CERTIFIED PUBLIC ACCOUNTANT

ADVANCED LEVEL 2 EXAMINATION

A2.1: STRATEGIC CORPORATE FINANCE

DATE: WEDNESDAY 28, FFBRUARY 2024

MARKING GUIDE AND MODEL ANSWERS

SECTION A

QUESTION ONE

Marking guide:

Question	Description	Marks	Total Marks
Q1A	Objective of the company	2	
	Non dividend payment	2	
	Other stakeholders needs mentioned by management	2	6
Q1B	Description		
	Managerial incentives (1 for state and 2 for explanation)	2	
	Share options (1 for state and 2 for explanation)	2	
	Regulatory (1 for state and 2 for explanation)	2	6
Q1C			
	Asset valuation (given 0.5)	1	
	PE Ratios (0.5) (Industrial PE x Earning)	1	
	Market prices (0.5) (MPS x no. of shares)	1	
	Net present value of Future cash flow	1	
	Cash flow calculation		
	Profits before tax each year (4x0.5 marks)	2	
	Tax for each year (4x0.5 marks)	2	
	Tax Allowable Depreciation working for each year (4 x 0.5 Marks)	2	
	Cash flow for assets replacement for each year (4x0.5 marks)	2	
	Cost of equity (CAPM method)	2	
	Use of dividend growth model after year 4	2	16
Q1D (i)			
	Inflation of sale prices and revenue each year (4 x 0.5 marks)	2	
	Inflation of purchase cost and cost of sales each year (4 x 0.5 Marks)	2	
	Contribution each year (4 x 0.5 Marks)	2	
	Tax allowable depreciation each year (4 x 0.5 Marks)	2	
	Inclusion of scarp and initial cost	0.5	
	Net Present Value	0.5	9
Q1D (ii)			
	Sensitivity analysis (model 1 mark, comment 2 marks)	3	
	Probability (model 1 mark, comment 2 marks)	3	
	Adjusted Discount rates (model 1 mark, comment 2 marks)	3	
	Payback (model 1 mark, comment 2 marks)	3	3
	Total		**50**

Q1 E	Description	Marks	Total
	calculation of share price (DVM 1 mark, answer 1.5)	2.5	
	mention of efficient market hypothesis not efficient 1 mark, effect 2 marks	3.0	

	Alternative method any metos	2.0	
	Conclusion (not overvalued 2 marks, wrong conclusion 2 marks)	4.0	10

Model Answers

(a)

The shareholder is right in asserting so since the company has been established solely to create wealth for its owners and primary financial management objective of a company is assumed to be the maximization of shareholder wealth.

Wealth is maximized by paying higher dividends and in appreciation of share prices

So, when there is a decrease or nonpayment of dividends, the investor is right to complain as they see their wealth diminishing.

Management has correctly replied, they do have responsibilities to all stakeholders of the company which the investor seems to be unaware of

Satisfying all stakeholder needs requires a careful balance
(Other valid explanations are accepted)

(b)

Can be encouraged as through;

- **Managerial incentives**
- **Regulatory requirement**

Managerial incentive

1. Reward them with performance related pays
2. Share options schemes

Managerial reward schemes

A pay that is related to performance is normally links part of directors' remunerations to a specific KPI in the business, such areas my include increase in profitability, market share, growth in share prices

A major disadvantage of this is in identifying which part of performance to link that may not be manipulated by management since management have insider information about the company and are able to influence almost every aspect of the company

It may also lead to short-termism in that at management may be interested in short-term gains at the expense of longer-term benefits

Share options
In this, the directors become part of ownership of the company they work for. They are given an option to buy shares at a specific price, this encourages the directors to make choices which enhances growth in market value of the company. Such schemes create goal congruence

Regulatory requirements
These may be imposed by the market regulators and the government,

Company law requires a company to appoint external auditors who will report back to shareholders after carrying out the audit

For a company wishing to obtain a listing, market regulators will require the management to institute certain aspect to achieve good corporate governance, these may include instituting risk and remuneration committees, good system of internal controls, appointment of non-executive directors, and publication of financial statements

(c)

Calculation of range of prices

Range of prices	FRW Million
1. By market capitalization (mps x no. of shares)	4,970
2. Net asset valuation (given)	3,820
3. Using PE Ratio of the industry (PEx PAT) = 370*12.5	4,625
4. Free cash flow (see workings below)	6,438

(note required, given for the sake of student's revisions later on)
ML will wish to pay the minimum price that will attract the majority of Remera shareholders to sell. The current market capitalization is FRW 4,970 million, is likely to be the lowest that shareholders of Remera would accept, and unless there is an expectation that Remera's shares will fall further in value in the near future, a premium over the current market price will normally be payable.

If industry PE ratios are used to value Remera, it will be FRW 4,625 million
The realizable value of assets, FRW 3,820 million, is substantially below the estimates
The realizable value of assets is not the recommended valuation method unless it produces a value higher than the value as a going concern.

A better method of estimating the value of Remera is to use the cash flow projections to find the present value of Remera to ML. This will be based upon the free cash flow after replacement expenditure and expenditure required to achieve the forecast growth levels. Giving a value of FRW 6,438 (See working Below)

Free cash flow						
Financial years	2020	2021	2022	2023	2024 onwards	
Net sales	4,100	4,300	4,910	4,800		
cost of sales	2,460	2,580	2,946	2,880		
Sales and Administration expenses	120	150	100	250		
operating cash before taxation	1,520	1,570	1,864	1,670		
Taxation at 30%	- 456	- 471	- 559	- 501		
Allowable tax depreciation	180	189	189	189		
cash flow for future growth and asset replacement	300	200	150	240		
Net Cash	944	1,088	480	1,118		
PVIF at 20%	0.8330	0.6940	0.5790	0.4820		
Present values	786	755	278	539	4080	we have use dividend row te model
	6,438					
Cost of equity using CAPM RfRe = Rf+(rm-rf)xBe , 9+ (18-9)x 1.2 =		19.8				
we will use 20%						

(d) (i)

Years	**0**	**1**	**2**	**3**	**4**	**5**
Sales Revenues		13,545,000	24,557,031	37,865,209	15,491,442	
Variable cost		7,848,000	12,118,620	19,736,242	9,824,608	
Contribution		5,697,000	12,438,411	18,128,967	5,666,834	
Less fixed cost		1,810,000	2,015,000	2,125,000	2,100,000	
Taxable cash flows		3,887,000	10,423,411	16,003,967	3,566,834	
Taxation			(1,166,100)	(3,127,023)	(4,801,190)	(1,070,050)
TAD benefits			18,000,000	13,500,000	10,125,000	18,375,000
Initial and Scrap v	240,000,000	-	-	-	40,000,000	
After tax cash flows	240,000,000	3,887,000	27,257,311	26,376,943	48,890,644	17,304,950
PVIF at 18%	1	0.847	0.718	0.609	0.516	0.437
Present values	240,000,000	3,292,289	19,570,749	16,063,559	25,227,572	7,562,263

NPV	311,716,432					

Working 1

Sales revenues	1	2	3	4
Sales volume	600,000	850,000	1,270,000	580,000
Selling price (FRW)	21.00	25.00	24.00	20.00
Sales prices (FRW)	22.58	28.89	29.82	26.71
Sales Revenue (FRW)	13,545,000	24,557,031	37,865,209	15,491,442

Working 2

Variable cost				
Sales volume	600,000	850,000	1,270,000	580,000
Cost of sales	12.00	12.00	12.00	12.00
Inflated	13.08	14.26	15.54	16.94
Total variable cost	7,848,000	12,118,620	19,736,242	9,824,608

Working 3

Tax allowable depreciation	Cost		
Year	Cost/CV	Depreciation at 25%	Tax Sield
1	240,000,000	60,000,000	18,000,000
2	180,000,000	45,000,000	13,500,000
3	135,000,000	33,750,000	10,125,000
4	101,250,000	61,250,000	18,375,000

(d) (ii)

There are several ways of considering risk in the investment appraisal process.

Sensitivity analysis

Looks at effect on NPV if one variable change. It is a what if analysis, which ask the question, what if a variable was to change by let's say 5%, how will it affect the NPV. It is calculated by computing NPV of each variable, this it then divided buy the overall NPV to give a relative percentage change. Sensitivity considers each variable at a time, which is unrealistic since variable may be related at would cane at the same time.

It also does not give the probability of a particular change in a variable being evaluated.

It does point to a variable that management need to focus on most, i.e. the sensitive areas.

Probability analysis

An expert can study the variables associated with a given project and assign to probabilities of the project being a success or a failure.

In such a case, one can calculate different possible outcomes after the probabilities have been assigned.

Risk-adjusted discount rate

The discount to be used in appraising a project is adjusted accordingly, so where the risk is of the project under review is higher compared to the existing risk profile of the company, the discount is adjusted accordingly to reflect risk level of the project

CAPM may also be used to calculate projects specific risk.

Payback Period

This considers how long it takes to recover the initial outlays on the project, the shorter it takes to recover the investment the safer it is for the company, in this case, uncertainties associated with longer period cash flows are avoided

(e)

Use dividend model do(1+g)

Do = 25.02

G = 5%

Price = d1/(ke-g) = FRW25.02(1.08)/(0.125 - 0.08) = FRW600

1. **Market efficiency**

The analyst has based this calculation using already publicly available information, implying that the stock market is not semi-strong form efficient. Since all public information should be reflected in share prices in a semi strong form of stock market efficiency

2. **Alternative methods**

Using dividend growth model is an inferior method of estimation the share price, the method suffers from assumptions made such as unrealistic and unattainable constant growth rate in dividends.

It is based on accounting earnings, these are prone to manipulation, a more superior method like discounted free cash flow should be used

3. **Conclusion**

The analyst is probably not justified in suggesting that the share is overvalued based upon only this evidence

QUESTION TWO

Marking guide:

Q2(a)	Description	Marks	Total
	ownership public or private	2.0	
	capital structure	2.0	
	definition of ratios	2.0	
	Age of assets	2.0	
	management policies	2.0	
	any other relevant difference mentioned	2.0	
	Upto a total of 6 marks		6
Q2(b)	Description	Marks	
	Calculation of current EPS	0.5	
	Calculation of New EPS	0.5	
	Calculation of current dividend cover	1.0	
	Calculation of New dividend cover	1.0	
	Other factors that shareholders take into account	2.0	
	Modigliani theory of dividend irrelevance	2.0	
			7
Q2(c)	Description	Marks	
	Cost of equity (CAPM)	1.0	
	Weight of equity	0.5	
	Cost of debt using IRR		
	at 14%	0.5	
	at 20%	0.5	
	IRR formula use	1.0	
	correct cost of debt	0.5	
	Market value of debt	0.5	
	Weight of debt	0.5	
	cost of bank loan	0.5	
	weight of bank loan	0.5	
	use of WACC formula	1.5	
	WACC	0.5	
			8
Q2(d)	Description	Marks	
	Definition of projects finance	2.0	
	Project not finished on time, budget or not at all	2.0	
	Project not function	2.0	
	No funds	2.0	
	Abrupt stop	2.0	
	Minimum of		4
	Total		**25**

Model Answers

(a)

Companies might have very different characteristics to Dodola so any direct comparison should be taken with caution

Areas of differences arises in:

1. Ownership structure affect vision and vision of companies, listed companies with a large base of shareholders may have a different mission compared to a family-owned limited company even when they are in the same industry or same size making a comparison difficult.

2. Capital structure companies will not have the same debt ratio, some may be lowly gearing and others highly geared.

3. Formulas or composition to be used in each calculation may differ from company to company, for example when calculating debt ratio, what amounts as debt is relative. Is permanent current liability a taken as long-term debt in calculating gearing ratios?

4. Asset base of companies may be in the same industry but have completely different asset bases, for example when comparing asset turn over, a similar company with fully depreciated asset will show higher return compared to that with relatively newer assets

5. Age of assets will affect calculations such as ROCE. Asset turn over

6. No similar company, in size or structure getting a similar company with which to benchmark may not be an easy task making comparison less useful

(b)

Introduction, not mark

This policy should only be followed if the company does not have projects with positive net present value otherwise retained earnings are the cheapest and readily available source of finance for a company

Current and new EPS

If the total amounts of dividends are going to be increased by 20%, then the following will be observed

Current dividend pare share = FRW6/300 = FRW 0.2 per share, this will increase to FRW 0.24 per share

Current and new dividend cover

Total dividends will now be at FRW7200 giving a dividend cover of 5 times (36/7.2) as opposed to the current of 6 times (736/6)

Shareholders do take many factors into account before making an investment decision and not dividend payment only including sound corporate governance, risk appetite

According to Modigliani and Miller, dividend payment is irrelevant so if a company wishes to increase its marketability, it should simply make good investment decisions and communicate it to the market

The proposal should be rejected and should stick to its current policy if they have one

(c)

WAAC				
WACC = [(19.4 x 7200) + (16·0 x 385.2) + (8.4 x 200)]/(7200+385.2+200) = 18.95%				

(d)

Definition of
Project finance is finance for a particular project, Reasons why a company may seek proper management of a project finance is because they are unique and substantially involves huge amounts of fund

Possible risks associated with project finance would include: -

- Project not being finished on time, on budget, or at all
- Project not functioning at its full capacity
- Project failing to generate sufficient revenue to service the debt
- Project hastily comes to an end

QUESTION THREE

Marking Guide

Q3(a)	Description	Marks	Total
	How pecking order works must mention		
	internal equity first	1.0	
	cheap external debt	1.0	
	more expensive external equity	1.0	
	not working towards optimal capital structure	2.0	5
Q3(b)	Description	Marks	
	Contribution	0.5	
	Annual revenues	0.5	
	Fixed cost	0.5	
	initial investment	0.5	
	Annuity factor	0.5	
	Present Values	0.5	
	Ungear	2.0	
	Regear	2.0	
	Use of CAPM - cost of equity	0.5	
	WACC	1.5	
	NPV	0.5	
	Advise of the project	0.5	10.00
Q3(c)	Description	Marks	
	100% equity	1.0	
	50% Equity :50% debt	1.0	
	30% equity: 70% debt	1.0	
	Advice	2.0	5.00
Q3(d)	Description	Marks	
	Use of formula to calculation of failure indicator digit	2.0	
	Any two reasons each 1.5 marks	3.0	5.00
	Total		**25.00**

Model Answers

(a)

Pecking order theory is whereby companies do choose from sources of finance which are immediately available and easily reachable.

The order is that they will first of all access retained earnings (internal equity) since this is within their reach once internal equity is exhausted, it will look for cheapest external finance which is debt before turning to a more expensive external equity.

In this model, companies go for the cheapest and readily available sources of finance and not necessary looking for ways to minimize Weighted Average Cost of Capital (WACC).

(b)

Contribution =720-465	255
Annual revenues	67,500
(units x contribution) 225 x300	
Less Fixed cost	10,000
Net cash	57,500
Annuity (Use Annuity) at 14%	2.914
PV	167,555
Initial Investment	70,000
NPV	97,555
project should be taken	
Calculating WACC	
WACC = [(18 x 60%) + (9 x 40%) = 13.30%	14
Ungear the equity beta to asset beta	
βa = βeVe/ (Ve + Vd (1 – T))	0.78
1.6 x 40/40+60 x0.7	
Regear the asset beta to equity beta	
βe = βa (Ve + Vd (1 – T))/Ve	1.144
0.78 x 60+40 x0.7/60	
Calculate cost of equity using CAPM	
rf+rm-rf)x Be	18
10 + 7 x1.144	
Cost of Debt(given)	9%

(c)

	All equity	50% E: 50%D	30%E:70%D
Earnings in millions	150	150	150
less Interest	-	50	70
Dividends	150	100	80
Cost of debt (Kd)	0%	6%	10%
Cost of equity (Ke) = Do/Po	15%	20%	27%
WACC = (ke x Ve + Kd x Vd)	15%	13%	18%
Value of the firm = cash flow /WACC	1,000	1,154	818
		optimal capital structure	

(d)

Earnings before interest and tax	82	S1	(82/32) x 3.5	0.66
Market value of equity	432	S22	(-20/605) x1.8	- 0.06
Working capital	-20	S3	(432/348) x0.25	0.31
Medium- and long-term capital employed	605	S4	(348/809) x0.69	0.30
The present value to infinity of current operating free cash flow/turnover	401		Factor to be interpreted	1.21
Market value of debt	348			
Turn over	809			

Brief comment

The SO model suggests a score of 1·20, that is above the level of probable failure but still Uwamaliya must make drastic steps to move out of the danger zone and survive

Problems of models are

1. they are normally tailor-made to specific industries and of certain sizes therefore may not predict failure for every company
2. Accounting information suffers several weaknesses, so if the model uses the same information, it as well suffers from disadvantage of accounting information
3. the model may predict a probable failure; however, management may put strategies in place and revive the company rendering the model useless

Financial crises and economic downturns can lead to segmentation as investors become risk-averse. During periods of uncertainty, investors may retreat to domestic markets, contributing to a segmentation effect

QUESTION FOUR

Marking Guide

No			Marks
a	5 pointS@1mark		5
b	Forward rate computation	2	10
	Money market net borrowing	2	
	Money market net investment	2	
	Forward contract amount	2	
	advice	2	
c	5 points @1mark		5
d	LIBOR interest	2	5
	Savings on cost	3	
	Total marks		20

Model answers

(a)

Basing on the above scenario give **five** key financial risk facing the enterprise

i)Interest Rate Risk:

ii)Credit Risk:

iii)Market Risk:

iv)Foreign Exchange Risk:

v)Liquidity Risk:

(b)

Spot rate	$1=FRW 1,265.01
Amount receivable	$400,000
Home interest rate	=5.57%
Foreign interest rate	=5.10%
3 Months exchange rate	$1 =FRW 1,268.26

No hedging of the receipts

Amount receivable =$400,00x1268.26

=FRW 507,304,000.00

Using forward contract

F=s(1+P)

P= (1+Ih/ (1+If) -1

1+ih=1+5.57%X3/12=1.013925

1+if=1+5.10%X3/12=1.01275

P=1.013925/1.01275-1
P=0.00116
F=1265.01(1+0.00116)
F=1266.48
Amount receivable=1266.48x400,000
=FRW 506,591,069.56

Using money market hedging
Borrow in USA net of interest=400,000-400,000x3/12x5.10
= $394900
Invest in RWANDA for three months
=$394900x1265.01x5.57%x3/12
=FRW506,508,716.85

Decision the company should not do any hedging because without hedging they will receive the highest amount

(c)
Five best strategies that they can use to manage exchange rate risk
i) Forward Contracts:
ii) Currency Diversification:
iii) Natural Hedging:
iv)Currency Swaps:
v)Use of Options

(d)
Calculate the annual interest expense if the LIBOR rate increases by 1%. Show the formula and the numerical calculation.

loan amount	5,000,000
base interest	3%
LIBOR rate	1%
Interest =(5,000,000x4%)	$200,000.00
ii)Calculation of Potential Annual Savings or Costs with an Interest Rate Swap:	
potential saving/cost=loan x (fixed rate-LIBOR rate)	
loan amount $	$5,000,000
fixed rate	4%
annual rate	3%
Interest 5,000,000x (4%-3%) =	$50,000.00

END OF MARKING GUIDE AND MODEL ANSWERS