

IMPORTANT INFORMATION: READ NOW

**DEPARTMENT OF FINANCE AND RISK MANAGEMENT AND
BANKING**

FINANCIAL MANAGEMENT

MNF3015

Tutorial Letter 202/2009

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1 INTRODUCTION

We trust that you are making good progress in your study of Financial Management (MNF3015). The purpose of this tutorial letter is to provide you with suggested solutions to Assignments 01 and 02, changes in the dates for the second semester discussion classes and a summary of the work that will be covered in the discussion classes.

2 LECTURERS AND CONTACT DETAILS

The lecturers for Financial Management (MNF3015) are as follows:

LECTURER	ROOM NO	TELEPHONE NO	E-mail address
Mr AM Phenya	AJH3-115	(012)429-4493	Phenyam@unisa.ac.za
Dr S Ngwenya	AJH3-121	(012)429-4937	Ngwenms@unisa.ac.za
Mr J Kasozi	AJH3-116	(012)429-4684	Kasozjs@unisa.ac.za
Mr AB Sibindi	AJH3-118	(012)429-3757	Sibinab@unisa.ac.za
Mr KS Naicker	AJH3-120	(012)429-4431	Naickks@unisa.ac.za

Please note that lecturers may only be contacted for academic inquiries (enquiries about the **content** of the module). Administrative enquiries concerning; fees, receipt of assignments, exam dates, etc, should be directed to the relevant administrative departments via the call centre 0861670411.

3 DISCUSSION CLASSES

The table below lists the programme for the second semester discussion classes.

Module	Centre	Date	Time
MNF2023	Pretoria	09/09/2009	13:00 – 16:00
MNF3015	Pretoria	10/09/2009	09:00 – 12:00
MNF2023	Polokwane	10/09/2009	13:00 – 16:00
MNF3015	Polokwane	11/09/2009	09:00 – 12:00
MNF2023	Durban	14/09/2009	09:00 – 12:00
MNF3015	Durban	15/09/2009	09:00 - 12:00
MNF2023	Cape Town	17/09/2009	13:00 – 16:00
MNF3015	Cape Town	18/09/2009	09:00 – 12:00
MNF2023	Port Elizabeth	16/09/2009	13:00 – 16:00
MNF3015	Port Elizabeth	17/09/2009	09:00 – 12:00

Please note: The discussion classes for MNF2023 in Cape Town will be on 17 September not on the 18th as indicated in the Tutorial Letter MNALLE-Q/302

4 SUGGESTED SOLUTION TO ASSIGNMENT 01

(All references refer to the 11th and 12th edition of Gitman).

Q.1 The correct answer is 2.

Textbook reference: Chapter 8

Q.2 The correct answer is 4.

Textbook reference: Chapter 8

Q.3 The correct answer is 1.

Textbook reference: Chapter 8

Q.4 The correct answer is 3.

Textbook reference: Chapter 8

Q.5 The correct answer is 1.

Textbook reference: Chapter 9

Q.6 The correct answer is 2.

Cost of the equipment	R140 000
Add: Installation cost	<u>14 000</u>
	154 000
Less: Accumulated depreciation	<u>(90 000)</u>
Book value	64 000
Loss on sale of an old machine: (64 000 – 50 000)	14 000
Tax benefit (14 000 x 0.29) =	4 060

Q.7 The correct answer is 4.

Cost of the equipment	R500 000
Add: Installation cost	50 000
Add: Net working capital (30 000 + 40 000)	<u>70 000</u>
	620 000
Less: Net proceeds from sale of old asset (150 000 – 50 000)	<u>(100 000)</u>
Initial investment	520 000

Q.8 The correct answer is 4.

Textbook reference: Chapter 8

Q.9 The correct answer is 3.

Profit before tax	R500 000
Less: Tax (500 000 x 0.29)	<u>(145 000)</u>
	355 000
Add back depreciation	<u>20 000</u>
Operating cash inflow:	375 000

Q.10 The correct answer is 3.

Calculation:

Input	Function
-R400 406	Cfi
140 000	Cfi
10	I/YR

2nd function NPV = R130 304

Q.11 The correct answer is 2.

Textbook reference: Chapter 9

Projects with the highest IRR/NPV are preferable. In the question, the projects are ranked according to IRR.

Projects A and B are obvious choices. This leaves only enough money to choose one of the three remaining projects.

Projects C and D have equal IRR and so the one with the higher NPV is selected.

Q.12 The correct answer is 3.

Sales	R 9 000
Net working capital	<u>4 150</u>
Terminal net cash flow	13 150

Q.13 The correct answer is 3.

Cost of the equipment	R98 100
Add: installation cost	<u>60 000</u>
	158 100

Depreciation per year (158 100 / 5) 31 620

Payback period = Initial investment / After-tax cash inflow

After-tax cash inflow = Initial investment / Payback period
 = 158 100 / 2 = 79 050

Net profit per year = After-tax cash inflow – Depreciation
 = 79 050 – 31 620
 = 47 430

Q.14 The correct answer is 4.

Textbook references: Chapter 9

Q.15 The correct answer is 1.

PI = Total PV of cash inflows / initial investment

Initial investment = Total PV of cash inflows / PI
 = 115 000 / 0.85
 = R135 294

Q.16 The correct answer is 2.

Textbook references: Chapter 9

Q.17 The correct answer is 4.

Calculate Terminal Cash Flow:

Book value equals zero after three years, so the entire sale value is a gain and should be taxed as such.

$$88000 (1 - 0.29) = 62\,480$$

Therefore, the total cash flow for year 3 is:

$$62\,480 + 90\,000 = R152\,480$$

Input	Function
-R150 000	Cfi
R 50 000	Cfi
65 000	Cif
152 480	Cfi
12	i
	2nd function NPV = R54 993
	2nd function IRR = 28.55%

Q.18 The correct answer is 4.

See the solution to Question 17.

Q.19 The correct answer is 4.

Change in current assets: $1000 - 500 = 500$ (increase)

Change in current liabilities: 500 (increase)

Since both amounts have increased by R500, there is no change in net working capital.

Q.20 The correct answer is 2.

Textbook reference: Chapter 17

5 SUGGESTED SOLUTION TO ASSIGNMENT 02

Q.1 The correct answer is 2.

Textbook references: chapter 11

Q.2 The correct answer is 2.

Calculation:

$$BP_{\text{equity}} = R200\,000/0.60 = R333\,333$$

Q.3 The correct answer is 3.

Calculation:

$$BP_{\text{debt}} = R240\,000/0.40 = R600\,000$$

Q.4 The correct answer is 1.

When the debenture sells at par, its yield to maturity will equal to the coupon rate. Therefore the before tax cost (yield to maturity) will be 16%. The calculation below will prove this point.

Input	Function
R1 000	FV
-R1 000	PV
R 160	PMT
10	N
	I/YR = 16%

Q.5 The correct answer is 3.

Calculation:

$$r_p = \frac{D_p}{N_p} \frac{R2.50 \times 0.10}{R2.50 - R0.50} = 12.5\%$$

Q.6 The correct answer is 2.

Calculation:

$$r_s = \frac{D_1}{P_0} + g$$

$$r_s = \frac{0.40 \times (1.10)}{R48} + 0.10 = 10.92\%$$

Q.7 The correct answer is 2.

Calculation:

Input	Function
R1 000	FV
-R 950	PV
R 90	PMT
20	N
	I/% = 9.57%

Q.8 The correct answer is 3

Calculation:

Form of capital	Amount	Proportion	Cost %	WACC
Equity	R73 900	0.69	14	9.66
Preference shares	R19 400	0.18	10	1.80
Debt	R14 300	0.13	12	1.56
	R107 600	1.00	WACC	13.02

Q.9 The correct answer is 2.

$$V = \frac{\text{EBITX}(1 - T)}{ra}$$

$$V = \frac{\text{R}40000(1 - 0.29)}{0.10} = \text{R}284\ 000$$

Q.10 The correct answer is 3.

Textbook references chapter: 10

Q.11 The correct answer is 1.

Textbook references chapter: 12

Q.12 The correct answer is 2.

Calculation:

$$\begin{aligned} \text{Financial Breakeven point} &= I + \frac{PD}{1 - T} \\ &= (950\ 000 \times 0.12) + \frac{\text{R}4 \times 250\ 000}{1 - 0.30} = \text{R}256\ 857 \end{aligned}$$

Q.13 The correct answer is 4.

Calculation:

$$\text{DOL} = \frac{\text{Percentage change in EBIT}}{\text{Percentage change in sales}}$$

$$1.25 = \frac{\% \Delta \text{EBIT}}{15\%}$$

$$\% \Delta \text{EBIT} = 18.25$$

$$\text{DFL} = \frac{\text{Percentage change in EPS}}{\text{Percentage change in EBIT}}$$

$$3.5 = \frac{\% \Delta \text{EPS}}{18.75\%}$$

$$\% \Delta \text{EPS} = 66\%$$

Q.14 The correct answer is 3.

Textbook references chapter: 12

Q.15 The correct answer is 3.

Textbook references chapter: 13

Q.16 The correct answer is 4.

Textbook references chapter: 13

Q.17 The correct answer is 2.

Textbook references chapter: 13

Q.18 The correct answer is 4.

Return	Probability	Expected return
14	0.20	2.80
16	0.70	11.20
25	0.10	2.50
	1.00	16.50

NB: Probability must add up to 100%

Q.19 The correct answer is 4.

Calculation:

$$k_S = R_f + \beta (k_M - R_f)$$

$$15 = R_f + 0.85 (14 - R_f)$$

$$15 - 11.90 = R_f - 0.85 R_f$$

$$3.10 / 0.15 = 0.15 R_f / 0.15$$

$$R_f = 20.67$$

Q.20 The correct answer is 2

R100 000/R21 = 4 762

6 DISCUSSION CLASSES

The following topics are discussed:

- A Capital budgeting and cash flow principles
- B Capital budgeting techniques
- C Risk and refinements in capital budgeting
- D Cost of capital
- E Leverage and capital structure
- F Dividends and dividend policies
- G Leasing, mergers and acquisitions

A CAPITAL BUDGETING AND CASH FLOW PRINCIPLES

Capital budgeting is the process of evaluating and selecting long-term investments consistent with the firm's goal of owner wealth maximisation.

The calculation of the following was explained:

- relevant cash flow
- initial investment
- changes in net working capital
- operating cash inflows
- terminal cash flow

This study unit is covered in chapter 8 of your prescribed book. Be sure that you understand all the examples and calculations covered in this chapter.

B CAPITAL BUDGETING TECHNIQUES

This study unit is discussed in chapter 9 of your prescribed book. The following capital budgeting techniques are discussed:

- the payback period technique
- the net present value technique
- the internal rate of return technique

Make sure that you are able to do all the calculations relevant to these techniques. Also pay attention to the comparison of the different techniques, especially the NPV and IRR techniques in terms of conflicting rankings and the theoretical and practical advantages of each.

C RISK AND REFINEMENTS IN CAPITAL BUDGETING

This study unit is discussed in chapter 10 of your prescribed book. Two risk adjustment techniques were discussed, namely certainty equivalents (CEs) and risk adjustment discount rates (RADRs). These techniques are explained with different examples using the NPV method. Make sure that you understand these practical examples and are able to apply them.

D COST OF CAPITAL

This study unit is discussed in chapter 11 of your prescribed book. During the discussion classes, the calculation of the following different component costs are explained:

- long-term debt
- preference shares
- ordinary shares
- retained earnings

We also explained how the Gordon model and the capital asset pricing model can be used to calculate the cost of ordinary shares. You must also be able to calculate the weighted average cost of capital (WACC) and the weighted marginal cost of capital (WMCC). Study the different cost calculations in this chapter carefully so that you understand them clearly.

E LEVERAGE AND CAPITAL STRUCTURE

These study units are discussed in chapter 12 of your prescribed book. Leverage results from the use of fixed-cost assets or funds to magnify returns to the firm's owners. The difference between operating leverage and financial leverage was explained. You must be able to calculate the different degrees of leverage as explained in the examples in your textbook. Capital structure refers to the relationship between equity capital and debt capital that the firm is using. The optimal capital structure is reached when the weighted average cost of capital is minimised, thereby maximising the value of the firm.

F DIVIDENDS AND DIVIDEND POLICY

This study unit is discussed in chapter 13 of your prescribed book. Attention was given to the importance of dividends to firms. The residual theory of dividends was explained and the different arguments pertaining to the relevance and irrelevance of dividends were discussed.

G LEASING, MERGERS AND ACQUISITIONS

These study units are covered in chapters 16 and 17 of your prescribed book. As with every study unit, the learning outcomes specified in the study guide were emphasised. Make sure that you are able to achieve these learning outcomes.

7 EXAMINATION PAPER

The examination paper consists of 40 multiple-choice questions and one or more long calculation(s) of 30 marks. The paper totals 70 marks and the duration is two hours. Equations are NOT provided as part of the examination paper. Financial tables are provided. The use of a nonprogrammable financial calculator (such as the Sharp EL733A, EL735A , EL738A and HP10 BII) is strongly recommended.

8 CONCLUDING REMARKS

We trust that you are enjoying your studies. You are welcome to contact any of your lecturers if you encounter problems with your prescribed work.

Best wishes

Mr AM Phenya
DEPARTMENT OF FINANCE AND RISK MANAGEMENT AND
BANKING
Unisa