is 50%. It is expected that the operating costs would remain the same under either method. The firm follows straight-line method of depreciation. As a financial consultant, indicate what your advice will be.

(18 Marks)