# CERTIFIED PUBLIC ACCOUNTANT

# ADVANCED LEVEL 2 EXAMINATIONS

# A2.1: STRATEGIC CORPORATE FINANCE

# DATE: WEDNESDAY, 30 APRIL 2022

# MARKING GUIDE AND MODEL ANSWER

# SECTION A

**QUESTION ONE**

a**. Advise as to whether Mulindi Investment Limited should acquire Musanze Steel Rolling** Mills Limited

| | **Marks** |
|---|---|
| Computing the asset beta | 1 |
| Cost of ungeared business | 1 |
| Value of ungeared business 0.5 marks for present value cash flows and 1-mark NPV (with a maximum of 3.5) | 3.5 |
| issue cost of debt | 0.5 |
| Total loan | 0.5 |
| Present value of debt tax shield on market loan 0.5 mark each transaction max | 1.5 |
| Present value of debt tax shield on subsidised loan 0.5 mark each transaction max | 1.5 |
| Present value benefits on interest saving 0.5 mark each transaction with max | 1 |
| Present value of interest tax benefits foregone 0.5 mark each transaction Max | 1.5 |
| Tax benefits on issue costs 0.5 mark each transaction max | 1 |
| Computation of adjusted present value 0.5 mark each transaction max | 4 |
| **Total** | **17** |

b. i. computing the purchase costs

| | |
|---|---|
| Computing the EPS 0.5 mark for each company | 1 |
| Computing price 0.5 mark for each company | 1 |
| Exchange ratio | 0.5 |
| Purchase cost | 0.5 |
| Total | **3** |

ii. **Evaluation on whether Mulindi Investment should acquire Bereshe**

| | |
|---|---|
| Computing the combined EPS | 0.5 |
| Price per share after merger | 0.5 |
| Computing gain/loss | 0.5 |
| Decision | 0.5 |
| Total | **2** |

iii. Advise to the shareholders of Bereshe

| | |
|---|---|
| Computing gain or loss | 1 |
| Decision | 1 |
| **Total** | **2** |

| | |
|---|---|
| c. Evaluation of organic growth | |
| Sales revenue 0.5 mark with max of (2) | 2 |
| Variable costs 0.5 mark with max of (2) | 2 |
| Fixed costs 0.5 mark with max of (2) | 2 |
| Working capital 0.5 mark with max of (2) | 2 |
| Tax allowable depreciation 0.5 mark with max of (2) | 2 |
| Nominal rate | 1 |
| NPV at 22% cost of capital 0.5 mark for PV cash flows and 0.5 for NPV | 3 |
| NPV for estimated 0.5 mark each Max (2 Marks) | 2 |
| IRR | 1 |
| **Maximum marks** | **17** |

| | |
|---|---|
| **c. Reconstruction** | |
| Reconstruction methods 1 mark each maximum three | 3 |
| Specific type of a reconstruction of each method above (two marks for each method = maximum three types) | 6 |
| **Maximum** | **9** |
| **Any Valid method/type not provided in the model answers** | |
| **Total Marks** | **50** |

**Model Answer**

**a. Advise as to whether Mulindi Investment Rwanda Limited should acquire Musanze Steel Rolling Mills Limited**

Given Data

Wd = 60% We = 40% Kd= 8% RFR = 10%, Rm = 15% βe = 1.7 T= 30%

Wd is the weight of debt, We is the Weight of equity, Kd is the cost of debt, RFR is the risk free rate, Rm is the Market return, T is the corporate tax

Since the acquirer is exposed to only financial risks then we should use APV

**Step one: Determining the value of ungeared business**

The cash flows should be discounted using the cost of ungeared business

**Therefore, need to get the asset beta**

$$\beta a = \frac{\beta e We}{We + Wd(1-T)}$$

where βa is the asset beta and βe is the equity beta

We is the weight of equity and Wd is the weight of debt

Substituting in the formula

$$\beta a = \frac{1.7*0.4}{0.4 + 0.6(1-0.3)}$$

**βa = 0.83**

Cost of Ungeared business (Ku) = RFR + βa (Rm-RFR)

Ku = 0.1 +0.83(0.15-0.1)

**Ku = 0.1415 = 14.2%**

**(Candidate can use 14.15%)**

| | **0** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|---|
| | **FRW "000"** | **FRW "000"** | **FRW "000"** | **FRW "000"** | **FRW "000"** | **FRW "000"** |
| **Investment** | -500,000 | | | | | |
| **Free cash flows** | | 80,000 | 120,000 | 180,000 | 160,000 | 195,000 |
| **PV.F 14.2% (1+0.142)^-n** | 1.000 | 0.876 | 0.767 | 0.671 | 0.588 | 0.515 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Present value** | (500,000) | 70,052.54 | 92,012.97 | 120,857.66 | 94,070.96 | 100,393.15 |
| | | | | | | |
| **Net present value of ungeared (NPVu) =** | | | | | | (22,612.72) |

**Step two determining the debt tax shield**

| Loan | **FRW "000"** |
|---|---|
| Value of the debt FRW | 350,000 |
| Issue cost (5/95*350,000) | 18,421 |
| Total loan | 368,421 |
| | |
| Subdised loan (40%*368,421) | 147,368.42 |
| | |
| Market loan | 221,052.63 |

| **Debt tax shield on the market loan** | FRW "000" |
|---|---|
| Value of the loan | 221,052.63 |
| interest (12%*221,051.63) | 26,526.32 |
| **Debt tax shield (26,526.32*30%)** | **7,957.89** |

**Present value of debt tax shield (PVDTS)**
**method 1 (Reading annuity factors from tables)**

| PVDTS = Constant *PVIFA12%, 5 3.605*7,957.89 = | 28,688.21 |
|---|---|

| **Debt tax shield on subsidized loan** | **FRW "000"** |
|---|---|
| Value | 147,368.42 |
| Interest (8%*147,368.42) | 11,789.47 |
| Debt tax shield on subsidized loan | 3,536.84 |
| PVDTS = (3,536.84*3.605) | **12,750.32** |

| **Benefit on interest saving** | **FRW "000"** |
|---|---|
| Interest saving (12% - 8%)*147,368.42 | 5,894.74 |
| | |
| Present value of interest saving = (5,894*3.605) | **21,250.53** |

FRW "000"

| **Present value of interest tax benefit foregone on subsidized loan** | |
|---|---|
| Interest saving | 5,894.53 |
| Tax benefit (5,894.74*30%) | 1,768.42 |
| **Present value of tax foregone (1,768.42*3.605) =** | **6375.15** |

| **Adjusted present value** | **FRW "000"** |
|---|---|
| Net present value of ungeared | (22,612.72) |
| Present value of debt tax shield on market loan | 28,688.19 |
| Present value of debt tax shield on subsidized loan | 12,750.32 |
| Present value of interest saving | 21,250.53 |
| Issue costs | (18,421.05) |
| Tax benefits foregone | (6,375) |
| **Adjusted present value** | **15280.27** |

**Note: A student can use a present value annuity to compute the present value annuity**
Since the adjusted present value is positive, the acquisition of Musanze Steel Rolling Mills Will add value to the company. Thus, Mulindi Investment Rwanda Limited should proceed with the acquisition

**(b)**

**i. computing the purchase cost**

Step one: computing the exchange ratio

Price per share of Mulindi Investment Ltd = EPS*P/E

| | |
|---|---|
| EPS = 345,000 / 8000 | 43.13 |
| P/E | 20 |
| **Price (Po) (EPS*P/E)** | **862.5** |

**or Value of business/number of shares**

| | |
|---|---|
| Value = earnings *P/E = 345,000*20 = | 6,900,000 |
| Po = (6,900,000/8000) | **862.50** |

**Price per share for Bereshe General Hardware**

| | |
|---|---|
| EPS = (240,000/5000) | 48 |
| P/E | 15 |
| **Po = (P/E*EPS)** | **720** |

Exchange ratio = offer price/Predator mps = 720/862.5

No. of shares = $\frac{720*5,000 =}{862.50}$ 4,173,91

**Purchase costs** **3,600,000**

**ii.** Evaluation as to whether Mulindi Investment Rwanda limited should acquire Bereshe
This is assessed by looking at the value before the merger and the value after the merger

Combined EPS = $\frac{(345,000 +240,000)}{8,000+4,713.91}$ 46.01

| | |
|---|---|
| P/E after merger | 19 |
| price per share after merger (46.0126*19) | 874.24 |
| price per share before the merger | 862.5 |
| **Gain** | **11.74** |

**Alternatively, the student can compare the EPS before and the EPS after the merger**

| | |
|---|---|
| EPS after merger | 46.01 |
| EPS before merger | 43.13 |
| Gain | 2.89 |

**Based on the gain received, Mulindi Investment Rwanda Limited should go on with the merger**

Another alternative, the student compares the value of the company before merger and the value of the company after the merger

**iii. Evaluation as to whether Bereshe General Hardware Limited should accept the merger**
This can be done by comparing the price before merger and price after the merger or the EPS before and the EPS after

| | |
|---|---|
| Price after the merger | 874.2393174 |
| price before the merger | 720 |
| **gain** | **154.239317** |

**Bereshe General Hardware Limited should accept the merger**

**c) Organic growth**

**Working 1 sales revenues FRW "000"**

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Units | 300 | 300 | 300 | 300 | 300 |
| selling price per unit | 2000 | 2000 | 2000 | 2000 | 2000 |
| Inflation (5%) | 1.05 | 1.10 | 1.16 | 1.22 | 1.28 |
| Revenues | **630,000.00** | **661,500.00** | **694,575.00** | **729,303.75** | **765,768.94** |

**Working 2 Variable costs FRW "000"**

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Units | 300 | 300 | 300 | 300 | 300 |
| Variable cost per unit | 800 | 800 | 800 | 800 | 800 |
| Inflation (4%) | 1.04 | 1.08 | 1.12 | 1.17 | 1.22 |
| **Variable costs** | **249,600.00** | **259,584.00** | **269,967.36** | **280,766.05** | **291,996.70** |

**Working 3 Incremental fixed costs FRW "000"**

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Cost | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 |
| Inflation (3%) | 1.03 | 1.06 | 1.09 | 1.13 | 1.16 |
| | **20,600.00** | **21,218.00** | **21,854.54** | **22,510.18** | **23,185.48** |

**W4 Working Capital FRW "000"**

| | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| working C | -30,000 | -30,000 | -30,000 | -30,000 | -30,000 | |
| Inflation | 1.00 | 1.07 | 1.14 | 1.23 | 1.31 | |
| | (30,000) | (32,100) | (34,347) | (36,751) | (39,324) | |
| **Incremental** | **(30,000)** | **(2,100)** | **(2,247)** | **(2,404)** | **(2,573)** | **39,324** |

**Working 5 Tax allowable depreciation**

| | |
|---|---|
| Cost | FRW "000" |
| | 2,000,000 |
| Residual value | 300,000 |
| Depreciation rate 25% reducing balance | |

| Period | depreciation | Net book value | Tax saving |
|---|---|---|---|
| 1 | 500,000.00 | 1,500,000 | 150,000 |
| 2 | 375,000.00 | 1,125,000 | 112,500 |
| 3 | 281,250.00 | 843,750 | 84,375 |
| 4 | 210,937.50 | 632,813 | 63,281 |
| 5 | 332,812.50 | 300,000 | 99,844 |
| | | | |

**Computation of nominal rate**

Nominal rate = (1 +real rate)(1+inflation rate)-1

Nominal rate = (1+0.14) (1+0.07)-1 **21.98% or 22%**

**Net present value (NPV) at 22%**

| | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| Revenues W1 | | 630,000.00 | 661,500.00 | 694,575.00 | 729,303.75 | 765,768.94 |
| Variable cost W2 | | (249,600.00) | (259,584.00) | (269,967.36) | (280,766.05) | (291,996.70) |
| Fixed cost W2 | | (20,600.00) | (21,218.00) | (21,854.54) | (22,510.18) | (23,185.48) |
| Profit | | 359,800.00 | 380,698.00 | 402,753.10 | 426,027.52 | 450,586.76 |
| Tax 30% | | (107,940.00) | (114,209.40) | (120,825.93) | (127,808.26) | (135,176.03) |
| Net income | | 251,860.00 | 266,488.60 | 281,927.17 | 298,219.26 | 315,410.73 |
| Investment | (2,000,000) | | | | | 300,000 |
| Working capital | (30,000.00) | (2,100.00) | (2,247.00) | (2,404.29) | (2,572.59) | 39,324.00 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Tax savings | | 150,000.00 | 112,500.00 | 84,375.00 | 63,281.25 | 99,843.75 |
| net cash flows | (2,030,000) | 399,760.00 | 376,741.60 | 363,897.88 | 358,927.92 | 754,578.48 |
| PV.F 22% | 1.000 | 0.820 | 0.672 | 0.551 | 0.451 | 0.370 |
| Present value | (2,030,000) | 327,672.13 | 253,118.52 | 200,401.07 | 162,019.74 | 279,193.47 |
| | | | | | | |
| **NPV** | | | | | | **(807,595)** |

**NPV at 10%**

| | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| Revenues W1 | | 630,000 | 661,500 | 694,575 | 729,304 | 765,769 |
| Variable cost W2 | | (249,600) | (259,584) | (269,967) | (280,766) | (291,997) |
| fixed cost W2 | | (20,600) | (21,218) | (21,855) | (22,510) | (23,185) |
| Profit | | 359,800 | 380,698 | 402,753 | 426,028 | 450,587 |
| Tax 30% | | (107,940) | (114,209) | (120,826) | (127,808) | (135,176) |
| Net income | | 467,740 | 494,907 | 523,579 | 553,836 | 585,763 |
| Investment | (2,000,000) | | | | | 300,000 |
| Working capital | (30,000) | (2,100) | (2,247) | (2,404) | (2,573) | 39,324 |
| Tax savings | | 150,000 | 112,500 | 84,375 | 63,281 | 99,844 |
| net cash flows | (2,030,000) | 615,640 | 605,160 | 605,550 | 614,544 | 1,024,931 |
| PV.F 10% | 1.000 | 0.909 | 0.826 | 0.751 | 0.683 | 0.621 |
| Present value | (2,030,000) | 559,673 | 500,133 | 454,958 | 419,742 | 636,401 |
| | | | | | | |
| NPV= | | | | | | 540,907 |

IRR=a +$\frac{NPV\ a(b-a)}{NPVa-NPVb}$ where a=, NPV= etc

Substituting in the formula IRR=0.22 +$\frac{-807,595(0.1-0.22)}{-807,595-540,907}$

**IRR=14.8%**
Since the IRR is below the cost of capital the project should be rejected

**Note:** In the estimation of the rate, a student may use any other rate as long as he or she can get
both positive and negative NPV

| **Method 2** | | | | | | |
|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 |
| Revenues W1 | | 630,000 | 661,500 | 694,575 | 729,304 | 765,769 |
| Variable cost W2 | | (249,600) | (259,584) | (269,967) | (280,766) | (291,997) |
| fixed cost W2 | | (20,600) | (21,218) | (21,855) | (22,510) | (23,185) |
| Profit | | 359,800 | 380,698 | 402,753 | 426,028 | 450,587 |
| less depreciation | | (500,000) | (375,000) | (281,250) | (210,938) | (332,813) |
| EBT | | (140,200) | 5,698 | 121,503 | 215,090 | 117,774 |
| Tax | | 42,060 | (1,709) | (36,451) | (64,527) | (35,332) |
| EAT | | (98,140) | 3,989 | 85,052 | 150,563 | 82,442 |
| Add back Depreciation | | 500,000 | 375,000 | 281,250 | 210,938 | 332,813 |
| Earnings | | 401,860 | 378,989 | 366,302 | 361,501 | 415,254 |
| Investment | (2,000,000) | | | | | 300,000 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Working capital | (30,000) | (2,100) | (2,247) | (2,404) | (2,573) | 39,324 |
| Net cash flows | (2,030,000) | 399,760 | 376,742 | 363,898 | 358,928 | 754,578 |
| PV.F 22% | 1.000 | 0.820 | 0.672 | 0.551 | 0.451 | 0.370 |
| present value | (2,030,000.0) | 327,672.1 | 253,118.5 | 200,401.1 | 162,019.7 | 279,193.5 |
| | | | | | | |
| NPV | (807,595.1) | | | | | |
| **Note:** The student can determine the positive NPV by changing the rate since the cash flows are the same | | | | | | |
| **(d) The capital reconstruction methods to be used by Best Bite Limited** | | | | | | |

**1. Financial Reconstructions**

Under this scheme, the company reorganizes its capital structure including leveraged buy outs, leveraged recapitalizations and debt for equity swaps. There are many possible reasons why management would wish to restructure company finances

**a. Leveraged recapitalizations**: In leveraged recapitalization a firm replaces the majority of its equity with a package of debt securities consisting of both senior and subordinated debt. Leveraged capitalizations are employed by firms as defense mechanisms to protect them from takeovers.

b. **Debt/equity swaps:** A second way of changing a company's capital is to issue a debt/equity or an equity/debt swap. In the case of an equity/debt swap, all specified shareholders are given the right to exchange their stock for a predetermined amount of debt (i.e bonds) in the same company. A debt/equity swap works the opposite way: debt is exchanged for a predetermined amount of equity (or stock).

c. **Leveraged buy-outs**: A leveraged buy-out is a transaction in which a group of private investors uses debt financing to purchase a company or part of a company. In a leveraged buy-out, like a leveraged capitalisation, the company increases its level of leverage but, unlike the case of leveraged capitalisations, the company does not have access to equity markets any more

d. **Dividend policy**: A company may change its dividend policy as part of financial restructuring and increase retained earnings and therefore its equity base.

**2. Portfolio restructuring**

Portfolio restructuring is the acquisition or disposal of assets or business units by a company in the form of divestments, demergers, spin-offs or management buy-outs. Portfolio restructuring consists of changes in the mix of assets owned by the firm or the lines of business in which the firm operates in order to increase the performance of the firm

**a. Disinvestment**

Divestment is the partial or complete sale or disposal of physical and organisational assets, the shut-down of facilities and the reduction in workforce in order to free funds for investment in other areas of strategic interest

**b. Demerger**

A demerger is the splitting up of corporate bodies into two or more separate bodies, to ensure that share prices reflect the true value of underlying operations

**c. Sell-Offs**

A sell-off is a form of divestment involving the sale of part of a company to a third party, usually another company. Generally, cash will be received in exchange

**d. Liquidations**

The extreme form of a sell-off is where the entire business is sold off in a liquidation. In a voluntary dissolution, the shareholders might decide to close the whole business, sell off all the assets and distribute net funds raised to shareholders.

**e. Spin-offs**

A spin-off is the creation of a new company, where the shareholders of the original company own the shares. There is no change in the ownership of assets, as the shareholders own the same proportion of shares**.**

**3. Organizational restructuring**

Organisational restructuring consists of changes in the organisational structure of the firm, such as divisional changes and hierarchical structures.

# SECTION B

**QUESTION TWO**

| a. i. Return of portfolio using CAPM | **Marks** |
|---|---|
| Return of project A 0.5 mark for each transaction Max (2,5) | 2.5 |
| Return of project B 0.5 mark for each transaction Max (2,5) | 2.5 |
| Portfolio return | 1 |
| Beta portfolio | 1 |
| CAPM | 1 |
| Total | **8** |

| a. ii. Application of CAPM in Finance | |
|---|---|
| Each point 1 mark explained maximum three applications | 3 |
| Any valid application not indicated in the model answer | |

| b. Hedging | |
|---|---|
| i. Foreign currency hedging | |
| Matching the currency | 0.5 |
| Forward contract | 1 |
| Lagging | 1 |
| Leading | 2 |
| Money market hedging 0.5 mark each transaction max (4.5) | 4.5 |
| Decision | 1 |
| Total | **10** |

| ii. Interest rate hedging | |
|---|---|
| a. spot rate below the forward rate | |
| Identifying the extra payment | 0.5 |
| calculating the interest cost 0.5 mark each transaction | 1.5 |
| | **2** |
| c Spot rate above the forward rate | |
| Identifying the interest saving | 0.5 |
| Calculating the interest cost 0.5 mark each transaction | 1.5 |
| Total | **2** |
| **Total Marks** | **25** |

**Model answer**

**(a)**

**Expected Return of the project A**

| probability | Return % | ER % |
|---|---|---|
| 0.1 | 10 | 1 |
| 0.4 | -8 | -3.2 |
| 0.3 | 20 | 6 |
| 0.2 | 15 | 3 |
| | **ERa** | **6.8** |

**Expected return of project B**

| probability | Return % | ER % |
|---|---|---|
| 0.2 | -10 | -2 |
| 0.15 | 15 | 2.25 |
| 0.4 | 20 | 8 |
| 0.25 | 8 | 2 |
| | **ERb** | **10.25** |

**Expected Return of the portfolio**

ERport = ERa Wa + ERb*Wb

Where ERpot is the expected return of portfolio of project A and B,

Era is the expected return of project B and

Erb is the expected return of project B

Wa and Wb are weights for A and B respectively

ERport = 0.068*0.6 + 0.1025*0.4 **8.18%**

**Beta portfolio**

βport = βaWa +βbWb

Where βa is the systematic risk fo project A and βb is the systematic risk for project B **1.72**

βport = 1.8*0.6 + 1.6*0.4

Return of portfolio using CAPM = RFR + βport (Rm-RFR)

Rport = 0.08 + 1.72(0.1025 - 0.08) **11.87%**

**Application of CAPM**

i. It is considered only on systematic risks reflecting a reality in which most investors have diversified portfolio from which unsystematic risks have been eliminated

ii. It is superior to WACC in providing discount rates for use in investment appraisal

iii. It considers the systematic risks in calculation of the cost of equity unlike the dividend model

| | | |
|---|---|---|
| **b. Transaction Values** | KES | |
| Purchases | 20,000,000 | |
| Sales | 9,500,000 | |
| **Matching receipt and payment** | **10,500,000** | **payment** |
| **. Forward rate contract** | | |
| Transaction value | 10,500,000 | |
| Forward Rate = (9.5 + 1.5) | 11 | |
| **Forward contract cost** | **115,500,000** | |
| | | |
| **Lagging** | | |
| Transaction value | 10,500,000 | |
| **Spot rate on 30/6/2022** | 14.5 | |
| **Cost** | **152,250,000** | |
| | | |
| **Leading** | | |
| **Transaction value** | 10,500,000 | |
| **Spot rate on 28/2/2022** | 11.5 | |
| **Cost** | 120,750,000 | |
| **interest foregone 120,750,000*(0.1*4/12)** | 4,025,000 | |
| **Forward cost** | **124,775,000** | |

**Money Market Hedging**

| **Rwanda** | **Kenya** |
|---|---|
| **Borrowing in Rwanda = 10,096,154** | **Deposit 10,500,000Kshs** |
| **Spot rate 9.5** | **Deposit rate 8%*6/12 = 0.04** |
| 95,913,463 | **Present value of deposit = 10,500,000/1.04** |
| Borrowing rate (0.16*6/12) = 0.08 | 10,096,154 |
| Forward cost = 1.08*95,913,463 | |
| **103,586,540** | |

**It is cheaper to use money market hedging**

**(c)**

**Forward rate agreement**

| | |
|---|---|
| i. spot rate | 12% |
| Forward rate | 15% |
| **Extra payment** | **3%** |

| | |
|---|---|
| Interest paid (3%*6/12) *100,000,000 | 1,500,000 |

| | |
|---|---|
| Interest rate at spot rate (12%*6/12) *100,000,000 | 6,000,000 |
| **Interest payment** | **7,500,000** |

| | |
|---|---|
| ii. Spot rate | 17% |
| forward rate | 15% |
| Saving | 2% |

| | |
|---|---|
| Extra interest saved (2%*6/12) *100,000,000 | (1,000,000) |
| spot rate (17*6/12) *100,000,000 | 8,500,000 |
| **interest payment** | **7,500,000** |

**QUESTION THREE**

| a. Evaluating the dividend policy of each company | **Marks** |
|---|---|
| Identifying the dividend policy adopted by each company 1 mark each (max. of 3) | 3 |
| Explaining the advantages of each policy 0.5 mark each (maximum of 4.5) | 4.5 |
| Explaining the disadvantages of each policy 0.5 mark each (maximum of 4.5) | 4.5 |
| **Total** | **12** |
| Any Valid advantage or disadvantage not indicated in the model answer | |
| b. Capital structure theories | |
| **Determining the optimal value** | |
| Computing the market value of each source | 1 |
| Computing the optimal value under Modigliani and Miller theory | 1 |
| **Total** | **2** |

| | |
|---|---|
| E**ffect of issuing the additional capital on the value of equity** | |
| Calculating the value of equity before issuing additional debt | 0.5 |
| Determining the optimal value after issuing additional capital | 1 |
| Calculating the value of equity after issuing additional debt | 0.5 |
| Decision | 0.5 |
| Maximum | **3** |
| **Effect of issuing an additional debt on the cost of capital (WACC)** | |
| Calculating the cost of equity before issuing the debt | 1 |
| Calculating the cost of debt | 1 |
| Calculating WACC before issuing the debt | 2 |
| Calculating the cost of equity after issuing the debt | 1 |
| Calculating the WACC after issuing the debt | 2 |
| Decision | 1 |
| Maximum | **9** |
| **Total** | **25** |

**Model Answer**

| **(a)**i. **Urwagwa Limited** | **2018** | **2019** | **2020** | **2021** |
|---|---|---|---|---|
| | FRW "000" | FRW "000" | FRW "000" | FRW "000" |
| Earnings after tax EAT | 240,000 | 400,000 | 320,000 | 500,000 |
| Dividends | 100,000 | 100,000 | 100,000 | 100,000 |
| No. of Shares | 2,000 | 2,000 | 2,000 | 2,000 |
| Dividend per share (DPS = Dividends/Number of shares | 50 | 50 | 50 | 50 |
| Dividends pay out = Dividends/EAT | 41.7% | 25.0% | 31.3% | 20.0% |

Since the dividend per share is constant regardless of the increase or decrease in the earnings. Thus, Urwagwa Limited is employing a stable dividend policy.

**Advantages of the policy**

i. The shareholders are able to get the return regardless of whether the company has generated profit or not

ii. The company can be able to use the internal sources to finance its activities

iii.

**Disadvantages of the policy**

i. In case the company has not generated enough profits it can affect the company's cash flows

ii. In case the company generates a lot of profits, the shareholders stand to lose

**Note: Plus any other valid advantage or disadvantage not mentioned here**

**Urunoze Limited**

| | **2018** | **2019** | **2020** | **2021** |
|---|---|---|---|---|
| | FRW "000" | FRW "000" | FRW "000" | FRW "000" |
| EAT | 200,000 | 120,000 | 650,000 | 800,000 |
| Dividends | 40,000 | 24,000 | 130,000 | 160,000 |
| No. of Shares | 2,000 | 2,000 | 2,000 | 2,000 |
| DPS | 20 | 12 | 65 | 80 |
| Dividends payout ratio | 20% | 20% | 20% | 20% |

Since the payout ratio is constant and the dividend per share increase or decreases as per the earnings, the company is employing a constant payout ratio.

**Advantages of the policy**

i. The company will pay when it makes profits and therefore the company's cash flows are not affected.

ii. Signaling effect: An increase in the dividends indicates that the company has generated enough cash flows

iii. The shareholders are able to enjoy high dividends in the periods of high increase in the earnings

**Disadvantage of the policy**

i. A decrease in the dividends shows that the company has not been able to generate enough profits which communicate poor information

ii. The shareholders can only get a return if the company has generated profit

**Urusindisha Limited**

| | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| | FRW "000" | FRW "000" | FRW "000" | FRW "000" |
| Earnings after tax | 250,000 | 100,000 | 240,000 | 500,000 |
| Dividends distributed | 0 | 80,000 | 50,000 | 200,000 |
| Number shares | 2,000 | 2,000 | 2,000 | 2,000 |
| DPS | 0 | 40 | 25 | 100 |
| Dividend payout | 0% | 80% | 21% | 40% |

Since the dividend payout does not depend on the earnings generated, the company is employing a residual policy. For example, in 2018 the company generated an earning but the dividend payout is zero.

**Advantage of the policy**

i. The company's cash flows are not affected since the company only pay dividends when it generates profits and has no investment opportunities

ii. The company can be able to use the internally generated funds to finance the company's activities

**Disadvantages of the policy**

i. Signaling effect: not paying dividends to the shareholders may communicate a bad information
that the company is not able to generate enough cash flows

ii. The shareholders are not able to predict their earnings since they are not sure whether they
will get a dividend or not

**(b)**

i. Determining the optimal value

| given data | FRW "000" |
|---|---|
| Market value of equity (500,000/1,000) *950 | 475,000 |
| Market value of debt (200,000/1,000) *1,100 | 220,000 |

T = 30% Kd 10%, and Ku 14%

T is the corporate tax, Kd is the cost of debt and Ku is the cost of ungeared business
As per Modigliani and Miller the optimal is at point where Vg = Vu +DT
where Vg is the value of a geared business and Vu is the value of ungeared
and Dt is the debt tax shield
Vg = Vu +DT = 475,000 + (220,000*30%)

| | | |
|---|---|---|
| **Vg =** | **541,000** | |
| Value of the firm after issuing additional debt | | |
| Total value of the debt (220,000 + 100,000) | | 320,000 |
| Vg = Vu +DT = 475,000 + (320,000*30%) | | 571,000 |
| Ve = Vg - Vd = 571,000- 320,000 | | 251,000 |

Issuing of an additional debt leads to a decrease in the value of equity

iii. Effect of issuing an additional debt on the WACC

WACC before issuing an additional debt

| | |
|---|---|
| MVd = 220,000 | Interest on debt = 10%*1000 = 100 |
| Mve = 321,000 | market price of debt 1,100 |
| Ku = 14% | |

Kd = 10%

**Determining the cost of equity of a geared business**

Ke = Ku + (Ku - Kd) (1-T)D/E

Ke = 0.14 + (0.14 - 0.1)(1-0.3)*220,000/321,000 = **15.9% = 16%**

WACC = $\frac{VeKe}{Vd+Ve} + \frac{Vd}{Ve+Vd} Kd(1-T)$

$Kd = \frac{I(1-T)}{Po}$ $Kd = \frac{100}{1,100}(1-0.3)$

Kd= 6.4%

WACC = $\frac{321,000*.159}{541,000} + \frac{220,000*0.064}{541,000}$

**WACC = 12.04%**

| **Method two** | **FRW "000"** | | | |
|---|---|---|---|---|
| Source | MV | Weight | Cost | WC |
| Equity | 321,000 | 0.593346 | 0.159 | 0.094 |
| Debt | 220,000 | 0.406654 | 0.064 | 0.0260 |
| | 541,000 | | WACC | 12.04% |

WACC after introducing new debt

MVD= 320,000

MVE = 251,000

Ku = 14%

kd = 10%

Ke = Ku +(ku -kd)(1-T)D/E = 0.14 + (0.14-0.1)(1-0.3)*320,000/251,000

**Ke = 17.6%**

| Source | MV | Weight | Cost | Weighted cost |
|---|---|---|---|---|
| Equity | 251,000 | 0.43958 | 0.176 | 0.077366025 |
| Debt | 320,000 | 0.56042 | 0.064 | 0.0358669 |
| | 571,000 | | WACC | 11.32% |

Issuing of an additional debt leads to a decrease in the cost of capital by (12.04% - 11.3%)

**QUESTION FOUR**

**Marking guide**

| a. Evaluating the credit policy | Marks |
|---|---|
| Calculating the credit sales | 0.5 |
| Calculating the incremental bad debts | 1 |
| Determining the incremental gross profit | 1 |
| Determining the discount cost | 0.5 |
| Computing the current receivables | 1 |
| Computing the new receivables | 1.5 |
| Determining the interest saving | 1 |
| Identifying the benefits of the policy | 1 |
| Identifying the costs of the policy | 1 |
| Incremental profit or loss for the policy | 1 |
| Decision | 0.5 |
| **Total** | **10** |

| b. i. corporate governance issues in the case | |
|---|---|
| Explaining the strength in corporate governance (1 mark each maximum of 4) | 4 |
| Identifying and explaining the weaknesses (1 mark each maximum of 4) | 4 |
| Any valid point identified in the strength and weakness not mentioned in the model answer | 8 |
| ii. Importance of corporate social responsibility | |
| Identifying and explaining the advantages 1 mark each maximum of 4 | 4 |
| iii. International Money market instruments | |
| mentioning and explaining the instrument 1 mark each maximum of 3 | 3 |
| Any valid instrument not mentioned in the model answer | |
| **Total marks** | **25** |

**Model Answer**
**(a)**

| | | |
|---|---|---|
| Total sales | 400,000,000 | |
| Cash sales 10% of 400,000,000 | 40,000,000 | |
| **Credit sales** | **360,000,000** | |
| Current credit period | 60 days | |
| proposed credit period | 90 days | |
| Increase in sales 25% | 100,000,000 | |
| Total sales after the credit policy | 500,000,000 | |
| **Credit sales 90%** | **450,000,000** | |
| Current bad debt (2%*360,000,000) | 7,200,000 | |
| New bad debt (450,000,000*3%) | 13,500,000 | |
| Increase in bad debt | 6,300,000 | |
| Discount cost (450,000,000*4%)*60% | 10,800,000 | |
| Current receivables (60/365*360,000,000) | | 59,178,082.19 |
| New receivables (15/365*450,000,000) *20% +(90/365*450,000,000) *65% +(60/365*450,000,000) *15% | | 86,917,808.22 |
| Increase in receivables | | 27,739,726.03 |
| Increase in finance costs (15%*9,246,575.19) | | **4,160,958.90** |

**Benefits of the credit policy**

| | |
|---|---|
| Gross profit (100,000,000*28%) | 28,000,000 |
| Cost associated with policy | |
| Saving in finance costs | 27,739,726.03 |
| Discount costs | 10,800,000.00 |

| | |
|---|---|
| increase in bad debt | 6,300,000 |
| Total costs | 44,839,726.03 |
| **Incremental costs** | **16,839,726.03** |

The company should not introduce a new credit policy since there are more incremental costs than profit.

**(b)**

**i. Corporate governance issues of Ndahiro PLC**

**Strength in the corporate governance**

**Composition of the board:** The board is composed of both executive and non-executive members who help in providing a balance in the company management.

**Skills and Competence:** Most board members are skilled in different discipline which can help in proving leadership roles of the company

**Existence of the board Committees**: The Company has got different board committees such as the audit committees, remuneration committees and appointment committees which help in the day today management of the company

**Size of non-executive members**: The numbers of the non-executive directors are more than 1/3 which helps in providing independent opinions

**Weakness in the corporate governance**

**Separation of the roles of CEO and Chairman Board of director:** Mr. Ndahiro acts both as the CEO and chairman board of director. As per the best practice of corporate governance the roles of CEO and Chairman Board should be separated.

**Independence of the committees:** The audit committee is headed by the finance director which led to self-evaluation hence compromising on the quality of the audit.

**Age of the board members: one of the board members is a minor.** As per the company law board members should be at least 16 years of age. Including a minor as a board member may affect the decisions taken by the board.

All the executive directors are family members which compromise on the leadership of the company

**Note: Plus, any other valid strength or weakness not mentioned but identified by the student**

ii. Providing explanations as to why the company may continue spending money in the community work

1. It helps in creating public relations with the organization
2. It helps in attracting new and repeat customers
3. it helps in staff recruitment, motivation, and retention
4. It helps in keeping the organization within the spirit of the law

c. **Instruments in money market**

International certificate of deposit the opposite of a Foreign Bond is an International Certificate of Deposit. This is really a deposit in a foreign bank in the local currency of that bank. A Certificate of Deposit (CD) is a time deposit, a financial product commonly offered to businesses or other clients by banks

**International repurchase agreement** is an agreement between two counterparties under which one counterparty agrees to sell an instrument to the other on an agreed date for an agreed price, and simultaneously agrees to buy back the instrument from the counterparty at a later date for an agreed price.

**International Banker's acceptances (**BAs) are negotiable bills issued by companies and guaranteed by a bank.

**Euro Loan:** This is where the company borrows from a foreign bank

**END OF MARKING GUIDE AND MODEL ANSWERS**