

UNIVERSITY OF ESWATINI
DEPARTMENT OF BUSINESS ADMINISTRATION
EXAMINATION PAPER NOVEMBER 2019

PROGRAMME : MASTER OF BUSINESS ADMINISTRATION

TITLE OF PAPER : ADVANCED CORPORATE FINANCE

COURSE CODE : ACF643

TOTAL MARKS : 100 MARKS

TIME ALLOWED : THREE (3) HOURS

- INSTRUCTIONS
- 1 This paper consists of **eight (8)** numbered pages, including this page and Appendix A which contains useful formulae.
 - 2 There are **SIX (6)** questions of 25 marks each. Answer **ANY FOUR (4)** questions.
 - 3 Begin solutions to each question on a new page.
 - 4 Show all the necessary workings.
 - 5 Round off all prices to the nearest cent, values to the nearest lilangeni 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.

Question 1 (25 marks)

Your line manager Dumisani Mathonsi has tasked you to value a listed horticultural company, Cambridge Farms Limited. Having extensively studied the company's fundamentals, you believe that Cambridge Farms is able to sustain its current earnings growth rate for the next three years. The company currently pays out only 13% of its earnings as dividends. During this 3-year high growth phase, capital expenditures, depreciation, and working capital are all expected to increase at 21%, 20% and 18% respectively. The firm's beta will be 1.25. After the high growth phase, Cambridge Farms' earnings growth rate will stabilise to be in line with the industry average of 10% while its share price will follow the market. Capital expenditures, depreciation, and working capital are all expected to increase at the same rate as earnings.

The company's fiscal year is January to December. Cambridge Farms actual 2017 and 2018 financial statements for the fiscal years ending 31 December presented below.

Income Statement	2017	2018
	E 000 000	E 000 000
Revenue	R475	R600
Depreciation	50	75
Other operating costs	275	295
Income before taxes	150	230
Taxes	30	50
Net Income	120	180

Balance Sheet	2017	2018
	E 000 000	E 000 000
Current assets (includes E50 cash in 2017 & 2018)	200	225
Net property, plant, and equipment	475	590
Total assets	675	815
Current liabilities (all non-interest-bearing)	165	149
Long term debt	0	0
Retained profits	160	316
Ordinary Share Capital (@ E10 each)	350	350
Total liabilities and equity	675	815

The applicable risk-free rate and market risk premium are 8.5% and 5.5% respectively.

Required

Calculate the current value of a share of Cambridge Farms based on the Free Cash Flow to Equity (FCFE) model.

(25 marks)

Question 2 (25 marks)**KUPERS ENTERPRISES****Statement of Comprehensive Income for year ending 31 December 2018**

	(R) 000
Sales	33 500
Cost of Goods Sold	18 970
Depreciation	1 980
Profit Before Interest and Tax	<u>12 550</u>
Interest Paid	486
Net Profit before Tax	<u>12 064</u>
Taxes	4 222
Net Profit after Tax	<u>7 842</u>
Dividend-Ordinary	4 000
Addition to Retained profit	3 842

KUPERS ENTERPRISES Statements of Financial position as at December 31

	(R) 0000 2017	(R) 000 2018
ASSETS		
Net Non-current Assets		
Net Plant and Equipment	15 164	19 167
Current Assets	<u>7 828</u>	<u>8 322</u>
Total Assets	<u><u>22 992</u></u>	<u><u>27 489</u></u>
EQUITY and LIABILITIES		
Owner's equity	16 367	20 209
Share Capital (R1.00 each)	<u>10 000</u>	<u>10 000</u>
Retained profit	<u>6 367</u>	<u>10 209</u>
Long-Term debt	4 817	4 960
Current Liabilities	<u>1 808</u>	<u>2 320</u>
Total Equity And Liabilities	<u><u>22 992</u></u>	<u><u>27 489</u></u>

Additional information

- Kupers is able to sustain the current growth rate of 20% in free cash flows for the next four years after which the growth rate will slow down to 10% for the foreseeable future.
- The cost of debt is 5%. The risk-free rate is 5% and the market risk premium is 7%.
- The current total debt ratio is considered optimal and will not change in the near future.
- Kupers has a beta of 1.5 and during the stable growth phase, the beta will drop to 1.2.
- The probability of bankruptcy is estimated at 0.25% and the cost of bankruptcy is expected to be 25% of the unlevered firm value.
- The tax rate is 35%.
- Tax benefits are applicable to long term debt only.

Required

Calculate the firm value of Kupers based on the Adjusted Present Value Model (APV) model.

Question 3 (25 marks)

Miguels Limited, a listed company with retail, tourism and hospitality operations, wants to merge with Royal Kingdom Financial Services Limited (RKFSL), a young and dynamic financial services firm with stock broking, merchant and commercial banking operations.

The following current financial information is provided for the two companies:

	Miguels Co	RKFSL
Current share price	\$10	\$5
Number of issued shares	100 million	80 million
Equity beta	1.2	1.5
Debt to equity ratio	60:40	25:75

It is thought that combining the two companies will result in several benefits. Earnings before interest and taxes (EBIT) of the combined company will be \$180 million in current value terms, but these will increase by an annual growth rate of 10% for the next four years, before reverting to an annual growth rate of 3% in perpetuity. The company's free cash flows to the firm will be 30% of its after-tax earnings for the next four years. After the high growth phase the company's free cash flows to the firm will be 70% of its after-tax earnings in perpetuity. The debt-to-equity ratio of the combined company will be 50:50 in market value terms and it is expected that the combined company's cost of debt will be 5%.

The corporation tax rate is 30%, the current risk free rate of return is 4% and the market risk premium is 4%. It can be assumed that the combined company's asset beta is the weighted average of Miguels' and RKFSL's asset betas, weighted by their current market values.

Required:

Determine the additional equity value created by combining Miguels and RKFSL.

(25 marks)

Question 4 (25 marks)

The sugar market is very competitive. It is dominated by three firms who compete on the basis of price, as there is very little product differentiation. Two of these firms are Sweetness Ltd and Sunsweet Brown Sugar Ltd. Sweetness Ltd is considering the acquisition of Sunsweet Brown Sugar Ltd. Sweetness Ltd believes that the value of the combined firm will be R72 100 000.

The finance department of Sweetness Ltd knows that Sunsweet Brown Sugar Ltd would favour a stock/share offer, and have formulated an exchange offer that has an equivalent cost to Sweetness Ltd of R28 840 000. Sweetness Ltd currently has 3 600 000 shares outstanding that are trading at R9.50 per share. Sunsweet Brown Sugar Ltd has 1 912 500 shares outstanding and their shares are currently trading at a price of R12 per share.

Required:

- (a) Calculate the value of the merger synergy, premium and NPV. **(8 marks)**
- (b) Calculate the exchange ratio implied in the offer worked out by the finance department **(4 marks)**
- (c) Discuss briefly the likely sources of synergy for such a merger. **(7 marks)**
- (d) Assuming that Sunsweet Brown Sugar shareholders are not in favour of the merger, list and briefly explain how they can fight such a bid. **(6 marks)**

Question 5 (25 marks)

The eight-member board of executive directors (BoD) of Chrysos Co, a large private, unlisted company, is considering the company's long-term business and financial future. The BoD is considering whether or not to undertake a restructuring programme.

Chrysos Co has three business units: a mining business unit, a shipping business unit, and a machinery parts manufacturing business unit. The mining and machinery parts manufacturing business units accounts for around 80% of Chrysos Co's business in terms of sales revenue, non-current and current assets, and payables and the smaller shipping business unit accounts for the remaining 20%.

Corporate restructuring programme

The purpose of the restructuring programme is to simplify the company's gearing structure and to obtain extra funding to expand the mining and machinery parts manufacturing business in the future. At present, Chrysos Co is having difficulty obtaining additional funding without having to pay high interest rates.

Machinery parts manufacturing business unit

The shipping business unit will be unbundled either by having the whole unit to a local supplier; or it will be unbundled through a management buy-out by four managers. The BoD wants to make sure that they receive **fair value** if the shipping business is sold.

Chrysos Co does not know the equity beta for the mining and shipping business unit. However, its finance director has identified five players in the shipping business with the following characteristics and information.

Firm	Equity Beta	Debt ratio %
King Fisher Co	1.1	30
Eco Shipping Co	1.6	45
First Freight Co	0.9	35
Vasco Aquatics	1.8	40
Aquatic World	2.1	55

The finance director has determined that the free cash flows to the firm of Chrysos are \$150 million and the shipping division accounts for 20% of these free cash flows. He considers the shipping industry to be a mature industry and therefore does not anticipate any growth in this division's cash flows.

Additional financial information

Chrysos Co maintains a long-term capital structure of 40% debt and 60% equity in market value terms for all its subsidiaries. The cost of debt is 5% and the applicable tax rate is 25%. The current risk free rate of return is 4% and the market risk premium is 4%.

Required:

Calculate the Weighted Average Cost of Capital (WACC) Chrysos must use to value its shipping division and the **value of equity** in the shipping division.

(25 marks)

Question 6 (25 marks)

Chiremba Holdings Limited (CHL) is a large listed company operating in the pharmaceutical industry with a current market value of equity of \$126 million and a debt to equity ratio of 30:70, in market value terms. Institutional investors hold most of its equity shares. The company develops and manufactures antibiotics and anti-viral medicines. Both the company and its products have an established positive reputation among the medical profession, and its products are used widely. However, its rate of innovation has slowed considerably in the last few years and it has fewer new medical products coming into the market. At a recent meeting of the board of directors (BoD), it was decided that the company needed to change its current strategy of growing organically to one of acquiring companies, in order to maintain the growth in its share price in the future. The members of the BoD had different opinions on the type of acquisition strategy to pursue.

Director A was of the opinion that CHL should follow a strategy of acquiring companies in different business sectors.

Director B was of the opinion that CHL should focus on its current business and acquire other established pharmaceutical companies.

Director C agreed with Director B, but suggested that CHL should consider relatively new pharmaceutical companies, as well as established businesses.

A potential target for acquisition, Fundira Medicals Limited (FML), has been presented to the BoD. Below is a short profile of FML.

FML is a non-listed pharmaceutical company established about 6 years ago. Initially FML grew rapidly, but this rate of growth slowed considerably three years ago, after a venture capital equity backer exited the company by selling its stake back to the founding directors. The directors had to raise substantial debt capital to buy back the equity stake. The company's current debt to equity ratio is 60:40. This high level of gearing means that the company will find it difficult to obtain funds to develop its innovative products in the future.

Required

- (a) Write a detailed analysis of the merits and the demerits of each director's proposal. **(9 marks)**
- (b) Assuming FML is an ideal candidate for acquisition, provide a detailed report stating the key aspects of the due diligence process and how this process might help to make this acquisition a success. **(16 marks)**

APPENDIX A: SELECTED FORMULAE

$$V_{0t-1} = FCF_t / (R - g)$$

$$WACC = \left(\frac{E}{V} \times R_E \right) + \left(\frac{P}{V} \times R_P \right) + \left(\frac{D}{V} \times R_D \times (1 - T_c) \right)$$

$$R_E = R_F + \beta_E \times (R_M - R_F)$$

$$\beta_{ASSET} = \frac{\beta_{EQUITY}}{(1 + [(1 - T_C)(D / E)])}$$

$$\beta_{EQUITY} = \beta_{ASSET} \times \left(1 + \left((1 - T_C) \times \frac{Debt}{Equity} \right) \right)$$

$$\alpha = \frac{\text{No. of new shares issued}}{\text{No. of old shares} + \text{No. of new shares issued}}$$

$$\bullet \text{ Firm value} = \sum_{t=1}^T \frac{FCF_t}{(1+WACC)^t} + \frac{FCF_{T+1}}{(1+WACC)^T}$$

$$\bullet \text{ ROA} = \text{NPAT} / \text{Total Assets}$$

$$\bullet \text{ Net Profit Margin} = \text{NPAT} / \text{Sales}$$

$$\bullet \text{ Total Debt ratio} = \text{Total debt} / \text{Total Assets}$$

$$\bullet \text{ ROE} = \text{NPAT} / \text{Equity}$$

$$\bullet \text{ Debt: Equity ratio} = \text{Total Debt} / \text{Total Equity}$$

$$\bullet \text{ ROE} = \text{PM} \times \text{TAT} \times \text{EM}$$

$$\bullet R_P = D / P_0$$