Strathmore UNIVERSITY

SIMS

END OF SEMESTER EXAMINATION

BSF 1204 – CORPORATE FINANCE

DATE: 16th March 2020 Time: 2 Hours

Instructions

1. This examination consists of **FIVE** questions.

2. Answer **Question ONE (COMPULSORY)** and any other **TWO** questions.

QUESTION ONE

1) Generally, an average investor in the market is deemed to be risk averse. What does that mean? **(2 Marks)**

2) What is a stock beta? What does beta coefficient of greater than 1 mean and what would you expect of technology based firm's stock beta to be? **(4 marks)**

3) Stocks A and B have the following historical returns:

Year	$\bar{r}_A$	$\bar{r}_B$
2006	–18.00%	–14.50%
2007	33.00	21.80
2008	15.00	30.50
2009	–0.50	–7.60
2010	27.00	26.30

a). Calculate the average rate of return for each stock during the 5-year period. **(2 marks)**

b). Assume that someone held a portfolio consisting of 50% of Stock A and 50% of Stock B.

i) What would have been the average return on the portfolio for the 5-year period? **(4 marks)**

ii) calculate the standard deviation of returns for the portfolio **(4 Marks)**

iii) What would you expect of the correlation coefficient of stock's A and B returns, 0.8 or -0.8? (no calculations) **(3 Marks)**

4) Dusty Co wishes to improve its working capital management as part of an overall cost-cutting strategy to increase profitability. Two areas the company has been considering are working capital funding strategy and inventory management. Dusty Co currently follows a policy of financing working capital needs as much as possible from long-term sources of finance, such as equity. The company has been considering its inventory management and has been looking specifically at component K.

Current position

Dusty Co purchases 1,500,000 units of component K each year and consumes the component at a constant rate. The purchase price of component K is Kes14 per unit. The company places 12 orders each year. Inventory of component K in the financial statements of Dusty Co is equal to average inventory of component K.

The holding cost of component K, excluding finance costs, is Kes0.21 per unit per year. The ordering cost of component K is Kes252 per order.

Economic order quantity

Dusty Co wishes to investigate whether basing ordering of component K on the economic order quantity will reduce costs.

Bulk order discount

The supplier of component K has offered Dusty Co a discount of 0.5% on the purchase price of component K, provided the company orders 250,000 units per order.

Other information

Dusty Co has no cash but has access to short-term finance via an overdraft facility at an interest rate of 3% per year. This overdraft currently stands at Kes250,000.

i) Calculate the annual holding and ordering costs of Dusty Co.'s current inventory management system. **(2 mark)**

ii) Calculate the financial effect of adopting the Economic Order Quantity as the basis for ordering inventory. **(4 marks)**

iii) Calculate the financial effect of accepting the bulk order discount. **(4 marks)**

iv) Recommend, with justification, which option should be selected by Dusty Co. **(1 mark)**

QUESTION TWO

Mandigo Co needs to increase production capacity to meet increasing demand for an existing product, ‘Kahawa’, which is used in food processing. A new machine, with a useful life of four years and a maximum output of 600,000 kg of Kahawa per year, could be bought for Kes800,000, payable immediately. The scrap value of the machine after four years would be Kes30,000. Forecast demand and production of Kahawa over the next four years is as follows:

Year	1	2	3	4
Demand (kg)	1·4 million	1·5 million	1·6 million	1·7 million

Existing production capacity for Kahawa is limited to one million kilograms per year and the new machine would only be used for demand additional to this.

The current selling price of Kahawa is Kes8·00 per kilogram and the variable cost of materials is Kes5·00 per kilogram. Other variable costs of production are Kes1·90 per kilogram. Fixed costs of production associated with the new machine would be Kes240,000 in the first year of production, increasing by Kes20,000 per year in each subsequent year of operation.

Mandigo Co pays tax one year in arrears at an annual rate of 30% and can claim capital allowances (tax-allowable depreciation) on a 25% reducing balance basis. A balancing allowance is claimed in the final year of operation.

Mandigo Co uses its after-tax weighted average cost of capital when appraising investment projects. It has a cost of equity of 11% and a before-tax cost of debt of 8·6%. The long-term finance of the company, on a market-value basis, consists of 80% equity and 20% debt.

Required:

(a) Calculate the net present value of buying the new machine and advise on the acceptability of the proposed purchase (work to the nearest Kes1,000). **(15 marks)**

(b) Calculate the internal rate of return of buying the new machine and advise on the acceptability of the proposed purchase (work to the nearest Kes1,000). **(5 marks)**

QUESTION THREE

a). FLAMENGO Co has annual credit sales of Kes4·2 million and cost of sales of Kes1·89 million. Current assets consist of inventory and accounts receivable. Current liabilities consist of accounts payable and an overdraft with an average interest rate of 7% per year. The company gives two months' credit to its customers and is allowed, on average, one month's credit by trade suppliers. It has an operating cycle of three months.

Other relevant information:

Current ratio of FLAMENGO Co	1·4
Cost of long-term finance of FLAMENGO Co	11 %

Calculate the size of the overdraft of FLAMENGO Co, the net working capital of the company and the total cost of financing its current assets. **(6 marks)**

b). Under capital structure theories, debt is considered cheaper than equity, why? **(4 marks)**

c). Explain how the ranking conflict between NPV method and IRR method can be resolved. **(2 Marks)**

d). Under the working capital financing strategies, firms can adopt either of the three strategies. Discuss in details the strategies. **(8 Marks)**

QUESTION FOUR

a). Discuss 5 factors that may influence the dividend policy a firm can adopt, in relation to the amount of dividend. **(10 Marks)**

b). The following are the financial data extracted from the financial statements of EABL Ltd, for the year ended 30 June 2018.

Total sales	Shs 20 million
Total assets turnover	2 times
Debt to total assets	30%
Current ratio	3X
Inventory turnover	5X
Average collection period	18 days
Fixed assets turnover	5X
Gross profit margin	25%

Assume 360 days in a year

Required:

A statement of financial position of EABL Ltd, as at 30 June 2018 **(10 Marks)**

QUESTION FIVE

a). Using five reasons, support why the net present value method is considered as a superior investment appraisal method. **(5 Marks)**

b). Wing Ltd., maintains a minimum cash balance of sh. 1,500,000. The standard deviation of the daily cash is sh. 800,000. The annual interest rate is 12%. The transaction cost of buying and selling money market securities is sh.200 per transaction. Assume that one year has 365 days.

Required:

Using the Miller-Orr cash management model, determine;

i) The return point **(4 Marks)**

ii) The upper cash limit **(2 Marks)**

c). Discuss the relationship between capital structure and weighted average cost of capital. **(9 marks)**