



ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF LAW, BUSINESS INTELLIGENCE AND ECONOMICS

DEPARTMENT OF ECONOMICS, MARKETING AND ENTREPRENEURSHIP

EXAMINATION PAPER

MODULE CODE : CBM223
MODULE TITLE : Business Finance
DURATION : 3 Hours
LEVEL : 2.2
DATE :
12 FEB 2025

INSTRUCTIONS TO CANDIDATES:

1. No cell phones are allowed in the examination venue.
2. Use of silent, non-programmable calculators is allowed
3. Answer all questions
4. Begin each question on a new page.
5. The number of marks for each question or part question is shown in brackets []
6. Show all workings, where applicable.

SECTION A: ANSWER ALL QUESTIONS [25 MARKS]

Read the case study below and answer the questions that follow.

Richard, a finance manager is worried that his company does not have a proper working capital management policy. Richard told his business partners that, "Working capital is the life blood and nerve centre of a business. Just as circulation of blood is essential in the human body for maintaining life, working capital is very essential to maintain the smooth running of a business. Richard went on to stated that, "Every business concern should have adequate working capital to run its business operations. It should have neither redundant or excess working capital nor inadequate or shortage of working capital. Both excess as well as short working capital positions are bad for any business. However, out of the two, it is the inadequacy of working capital which is more dangerous from the point of view of the firm. Cash management is an important element of inventory management and there are different motives for holding cash."

- a) Evaluate the working capital policies and propose the appropriate policy that Richard can implement for his company. **[9 marks]**
- b) Justify the importance of having adequate working capital in running business operations. **[8 marks]**
- c) Evaluate the motives for holding cash in an organisation. **[8 marks]**

SECTION B: ANSWER ALL QUESTIONS [75 MARKS]

QUESTION 1

- a) With aid of a diagram, evaluate the effectiveness of diversification in the presence of both systematic and unsystematic risk. **[10 marks]**
- b) Critique the applicability of the capita asset pricing model in modern corporate finance analysis. **[15 marks]**

QUESTION 2

- a) Study the table below and answer questions that follow

Year	0	1	2	3	4	5	6
Cash flow (\$)	-10 000	2 920	-500	5 000	2 896	7 765	3 218

Calculate the payback period of the investment. **[4 marks]**

b) Aaron Engineering invested \$12 000 for 3 years in a deposit account that pays annual interest of 12%, compounded semi-annually. Determine the value of the investment at the end of 3 years. **[4 marks]**

c) Gejman has a 3-year investment that will matheke a series of \$7 425 payments at the beginning of year for the next three years at a discount rate of 9.7%. Calculate the present value of the of this investment. **[4 marks]**

d) Critique the applicability of the pecking order theory in determination of capital structure in organisations. **[13 marks]**

QUESTION 3

a) Suppose the expected return from the market is 9.74% and the government Treasury bill rate is at 8.36% and β is 1.04. Calculate the cost of capital. **[4 marks]**

b) Madhende F.C cost of equity (K_e) is 11.3%, the average income tax rate of shareholders is 18.4% and brokerage cost of 5.53% is expected to be incurred while investing their dividends in alternative securities. Compute the cost of retained earnings. **[4 marks]**

c) Gift Engineering invested an initial amount of \$5 670 000 and is expecting cashflows with the following information.

Year	Expected cash flow (\$)	Certainty equivalent coefficient
1	3 000 0000	0.98
2	2 780 000	0.87
3	4 500 080	0.52
4	1 330 900	0.77

The cost of capital is 7.3% and risk-free rate is 2.8%. Determine the net present value of the investment under certainty equivalent technique. **[5 marks]**

d) Compare scenario analysis with sensitivity analysis in the evaluation of risks associated with capital projects. **[12 marks]**

FORMULAS

$$FV_n = PV * (1 + r)^n$$

$$r = \left(\frac{FV}{PV}\right)^{1/n} - 1$$

$$PV_0 = \frac{FV}{(1+r)^n}$$

$$PV \text{ Perp} = \frac{C}{r}$$

$$PV \text{ annuity due} = (1 + r) * PV \text{ of annuity}$$

$$r = \frac{QR}{m}$$

$$PBP = \frac{\text{Original cost of the project (initial outlay) (IO)}}{\text{Annual cash inflow (CF)}}$$

$$AAR = \frac{\text{Av Inc}}{\text{Av Inv}} * 100$$

$$PI = \frac{PV \text{ of CFs}}{IO}$$

$$ENCF = \sum CF_i * P_i$$

$$\text{Variance } (\delta^2) = \sum (CF - ENCF)^2 * P_i$$

$$\text{Coef of var} = \frac{\text{Standard deviation}}{\text{Expected return/Expected cashflow}}$$

$$NPV = \sum \left(\frac{CF_n}{(1+r)^n}\right) - IO$$

$$K_e = \frac{D}{MP}$$

$$K_p = \frac{D}{NP}$$

$$K_e = \frac{EPS}{MP_e}$$

$$K_e = R_f + \beta_1 * RP_1 + \dots + \beta_n * RP_n + \mu$$

$$NP = \text{Amnt of D} - \text{D Acq fees} + \text{Prem} - \text{Disc} \quad K_r = K_e * (1 - t) * (1 - b)$$

maximum level = reorder level - (minimum consumption) * (minimum lead times) + reordering quantity

minimum level = reorder level - (average usage * average lead time)

Reorder level = maximum usage * maximum lead time or minimum level + consumption during lead time.

$$E(R_i) = R_f + \beta_1 (R_{m1} - R_f) + \dots + \beta_n (R_{mn} - R_f)$$

$$E(r) = \sum (\text{Prob} * \text{Return})$$

$$\text{Standard deviation } \delta = \sqrt{\delta^2}$$

$$CV = \frac{\delta}{x}$$

$$CV = \sum P_i (R_x - E(R_x)) (R_y - E(R_y))$$

$$FV_n - PV = (1 + r)^n$$

$$PV_0 = \frac{FV}{(1+r)^n}$$

$$PV \text{ ann} = \frac{C}{r} * (1 - (1 + r)^{-n})$$

$$FV \text{ ann} = \frac{C}{r} * ((1 + r)^n - 1)$$

$$FV \text{ ann due} = (1 + r) * FV \text{ of annuity}$$

$$EAR = (1 + \frac{QR}{m})^m - 1$$

$$\text{Payback period} = Y + \frac{B}{C}$$

$$NPV = \sum \frac{CF_n}{(1+r)^n} - IO$$

$$IRR = A + B * \frac{C}{D}$$

$$ENPV = \left(\sum \frac{ENCF}{(1+r)^n}\right) - IO$$

$$\text{Standard deviation } (\delta) = \sqrt{\delta^2}$$

$$RADR = R_f + R_p$$

$$WACC / K_o = \sum W_i K_i$$

$$K_e = \frac{D}{MP} + g$$

$$NP = \text{Issue Price} - \text{Flotation price}$$

$$K_e = R_f + (R_m - R_f) * \beta$$

$$K_d = \frac{I}{NP} * (1 - t)$$

$$\delta^2 = \sum \text{Prob} * (R - E(r))$$

$$Er(p) = \sum W_i * E(r)_i$$

$$CV = \frac{1}{n} * \sum (R_x - E(R_x)) (R_y - E(R_y))$$

$$r_{xy} = \frac{\text{Covariance}_{xy}}{\delta_x \delta_y}$$

$$\delta_{AB}^2 = W_A^2 \delta_A^2 + W_B^2 \delta_B^2 + 2W_A W_B \text{Cov}_{AB}$$

$$\delta_p = \delta_m * W_m$$

$$RP = (R_m - R_f)$$

$$NCA + CA = NCL + CL + E$$

Total CF = CF from operating activities + CF from investing activities + CF from financing activities

$$\text{Current ratio} = \frac{CA}{CR}$$

$$\text{Cash ratio} = \frac{CA+CE}{CL}$$

$$\text{Debt-equity ratio} = \frac{TD}{TE}$$

$$\text{Interest cover ratio} = \frac{EBIT}{Int}$$

$$\text{Days' sales in inventory} = \frac{365 \text{ days}}{Inv T/O}$$

$$\text{Receivables turnover} = \frac{S}{TA}$$

$$ROA = \frac{NI}{TA}$$

$$EPS = \frac{E}{\text{Ordinary shares in issue}}$$

$$BEP = \frac{FC}{Cont}$$

$$\text{Dividends per share} = \frac{\text{Dividends announced during the period}}{\text{Number of shares in issue}}$$

Value of target firm = Market share price * number of outstanding shares
Value of target firm = Total assets - total liabilities

$$CML(R_p) = R_f + \frac{E(R_m - R_f)}{\delta_m} * \delta_p$$

$$E(R_i) = R_f + \beta(R_m - R_f)$$

$$TA = TL + E$$

$$NWC = CA - CL$$

$$\text{Acid/quick test ratio} = \frac{CA - Inv}{CL}$$

$$\text{Total debt ratio} = \frac{TA - TE}{TA}$$

$$\text{Equity multiplier} = \frac{TA}{TE}$$

$$\text{Inventory turnover} = \frac{COGS}{Inv}$$

$$\text{Receivables turnover} = \frac{S}{TR}$$

$$\text{Profit margin} = \frac{NI}{S}$$

$$ROE = \frac{NI}{TE}$$

$$P/E \text{ ratio} = \frac{\text{price per share}}{EPS}$$

$$Cont = SP - VC$$

END OF EXAMINATION PAPER.