

**UNIVERSITY OF SWAZILAND**  
DEPARTMENT OF ACCOUNTING AND FINANCE  
MAIN EXAMINATION PAPER MAY/JUNE 2018

PROGRAMME : Bachelor of Commerce

YEAR OF STUDY : Year 4 (Full Time/Part Time)

TITLE OF PAPER : ADVANVED BUSINESS FINANCE

COURSE CODE : AC428/ AC513 (M) MAY / JUNE 2018

TOTAL MARKS : 100 MARKS

TIME ALLOWED : THREE (3) HOURS

INSTRUCTIONS

- 1 This paper consists of **6** numbered pages, including this page and Appendix A which contains useful formulae.
2. There are **four (4)** questions, ANSWER all questions.
- 2 Begin the solution to each question on a new page.
- 3 The marks awarded for a question are indicated at the end of each question.
- 4 Show all the necessary workings.
- 5 Round off all prices to the nearest cent, values to the nearest rand and decimalized interest rates to four decimal places, and decimalized weightings to four decimals.

Note: You are reminded that in assessing your work, account will be taken of accuracy of the language and general quality of expression, together with layout and presentation of your answer.

THIS PAPER MUST NOT BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR OR SUPERVISOR.

SPECIAL REQUIREMENTS: FINANCIAL CALCULATOR

## Question 1

[15 marks]

You have been observed the following exchange rate quotations and interest rates from American First Bank:

Beginning of year

Spot rate of US\$/£ = 3.192

Spot rate of Canadian dollar (CAD\$) / USD\$ = 1.40

One-year forward rate of CAD\$/ USD\$ = \$1.42

One-year forward rate of USD/£ = 3.16008

One-year U.S. interest rate = 4.00%

One-year British interest rate = 4.545%

One-year Canadian interest rate = 3.500%

**Required:**

- a) Assuming that another bank, Axim Bank is quoting CAD/£ at 4.56, determine the amount of triangular arbitrage profit you can make.
- b) Determine whether covered interest arbitrage is feasible and, if so, how it should be conducted to make a profit (use a starting amount of \$1 000,000).
- c) Calculate the expected one year US\$/£ forward exchange rate.

**Question 2** [25 marks]

A United States (U.S) firm, Soccer United, is considering setting up a manufacturing plant in the Kingdom of Eswatini. To set up the manufacturing plant, Soccer United will buy an existing warehouse in the Kingdom of Eswatini for E100 million and the machinery needed to produce the goods can be sourced in USA for \$16 million. The project will generate the following after tax cash flows:

Year	After tax cash flows million (E)
1	120
2	130
3	150
4	175

The following information has been obtained from Eswatini Reserve Bank:

	Interest Rate
Eswatini	6%
United States	2.5%

	Exchange Rate
E/\$	12.5000

Soccer United uses a cost of capital of 15.82% for SADC region-based projects.

**Required:**

- (a) Using the currency of your own choice, calculate the total cost required to start the project. (3 marks)
- (b) Using the home currency approach, calculate whether Soccer United should proceed with this project or not. (16 marks)
- (c) The manager of Soccer United has been told that by establishing a manufacturing plant in Eswatini the firm will be exposed to political risk. Briefly explain the meaning of political risk and advise the firm on how it can manage the political risk of investing in the Kingdom of Eswatini. (6 marks)

**Question 3 [30 marks]**

Ubuntu Investments Limited is a listed firm with diversified operations in computers, construction, retail and financial services. Its management wants to increase its presence in the retail industry and has identified Mega Stores Limited as a target for acquisition. Mega Stores Limited is a chain store which mainly operates in townships in Manzini and Lomahasha. It has enjoyed rapid growth over the last eight years but its growth has now stabilized to be in line with the industry average.

Ubuntu has 20 000 000 shares outstanding currently trading at E5 per share. Its Weighted Average Cost of Capital (WACC) is 12%, has a beta of 1 and its cost of debt is 10%.

Mega Stores Limited currently has 10 000 000 shares outstanding.

The management of Ubuntu believes that the acquisition will generate annual incremental after-tax cash flows of E2.5 million for the next 10 years. From the eleventh year, these annual incremental after-tax cash flows will drop to E1 000 000 and will remain at that level forever. In addition, management believe that the acquisition will provide a perpetual annual interest tax shield of E300 000. The applicable cost of debt is 10%.

The risk-free rate is 10% and the expected return on the market is 18%. The corporate tax rate, payable by both companies, is 30%.

Ubuntu is undecided as to whether to acquire Mega Stores through a cash or share offer.

**Required :**

- (a) Calculate the benefits to Ubuntu of acquiring Mega Stores Limited. (9 marks)
- (b) Ignoring your answer in (a) and assuming that Ubuntu values Mega Stores at E42 000 000,
- i. Calculate Ubuntu's post-merger market price per share, if Ubuntu is prepared to acquire Mega Stores for E40 000 000 cash. (3 marks)
  - ii. Calculate the exchange ratio that should be offered to Mega Stores' shareholders, if Ubuntu decides to offer E36 million worth of newly-issued shares in the post-merger company instead of cash. (3 marks)
- (c) List and explain any possible reasons why such a merger and mergers in general would fail or perform poorly. (5 marks)
- (d) List and explain any possible reasons why, in general, companies undertake mergers. (5 marks)

**Question 4** [30 marks]

You have just been hired as the financial manager of a private company, Swazi Foods, which produces food products such as breakfast cereals and bread. As part of their manufacturing process, they require a new industrial oven. The question is whether they should purchase the new oven or lease it.

The information with respect to leasing and purchasing the oven is as follows:

- **Lease option:** The company is required to make annual lease payments of E225 000 per year, payable in advance (the lease payments will have to be made at the beginning of each year) over 3 years. The tax deduction relating to the lease payments will occur one year after each lease payment. The lessor will pay maintenance and insurance costs. At the end of the three-year period, Swazi Foods will not exercise their option to purchase the machine for R75 000.
- **Purchase option:** The new oven will cost E600 000 and can be depreciated at 40% on a reducing balance basis over its three year lifespan and the expected residual value at the end of 3 years is E129 600.
- If the firm purchases the oven they will have to fund the purchase price with a loan at an interest rate of 10%.
- The firm pays tax at a rate of 30% and their pre-tax cost of debt capital is 9%.

Whether the industrial oven press is leased or purchased, it costs E30 000 per year through maintenance and insurance costs.

**Required:**

- (a) Assuming that your assistant manager has correctly determined that the Net Present Cost (NPC) of leasing the oven is E456 000, determine whether the company should lease or purchase the oven. (20 marks)
- (b) List and explain any **five (5)** advantages of using lease finance. (5 marks)
- (c) Describe any **five (5)** characteristics of operating lease. (5 marks)

## APPENDIX A

- $R_E = \frac{D_0 (1+g)}{P_0} + g$
- $R_P = \frac{D}{P_0}$
- $R_E = R_F + \beta_E \times (R_M - R_F)$
- Bond value =  $C \times \frac{1 - 1/(1+r)^t}{r} + F / (1+r)^t$
- $WACC = \left( \frac{E}{V} \times R_E \right) + \left( \frac{P}{V} \times R_P \right) + \left( \frac{D}{V} \times R_D \times (1 - T_c) \right)$
- $\beta_{EQUITY} = \beta_{ASSET} \times \left( 1 + \left( (1 - T_c) \times \frac{Debt}{Equity} \right) \right)$
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- $\beta_{ASSET} = \frac{\beta_{EQUITY}}{1 + [(1 - T_c)(D/E)]}$
- $R_E = R_U + (R_U - R_D) D / E (1 - T_c)$
- $(1 + R) = (1 + r) \times (1 + h)$
- $F_t = S_0 \times (1 + (r^* - r))^t$
- $F_t = E(S_t)$
- $E(S_t) = S_0 \times (1 + (h^* - h))^t$
- $P_{t-1} = \frac{D_t}{k_e - g}$
- P/E ratio = Market price per share / Earnings per share
- $\alpha = \frac{\text{No. of new shares issued}}{\text{No. of old shares} + \text{No. of new shares issued}}$