Tutorial letter 102/0/2018

APPLIED MANAGEMENT ACCOUNTING

MAC4862  NMA4862  ZMA4862

Year module

Department of Financial Intelligence

IMPORTANT INFORMATION

This tutorial letter contains important information about your module
# Applied Management Accounting

**Tutorial Letter 102 / 2018**

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## Part 1 – Strategy, Risk Management and Financing

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MODULE PURPOSE

This module is intended for students who are studying towards a Certificate in the Theory of Accounting (CTA), a prerequisite for the professional qualification of Chartered Accountant (SA) (registered with SAICA). This module will help you to develop some of the prerequisite competencies.

The purpose of the module is to provide students with knowledge of Management Decision Making and Control; as well as Strategy, Risk Management, and Financial Management. The module will create an understanding of and develop skills with regard to the following areas: Management and use of costs, control, decision-making and planning approaches and processes; strategy; risk management; function of financial management; as well as mergers and acquisitions, and business plans.

INTRODUCTION AND OVERVIEW

The purpose of this tutorial letter is to provide students with tutorial matter relating to Financial Management topics. This tutorial letter will build upon your prior knowledge and introduce a few new concepts relating to strategy, risk and financing; the function of financial management; and also within mergers and acquisitions, and business plans.

PRE-REQUISITES

The parts and learning units in this tutorial letter build, to a large extent, upon prior knowledge obtained in your undergraduate Management Accounting studies and in the post-graduate Advanced Management Accounting module. It is therefore assumed that you have achieved the necessary prior learning.

STRUCTURE OF THIS TUTORIAL LETTER

This tutorial letter is structured as three distinct parts, each containing a couple of learning units. A learning unit is the main study area within a part, and each learning unit is further divided into sub learning units. You will find the outcomes, which you are required to achieve for each learning unit in this tutorial letter at the beginning of each learning unit. Self-assessment activities are provided at the end of each learning unit so that you can assess whether you have mastered the learning outcomes.

The parts of this tutorial letter are described below:

PART 1 – STRATEGY, RISK MANAGEMENT AND FINANCING (containing learning units 1-7)

The purpose of part 1 is to enhance your existing knowledge of strategy, risk management and sources and forms of financing.

PART 2 – FUNCTION OF FINANCIAL MANAGEMENT (containing learning units 8–10)

The purpose of part 2 is to enhance your existing knowledge of the function of financial management, which includes the analysis and interpretation of information, and valuations.
PART 3 – MERGERS AND ACQUISITIONS, AND BUSINESS PLANS
(containing learning units 11-12)

The purpose of part 3 is to enhance your existing knowledge of mergers and acquisitions, as well as business plans.

CONTENT – THIS MODULE

The diagram below contains a schematic presentation of the content of this module.

- **MAC4862**
  - Applied Management Accounting

- **Planning and general**
  - Tutorial letter 101
  - Tutorial letters in the 3-series (3**)

- **Part 1**
  - Learning units
    1. Strategy and governance
    2. Risk management
    3. Cost of capital and capital investment appraisal
    4. Sources and forms of finance
    5. Dividend decision
    6. Management of working capital
    7. Treasury function

- **Part 2**
  - Learning units
    8. Analysis and interpretation of financial and non-financial information
    9. Businesses in difficulty
    10. Valuations

- **Part 3**
  - Learning units
    11. Mergers and acquisitions
    12. Business plans and financial proposals

- **Prior exams, questions and revision**
  - Tutorial Letter 103
  - Tutorial Letter 104
  - Tutorial Letter 105

- **Integrated self-assessment**
  - Tutorial Letter 105
STUDY MATERIAL AND RESOURCES

Prescribed study material

The prescribed textbooks for this module are:


myUnisa resources

Please make use of myUnisa (https://my.unisa.ac.za) as it contains further resources to help you master this module. The following resources are available on myUnisa (made available at appropriate times during the year):

- your tutorial letters for this module
- tutorial letters of Advanced Management Accounting (MAC/NMA/ZMA4861) for this year
- suggested solutions to the tests
- e-learning initiatives (optional)

Important note:

This tutorial letter makes principle reference to the textbook Managerial Finance, 8th Edition, and Tutorial Letters 102 and 103 Advanced Management Accounting (MAC/NMA/ZMA4861).

Supplementary literature/additional reading

You can use the bibliography at the end of each learning unit for additional reading for purposes of self-enrichment.

General information and CTA news

For general information and CTA news please refer to the CTA Support Page. The CTA support page can be accessed from our CAS website landing page.

The short URL for this page is: www.unisa.ac.za/cas/cta

Study schools

Please refer to follow-up tutorial letters in the SASALL 300-series for more details. If these classes are offered in your area, it is strongly recommended that you attend. These classes will support you with your studies and help you gain a better understanding of the module.

TESTS

The learning units assessed by Test 1 will cover predominately (but not exclusively) the content of Part 1 (learning units 1–7); and Test 2 the content of Parts 2 and 3 (learning units 8–12).

It is important to realise that the examination papers of this module will integrate between the various learning units and disciplines. In preparation for the exam, you can therefore also expect some level of integration in the tests.
STUDY PROGRAMME

A study programme has been published in Tutorial Letter CASALL301. Please utilise this to plan your studies.

We recommend that you allocate your time according to the following approximate allocation:

<table>
<thead>
<tr>
<th>Part</th>
<th>Learning unit no.</th>
<th>Learning unit</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Strategy and governance</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Risk management</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Cost of capital and capital investment appraisal</td>
<td>12%</td>
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<tr>
<td></td>
<td>4</td>
<td>Sources and forms of finance</td>
<td>9%</td>
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<td></td>
<td>5</td>
<td>Dividend decision</td>
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<td></td>
<td>6</td>
<td>Management of working capital</td>
<td>6%</td>
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<tr>
<td></td>
<td>7</td>
<td>Treasury function</td>
<td>6%</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>Analysis and interpretation of financial and non-financial information</td>
<td>10%</td>
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<tr>
<td></td>
<td>9</td>
<td>Businesses in difficulty</td>
<td>7%</td>
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<td></td>
<td>10</td>
<td>Valuations</td>
<td>11%</td>
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<tr>
<td>3</td>
<td>11</td>
<td>Mergers and acquisitions</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Business plans and financial proposals</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Integrated self-assessment</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

Note

If you struggle with any of the learning units we strongly recommend that you allocate additional time above and beyond the total 90 hours indicated. This is especially important for learning unit 10 (Valuations).

CONCLUSION

We trust that the preceding sections will assist you in approaching your studies (linked to this tutorial letter) in a methodical manner and with a greater level of understanding.

We hope you enjoy this part of your studies!

Regards,

Your Applied Management Accounting lecturers
PART 1: STRATEGY, RISK MANAGEMENT AND FINANCING

PURPOSE

The purpose of Part 1 is to reinforce and enhance your existing competencies related to strategy, risk management and financing. Its purpose is further to assist you in applying your knowledge to a scenario on an integrated basis.

The specific competencies referred to above relate to the development and evaluation of an entity’s ability to make decisions and maximise its performance (including governance, strategies, policies and resources). The competencies further relate to the management of financial assets and the treasury function.

The purpose of the numerous activities and self-assessment activities included in this part is also to enhance your pervasive qualities and skills – the professional qualities and skills that Chartered Accountants are expected to bring to all tasks. These professional qualities include ethical behaviour and professionalism, personal attributes, and professional skills.

The diagram below contains a schematic presentation of the content of this part as well as later parts.
PART 1 - LEARNING UNIT 1 – STRATEGY AND GOVERNANCE

LEARNING OUTCOMES

After studying this learning unit, you should be able to further apply your knowledge and skills achieved through your prior learning (see below) to a scenario, on an integrated basis.

PRIOR LEARNING ASSUMED

In your undergraduate and Advanced Management Accounting studies you have already mastered the learning outcomes indicated below. If you want to refresh your knowledge, please refer to your undergraduate material, prescribed textbook and MAC4861 Tutorial Letter 102/2018 (available under ‘additional resources’ on myUnisa). For your convenience we also provide textbook references.

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>Managerial Finance, 8th edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Demonstrate sound knowledge of the concepts of mandate and business model in the context of an organisation.</td>
<td>• Chapter 1 and 2</td>
</tr>
<tr>
<td>• Critically review the appropriateness of an entity’s mission, vision, strategies and strategic plan.</td>
<td>• MAC4861 TL102</td>
</tr>
<tr>
<td>• Critically reflect upon the internal and external influences on an entity’s strategy development.</td>
<td></td>
</tr>
<tr>
<td>• Evaluate an entity’s ability to manage organisational performance in accordance with its strategies.</td>
<td></td>
</tr>
<tr>
<td>• Assesses the alignment of management decisions with the entity’s vision, mission, values and mandates.</td>
<td></td>
</tr>
<tr>
<td>• Understands and evaluates the business model of the entity in the context of the entity’s vision, mission, values, mandate and overall objective</td>
<td></td>
</tr>
<tr>
<td>• Utilise analytical tools to assess the feasibility of strategies formulated.</td>
<td></td>
</tr>
<tr>
<td>• Discuss and critically review the strategic alignment of the financial function.</td>
<td></td>
</tr>
<tr>
<td>• Evaluate relevant structural and governance issues, including sustainability issues and integrated reporting matters.</td>
<td></td>
</tr>
<tr>
<td>• Understand what the International Integrated Reporting Framework entails and its reference to the various capitals within the organisation (financial, manufactured, intellectual, human, social and human relationships and natural).</td>
<td></td>
</tr>
</tbody>
</table>

INTRODUCTION

For an entity to be successful it has to be guided by an overarching corporate strategy. In this regard, the financial function could also add more value through a process of strategic alignment. In dealing with the ‘bigger picture’, it is also important to realise that a firm functions within a greater context and therefore also has to consider other stakeholders by means of appropriate corporate governance.

In this learning unit, we do not attempt to discuss all the different viewpoints and approaches. The content of this learning unit is intended to enhance your knowledge of corporate strategy.

THIS LEARNING UNIT CONSISTS OF THE FOLLOWING SUB LEARNING UNITS:

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<td>LEARNING UNIT 1.1</td>
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LEARNING UNIT 1.1 - STRATEGY AND GOVERNANCE

1. Introduction

The term “strategy” is frequently associated with the military, in which context it is described as ‘the utilization, during both peace and war, of all of a nation's forces, through large-scale, long-range planning and development, to ensure security or victory’ (Dictionary.com:2011). Corporate strategy, in turn, shares many of the characteristics of military strategy. Author, Dale Littler points out that corporate strategy should address the fundamentals, ‘namely, the “what,” “why,” “how,” and “when” of the organization’ (2011: no page number).

In addition, when contemplating the ‘bigger picture’, it is important to temper ambitions by means of appropriate corporate governance.

This learning unit is based on selected sections of the following chapter in your prescribed textbook (Managerial Finance, 8th edition):

- Chapter 1 (Sections 1.2 to 1.6)
- Chapter 2 (Sections 2.1. to 2.6)

2. Content

2.1. Key building blocks of an entity’s business model

A business model describes the rationale of how an organisation creates, delivers and captures value. An entity’s business model is evaluated with the help of the following nine key building blocks:

- Customer segments

The customer segments building block defines the different groups of people or organisations an enterprise aims to reach and serve. Customers comprise the heart of any business model. Without profitable customers, no company can survive for long. In order to better satisfy customers, a company may/should group them into segments with common needs, behaviours or other attributes.

- Value propositions

The value propositions building block defines the bundle of products and services that create value for a specific customer segment. The value proposition is an aggregation, or bundle, of benefits that a company offers customers. This could be the reason why customers choose one company over another.

- Channels

The channels building block relates to the communication, distribution and sales channels utilised by the company. This includes raising awareness among customers about new products, post-purchase customer service and helping customers evaluate a company’s value proposition.

- Customer relationships

The customer relationship building block describes the type of relationships a company establishes with customer segments. The following motivations apply to customer relationships: customer acquisition, customer retention or increasing sales.
• **Revenue streams**

The revenue streams building block represents the cash a company generates from each customer segment. The following two different types of streams exist: once-off customers and recurring revenue.

• **Key resources**

The key resources building block describes the most important assets required to make a business model work. Key resources can be manufactured, financial, intellectual, human or social and relationship.

• **Key activities**

The key activities building block describes the most important activities a company must perform to make its business model work. Activities differ depending on the type of business model e.g. for a software company, the development of software is a key activity; this will, however, differ from a computer manufacturer where the supply chain of raw materials is important.

• **Key partnerships**

The key partnerships building block describes the network of suppliers and partners that makes the business model work. Partnerships are forged for many reasons and have become a cornerstone of many business models. Different types of partnerships can be distinguished; strategic alliances with non-competitors, competition between competitors; joint ventures and buyer supplier relationships.

• **Cost structure**

The cost structure describes all costs incurred to operate a business model. The nature of the business will determine whether it is a cost driven business (contain costs to drive value) or a value driven business (spend what is necessary to get value).

### 2.2. The impact of technology on strategy

The way in which business is conducted is evolving. Technology and industrialisation are amongst some of the components which have played a role in this evolution and are therefore discussed below.

The internet has significantly expanded its reach over the last few decades with the number of users growing daily; where users are now able to access the internet with their phones or tablets and do not necessarily require a computer. This is particularly relevant in developing economies, including South Africa. The effect of decreasing data costs and greater bandwidth has had a positive effect, with businesses harnessing the benefits in the form of up to date marketing campaigns, on-line sales, the creation of customer information database, on-line payments (Electronic funds transfer-EFT’s) etc. While this evolution has proved to be beneficial it is important to note that challenges also do exist, some of which are discussed below.

• **Industrialisation and the Fourth Industrial revolution**

There is a trend in most industries to move towards a mechanised environment which impacts both the manufacturing and non-manufacturing/services industries. An example of this is the motor manufacturing industry where production lines are automated with limited manual intervention. With the increase in completion and lowering of selling prices, car manufacturers are expected to provide more value to customers at competitive prices. The resultant effect is that entities have to invest in technologies to optimise costs thereby creating efficiencies in the production processes.
It is therefore important to note that this shift has consequences that extend beyond increasing the profitability of the entity to include aspects relating to efficiency, effectiveness and the long term sustainability of entities or industries. One such aspect which was a theme in the World Economic Forum (WEF) held in Davos in 2016, is that which relates to the use of the surplus labour which arises from industrialisation. According to the WEF the impact of this aspect is currently unknown and needs to be considered for both developing and developed economies due to the interconnectedness of the global economy.

Refer to the link below for further information in this regard:

http://www.weforum.org/agenda/2016/01/a-recap-of-davos-2016

- The Internet of Things

The internet of things has also influenced production processors where assets are equipped with sensors that can capture, communicate and process data. This provides the potential to create production distribution efficiencies, which benefits both manufactures and customers alike. Studies have shown that the implementation of the Internet of Things could result in significant cost savings thereby building efficiencies into an entities production process.

Refer to the link below for further information in this regard:


- Technology and integration with an entity’s strategy

Due to limited resources an entity normally has a strategy on how to harness technology in order to create sustainable value for an entity’s stakeholders. This includes the use of emails, on line sales platforms, loyalty programmes, generation or purchase of customer lists, ERM, costing systems etc. The utilisation of technology has long been a key determinant of the success and growth of an entity enabling the entity to compete on a global scale. This shift is across industries irrespective of the size of the entity, with Small and Medium Enterprises and global companies being able to market their product or service internationally and also source raw materials from suppliers around the world.

With this advanced technologies and interconnectedness there have also been significant advancements in the financial sector providing access to capital markets globally. Various stock exchanges are now accessible to most people with only bandwidth being a limiting factor. In most developing countries there has been an expansion of the reach these platforms have. In addition there is a significant growth in the types of products available (in the form of foreign exchange contracts, options, contracts for difference, etc).

Entities are also utilising social media to communicate with customers and suppliers in real time (Twitter, Facebook, Linked-in and various other applications or apps). This has enabled real time communication which makes turnaround time shorter and enhances the customer experience. It has given the customer a platform for raising complaints or compliments and therefore assists the entity in improving their service. With the increased usage of smart phones by consumers, this form of communication has become relatively wide reaching and has impacted most industries such as: banking, insurance, flight bookings (on line bookings and on line check in), taxi (Uber) etc. The cost is relatively low with entities encouraging the use of technology as this enables these entities to also save on costs (physical rent is saved, electronic bookings save time and is more efficient thereby enhancing the customer experience).

It is however also important to note that there are risks associated with the extensive use of technology in the form of system failure, fraud (internal and external), reliance on service providers etc. Technology security and business continuity plans are therefore important in order for an entity to operate without unnecessary disruptions and also provides assurance to its customers, suppliers and other users.
Activity 1.1.1

Answer Practice Question 1–4 in Managerial Finance (8th edition)

Feedback to activity 1.1.1

Find the solution after the practice question in the textbook.

Activity 1.1.2

Answer Practice Question 2–4 in Managerial Finance (8th edition)

Feedback to activity 1.1.2

Find the solution after the practice question in the textbook.

3. Self-assessment questions

After working through all the relevant sections in the textbook, guidance and activities provided by this learning unit, you should now be able to attempt the following self-assessment questions.

QUESTION 1  9 MARKS (14 MINUTES plus reading time)

Perform the required parts (d) and (h) of question 3 (Insimbi Limited), which can be found in the Question Bank Part 2, which is the relevant question bank for this tutorial letter. The relevant required parts are repeated below. (At this point it is not necessary to attempt to do other parts of the question; you should, however, take notice of the way in which all the various parts integrate and relate to the scenario.)

<table>
<thead>
<tr>
<th>REQUIRED</th>
<th>MARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(d) Evaluate the circumstances of Insimbi Limited and the behaviour of Mr West from an ethical and corporate governance perspective, and provide recommendations for improvement.</td>
<td>(5)</td>
</tr>
<tr>
<td>(h) List eight key areas recommended for inclusion in an Integrated Report.</td>
<td>(4)</td>
</tr>
</tbody>
</table>

SOLUTION QUESTION 1

Find the suggested solution to the relevant parts in the Question Bank.

QUESTION 2  13 MARKS (20 MINUTES plus reading time)

Perform the required sub-parts (e) of Part A of question 2 (Dinozzo and Son Technology Ltd), which can be found in the Question Bank. The relevant required parts are repeated below. (At this point it is not necessary to attempt to other parts of the question; you should, however, take notice of the way in which all the various parts integrate and relate to the scenario.)

<table>
<thead>
<tr>
<th>REQUIRED</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part A</td>
<td></td>
</tr>
<tr>
<td>(e) Describe how the suggested repurchase of shares will assist D&amp;S TEC with their anti-takeover strategy.</td>
<td>(4)</td>
</tr>
</tbody>
</table>
SOLUTION QUESTION 2

Find the suggested solution to the relevant parts in the Question Bank.

BIBLIOGRAPHY AND ADDITIONAL READING


PART 1 - LEARNING UNIT 2 – RISK MANAGEMENT

LEARNING OUTCOMES

After studying this learning unit, you should be able to further apply your knowledge and skills achieved through your prior learning (see below) to a scenario, on an integrated basis.

PRIOR LEARNING ASSUMED

In your undergraduate and Advanced Management Accounting studies you have already mastered the learning outcomes indicated below. If you want to refresh your knowledge, please refer to your undergraduate material, prescribed textbook and MAC4861 Tutorial Letter 102/2018 (available under ‘additional resources’ on myUnisa). For your convenience we also provide textbook references.

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>Managerial Finance, 8th edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Identify and evaluate opportunities and risks on an advanced level.</td>
<td>• Chapter 3</td>
</tr>
<tr>
<td>• Critically assess risks (including IT risks) and how they are managed.</td>
<td>• MAC4861 TL102</td>
</tr>
<tr>
<td>• Understands and explains the critical components of an Enterprise Risk Management (ERM) framework</td>
<td></td>
</tr>
<tr>
<td>• Evaluate an entity’s risk management programme.</td>
<td></td>
</tr>
<tr>
<td>• Recommend courses of action to help manage risks.</td>
<td></td>
</tr>
<tr>
<td>• Apply your theoretical knowledge relating to risk management to a given scenario, and provide value added assessments and comments in this regard.</td>
<td></td>
</tr>
</tbody>
</table>

INTRODUCTION

A rational investor should expect a higher return on a higher risk investment. It is thus imperative to not only quantify risk accurately, but at the same time, to manage risk so that the uncompensated risks can be minimised.

Your prior learning for this learning unit included a fair amount of theory. You can obtain a better understanding of the theory by working through a sufficient number of questions/case studies that apply this to a business environment. This learning unit will assist you in this regard.

THIS LEARNING UNIT CONSISTS OF THE FOLLOWING SUB LEARNING UNITS:

<table>
<thead>
<tr>
<th>LEARNING UNITS</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING UNIT 2.1</td>
<td>RISK MANAGEMENT</td>
</tr>
</tbody>
</table>
LEARNING UNIT 2.1 - RISK MANAGEMENT

1. Introduction

We have already noted that risks are relevant in everybody’s day-to-day lives. In the financial world, one finds different types of risk. Risks can come from uncertainty, such as uncertainty from the future rand/dollar exchange rates, possible project failures, possible legal liabilities, granting of credit, accidents, possible natural disasters, possible fraud and error, and several other unknowns.

In the field of Management Accounting, the concepts of risk assessment and management are pervasive. You have already encountered some of the related concepts before and will also encounter others in later learning units. For example, in assessing risk, the concepts of probability and sensitivity have already been considered earlier as part of decision-making techniques. Risk will also be considered when evaluating investment and financing decisions. Later you will also be reacquainted with hedging techniques, which is a transaction that can lower or even eliminate risk in certain areas. In order to understand and manage risk, you will also require knowledge of relevant acts, including the Companies Act No 71 of 2008.

2. Content

There is no additional content to be studied at this level. All content has already been addressed in your prior learning. If you want to refresh your knowledge, please refer to the earlier section ‘Prior learning assumed’.

The activity below, the self-assessment questions provided later in this learning unit, and the integrated self-assessment at the end of this tutorial letter will help you to apply your knowledge.

Activity 2.1.1

List some risks that may be relevant to a South African entity manufacturing paper from tree pulp. Assume that the entity exports to various clients in South America and Africa, and that the entity utilises 80% debt capital.

Feedback on activity 2.1.1

There could be numerous types of risks and the following are just a few examples that you could have considered:

- environmental risks caused by air pollution from the paper mill (paper manufacturing plant)
- environmentalists may place pressure on the entity and cause restrictions on the cutting of trees if a conscious effort is not made to ensure the sustainability of the water resources, fertile land, natural forests and the biological system in the area
- the high level of gearing increases the financial risk and could place restrictions on future expansion as loans require fixed repayments and are often secured by assets
- the entity exports to South America and other African countries, which increases currency risk as contract values may change with currency fluctuations

3. Self-assessment questions

After working through all the relevant sections in the textbook, guidance and activities provided by this learning unit, you should now be able to attempt the following self-assessment questions.

QUESTION 1

Perform Practice Question 3-3 in Managerial Finance (8th edition).
SOLUTION QUESTION 1

Find the solution after the practice question in the textbook.

QUESTION 2  
(24 MARKS 36 MINUTES plus reading time)

Perform the required part (c) of question 3 (Insimbi Limited), which can be found in the Question Bank. The relevant required part is repeated below. (At this point it is not necessary to attempt the other parts of the question; you should, however, take notice of the way in which all the various parts integrate and relate to the scenario.)

<table>
<thead>
<tr>
<th>REQUIRED</th>
<th>MARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c) For each of the risk factors indicated below, describe the reason why Insimbi Limited may consider this a key risk factor and further suggest ways in which Insimbi could mitigate these risk factors. In your answer you should make use of a table in the following format:</td>
<td>(24)</td>
</tr>
<tr>
<td>Risk factor</td>
<td>Reason why this may represent a key risk factor</td>
</tr>
<tr>
<td>Regulatory, political and legal matters</td>
<td>(2 marks)</td>
</tr>
<tr>
<td>Inadequate supporting infrastructure</td>
<td>(1 mark)</td>
</tr>
<tr>
<td>Impact on the environment</td>
<td>(2 marks)</td>
</tr>
<tr>
<td>Foreign exchange</td>
<td>(1 mark)</td>
</tr>
<tr>
<td>Commodity price and demand</td>
<td>(3 marks)</td>
</tr>
<tr>
<td>Employees’ health and safety</td>
<td>(3 marks)</td>
</tr>
</tbody>
</table>

SOLUTION QUESTION 2

Find the suggested solution to the relevant part in the Question Bank.

QUESTION 3  
(7 MARKS (11 MINUTES plus reading time)

Perform the required sub-part (g) of Part A of Question 2 (Dinozzo and Son Technology Ltd), which can be found in the Question Bank. The relevant required part is repeated below. (At this point it is not necessary to attempt to other parts of the question; you should, however, take notice of the way in which all the various parts integrate and relate to the scenario.)

<table>
<thead>
<tr>
<th>REQUIRED</th>
<th>MARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(g) Identify the risks associated with D&amp;S TEC.</td>
<td>(7)</td>
</tr>
</tbody>
</table>

SOLUTION QUESTION 3

Find the suggested solution to the relevant part in the Question Bank.

BIBLIOGRAPHY AND ADDITIONAL READING

PART 1 - LEARNING UNIT 3 – COST OF CAPITAL AND CAPITAL INVESTMENT APPRAISAL

LEARNING OUTCOMES

After studying this learning unit, you should be able to further apply your knowledge and skills achieved through your prior learning (see below) to a scenario, on an integrated basis. In addition, after studying this learning unit, you should be able to:

- recommend ways in which project and investment appraisal could be approached differently with the aim of sustainable value creation
- perform and evaluate a foreign investment decision
- quantify the effect of specific scenarios on the net present value and/or internal rate of return of a proposed investment
- describe how Monte Carlo simulation could help measure the impact of risk on a proposed investment

PRIOR LEARNING ASSUMED

In your undergraduate and Advanced Management Accounting studies you have already mastered the learning outcomes indicated below. If you want to refresh your knowledge, please refer to your undergraduate material, prescribed textbook and MAC4861 Tutorial Letter 102/2018 (available under ‘additional resources’ on myUnisa). For your convenience we also provide textbook references.

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>Reference Managerial Finance (8th edition):</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Understand the concept of risk vs. return, including the underlying theory.</td>
<td>• Chapter 4 (sections 4.1-4.12)</td>
</tr>
<tr>
<td>✓ Integrate multiple sources of knowledge to determine the fair value of different types/forms of preference shares and debt, incorporating complications in discounted cash flow and relevant income tax treatments (e.g. sections 8E, 8F and 24J).</td>
<td>• Chapter 5</td>
</tr>
<tr>
<td>✓ Analyse an entity’s cost of capital and capital structure.</td>
<td>• Chapter 6 (parts 6.1 to 6.8)</td>
</tr>
<tr>
<td>✓ Calculate the weighted average cost of capital and its various components.</td>
<td>• Chapter 10</td>
</tr>
<tr>
<td>✓ Understand the circumstances in which a project specific cost of capital will be utilised, including the calculation thereof.</td>
<td>• Management and Cost Accounting, 9th edition: Chapter 13</td>
</tr>
<tr>
<td>✓ Differentiate between asset and equity betas, including the calculation thereof.</td>
<td>• MAC4861 TL102</td>
</tr>
<tr>
<td>✓ Perform and evaluate an investment decision on an advanced level, utilising various capital budgeting techniques</td>
<td></td>
</tr>
<tr>
<td>✓ Address complications of an investment decision, including dealing with the effects of inflation, risks, taxation, capital rationing and projects with different lifecycles.</td>
<td></td>
</tr>
<tr>
<td>✓ Evaluate the alternative of asset-specific finance.</td>
<td></td>
</tr>
<tr>
<td>✓ Perform sensitivity analysis upon an investment decision.</td>
<td></td>
</tr>
<tr>
<td>✓ Discuss the purpose and benefits of a post-investment audit.</td>
<td></td>
</tr>
<tr>
<td>✓ Recommend ways in which project and investment appraisal could be approached differently with the aim of sustainable value creation.</td>
<td></td>
</tr>
</tbody>
</table>
INTRODUCTION

Capital investment appraisals are long-term decisions, where it will take several years to earn a return on the capital investment made. The topic of capital investment appraisals integrates many other management accounting topics (including strategy, cost of capital and relevant costing), and frequently serves as the precursor to the financing decision. It further integrates with the subject of taxation.

The cost of capital is important as it directly affects the choice of investments. A too low cost of capital could lead to the acceptance of investments earning insufficient returns; whereas a too high cost of capital could lead to not accepting profitable investments.

Both cost of capital and capital investment appraisal have in the past frequently been examined in this subject and also on the level of SAICA’s professional examinations. Thorough knowledge of these learning units – on an advanced level – is therefore important.

THIS LEARNING UNIT CONSISTS OF THE FOLLOWING SUB LEARNING UNITS:

<table>
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<tr>
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<th>TITLE</th>
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<td>LEARNING UNIT 3.1</td>
<td>WEIGHTED AVERAGE COST OF CAPITAL</td>
</tr>
<tr>
<td>LEARNING UNIT 3.2</td>
<td>CAPITAL INVESTMENT APPRAISAL – ISSUES IN INVESTMENT APPRAISAL</td>
</tr>
<tr>
<td>LEARNING UNIT 3.3</td>
<td>FOREIGN INVESTMENT</td>
</tr>
<tr>
<td>LEARNING UNIT 3.4</td>
<td>SCENARIO ANALYSIS AND MONTE CARLO SIMULATION</td>
</tr>
</tbody>
</table>
LEARNING UNIT 3.1 - WEIGHTED AVERAGE COST OF CAPITAL

1. Introduction

The cost of capital is important as it directly affects the investment decision and the choice of investments. The weighted average cost of capital (WACC) is the dominant indicator of the cost of capital of an entity and is determined based on a weighted average of other costs. Here, an entity’s capital may consist of several forms of capital, including equity, preference shares and debt.

The cost of the primary form of capital – equity – can be calculated using several methods/models, but predominately we use either Gordon’s Growth model or the Capital Asset Pricing Model (CAPM). The beta coefficient incorporated in the CAPM takes account of the relevant business entity’s capital structure, and is known as the equity beta (or geared/levered beta). A related concept is the asset beta. The asset beta does not take account of a capital structure and is also known as the ungeared/unlevered beta.

This learning unit is based on selected sections of the following chapters in your prescribed textbook (Managerial Finance, 8th edition):

- Chapter 4: Capital structure and the cost of capital
- Chapter 5: Portfolio management and the Capital Asset Pricing Model
- Chapter 10: Valuations of preference shares and debt

2. Content

There is no additional content to be studied at this level. All content has already been addressed in your prior learning. If you want to refresh your knowledge, please refer to the earlier section ‘Prior learning assumed’.

The activity below, the self-assessment questions provided later in this learning unit, and the integrated self-assessment at the end of this tutorial letter will help you to apply your knowledge.

Activity 3.1.1

Attempt question 4.6 in Managerial Finance, 8th edition, without referring to the suggested solution.

Solution to activity 3.1.1

Find the suggested solution after the question in the textbook.

3. Self-assessment questions

After working through all the relevant sections in the textbook, guidance and activities provided by this learning unit, you should now be able to attempt the following self-assessment questions.

QUESTION 1 12 MARKS (18 MINUTES plus reading time)

Attempt Part (c) of Question 21 (Cloth Group Ltd), which is in the Question Bank, without referring to the suggested solution.

Solution to Question 1

Refer to the suggested solution to this part in the Question Bank.
BIBLIOGRAPHY AND ADDITIONAL READING


LEARNING UNIT 3.2 – CAPITAL INVESTMENT APPRAISAL – ISSUES IN INVESTMENT APPRAISAL

1. Introduction

Capital investment appraisals are long-term decisions, where it will take several years to earn a return on the capital investment made.

Here, it is important to take cognisance of the similarities and differences between capital investment appraisals and business valuations. When assessing a proposed capital investment using discounted cash flow methods (e.g. projecting cash flows and calculating a net present value or internal rate of return), a capital investment appraisal displays many similarities to a business valuation (using, for example, an enterprise discounted cash flow model, based on free cash flow). From your prior knowledge, you should recall that a capital investment appraisal frequently assesses a project over a fixed term (e.g. 5 years), where end-of-period cash flows should be accounted for (e.g. the re-sell value of a machine). In contrast, a business valuation frequently accounts for a continuing value using, for example, the Gordon Growth Model.

An investment decision can also be complicated by various factors, including the effects of inflation, relevant costs and revenues, taxation, capital rationing and projects with different lifecycles.

Often in the past, capital investment appraisals were made by considering only economic aspects. In these enlightened times, however, appraisers are starting to consider other issues as well with the ultimate goal of sustainable value creation.

This learning unit is based on the following chapters in your prescribed textbooks:

Managerial Finance – 8th edition:
- Chapter 6: The investment decision

Management and Cost Accounting – 9th Edition:
- Chapter 14: Capital investment decisions: the impact of capital rationing, taxation, inflation and risk – pages 339–353

2. Content

2.1. Sustainable value Creation

Sustainable business practice looks beyond only the usual economical perspective, to also include environmental and social considerations. Its intention is to support these multiple pillars in an effort to help secure the ability of later generations/businesses to endure.

The demanding task of sustainable value creation will require the commitment of more than just a few individuals; according to architect and sociologist, Robert Gutman, the responsibility falling upon professionals is clear:

*Every* profession bears the responsibility to understand the circumstances that enable its existence. (quote, emphasis added)

In recognition of the importance of sustainability and governance, SAICA has placed strong emphasis on these matters in its updated CTA curricula. You can therefore also expect coverage of this area in your CTA assessments and in future professional exams – normally in terms of integration of these topics within a larger context.
With this in mind, study the following extract from an exposure draft issued by the International Federation of Accountants (IFAC) as Good Practice Guidance, entitled: Project and Investment Appraisal for Sustainable Value Creation. (Our comments and notes are included in square brackets.)

As indicated below, project and investment appraisal include a wide range of capital investment decisions, but also valuations of business organisations, for example, in the case of acquisitions and disposals of subsidiaries.

2. **Key Principles of Project and Investment Appraisal** [an extract]

2.1 Project and investment appraisal refers to evaluations of decisions made by organizations on allocating resources to investments of a significant size. Typical capital spending and investment decisions include the following:

- Make or buy decisions and outsourcing certain organizational functions
- Acquisition and disposal of subsidiary organizations
- Entry into new markets
- The purchase (or sale) of plant and equipment
- Developing new products or services, or discontinuing them, or decisions on related research and development programs
- The acquisition or disposal of new premises or property by purchase, lease, or rental
- Marketing programs to enhance brand recognition and to promote products or services
- Significant programs of staff development or training
- Restructuring of supply chain
- Revision of distribution networks
- Replacing existing assets.

2.4 The key principles underlying widely accepted good practice...

D. A good decision relies on an understanding of the business and should be considered and interpreted in relation to an organization’s strategy and its economic, social, and competitive position.

F. All assumptions used in undertaking DCF [Discounted Cash Flow] analysis, and in evaluating proposed investment projects, should be supported by reasoned judgment, particularly where factors are difficult to predict and estimate. Using techniques such as sensitivity analysis to identify key variables and risks helps to reflect worst, most likely, and best case scenarios, and, therefore, can support a reasoned judgment.

G. A post-completion review or audit of an investment decision should include an assessment of the decision-making process and the results, benefits, and outcomes of the decision.

3. **Application Guidance on Implementing the Principles** [an extract]

<table>
<thead>
<tr>
<th><strong>PRINCIPLE A</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>When appraising multi-period investments, where expected benefits and costs and related cash inflows and outflows arise over time, the time value of money should be taken into account [thereby suggesting the use of Discounted Cash Flow method].</td>
</tr>
</tbody>
</table>

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1 Copyright © November 2012 by the International Federation of Accountants (IFAC). All rights reserved. Used with permission of IFAC. Permission is granted to make copies of this work to achieve maximum exposure and feedback.
A5. Many decisions will involve sustainability elements, whether from an economic, environmental, or social perspective, that may need incorporating into project appraisal and investment decisions. Where economic, environmental, and social impacts are important to decision-making, information flows, particularly on costs and resulting impact, should be explicitly required where possible. A project or investment evaluation process should identify and incorporate such impacts where they give rise to costs and benefits, which are often not viewed as being a component of direct investment or operational costs. Therefore, these impacts are often referred to as "externalities" but their inclusion with other relevant information enables an organization to better manage these impacts and internalize the costs and benefits.

**PRINCIPLE B**

The time value of money should be represented by the opportunity cost of capital.

B6. Sustainability-related risks without an intergenerational dimension can be estimated and ranked, and expected benefits and costs incorporated into the appraisal in the form of cash flows. Incorporating sustainability into the cash flow analysis ensures that cash flows account for the expected costs of not investing in a sustainable path. However, the choice of cost of capital becomes more critical to a valuation decision the longer the time period for which the cash flows occur. A criticism of discounting is that it places lower importance on the needs of future generations and, therefore, has implications for intergenerational equity. For example, if seeking to take account of environmentally linked deaths, to attribute a value today of 100 per death, a discount rate of 10% would effectively mean that 10 deaths in year 25 were equivalent to one death today. Certain benefits and synergies relating to improved sustainability performance might be penalized in a DCF analysis, particularly with larger outlay and longer payback periods.

B7. An approach to deal with a project investment proposal involving potential substantial and irreversible intergenerational wealth transfers, which can be the case with environmental issues, such as global climate change or biodiversity that have potentially significant impacts on future generations, is to use declining or variable discount rates so that future values are increased. This can be achieved by using the certainty-equivalent discount factor or a hyperbolic discounting model, which assigns greater importance to the distant future by making the per-period discount rate change over time rather than using a constant discount rate. A pragmatic approach is to apply several discount rates to test the sensitivity of the outcome...and incorporate sustainability risk and constraints into the wider decision-making process by ensuring that undesirable environmental and social effects are adequately understood and managed within a project and not obscured by an inappropriate approach.

**PRINCIPLE C**

The discount rate used to calculate the NPV in a DCF analysis should properly reflect the systematic risk of cash flows attributable to the project being appraised, and not the systematic risk of the organization undertaking the project.

C2. Organizations considering an investment with high specific risks often use a high investment hurdle rate rather than using the organization's discount rate, therefore departing from a lower cost of capital that is calculated using the portfolio approach. There is no theoretical basis for setting a very high hurdle rate to compensate for high specific risk or a risk of failure. It is a matter of judgment, which can be supported by calculating the probability-weighted expected value of cash flows of an investment. This could be achieved by developing several scenarios and assigning them probabilities of realization, including a probability of a project failure if applicable.... Organizations should be aware of the potential behavioural issues that can arise where an investment hurdle is higher than the cost of capital for a project. In some situations, it could encourage bias in projections.
C3. Where a risk adjustment takes place as an adjustment to the discount rate or to expected cash flows, or combination of both approaches, it is important to avoid double counting or miscounting risk. The danger of building up “additive models” for a variety of risk factors is over discounting for risk. Risk can also be considered and analysed in a post-valuation adjustment through a sensitivity analysis…for example, with the adjustment taking the form of a discount for potential downside risk or a premium for upside risk.

**PRINCIPLE D**

A good decision relies on an understanding of the business and should be considered and interpreted in relation to an organization’s strategy, and its economic, social, and competitive position.

D1. Decisions, especially those taken in a relatively high-risk environment, involve cash flow estimates based on judgment. Hard and fast cash flows rarely exist. An investment and DCF analysis should probe behind cash flow estimates to understand both the nature of a positive NPV and the source of value over the opportunity cost of capital. Various aspects relating to environmental and social performance can be particularly difficult to quantify, such as the valuation of ecosystem services. However, opportunities and risks, and impact on strategy arising from issues such as climate change, can be determined using estimates and qualitative criteria. In reality, the idea that ecosystems might be of financial or economic value has conventionally been given little attention in the “hard” measures that are used to assess and report on company performance. In the worst case, undervaluing ecosystems may have served to undermine business performance by failing to identify new cost-saving or revenue-generating opportunities, or to highlight potentially costly liabilities.

D2. The NPV is only one criterion that supports an evaluation of a potential investment. It should be coupled with a review of (a) the investment’s strategic importance or (b) its alignment with the strategic themes and objectives that have been outlined in a strategic plan. Strategic imperatives and goals, such as achieving particular environmental or social goals, can influence the qualitative and quantitative data that is incorporated into the project appraisal. Figure 1 shows that the DCF model and analysis is only one part of the decision-making process, which starts with a strategic context, followed by a process of incorporating the relevant data, constructing the DCF model, interpreting results, and followed by a post decision review.

![Figure 1: The Project and Investment Appraisal Decision Process](image)

D3. In a strategic context, professional accountants in business could encourage consideration of a range of stakeholders in assessing potential investments and conducting their analysis. Stakeholders include employees, managers, communities, customers, suppliers, the industry, and the general public. For example, discussing sustainability issues with stakeholders helps to gauge their importance and magnitude. Stakeholder interactions can be a critical part of enabling, validating, and quantifying monetary and non-monetary benefits and costs. These lead to a better understanding of the impacts of making strategic and operational changes, such as in terms of customer spending, supplier relationships, and employee productivity and motivation.
D5. In its simplest form, NPV as a decision criterion is not flexible in handling follow-on investments linked to an initial investment. Real options analysis however can be a useful enhancement to a DCF analysis as part of managing risk as well as return. Used for several decades in some industries, it is now an emerging and evolving area of practice, more widely in valuation and investment appraisal. It can be seen as an extension of DCF analysis, and complementing techniques such as Monte Carlo Simulation that enables the identification of uncertain variables and how they behave. Options analysis accommodates real-life scenarios in which cash flows often depend on decisions that will only be made after resolving uncertainties. The use of options can enhance DCF analysis by incorporating uncertainty and flexibility. Both are often important aspects of managerial decision making, for example, by being able to up-scale investments if demand warrants. Real options that typically represent adjustments that can be made to projects following a decision to invest include the options to abandon, expand, scale-back, delay, or outsource.

D6. Real options analysis can be useful in evaluating decisions for investments whose value lies in their providing the organization with future investment opportunities that would otherwise not be open to it. Where a project is planned to start sometime in the future, a real options approach can help evaluation where there is a need to safeguard or make good use of resources or rights necessary for the project, if it goes ahead, in the meantime. Because of the potential additional complexity, real options analysis is often applied to significant investments that warrant the additional costs of analysis, and can be particularly useful in managing projects with a large sustainability component as well as those with high technical or market risks. It can also be useful to consider the way options are communicated and expressed to managers, such as the potential opportunity value approach.

D7. When to make investments remains an important decision that, in every case, requires careful analysis. The benefits of a potential investment could exceed its costs, but postponing it or undertaking it in a phased way could change the project risks and the time profile of benefits and costs and, therefore, the investment’s or project’s NPV. Projects generally have some mutually exclusive alternatives (e.g., invest now or later) or there may be options that could be exercised at different stages (e.g., make or buy, or make now, buy later). Additional costs at an early stage to preserve such options for a later stage may be worthwhile.

D8. Key inputs into a project and investment appraisal process (as depicted in Figure 2) include those costs and benefits that are external to the organization (i.e., those that accrue to society or to identifiable third parties). External impacts can be internalized by incorporating appropriate costs and benefits into the decision-making process. Complementary tools and techniques, such as environmental management accounting, full cost accounting (FCA), lifecycle assessment, and costing or whole life costing, and wider enterprise risk management can help to identify and quantify costs and benefits, and risks and opportunities related to both current and future strategies and operations. These tools and techniques help to bring into the project appraisal additional forms of analysis, including evaluations of external impacts, social impacts (e.g., health and safety or labour practices), economic impacts of decisions (e.g., for communities and suppliers), and environmental impacts (e.g., biodiversity and pollution). External impacts will relate to the identification and quantification of cash and non-cash costs and benefits accruing to both the organization and to society as a whole arising from the project or investment being appraised.
Appendix A: Definitions [an extract]

Ecosystem services: (also referred to as “environmental services” or “ecological services”) the benefits that people obtain from ecosystems. Examples include freshwater, timber, climate regulation, protection from natural hazards, erosion control, and recreation. Corporate ecosystem valuation is where both ecosystem degradation and the benefits provided by ecosystem services are explicitly accounted for with the intention of informing and improving business decision making.

2.2. Other issues in investment appraisal

There is no additional content to be studied at this level. All content has already been addressed in your prior learning. If you want to refresh your knowledge, please refer to the earlier section ‘Prior learning assumed’.

The activity below, the self-assessment questions provided later in this learning unit, and the integrated self-assessment at the end of this tutorial letter will help you to apply your knowledge.

Activity 3.2.1

The extract from the exposure draft issued by IFAC, entitled: Project and Investment Appraisal for Sustainable Value Creation, has reference.
Required | Marks
--- | ---
(a) Name the common term used to describe the impact of economic, environmental, and social matters, where these result in costs and benefits, but where these are not viewed as elements of direct investment or operational costs. | 1
(b) Discuss the downfalls of using a constant discount rate over time to discount projects with long time horizons, in terms of sustainability-related risks. | 3
(c) Give two examples of ways in which discounted cash flow techniques could be adjusted for it to place greater emphasis on environmental issues, especially where these have possible cash outflow implications far in the future. | 2
(c) Complete the sentence: ‘Where a risk adjustment takes place as an adjustment to the discount rate or to expected cash flows, or combination of both approaches, it is important to avoid…’ | 1
(d) Supply two examples of how the under-valuation of ecosystems in project and investment appraisals could ultimately undermine the performance of an entity. | 2
(e) List the other four parts of a Project and Investment Appraisal Decision Process, other than the compilation of a Discounted Cash Flow model. | 2
(f) Give six examples of ecosystem services | 3

Feedback on activity 3.2.1
No specific solution is offered here as all answers are embedded in the extract from the exposure draft provided.

Activity 3.2.2
Attempt question 6.7. in chapter 6 of *Managerial Finance*, 8th edition, without referring to the suggested solution

Solution to activity 3.2.2
Compare your answer to the suggested solution in the textbook and establish reasons for differences.

3. Self-Assessment questions
After working through all the relevant sections in the textbook, guidance and activities provided by this learning unit, you should now be able to attempt the following self-assessment questions.

**QUESTION 1**
12 MARKS (18 MINUTES plus reading time)
Perform part (d) of question 23 (Foodage) in the Question Bank, which relates to environmental matters.

Solution to self-assessment question 1
Find the solution in the Question Bank.
BIBLIOGRAPHY AND ADDITIONAL READING


LEARNING UNIT 3.3 – FOREIGN INVESTMENT

1. Introduction

An appropriate capital investment decision can only be made after considering several quantitative and qualitative factors. Quantitative appraisal of a proposed capital investment usually requires forecasting of investment-related and associated cash flows, which is then discounted at an appropriate risk-adjusted discount rate based on WACC. This process is complicated further when involving a foreign investment as we then have to consider additional factors, such as country risk and different currency units.

This learning unit is based on the following chapters in your prescribed textbook:

Managerial Finance – 8th edition
Chapter 6: The investment decision, part 6.9

2. Content

2.1. Quantitative analysis of a local capital investment decision

In performing a quantitative appraisal of a proposed local investment, we usually calculate the net present value (NPV) of the projected investment-related and associated cash flows (excluding finance-related cash flows), by discounting the cash flows using an appropriate risk-adjusted discount rate. Then, once all quantitative and qualitative factors have been considered, a capital investment decision is made. (These concepts are described in detail in the indicated section of the textbook [refer to prior learning].)

Next we consider additional considerations when contemplating the discount rate for foreign investment.

2.2. Country risk

According to author, Luis Pereiro (2002), country risk represents the combined risk from the following country-specific risk components (with examples in brackets):

- Currency risk and the risk resulting from inflation, including devaluation and volatility in the local currency (think of the volatility of South African rand a few years ago and of the recent devaluation in several emerging market currencies against benchmark currencies).
- The credit risk of the government, including the possibility of defaulting on international debt funding, such as government bonds (think of the euro-crisis, and recent changes in the perceived credit risk of Greece and Portugal).
- Social or political problems (think of recent events in Syria and Egypt).
- Possibility of government expropriation and nationalisation of private assets (think of recent events in Zimbabwe and Bolivia).
- Potential barriers to free capital flow in and out of the country (think of South Africa).

Pereiro (2002) adds that country risk is relevant where investment is not diversified geographically, either through practical limitations, due to countries restraining investors from entering and exiting (for example, South African exchange control partially restrains investors in this regard), or willingly, where investors choose to invest only in a single country and therefore effectively choose not to diversify geographically.

Next we consider ways of adjusting for the effects of country risk as part of foreign investment appraisal.
2.3. Foreign investment appraisal

Although little consensus exist amongst experts as to the best technique to use for the adjustment of country risk, numerous techniques have been described, with various levels of complexity. (Complex techniques for the adjustment of country risk fall beyond the scope of the curriculum.)

We recommend that you study the techniques described in this section rather than section 6.9, entitled “International capital budgeting”, as in the prescribed textbook.

In this section we discuss two basic techniques that are commonly used; both are based on the Capital Asset Pricing Model. (This discussion is adapted from descriptions by Correia [2011], Pereiro, [2002] and Damodaran [2009].)

a) Technique 1

This technique allows for the adjustment of country risk in components: partially at the level of projected cash flows and partially at the discount rate.

Apply the following steps in evaluating a foreign investment:

1. Estimate future cash flows in the foreign currency.
2. Convert to local currency (rand) using forecasted spot exchange rates for each year. (This step accounts for the effect of currency risk and is similar to the one used in analysing foreign finance. Refer to learning unit 11.2 in this regard.)
3. If available, add or deduct the incremental insurance premium (in rand, as obtained from Lloyds of London, for example) to account for the difference in political risk, expropriation risk, etc. (If the foreign country has a higher risk than South Africa then the incremental insurance premium should be deducted; if a lower risk then the incremental premium should be added.)
4. Determine/obtain the discount rate for the investor company (in South Africa, based on rand) and adjust for foreign country risk factors not incorporated in step 3.
5. Adjust the local discount rate (South African, based on rand) for the effect of improved geographical diversification benefits, if any. (This may result in a lowering of the rate.)
6. Further adjust the local discount rate (South African) for undiversified investment-specific risks, not accounted for as part of the forecasted cash flows.
7. Determine the net present value by discounting the cash flows (in rand) using the adjusted local (South African) discount rate.

b) Technique 2

This technique allows for the adjustment of country risk mainly at the level of the discount rate, where it incorporates a "country risk premium".

Country risk premium

A country risk premium is the additional return required over a benchmark risk-free rate, due to the effects of incremental country risk. A country risk premium is often calculated based on the spread of a sovereign bond (belonging to the country of investment) over a benchmark bond (often taken as US T-Bonds or German Bunds), both with the same monetary denomination (thus normally US dollars or euro) and both with a similar maturity date close to the life expectancy of the proposed investment.
One way of determining this spread is to refer to the rating allocated to the country's debt by one of the rating agencies and then to refer to the published spreads relative to the US T-bond, for instance. Tables 3.1 and 3.2 provide an indication of these bond-spreads. (Spreads are indicated in basis points; 100 basis points equals 1%. We do not provide a more recent representation because US corporate bond spreads in recent times approached their widest on record due to the international financial crisis, making later figures less representative.)

**Activity 3.3.1**

Determine the country risk premium of a proposed 10 year investment in Brazil, using the information in Table 10.3.1. Assume that the credit rating of Brazil's sovereign debt is rated at BBB.

**Solution to Activity 3.3.1**

The country risk premium of a proposed investment in Brazil is calculated as follows: A 10 year BBB rated bond has a spread of 292 basis points compared to US T-bonds (per Table 10.3.1), or 2.92%, which equals the Brazilian country risk premium over the US.

**Steps in applying technique 2**

Apply the following steps in evaluating a foreign investment using this technique:

1. Estimate future cash flows in the foreign currency.
2. Convert to a benchmark currency (US dollar or euro) using forecasted spot exchange rates for each year. (This process is similar to the one used in analysing foreign finance. Refer to learning unit 11.2 and 11.3 in this regard.)
3. Determine a risk-adjusted discount rate (US dollar or euro-based) as follows:

   \[
   WACC_{fi} = (K_d \times d\%) + (K_e \times e\%)
   \]

   Where:
   - \(WACC_{fi}\) = The weighted average cost of capital for the proposed foreign investment
   - \(K_e\) = Cost of equity
   - \(K_d\) = After-tax rate of return on debt capital (sometimes increased by the after tax country risk premium \(R_c\))
   - \(d\%\) = The debt component in the target capital structure, or debt capital as a percentage of the sum of the debt and ordinary equity capital (based on market values)
   - \(e\%\) = The equity component in the target capital structure, or ordinary equity capital as a percentage of the sum of the debt and ordinary equity capital (based on market values)
Calculation of $K_e$

$K_e = (R_{fg} + R_c) + \beta (MRP) + R_i$

Where:

$R_{fg} =$ Global risk free rate (for example equal to the yield on a US T-bond or German Bund with a maturity date close to the life expectancy of the investment)

$R_c =$ Country risk premium (for example calculated based on the spread of a sovereign bond [belonging to the country of investment] over a benchmark bond, both denominated in the same currency and both with the same maturity date)

$\beta =$ Representative Beta coefficient

$MRP =$ Representative equity market risk premium

$R_i =$ Premium for undiversified investment-specific risks, not accounted for as part of the forecasted cash flows.

4. Determine the net present value by discounting the cash flows (in US dollar or euro) using the (US dollar or euro) risk-adjusted discount rate.

5. Convert the net present value to rand using the current spot rate.

**Table 3.3.1: Yield spread over US T-bond by bond rating, May 2009 (Bloomberg)**
Table 3.3.2   Meaning of credit rating opinions (Standard & Poor's, 2010)

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>Extremely strong capacity to meet financial commitments. Highest Rating.</td>
</tr>
<tr>
<td>AA</td>
<td>Very strong capacity to meet financial commitments.</td>
</tr>
<tr>
<td>A</td>
<td>Strong capacity to meet financial commitments, but somewhat susceptible to adverse economic conditions and changes in circumstances.</td>
</tr>
<tr>
<td>BBB</td>
<td>Adequate capacity to meet financial commitments, but more subject to adverse economic conditions.</td>
</tr>
<tr>
<td>BBB-</td>
<td>Considered lowest investment grade by market participants.</td>
</tr>
<tr>
<td>BB+</td>
<td>Considered highest speculative grade by market participants.</td>
</tr>
<tr>
<td>BB</td>
<td>Less vulnerable in the near term but faces major on-going uncertainties to adverse business, financial and economic conditions.</td>
</tr>
<tr>
<td>B</td>
<td>More vulnerable to adverse business, financial and economic conditions but currently has the capacity to meet financial commitments.</td>
</tr>
<tr>
<td>CCC</td>
<td>Currently vulnerable and dependent on favourable business, financial and economic conditions to meet financial commitments.</td>
</tr>
<tr>
<td>CC</td>
<td>Currently highly vulnerable.</td>
</tr>
<tr>
<td>C</td>
<td>Currently highly vulnerable obligations and other defined circumstances.</td>
</tr>
<tr>
<td>D</td>
<td>Payment default on financial commitments.</td>
</tr>
</tbody>
</table>

Additional “+” or “-” ratings are sometimes indicated for finer classification.

Activity 3.3.2

Attempt the following illustrative example and compare your answer to the suggested solution.

Foreign investment

Assume you are the financial manager of a large South African firm who is contemplating an investment in Brazil.

You have already gathered or estimated the following information:

- The investment has a life expectancy of 3 years.
- Forecasted net cash flows per annum:
<table>
<thead>
<tr>
<th>Years from now</th>
<th>Forecasted net cash flows (currency: Brazilian real)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>(4)</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>
- Rates

<table>
<thead>
<tr>
<th>Currency</th>
<th>Rate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 USD</td>
<td>8.13</td>
<td>ZAR Spot</td>
</tr>
<tr>
<td>1 USD</td>
<td>1.83</td>
<td>BRL Spot</td>
</tr>
<tr>
<td>1 USD</td>
<td>2.10</td>
<td>BRL Forward rate (1 year)</td>
</tr>
<tr>
<td>1 USD</td>
<td>2.31</td>
<td>BRL Forward rate (2 years) - estimated</td>
</tr>
<tr>
<td>1 USD</td>
<td>2.49</td>
<td>BRL Forward rate (3 years) - estimated</td>
</tr>
</tbody>
</table>
Acronyms used:

USD = US dollar
BRL = Brazilian real
ZAR = South African rand

- Yield on a note with a maturity close to that of project life-expectation
  US treasury note 1.2%
- International equity market risk premium 5.0%
- Brazilian bond spread relative to US treasury 2.9% (Based on credit ratings)

- Information specific to the Brazilian investment
  o Beta coefficient (estimated) 2.0
  o Undiversified investment-specific risk 5.0%

- Other information
  o Value of international diversification (rand [million]) 1 (Estimated)

<table>
<thead>
<tr>
<th>REQUIRED</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perform a quantitative analysis of the proposed Brazilian investment to determine if the investment will yield a positive net present value.</td>
<td>(10)</td>
</tr>
</tbody>
</table>

### Solution to activity 3.3.2

#### Investment in Brazil

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRL (million) cash flows</td>
<td>(4,00)</td>
<td>3,00</td>
<td>5,00</td>
<td>7,00</td>
</tr>
<tr>
<td>Forward exchange rates (USD1 = BRL_)</td>
<td>1,83</td>
<td>2,10</td>
<td>2,31</td>
<td>2,49</td>
</tr>
<tr>
<td>USD (million) cash flows</td>
<td>(2,19)</td>
<td>1,43</td>
<td>2,16</td>
<td>2,81</td>
</tr>
</tbody>
</table>

Foreign discount rate

\[
K_e = (R_g + R_c) + \beta (MRP) + R_i
\]

\[
= (1, 2\% + 2, 9\%) [1] + 2(5\%) [1] + 5\%[1]
\]

\[
= 19,1\% 
\]

Factors or calculator steps shown

Discounted values (USD [million]) | 2,20 | (2,19) | 1,20 | 1,53 | 1,66 |

| Spot exchange rate (1USD = ZAR_) | 8,13 |
| Converted to ZAR (million) | 17,92 |
| Value of international diversification (ZAR [million]) | 1,00 |
| Net present value of Brazilian investment (ZAR [million]) | 18,92 |

Note: figures may not total due to rounding.
3. Summary

The growth in foreign investment over the past couple of decades is a natural result of the globalisation of business. However, since foreign investment is more complex its appraisal demands a greater level of diligence and skill. When performing a quantitative analysis of a foreign investment, we can use a few techniques to incorporate the effects of *country risk* (we described two such techniques in this learning unit).

The first technique incorporates country risk partially at the level of projected cash flows and partially at the level of the discount rate. In simplified terms, it requires that we:

- Convert the projected foreign cash flows into rand (thus accounting for currency risk);
- Where insurable, incorporate an insurance premium (or discount) into the cash flow forecast to account for the effects of the remaining country risk (all except currency risk); and
- Discount the projected cash flows using a rand-based discount rate, which has been adjusted for remaining factors.

The second technique adjusts for the country risk mainly at the level of the discount rate. In abridged terms it requires that we:

- Convert the projected foreign cash flows into a benchmark currency (US dollar or euro);
- Determine a benchmark (US dollar or euro-based) discount rate and incorporate a *country risk premium*;
- Discount the forecast cash flows using this discount rate;
- Convert to rand using the current spot rate.

In particular, in this learning unit, you have learned how to further apply your knowledge and skills achieved through your prior learning to a scenario, on an integrated basis.

In addition, you have learned how to

- perform and evaluate a foreign investment decision

**BIBLIOGRAPHY AND ADDITIONAL READING**


LEARNING UNIT 3.4 - SCENARIO ANALYSIS AND MONTE CARLO SIMULATION

1. Introduction

Traditional discounted cash flow techniques used to evaluate a proposed investment, attempt to capture the effects of risk and uncertainty into a single figure – a single net present value (NPV) or internal rate of return (IRR) for the investment. Yet these techniques incorporate several variables, each subject to a degree of uncertainty. In consequence, by attempting to capture the effects of overall risk and uncertainty into a single figure, these techniques do not fully highlight the potential effects these may have. (Traditional discounted cash flow techniques are described in detail in the indicated section of the textbook [refer to prior learning].)

To help address this weakness, an appraiser can employ certain techniques that shed greater light on the effects of risk and uncertainty. Two such techniques are scenario analysis and Monte Carlo simulation.

This learning unit is based on the following chapters in your prescribed textbook:

Managerial Finance – 8th edition
- Chapter 6: The investment decision, part 6.7

2. Content

2.1. Scenario analysis

Scenario analysis is an extension of sensitivity analysis performed on a capital investment appraisal. Firstly, a brief summary of sensitivity analysis: Here we change a single variable in the analysis (whilst keeping the other constant or independent) and note the outcome on the appraisal, such as the effect on the investment’s net present value (NPV) or internal rate of return (IRR). We can also plot the results on a sensitivity graph.

With scenario analysis we determine the outcome of an investment appraisal for different scenarios (often in three levels, such as best-case, worst-case and intermediate-case). In contrast to sensitivity analysis, here we have the luxury of assuming interdependence of variables. For example, under a worst-case scenario, if we assume a smaller market share we can also lower the expected selling price of the product.

2.2. Monte Carlo simulation

Monte Carlo simulation was developed by nuclear physicists to help solve complex problems incorporating a fair degree of uncertainty. Practitioners in managerial finance later realised that it would be helpful also in performing capital investment appraisals, specifically for proposed investments incorporating a large degree of uncertainty.

A Monte Carlo simulation utilises a computer programme (Microsoft Excel® or a dedicated software programme) to generate a large number of scenarios (similar to those described in the preceding section), given probabilities for inputs. A random number is then generated for each of the uncertainties that, in turn, is input into a formula to generate an outcome for a single scenario. This is then repeated for thousands of scenarios.

Before we explore the intricacies of Monte Carlo simulation, let’s assume that regular discounted cash flow analysis was performed on two investments. Further assume that this analysis revealed an expected internal rate of return (IRR) of 9.2% for Investment X and an IRR of 10.3% for Investment Y. Based on these internal rates of return only, a financial manager will typically choose Investment Y, due to its higher IRR (if this is in excess of the company’s weighted average cost of capital).
A paper on risk analysis in capital investment, written by David Hertz as long ago as 1964, highlights the additional insight that could be obtained through Monte Carlo simulation. Table 3.4.1 shows the results of a Monte Carlo simulation performed by Hertz for two proposed investments, Investment X and Investment Y, based on thousands of scenarios. If assumptions are aligned, the peak of the distribution plotted for each investment should equal the results of a regular discounted cash flow analysis. (Notice that the peak of the distribution plotted for Investment X equals the 9.2% IRR described earlier and likewise, the distribution plotted for Investment X equals the 10.3% IRR described earlier.) However, Monte Carlo simulation offers additional insight into the two investments. For example, Table 3.4.1 reveals the following:

- Investment X has a one-in-twenty chance of a negative IRR, and a one-in-fifty chance of an IRR in excess of 30%.
- Investment Y has a one-in-ten chance of a negative IRR, and a one-in-hundred chance of an IRR in excess of 30%.

**Table 3.4.1 Results of a Monte Carlo simulation: Various possible internal rates of return for two proposed investments (Hertz, 1964:96)**

---

**Activity 3.4.1**

Assume you are the financial manager of the company considering the two investments for which a Monte Carlo Simulation was performed in Table 3.4.1. Further assume that the company has a weighted average cost of capital equal to 9%, with enough funds only for a single investment.

Would you recommend Investment X or Y, given the following information?

1. The company is neither risk averse nor an extreme risk taker and aims to maximise expected returns from investments.
2. The company is risk-averse and wants to avoid a loss-making investment where possible.
3. The company favours an investment with a greater possibility of becoming a “shooting star” (by offering great returns).

**Solution to activity 3.4.1**

1. Investment Y. This investment has the higher expected internal rate of return (10.3% per annum vs 9.2%).
2. Investment X. The expected internal rates of return of the two investments do not differ considerably (9.2% vs. 10.3%) and Investment X has half the chance of incurring a loss (1/20 vs 1/10 chance).
3. Investment X. The expected internal rates of return of the two investments do not differ considerably (9.2% vs. 10.3%) and Investment X has double the chance of earning an exceptional return of 30% per annum (1/50 vs 1/100 chance).

3. Summary

Traditional discounted cash flow analysis, whereby a single net present value (NPV) or internal rate of return (IRR) is calculated for a proposed investment, does not always highlight the potential effects of risk and uncertainty – especially for investments exposed to a large degree of uncertainty. To help address this weakness, an appraiser can employ scenario analysis and Monte Carlo simulation in order to shed greater light on the effects of risk and uncertainty.

In particular, in this learning unit, you have learned how to further apply your knowledge and skills achieved through your prior learning to a scenario, on an integrated basis.

In addition, you have learned how to

- quantify the effect of specific scenarios on the net present value and/or internal rate of return of a proposed investment
- describe how Monte Carlo simulation could help measure the impact of risk on a proposed investment

4. Self-assessment questions

After working through all the relevant sections in the textbook, guidance and activities provided by this learning unit, you should now be able to attempt the following self-assessment questions.

QUESTION 1 45 MARKS (70 MINUTES)

Attempt question 6.4 in chapter 6 of Managerial Finance, 8th edition, without referring to the suggested solution. Compare your answer to the suggested solution and establish reasons for differences.

The suggested solution presents the discounted cash flow analysis with a row layout. Experience has shown, however, that students make fewer mistakes when presenting such an analysis in a columnar format; we therefore suggest that you rather follow this route.

Remember to make notes summarising the reasons for your mistake(s). Further indicate on a summary sheet of questions performed during the year, whether you need to revisit this question, or sections of the question, later.

BIBLIOGRAPHY AND ADDITIONAL READING


PART 1 LEARNING UNIT 4 – SOURCES AND FORMS OF FINANCE AND FOREIGN FINANCE

LEARNING OUTCOMES

After studying this learning unit, you should be able to do the following:

- Further apply your knowledge and skills achieved through your prior learning (see below) to a scenario, on an integrated basis.
- Detail the most prominent forms of foreign finance available to business entities in South Africa and, for each, further detail the typical business users, sources of finance or investors, and associated requirements.
- Determine the most appropriate form of finance for a South African business entity, given a specific narrative, by performing appropriate calculations for various financing options (including foreign finance) and consideration of other relevant factors.

PRIOR LEARNING ASSUMED

In your undergraduate and Advanced Management Accounting studies you have already mastered the learning outcomes indicated below. If you want to refresh your knowledge, please refer to your undergraduate material, prescribed textbook and MAC4861 Tutorial Letter 102/2018 (available under ‘additional resources’ on myUnisa). For your convenience we also provide textbook references.

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>Managerial Finance, 8th edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sources and forms of finance</td>
<td></td>
</tr>
<tr>
<td>- Identify potential sources of funds on an intermediate level.</td>
<td></td>
</tr>
<tr>
<td>- Critically assess the suitability of different forms of finance to different types of business entities, different types of assets financed and different intended purposes.</td>
<td></td>
</tr>
<tr>
<td>- Describe the role, characteristics, advantages and disadvantages of different sources of financing to an entity after considering its strategies and objectives.</td>
<td></td>
</tr>
<tr>
<td>- Perform and evaluate a financing decision (incorporating the effect of tax, including section 24j of the Income Tax Act).</td>
<td></td>
</tr>
<tr>
<td>- Explain the terms “project finance”, “securitisation”, “asset securitisation” and “syndication”.</td>
<td></td>
</tr>
<tr>
<td>- Apply common business vocabulary and terms in your discussions.</td>
<td></td>
</tr>
<tr>
<td>- Identifies the strengths and weaknesses of the financial proposal or financing plans</td>
<td></td>
</tr>
<tr>
<td>- Review the alignment of a proposal or plan with strategic objectives.</td>
<td></td>
</tr>
</tbody>
</table>

- Chapter 7, including Appendix 1
- MAC4861 TL102
INTRODUCTION

Finance (funding) represents the lifeblood that enables a business to grow, expand, thrive, and sometimes, merely survive. Raising finance is therefore a very important aspect for any business enterprise. The aim of the financing decision is to decide on the best financing option for a proposed investment – best not only in terms of cost (determined by calculating the net present cost or IRR), but also fit (determined by considering various entity-specific factors).

THIS LEARNING UNIT CONSISTS OF THE FOLLOWING SUB LEARNING UNITS:

<table>
<thead>
<tr>
<th>LEARNING UNIT</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING UNIT 4.1</td>
<td>SOURCES AND FORMS OF FINANCE</td>
</tr>
<tr>
<td>LEARNING UNIT 4.2</td>
<td>SOURCES AND FORMS OF FOREIGN FINANCE</td>
</tr>
<tr>
<td>LEARNING UNIT 4.3</td>
<td>QUANTITATIVE ANALYSIS OF FOREIGN FINANCE, BASED ON DISCOUNTED CASH FLOW</td>
</tr>
</tbody>
</table>
LEARNING UNIT 4.1 SOURCES AND FORMS OF FINANCE

1. Introduction

The subject of this learning unit has already been introduced as part of the introduction above.

This learning unit is based on selected sections of the following chapters in your prescribed textbook (Managerial Finance, 8th edition):

- Chapter 7: The financing decision

2. Content

2.1. Alignment with strategic objectives

Successful development of strategy requires a clear understanding by the strategic planning team of perceived future capital limitations. If the strategy being formulated exceeds those limitations, the need for additional sources of capital becomes itself a strategic issue and the process of considering strategic alternatives begins.

There is no additional content to be studied at this level. All content has already been addressed in your prior learning. If you want to refresh your knowledge, please refer to the earlier section ‘Prior learning assumed’.

The activity below, the self-assessment questions provided later in this learning unit, and the integrated self-assessment at the end of this tutorial letter will help you to apply your knowledge.

Activity 4.1.1

Attempt question 7–1 in chapter 7 of Managerial Finance, 8th edition, without referring to the suggested solution.

Solution to activity 4.1.1

Find the suggested solution after the question in the textbook.

3. Self-assessment questions

After working through all the relevant sections in the textbook, guidance and activities provided by this learning unit, you should now be able to attempt the following self-assessment questions.

QUESTION 1 15 MARKS (22 MINUTES)

Attempt question 3, - Isimbi Ltd - part f, in the Question Bank book.

Solution to question 1

Find the suggested solution in the Question Bank book

BIBLIOGRAPHY AND ADDITIONAL READING

LEARNING UNIT 4.2 - SOURCES AND FORMS OF FOREIGN FINANCE

1. Introduction

Finance represents the lifeblood that enables a business to expand, grow, thrive, and sometimes, merely survive. Raising finance is therefore a very important aspect for any business enterprise. In deciding on a form of finance, an enterprise should consider several factors, including the following:

- suitability to the type of business and/or asset financed
- true cost
- impact on cash flow
- constraints associated with the form of finance, including the effect of debt covenants
- impact on the overall risk profile
- how it pairs with existing finance
- availability

The present financial crisis have not only restricted the access to finance for many business entities, but placed renewed focus on the risk of using excessive debt finance. For the new, smaller business it is often a case of using whatever form of finance is available, at whatever cost. In contrast, a larger business – with a track record – can often apply more of the knowledge and skills highlighted in this learning unit, to secure the right form of finance, at the right time, and at the right cost. Under certain circumstances, foreign finance will provide the right match to such a business enterprise.

In this learning unit we explore the specialist field of foreign finance, as it applies to the South African business entity.

Now study the following subsections in Managerial Finance (8th edition) and attempt the activities included therein (if any):

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Subsection</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>7.16 Foreign Finance</td>
</tr>
</tbody>
</table>

2. Content

2.1. Sources and forms of foreign finance

Notwithstanding the effects of the financial crisis, several forms of finance are nonetheless available to the South Africa business, from several sources – local and foreign. It is important to place sources and forms of foreign finance within the greater context of the financing field.

The more common forms of foreign finance include debt financing in the form of

- foreign currency loans
- medium-term notes, issued in a foreign currency
- foreign bonds
- eurobonds
Sources of foreign debt finance include:

- South African development finance institutions (DFIs), such as the Industrial Development Corporation (IDC)
- foreign DFIs
- foreign banks
- foreign institutional and retail investors

Certain foreign investors may also invest directly in the equity of South African businesses, which is referred to as “foreign direct investment”.

2.2. Detailed description of specific forms of foreign finance

a) Foreign bonds

A foreign bond is a bond issued by an entity to investors in a foreign country, in the currency of that foreign country. For example, foreign bonds, known as “Bulldog bonds”, may be issued by a South African business to investors in the UK bond market, in pound sterling (Emery, Finnerty & Stowe, 2007). Foreign bonds may also be listed on foreign securities exchanges in order to promote their liquidity on the secondary market.

b) Eurobonds

Eurobonds represent bonds issued by an entity to European investors, denominated in a currency other than that of the entity's home country or country of issue (Levinson, 2006). For example, a South African business may issue euro-denominated Eurobonds to investors in the UK. Eurobonds are frequently denominated either in euro, US dollar or Swiss francs. (The name Eurobond is derived from the European investors to which it is issued, not the euro currency). Eurobonds are frequently listed on the London Stock Exchange and is subject to less regulation as it is issued only to institutional investors, not retail investors (London Stock Exchange, no date).

2.3. Uses of foreign finance

Foreign finance is used predominately by large companies, for the following reasons:

- To obtain access to finance, where local sources of finance is limited.
- To diversify the sources of finance.
- To refinance existing debt.
- Foreign finance may be more affordable than local finance.
- To act as a natural hedge, where the company earns foreign income.

2.4. Additional considerations when using foreign finance

A South African business using foreign finance has to take cognisance of additional considerations, including:

- foreign exchange risks and associated cost of hedging this risk.
- South African Reserve Bank requirements.
- credit rating agency reviews and ratings (This is normally only required where credit risk is not intrinsically assessed by the debt provider, such as a foreign bank. An example where it may be necessary is before a foreign bond issue; this function is then typically performed by one of the three main rating agencies, which are Standard & Poor’s, Fitch and Moody’s.)
3. Summary

Foreign finance is increasingly important to the larger business entity, especially firms earning foreign income and those with operations in other countries. However, when contemplating the use of foreign finance, it is important that a business consider not only the related benefits (e.g. natural hedging opportunities and diversification of the sources of finance), but also the additional risks (e.g. foreign exchange exposure).

Multitude forms of foreign finance exist, including foreign currency denominated loans, notes and bonds. These, in turn, can be obtained from several sources, including foreign banks, institutions and other investors. Foreign finance is more complex as several additional requirements have to be met and considered.
LEARNING UNIT 4.3 - QUANTITATIVE ANALYSIS OF FOREIGN FINANCE, BASED ON DISCOUNTED CASH FLOW

1. Introduction

The aim of the financing decision is to decide on the best financing option for a particular investment, as planned by a particular business. In choosing the best financing option several factors have to be considered, including:

1. Financing options: what are the available options, including foreign finance options?
2. Capital structure: does the business have capacity for more debt; how close is the business to its optimal (target) capital structure; and is there an opportunity to move closer to the target level?
3. Cost considerations: which viable financing option is the most cost effective?
4. Impact: what is the impact of each viable choice in finance on the business (e.g. the impact on control, and the impact of conditions and debt covenants)?
5. Matching: is there a proper match between expected investment cash inflows and finance cash outflows?
6. Other benefits: does the financing option allow for other benefits, such as the opportunity to form a natural hedge to foreign exchange risk? (For example, a company earning income from foreign operations in US dollar, for instance, may opt to also take out a foreign loan denominated in US dollar.)

2. Content

2.1. Interaction between the finance and investment decisions

The financing decision normally takes place after a capital investment appraisal, where the investment appraisal indicated that a particular investment should be made (usually accompanied by a positive net present value). The same is true in the case of a financing decision involving foreign debt.

The only exception is where there is a particular cheap form of finance available and this form of finance is directly linked to the particular investment (e.g. a favourable leasing option of a particular asset). In this case the finance decision can influence the outcome of an investment decision, because here the cheap finance and asset are intricately linked. In such a case the favourable asset-specific finance can provide an additional advantage, which may turn a capital-investment decision’s negative net present value, into a positive.

2.2. Determining the most cost-effective form of finance

When comparing the cost of several viable financing options, it is important to compare like to like. Therefore, a financial manager should attempt to compare the cost of different financing options where these have similar conditions, security requirements and covenants. If the options are not directly comparable in this way, these factors should be adjusted for in the calculation (which may involve a great deal of subjective adjustment, which in turn, will reduce the reliability of the results).

In deciding on the most cost-effective form of finance, you should calculate and compare the following for each viable finance option:
the net present cost in South African rand of the associated finance-related cash flows (including the implications of taxation), using an appropriate risk-adjusted discount rate; and/or

the internal rate of return per annum of the associated finance-related cash flows (including the implications of taxation), taking cognisance of different exchange rates

This process is fairly simple when comparing, for example, different loan options denominated in rand. However, foreign debt finance introduces further complications, including: changes in exchange rates, foreign exchange risk and country risk.

a) Determining the net present cost / internal rate of return of foreign debt finance

When a South African business wishes to incur foreign debt finance, an evaluation of this financing option will require certain adjustments to be made, including adjustment for the effects of changes in exchange rates and foreign exchange risk.

Author, Luis E Pereiro (2002), detailed adjustment methods that can be used when evaluating foreign debt finance in a book on valuation in emerging markets. Although this publication is written from a US perspective, the methods are equally relevant in a SA perspective. More specialised methods are available, but the description in this section is based on the simplified method described by Pereiro and we therefore acknowledge the contribution made by this author.

A financial manager of a South African business, determining the net present cost (NPC) or internal rate of return (IRR) of foreign debt should preferably make use of the following method.

Suggested method

(This method is adjusted for a SA perspective and slightly adapted. According to this method the effects of changes in exchange rates and foreign exchange risk are incorporated in the exchange rates used to convert the foreign currency to the home currency.)

You should apply the following steps:

1. Project the financing-related cash flows in the foreign currency.
2. Project the applicable taxation effect of the financing cash flows, but express as a foreign currency.
3. Total the financing-related cash flows.
4. Convert the total cash flows into rand using a forecast spot exchange rate at each time interval, based on (in order of preference):
   a. Forward exchange rates published by banks (normally only available for a 12 month horizon and only for major currencies).
   b. Relative interest rates, using the International Fisher Effect, based on this formula:

\[(ZAR/FC)_t = (ZAR/FC)_0 \times \left( \frac{1+r_i}{1+r_F} \right)^{t-1}\]

Where:

\[(ZAR/FC)_t = \text{the exchange rate of South African rand compared to the foreign currency at time } t\]
(ZAR/FC)0 = the current spot exchange rate

\[ r_t = \text{the spot South African interest rate at term } t \text{ (often determined based on the yield to maturity of an appropriate South African government bond)} \]

\[ rF_t = \text{the spot foreign country interest rate at term } t \text{ (often determined based on the yield to maturity of an appropriate foreign government bond)} \]

(Variables in italics are usually provided in an examination.)

5. Determine the NPC by discounting the forecast total rand-converted cash flows using an appropriate discount rate (usually the risk-adjusted after-tax cost of new debt); or determine the IRR based on the initial rand-equivalent loan advance and forecasted total rand-converted cash flows.

(We demonstrate the use of this method in the activity below.)

b) Quantitative analysis of foreign finance: other important procedures

In cases where a business elects not to hedge the foreign exchange risk (refer to learning unit 14 for hedging techniques), or is unable to do so, it is important to perform additional procedures to explore the effects of risk and uncertainty. These procedures may include:

- sensitivity analyses, based on changes in the forecast spot exchange rates
- allocating probabilities to different outcomes such as “optimistic”, “expected” and “pessimistic” to weigh the effect of uncertainty on forecast cash flows (refer to learning unit 10 for more detail on this technique)
- a Monte Carlo simulation (refer to learning unit 10 for more detail on this technique)

Activity 4.3.1

Construction and mining group

The management of a construction company, listed on the JSE (known as the JSE Ltd or Johannesburg Stock Exchange; previously known as the Johannesburg Securities Exchange) recently approved the investment in a R770 million mining fleet by a subsidiary company (Newco). This investment will allow the group to enter the contract mining market.

The management has been in discussions with various parties regarding the financing of this fleet. The company has received two proposals but has not yet made a final decision on which option to pursue.

Details of the proposals are as follows:

1. A loan by the group’s usual commercial bankers

The bank is prepared to advance a five year loan of R770 million to Newco, secured by means of a notarial bond over the fleet. The loan will bear interest at an effective annual rate of 8.65%. (This is deemed to be Newco’s pre-tax cost of new debt.)

2. €70 million Eurobond

The second alternative is that Newco issue a €70 million Eurobond. The Eurobond will be secured by means of a notarial bond over the fleet. The bond will have a fixed coupon of 5.65% per annum payable annually in arrears. The Eurobond will be listed on various European bond exchanges. The bond will be redeemable five years after issue at the par value of €70 million.
Other market information:

- The current R : € exchange rate is 11,00 : 1,00.
- The 12 month forward R : € exchange rate published by a bank is 11,70 : 1,00.
- Recent data on government bonds are as follows:

<table>
<thead>
<tr>
<th>Maturity date (years from now)</th>
<th>Latest yields</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>South Africa</td>
</tr>
<tr>
<td>2 years</td>
<td>6,3%</td>
</tr>
<tr>
<td>3 years</td>
<td>6,5%</td>
</tr>
<tr>
<td>4 years</td>
<td>6,8%</td>
</tr>
<tr>
<td>5 years</td>
<td>7,0%</td>
</tr>
</tbody>
</table>

You can assume that:

- Newco’s tax rate is 28% per annum.
- No other hedging instruments are available to Newco.

**REQUIRED**

(a) Determine the most cost-effective form of finance to be used by Newco to finance the fleet investment. (10)

(The example is based on the 2011 Qualifying Examination, Part 2, question 2: updated, adapted and requirement changed [SAICA, 2011].)

**Solution to activity 4.3.1**

**Determination of net present cost (NPC) and internal rate of return (IRR)**

**Marks**

**A loan by the group’s usual commercial bankers**

As the loan’s effective annual rate of 8,65% per annum is equal to Newco’s *pre-tax cost of new debt* ($k_d$ before tax), this rate will dictate the loan’s NPC and IRR. (NB: This is a specific condition with a specific outcome).

$k_d$ of Newco $= 8,65% \times 0,72 = 6,228\%$.

Therefore:

IRR/YR of this loan $= 6,228\%;$ and

NPC of this loan $= (R770\ 000\ 000)$ (equal to the loan amount advanced, but negative)

Due to the lack of transaction fee and other complicating factors, a simplified calculation has been shown in the suggested solution for the SA taxation effect.

Students should specifically refer to Tutorial Letter 104 of MAC4861 (available under Additional Resources on myUnisa) to ensure they are up to date with the impact of Section 24J of the Income Tax Act on the financing decision. In this regard, you should let the wording in the required-section and the number of allocated marks guide you towards using a “short” or “long” approach. The superior approach, when there is a transaction fee involved, is the long approach as described in chapter 7 of the prescribed textbook.
### Eurobond

<table>
<thead>
<tr>
<th>Eurobond</th>
<th>Year</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest (EUR) 5.65%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA taxation effect (28% on interest) (stated in EUR)</td>
<td></td>
<td>3 955 000</td>
<td>3 955 000</td>
<td>3 955 000</td>
<td>3 955 000</td>
<td>3 955 000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Redeem bond (EUR)</td>
<td></td>
<td>1 107 400</td>
<td>1 107 400</td>
<td>1 107 400</td>
<td>1 107 400</td>
<td>1 107 400</td>
<td>(70 000 000)</td>
<td></td>
</tr>
<tr>
<td>Finance-related cash flows (after tax) (EUR)</td>
<td></td>
<td>0</td>
<td>2 847 600</td>
<td>2 847 600</td>
<td>2 847 600</td>
<td>2 847 600</td>
<td>(72 847 600)</td>
<td></td>
</tr>
<tr>
<td>Forecast spot exchange rate (see below)</td>
<td></td>
<td>11,70</td>
<td>12,33</td>
<td>13,09</td>
<td>13,86</td>
<td>14,61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finance-related cash flows (after tax) (ZAR)</td>
<td></td>
<td>0</td>
<td>(33 316 920)</td>
<td>(35 110 908)</td>
<td>(37 275 084)</td>
<td>(39 467 736)</td>
<td>(1 064 303 436)</td>
<td></td>
</tr>
<tr>
<td>IRR/YR</td>
<td></td>
<td>10.16%&lt;sup&gt;CS&lt;/sup&gt;</td>
<td>Calculator steps shown</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPC, discounted at:</td>
<td></td>
<td>6.228%</td>
<td>1,000</td>
<td>0,94137</td>
<td>0,88618</td>
<td>0,83422</td>
<td>0,78532</td>
<td>0,73927</td>
</tr>
<tr>
<td>NPC</td>
<td></td>
<td>(911 379 616)</td>
<td>0</td>
<td>(31 363 595)</td>
<td>(31 114 588)</td>
<td>(31 095 792)</td>
<td>(30 994 611)</td>
<td>(786 811 030)</td>
</tr>
</tbody>
</table>

Note: your answers may differ due to rounding differences.

### Determination of forecast spot exchange rate (ZAR/EUR):

Current spot rate (ZAR/EUR)<sub>0</sub> = 11,00

Forward exchange rate (ZAR/EUR)<sub>1</sub> = 11,70 not available not available not available not available not available

Based on relative interest rates (ZAR/EUR)<sub>t</sub> = 12,33<sup>C1</sup> 13,09<sup>C2</sup> 13,86<sup>C3</sup> 14,61<sup>C4</sup>

Increase in exchange rate = 6.4% 5.4% 6.2% 5.9% 5.4%

Example calculation:

<table>
<thead>
<tr>
<th></th>
<th>(11,70-11,00)</th>
<th>(12,33-11,70)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example calculation</td>
<td>11,00</td>
<td>11,70</td>
</tr>
</tbody>
</table>
Conclusion

The loan by the group’s usual commercial bankers will represent the most cost effective form of finance, as it has the lower NPC (compare its NPC of –R770 000 000 to –R911 379 616 of the Eurobond) and the lower IRR (compare 6,228% to 10,16%).

Calculations

1. **Calculations 1 – 4 based on:**

\[
(ZAR/EUR)_t = (ZAR/EUR)_0 \times \frac{(1+r_t)^t}{(1+r_{F_t})^t}
\]

\[
\begin{align*}
C_1 &= (ZAR/EUR)_2 = 11,00 \times (1+6,3\%)^2)/(1+0,4\%)^2 = 12,33 \\
C_2 &= (ZAR/EUR)_3 = 11,00 \times (1+6,5\%)^3)/(1+0,5\%)^3 = 13,09 \\
C_3 &= (ZAR/EUR)_4 = 11,00 \times (1+6,8\%)^4)/(1+0,8\%)^4 = 13,86 \\
C_4 &= (ZAR/EUR)_5 = 11,00 \times (1+7,0\%)^5)/(1+1,1\%)^5 = 14,61
\end{align*}
\]

2. **Calculation 5:**

Calculator steps (e.g. HP10bII) -

<table>
<thead>
<tr>
<th>P/YR</th>
<th>CF_0</th>
<th>CF_1</th>
<th>CF_2</th>
<th>CF_3</th>
<th>CF_4</th>
<th>CF_5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>770 000 000</td>
<td>(33 316 920)</td>
<td>(35 110 908)</td>
<td>(37 275 084)</td>
<td>(39 467 736)</td>
<td>(1 064 303 436)</td>
</tr>
</tbody>
</table>

IRR/YR = 10,16%

Available marks 13

Maximum marks 10

Focus notes

- The effect of changes in foreign exchange (or associated hedging costs) often has a significant impact on the NPC/IRR of a financing option.
- When determining the forecast spot exchange rates, we make use firstly of published forward exchange rates and, where this is not available, we use the effect of relative interest rates applying the International Fisher Effect, as shown.
- A simple reasonability check to the forecast spot exchange rates is to compare the difference between the interest rates in the two currency zones for a specific year to the increase in the forecast exchange rate for that year; these two percentages should be comparable, but not necessarily equal to one another. (For example, the difference in the yield percentages for year 5 is 5,9% [7,0% - 1,1%], the increase in the forecast exchange rate for year 5 is 5,4%.)

3. **Summary**

A business contemplating the use of foreign finance has to consider several additional factors, including the related benefits and additional risks. Except for these important factors, a business should further strive to minimise the cost of finance. In order to determine the true cost of various financing options, we can perform a discounted cash flow analysis of every option. Such analysis provides a net present cost (NPC) or internal rate of return (IRR) for every financing option – ensuring that we compare like with like.
Foreign finance exposes a business to the effect of foreign currency movements, which normally have an additional cash flow implication. We therefore have to incorporate the effect of expected foreign currency movements into the discounted cash flow analysis. Here we can make use of forecast spot exchange rates for every year, based on published forward exchange rates and / or relative interest rates calculated using the International Fisher Effect.

**BIBLIOGRAPHY AND ADDITIONAL READING**


PART 1 LEARNING UNIT 5 – DIVIDEND DECISION

LEARNING OUTCOMES

After studying this learning unit, you should be able to further apply your knowledge and skills achieved through your prior learning (see below) to a scenario, on an integrated basis, as well as incorporate tax considerations.

PRIOR LEARNING ASSUMED

In your undergraduate and Advanced Management Accounting studies you have already mastered the learning outcomes indicated below. If you want to refresh your knowledge, please refer to your undergraduate material, prescribed textbook and MAC4861 Tutorial Letter 102/2018 (available under ‘additional resources’ on myUnisa). For your convenience we also provide textbook references.

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>Managerial Finance, 8th edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Identify factors affecting the dividend decision.</td>
<td>• Chapter 14</td>
</tr>
<tr>
<td>• Understand, at an intermediate level, the relevance and irrelevance theories and its impact on dividend decisions.</td>
<td>• MAC4861 TL102</td>
</tr>
<tr>
<td>• Identify and discuss the different methods and forms (including alternative forms) that an entity may choose in paying dividends, on an intermediate level.</td>
<td></td>
</tr>
<tr>
<td>• Discuss the various factors to be considered before declaring a dividend / setting a dividend policy, on an intermediate level.</td>
<td></td>
</tr>
<tr>
<td>• Evaluate the dividend decision, on an intermediate level.</td>
<td></td>
</tr>
<tr>
<td>• Recommends, on an intermediate level, the most appropriate method to distribute profits</td>
<td></td>
</tr>
</tbody>
</table>

INTRODUCTION

Surprisingly, successful companies display widely divergent dividend policies. Here, some companies choose to pay strong, consistent dividends (e.g. Kumba), whilst others choose to not pay any dividends at all (in the spirit of Warren Buffet and Apple Inc.). This may lead one to predict that dividend policy is irrelevant. Yet, statutory requirements, shareholder preferences and the effect of taxation make this a more complex matter. Besides, regardless of the policy, you can never please everyone: somewhere, somehow there is likely to be a disgruntled person in the form of a shareholder, an employee, a director, or… (fill in the blank).

This learning unit refers to inter alia some of the different methods and forms of dividends, and factors to be considered before setting a dividend policy.

THIS LEARNING UNIT CONSISTS OF THE FOLLOWING SUB LEARNING UNITS:

<table>
<thead>
<tr>
<th>LEARNING UNIT</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING UNIT 5.1</td>
<td>DIVIDEND DECISION</td>
</tr>
</tbody>
</table>
LEARNING UNIT 5.1 - DIVIDEND DECISION

1. Introduction

The subject of this learning unit has already been introduced as part of the introduction above. This learning unit is based on selected sections of the following chapters in your prescribed textbook (Managerial Finance, 8th edition):

- Chapter 14: The dividend decision

2. Content

2.1. Tax implications

In terms of the Income Tax Act, dividends tax is payable on the distribution of profits:

- Distributions to shareholders that are natural persons carry dividends tax at 15% and shareholders will thus effectively receive 85% of the declared dividend.
- Dividends tax is not applicable when distributions are made to local companies.

Other specific exclusions in terms of the Income Tax Act should be considered.

There is no additional content to be studied at this level. All content has already been addressed in your prior learning. If you want to refresh your knowledge, please refer to the earlier section ‘Prior learning assumed’.

The activity below, the self-assessment questions provided later in this learning unit, and the integrated self-assessment at the end of this tutorial letter will help you to apply your knowledge.

Activity 5.1.1

Attempt question 14-2 in chapter 14 of Managerial Finance, 8th edition.

Solution to Activity 5.1.1

Find the suggested solution after the question in the textbook.

Remember to make notes summarising the reasons for your mistake(s). Further remember to indicate on a summary sheet of questions performed during the year, whether you need to revisit this question, or sections of the question, later.

3. Self-assessment questions

After working through all the relevant sections in the textbook, guidance and activities provided by this learning unit, you should now be able to attempt the following self-assessment questions.

QUESTION 1 12 MARKS (18 MINUTES)

Attempt question 1, Medico Group SA - part d, in the Question Bank book.

Solution to question 1

Find the suggested solution after the question in the Question Bank book.

BIBLIOGRAPHY AND ADDITIONAL READING

PART 1 LEARNING UNIT 6 – MANAGEMENT OF WORKING CAPITAL

LEARNING OUTCOMES

After studying this learning unit, you should be able to further apply your knowledge and skills achieved through your prior learning (see below) to a scenario, on an integrated basis.

PRIOR LEARNING ASSUMED

In your undergraduate and Advanced Management Accounting studies you have already mastered the learning outcomes indicated below. If you want to refresh your knowledge, please refer to your undergraduate material, prescribed textbook and MAC4861 Tutorial Letter 102/2018 (available under ‘additional resources’ on myUnisa). For your convenience we also provide textbook references.

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>Managerial Finance, 8th edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Analyse an entity’s accounts receivable, inventories, accounts payable and total working capital, and suggest improvements.</td>
<td>• Chapter 9</td>
</tr>
<tr>
<td>• Calculate and evaluate the effect of changes in credit terms/policy.</td>
<td>• MAC4861 TL102</td>
</tr>
<tr>
<td>• Analyse the entity’s financing of working capital and suggest improvements.</td>
<td></td>
</tr>
<tr>
<td>• Discuss the role of IT systems (incl Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) systems) in working capital management.</td>
<td></td>
</tr>
<tr>
<td>• Assess an entity’s cash management and make recommendations for improvement (You can exclude the Baumol and Miller-Orr models.)</td>
<td></td>
</tr>
</tbody>
</table>

INTRODUCTION

Working capital management involves the management of current assets and current liabilities with the aim of maintaining these at efficient levels. But what do we mean by efficient level? To paraphrase a fairy tale, these levels are not too low, not too high, but just right. Why is this important? Maintaining levels of working capital that are too high are expensive (it may generate insufficient returns) and it may negatively affect the entity’s cash flow; levels that are too low may result in lost opportunities. This learning unit is concerned with the range of skills required to manage working capital, including ways in which it could be financed.

THIS LEARNING UNIT CONSISTS OF THE FOLLOWING SUB LEARNING UNITS:

<table>
<thead>
<tr>
<th>LEARNING UNIT</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING UNIT 6.1</td>
<td>MANAGEMENT OF WORKING CAPITAL</td>
</tr>
</tbody>
</table>
LEARNING UNIT 6.1 - MANAGEMENT OF WORKING CAPITAL

1. Introduction

The subject of this learning unit has already been introduced as part of the introduction above.

This learning unit is based on selected sections of the following chapters in your prescribed textbook (Managerial Finance, 8th edition): Chapter 9: Working capital management.

2. Content

There is no additional content to be studied at this level. All content has already been addressed in your prior learning. If you want to refresh your knowledge, please refer to the earlier section ‘Prior learning assumed’.

The activity below, the self-assessment questions provided later in this learning unit, and the integrated self-assessment at the end of this tutorial letter will help you to apply your knowledge.

Activity 6.1.1

Attempt question 9-3 in chapter 9 of Managerial Finance, 7th edition, without referring to the suggested solution.

Solution to Activity 6.1.1

Find the suggested solution after the question in the textbook.

Remember to make notes summarising the reasons for your mistake(s). Further remember to indicate on a summary sheet of questions performed during the year, whether you need to revisit this question, or sections of the question, later.

3. Self-Assessment questions

After working through all the relevant sections in the textbook, guidance and activities provided by this learning unit, you should now be able to attempt the following self-assessment questions.

QUESTION 1 50 MARKS (75 MINUTES)

Attempt question 9-4 in chapter 9 of Managerial Finance, 8th edition.

Solution to question 1

Find the suggested solution after the question in the textbook.

BIBLIOGRAPHY AND ADDITIONAL READING

PART 1 LEARNING UNIT 7 – TREASURY FUNCTION

LEARNING OUTCOMES

After studying this learning unit, you should be able to further apply your knowledge and skills achieved through your prior learning (see below) to a scenario, on an integrated basis.

PRIOR LEARNING ASSUMED

In your undergraduate and Advanced Management Accounting studies you have already mastered the learning outcomes indicated below. If you want to refresh your knowledge, please refer to your undergraduate material, prescribed textbook and MAC4861 Tutorial Letter 102/2018 (available under ‘additional resources’ on myUnisa). For your convenience we also provide textbook references.

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>Managerial Finance, 8th edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Discuss the role of the treasury function.</td>
<td>• Chapter 15</td>
</tr>
<tr>
<td>• Integrate your knowledge of the workings of foreign exchange and interest rates.</td>
<td>• Chapter 16</td>
</tr>
<tr>
<td>• Identify risks related to foreign exchange and interest rates.</td>
<td>• MAC4861 TL102</td>
</tr>
<tr>
<td>• Identify and discuss hedging techniques and risk management.</td>
<td></td>
</tr>
<tr>
<td>• Analyses various derivative instruments that are available to mitigate risks</td>
<td></td>
</tr>
<tr>
<td>• Develops and evaluates risk management policies related to financial risk, at a basic level</td>
<td></td>
</tr>
<tr>
<td>• Monitor risk exposure, taking into account changes within the entity and within the economy, and recommend changes to risk management policies.</td>
<td></td>
</tr>
<tr>
<td>• Identify the need for and evaluate the usefulness of derivatives (including forward and future contracts, swaps, put and call options).</td>
<td></td>
</tr>
<tr>
<td>• Set up different hedges and calculate the cost thereof (at an intermediate level).</td>
<td></td>
</tr>
<tr>
<td>• Suggest appropriate derivative instruments to manage the risk</td>
<td></td>
</tr>
<tr>
<td>• Make use of the Black Scholes model to value options.</td>
<td></td>
</tr>
<tr>
<td>• Distinguish between the use of derivatives for purposes of hedging and speculation.</td>
<td></td>
</tr>
</tbody>
</table>

INTRODUCTION

The corporate treasury function fulfils multiple, important roles within most organisations. (The function may be interwoven with the other duties of the financial manager for smaller entities.) The treasury function is concerned with managing the entity’s payments, receipts and cash to make sure that the entity has sufficient liquidity to meet its obligations, whilst simultaneously, managing currency, interest rate and other financial risk. To fulfil these roles effectively requires a proper understanding of several areas, including the functioning of foreign exchange markets and currency risk, as well as interest rates and interest rate risk.

THIS LEARNING UNIT CONSISTS OF THE FOLLOWING SUB LEARNING UNITS:

<table>
<thead>
<tr>
<th>LEARNING UNIT</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING UNIT 7.1</td>
<td>THE TREASURY FUNCTION</td>
</tr>
</tbody>
</table>
LEARNING UNIT 7.1 - THE TREASURY FUNCTION

1. Introduction

The subject of this learning unit has already been introduced as part of the introduction above. This learning unit is based on selected sections of the following chapters in your prescribed textbook (Managerial Finance, 8th edition):

- Chapter 15: The functioning of the foreign exchange markets and currency risk
- Chapter 16*: Interest rates and interest rate risk

*Please note that you are not required to know detailed calculations relating to interest rate swaps, caps, floors and collars.

2. Content

There is no additional content to be studied at this level. All content has already been addressed in your prior learning. If you want to refresh your knowledge, please refer to the earlier section ‘Prior learning assumed’. The activity below, the self-assessment questions provided later in this learning unit, and the integrated self-assessment at the end of this tutorial letter will help you to apply your knowledge.

Activity 7.1.1

Attempt question 15-5 in chapter 15 of Managerial Finance, 8th edition, without referring to the suggested solution.

Solution to Activity 7.1.1
Find the suggested solution after the question in the textbook.

Activity 7.1.2

Attempt question 16-2 in chapter 16 of Managerial Finance, 8th edition, without referring to the suggested solution.

Solution to Activity 7.1.2
Find the suggested solution after the question in the textbook.

3. Self-Assessment questions

After working through all the relevant sections in the textbook, guidance and activities provided by this learning unit, you should now be able to attempt the following self-assessment questions.

QUESTION 1  
10 MARKS (15 MINUTES)

Attempt question 15-6 in chapter 15 of Managerial Finance, 8th edition.

Solution to question 1
Find the suggested solution after the question in the textbook.

BIBLIOGRAPHY AND ADDITIONAL READING
PART 2 – FUNCTION OF FINANCIAL MANAGEMENT

PURPOSE

The purpose of Part 2 is to reinforce and enhance your existing competencies related to the function of financial management, and to assist you in applying your knowledge to a scenario on an integrated basis.

The specific competencies referred to above relate to the analysis of the entity’s financial situation, advisory services to a financially troubled business, and estimating the value of a business.

This part also develops and applies specific competencies referred to in Part 1. In addition, the purpose of the numerous activities and self-assessment activities included in this part is also to enhance your pervasive qualities and skills – the professional qualities and skills that Chartered Accountants are expected to bring to all tasks. These professional qualities include ethical behaviour and professionalism, personal attributes, and professional skills.

The diagram below contains a schematic presentation of the content of this part, as well as earlier and later parts.
PART 2 LEARNING UNIT 8 – ANALYSIS AND INTERPRETATION OF FINANCIAL AND NON-FINANCIAL INFORMATION

LEARNING OUTCOMES

After studying this learning unit, you should be able to further apply your knowledge and skills achieved through your prior learning (see below) to a scenario, on an integrated basis.

PRIOR LEARNING ASSUMED

In your undergraduate and Advanced Management Accounting studies you have already mastered the learning outcomes indicated below. If you want to refresh your knowledge, please refer to your undergraduate material, prescribed textbook and MAC4861 Tutorial Letter 103/2018 (available under ‘additional resources’ on myUnisa). For your convenience we also provide textbook references.

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>Managerial Finance, 8th edition</th>
</tr>
</thead>
</table>
| ● Clearly distinguish between the different objectives and areas of analysis (including the ratios/calculations suitable to the different areas). | • Chapter 8  
• MAC4861 TL103 |
| ● Perform financial analysis, interpret results and draw conclusions as to an entity’s present and future financial situation (an advanced level). |  |
| ● Analyse and interpret non-financial information. |  |
| ● Identify and incorporate the influence of the entity’s competitive, economic, social, political and internal environment upon your results. |  |
| ● Integrate your knowledge of sustainability, and environmental, social and governance factors as part of your analysis. |  |

INTRODUCTION

Analysis and interpretation of information are important functions of financial management. These tasks are essential as they form the basis for a better understanding – an understanding that could then be used for several purposes. Perhaps unsurprisingly, the traditional focus of these endeavours was on financial information; however, these days, non-financial information is starting to assume more weight – specifically, where this relates to matters of sustainability, and environmental, social and governance factors.

THIS LEARNING UNIT CONSISTS OF THE FOLLOWING SUB LEARNING UNITS:

<table>
<thead>
<tr>
<th>LEARNING UNITS</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING UNIT 8.1</td>
<td>ANALYSIS AND INTERPRETATION OF FINANCIAL AND NON-FINANCIAL INFORMATION</td>
</tr>
</tbody>
</table>
LEARNING UNIT 8.1 - ANALYSIS AND INTERPRETATION OF FINANCIAL AND NON-FINANCIAL INFORMATION

1. Introduction

In this learning unit we further explore an important function of financial management, which involves the analysis and interpretation of financial and non-financial information.

Financial information is analysed, in part, to assess both business and financial risk. This includes the calculation and comparison of ratios within the entity over time, within the industry/similar entities as well as the discussion of, and conclusion on, the calculated ratios.

The wider scope of this topic also requires analysis and interpretation of non-financial information, including information on sustainability, and environmental, social and governance matters. Additional material on the integrated report and KING IV (which also deals with these matters) can be found in MAC4861, Tutorial Letter 102/2018. It is available for download under ‘additional resources’ on myUnisa.

This learning unit is based on selected sections of the following chapters in your prescribed textbook (Managerial Finance, 8th edition):

- Chapter 8: Analysis of financial and non-financial information

2. Content

At an applied management accounting level, students should not expect too many marks solely for being able to calculate a ratio. More important is to understand and interpret the ratio, trend and cash flows which are supported by possible and credible reasons for unexpected variances. A discussion of an entity’s financial position must be logical and structured and should add value and should not only indicate an increase or decrease in the ratio.

3. Self-Assessment question

After working through all the relevant sections in the textbook, guidance and activities provided by this learning unit, you should now be able to attempt the following self-assessment questions.

QUESTION 1 30 MARKS (45 MINUTES)

Attempt parts (a) and (b) of question 6, - Raps Group Ltd - appearing in the Question Bank.

The relevant sections of the required-part (containing additional notes and guidance) are repeated below.

<table>
<thead>
<tr>
<th>REQUIRED</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Analyse the working capital management of OKAY (Pty.) Ltd. at 31 August 2011 based on the available information and discuss your findings using the following format: (N1)</td>
<td>5</td>
</tr>
<tr>
<td>Analysis and calculations</td>
<td></td>
</tr>
<tr>
<td>Discussion of findings</td>
<td></td>
</tr>
<tr>
<td>(N2) Indicate whether levels are typical/ low or high as compared to the industry</td>
<td></td>
</tr>
<tr>
<td>Possible reasons for your findings, considering the industry</td>
<td></td>
</tr>
</tbody>
</table>

Assume 365 days in one year                                                 | 8     |

N1: Pay particular attention to the exact wording of the required section. Part (a) requires that you include all available information in your discussion.

N2: Answers should be carefully planned before being executed. The headings and format should be used as prescribed.
(b) Analyse and discuss the expenditure reported in the supplied statements of comprehensive income of OKAY (Pty) Ltd for the years ended 31 August 2009 to 2011. (N3)

- Pay particular attention to the behaviour of the following costs relative to revenue; (N4)
  - Cost of goods sold;
  - Depreciation; and
  - Employees, occupancy and other trading expenses.

Suggested solution to question 1

Refer to the solution in the Question Bank.

QUESTION 2

Attempt question 8-1 in chapter 8 of Managerial Finance, 8th edition, without referring to the suggested solution.

SOLUTION TO QUESTION 2

Find the solution after the practice question in the textbook.

QUESTION 3

Attempt question 8-2 in chapter 8 of Managerial Finance, 8th edition, without referring to the suggested solution.

SOLUTION TO QUESTION 3

Find the solution after the practice question in the textbook.

QUESTION 4

 Attempt question 8-3 in chapter 8 of Managerial Finance, 8th edition, without referring to the suggested solution.

SOLUTION TO QUESTION 4

Find the solution after the practice question in the textbook.

BIBLIOGRAPHY AND ADDITIONAL READING

JSE. (No date.) Guidelines to listing on the JSE (online). Available from: <https://www.jse.co.za/listing-process/listing-on-the-jse> Johannesburg: JSE


PART 2 LEARNING UNIT 9 – BUSINESSES IN DIFFICULTY

LEARNING OUTCOMES

After studying this learning unit, you should be able to further apply your knowledge and skills achieved through your prior learning (see below) to a scenario, on an integrated basis.

PRIOR LEARNING ASSUMED

In your undergraduate and Advanced Management Accounting studies you have already mastered the learning outcomes indicated below. If you want to refresh your knowledge, please refer to your undergraduate material, prescribed textbook and MAC4861 Tutorial Letter 103/2018 (available under 'additional resources' on myUnisa). For your convenience we also provide textbook references.

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>Managerial Finance, 8th edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Identify tools that can be utilised to measure performance of an organisation</td>
<td>• Chapter 13</td>
</tr>
<tr>
<td>• Identify and advise financially-troubled businesses (at a basic knowledge level).</td>
<td>• MAC4861 TL103</td>
</tr>
<tr>
<td>• Identify the tax implications of the possible courses of action.</td>
<td></td>
</tr>
<tr>
<td>• Suggest appropriate means of refinancing a business.</td>
<td></td>
</tr>
<tr>
<td>• Prepare a preliminary analysis of the sources of the financial difficulty, the severity of the situation and the potential for the success or failure of the recovery plans.</td>
<td></td>
</tr>
<tr>
<td>• Understand the business rescue principles as set out in the Companies Act.</td>
<td></td>
</tr>
<tr>
<td>• Integrate your knowledge of business performance measurement tools, ways of business restructuring (at a basic level), in attempting an integrated question.</td>
<td></td>
</tr>
</tbody>
</table>

INTRODUCTION

Business entities may find themselves in financial distress for a multitude of reasons. One of the functions of financial management is to assist these businesses, in the form of sound advice and with assistance in using the appropriate tools at their disposal. Here, businesses could restructure/reorganise themselves within the guidelines of the Companies Act; they could enter into voluntary liquidation; or restructure by means of divestiture, or an absorption or amalgamation with another entity.

Restructuring in the form of disinvestment may help with dealing with financial distress, but may also form part of a strategy of ‘best-practice parenting’. According to this strategy, holding companies should display a superior means of ‘parenting’ the subsidiary and, if not possible, it should then consider divesting. Here, the level of ‘difficulty’ in which the subsidiary finds itself necessitates a broader reading.

THIS LEARNING UNIT CONSISTS OF THE FOLLOWING SUB LEARNING UNITS:

<table>
<thead>
<tr>
<th>LEARNING UNITS</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING UNIT 9.1</td>
<td>BUSINESSES IN DIFFICULTY</td>
</tr>
</tbody>
</table>
LEARNING UNIT 9.1 BUSINESSES IN DIFFICULTY

1. Introduction

The subject of this learning unit has already been introduced as part of the introduction above.

This learning unit is based on the following chapter in your prescribed textbook (Managerial Finance, 8th edition):

- Chapter 13: Financial distress

2. Content

There is no additional content to be studied at this level. All content has already been addressed in your prior learning. If you want to refresh your knowledge, please refer to the earlier section ‘Prior learning assumed’.

The activity below and the integrated self-assessment at the end of this tutorial letter will help you to apply your knowledge.

3. Self-assessment question

After working through all the relevant sections in the textbook, guidance and activities provided by this learning unit, you should now be able to attempt the following self-assessment questions.

QUESTION 1

Attempt question 13-4 in chapter 13 of Managerial Finance, 8th edition, without referring to the suggested solution.

Solution to Question 1

Find the suggested solution after the question in the textbook.

BIBLIOGRAPHY AND ADDITIONAL READING

PART 2 LEARNING UNIT 10 – VALUATIONS

LEARNING OUTCOMES

After studying this learning unit, you should be able to further apply your knowledge and skills achieved through your prior learning (see below) to a scenario, on an integrated basis.

In addition, after studying this learning unit, you should be able to

- use a range of skills to perform, and professionally present, business and equity valuations using a model based on EVA®/MVA

PRIOR LEARNING ASSUMED

In your undergraduate and Advanced Management Accounting studies you have already mastered the learning outcomes indicated below. If you want to refresh your knowledge, please refer to your undergraduate material, prescribed textbook and MAC4861 Tutorial Letter 103/2018 (available under ‘additional resources’ on myUnisa). For your convenience we also provide textbook references.

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>Managerial Finance, 8th edition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chapter 11:</td>
</tr>
<tr>
<td></td>
<td>MAC4861 TL103</td>
</tr>
<tr>
<td>Display an understanding of the complexities and uncertainties underlying the various valuation approaches, methodologies, methods and models suitable to business and equity valuations.</td>
<td></td>
</tr>
<tr>
<td>Use a range of skills to perform, and professionally present, advanced business and equity valuations using the following valuation methodologies/methods/models: (1) price of recent investment, (2) net assets, (3) earnings multiples (several), (4) market price multiples, (5) Gordon Dividend Growth Model, and (6) models based on free cash flow.</td>
<td></td>
</tr>
<tr>
<td>Discuss the various considerations and recommend ways in which an entrepreneur could prepare for the sale of his/her business.</td>
<td></td>
</tr>
<tr>
<td>Identify the critical assumptions and facts that underlie the valuation estimate.</td>
<td></td>
</tr>
</tbody>
</table>
INTRODUCTION

Valuations is not only fascinating, but pervasive: it incorporates several principles learnt in preceding learning units and further serves as a springboard of knowledge to later learning units. In order to master the learning outcomes of this learning unit, you will thus require a strong foundation in your prior learning and the preceding learning units included in this tutorial letter, including, but not limited to: the cost of capital, capital investment appraisal and sources and forms of financing. In turn, this learning unit of valuations will serve as an introduction to further, more advanced learning units, such as mergers and acquisitions.

As a Chartered Accountant you may one day perform professional valuations, but even if you don’t, your skill set will still demand a good understanding of valuation principles.

In this learning unit you will learn a couple of new methods/models of valuation, but mainly, you will be dealing with more complex valuations. In short, you will be enhancing and applying your prior learning. Many students struggle with this important topic precisely because they are attempting to refine knowledge in this area that is not strong to begin with. If you are one of these students, we strongly encourage you to allocate extra time to this learning unit in order to first ‘cement’ your prior learning (indicated below), before attempting the further learning presented in this learning unit.

THIS LEARNING UNIT CONSISTS OF THE FOLLOWING SUB LEARNING UNITS:

<table>
<thead>
<tr>
<th>LEARNING UNITS</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING UNIT 10.1</td>
<td>VALUATIONS</td>
</tr>
</tbody>
</table>
LEARNING UNIT 10.1  VALUATIONS

1. Introduction

A successful *Applied Management Accounting* student is required to display advanced knowledge and engagement in the topic of Management Accounting that is ‘at the forefront of [this] field’. In addition to this demanding requirement, you will also have to show that you are able to *apply* your knowledge to complex scenarios (as implied by the title of the course).

2. Content

The content within this learning unit builds on the concepts introduced in your prior studies and in the preceding learning units of this tutorial letter. Some new concepts and valuation models (i.e. EVA®/MVA.) will also be learnt.

This learning unit is based mainly on the following chapter in your prescribed textbook (*Managerial Finance*, 8th edition):

- Chapter 11 – Business and equity valuations

To help you track your overall progress, be advised that combined revision of prior learning and new study required for this learning unit will be based on all subsections of this chapter (i.e. no subsection is to be excluded; Appendix 2 of chapter 11 is for noting only, but the valuation outlines in Appendix 1 of chapter 11 may be very helpful).

3. Self-assessment questions

After working through all the relevant sections in the textbook, guidance and activities provided by this learning unit, you should now be able to attempt the following self-assessment questions.

**QUESTION 1**  
22 MARKS (33 MINUTES)

Perform the required parts of practice question 11-2 in the *Managerial Finance* (8th edition) textbook.

**Solution to self-assessment question 1**

Find the solution after the practice question in the textbook.

**QUESTION 2**  
24 MARKS (36 MINUTES)

Perform the required parts of practice question 11-3 in the *Managerial Finance* (8th edition) textbook.

**Solution to self-assessment question 2**

Find the solution after the practice question in the textbook.
QUESTION 3  
9 MARKS (18 MINUTES plus reading time)

Perform part (e) of question 1 (Arete Office Automation) of Part II (Financial Management) of the Qualifying Examination of 2007. The question and suggested solution is available from:


or


(Alternatively, just search for the relevant page by entering the following phrase into your search engine: Past exam papers site: saica.co.za.)

Solution to self-assessment question 3

Find the solution on Saica’s website available from:


BIBLIOGRAPHY AND ADDITIONAL READING


PART 3 – MERGERS AND ACQUISITIONS AND BUSINESS PLANS

PURPOSE

The purpose of Part 3 is to reinforce and enhance your existing competencies related to the evaluation of mergers and acquisitions, and the development of business plans/proposals. In addition, its purpose is to assist you in applying your knowledge to a scenario on an integrated basis.

This part also develops and applies specific competencies referred to in Part 1 and 2. In addition, the purpose of the numerous activities and self-assessment activities included in this part is also to enhance your pervasive qualities and skills – the professional qualities and skills that Chartered Accountants are expected to bring to all tasks. These professional qualities include ethical behaviour and professionalism, personal attributes and professional skills.

The diagram below contains a schematic presentation of the content of this part as well as earlier parts.
# PART 3 LEARNING UNIT 11 – MERGERS AND ACQUISITIONS

## LEARNING OUTCOMES

After studying this learning unit, you should be able to further apply your knowledge and skills achieved through your prior learning (see below) to a scenario, on an integrated basis.

## PRIOR LEARNING ASSUMED

In your undergraduate and Advanced Management Accounting studies you have already mastered the learning outcomes indicated below. If you want to refresh your knowledge, please refer to your undergraduate material, prescribed textbook and MAC4861 Tutorial Letter 103/2018 (available under ‘additional resources’ on myUnisa). It is also essential to have mastered the outcomes of **learning unit 10** (Valuations) before attempting this learning unit.

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>Managerial Finance, 8th edition</th>
</tr>
</thead>
</table>
| • Analyse the risks and financial implications of a merger, acquisition, proposed start-up, strategic alliance or divestiture, including: | • Chapter 12  
  ✓ the strategic context  
  ✓ behavioural implications  
  ✓ legal implications  
  ✓ pricing considerations  
  ✓ impact of synergy  
  ✓ financing considerations  
  ✓ management buy-outs  
  ✓ Black Economic Empowerment (BEE)  
  ✓ post-acquisition review  
  ✓ industry regulation  
  ✓ environmental, social and governance implications  |
| • Based on the analysis, suggest | • MAC4861 TL 103  
  ✓ the form of the transaction  
  ✓ financing options and terms  
  ✓ due diligence procedures  
  ✓ systems, information, confidentiality and disclosure requirements  
  ✓ conflict of interest issues  
  ✓ key risks and rewards  |
| • Use a range of skills to perform advanced valuations for purposes of mergers & acquisitions (M&As), using various valuation methodologies/methods/models and incorporating the effect of synergies. |
INTRODUCTION

The business of mergers and acquisitions is an unforgiving business, whereby massive amounts of money are either spent or lost.

As a chartered accountant you may well be involved in these transactions, in some capacity or another. This learning unit therefore conveys important concepts that will lay the necessary groundwork in your studies but possibly also in your future area of specialism.

THIS LEARNING UNIT CONSISTS OF THE FOLLOWING SUB LEARNING UNITS:

<table>
<thead>
<tr>
<th>LEARNING UNITS</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING UNIT 11.1</td>
<td>VALUATION FOR PURPOSES OF M&amp;As: SYNERGIES</td>
</tr>
<tr>
<td>LEARNING UNIT 11.2</td>
<td>OTHER CONSIDERATIONS</td>
</tr>
</tbody>
</table>
LEARNING UNIT 11.1 VALUATION FOR PURPOSES OF M&As: SYNERGIES

1. Introduction

Valuation for purposes of M&As builds to a large extent on the concepts already addressed in the learning unit of Valuations (learning unit 10). It incorporates an extraordinary phenomenon with a combined effect greater than the sum of the parts – a synergy effect.

This learning unit is based on selected sections of the following chapters in your prescribed textbook (Managerial Finance, 8th edition):

- Chapter 11
- Chapter 12

2. Content

2.1. Corporate restructuring

Business entities often restructure their operations, assets, financial or legal structure – in a process called corporate restructuring (refer to figure 11.1) – with the aim of becoming more successful or to better serve their corporate strategy.

Instead of growing organically, a firm can sometimes achieve faster growth, especially in a new market, by expanding through a merger with or acquisition of another firm. Sometimes, changing circumstances, including changing economies and strategies, dictate that a firm divest itself of certain subsidiaries or interests.

Figure 11.1 Forms of corporate restructuring (a selection)

According to a new research area called ‘best practice parenting’, investors are increasingly demanding from firms a demonstration of their superior ‘parenting’ of subsidiaries. This dictates that firms not only expand through M&As and other transactions, but may also demand timely divestitures.

As explained, there are various forms of corporate restructuring; however, this learning unit focuses on what is probably the most sensational: mergers and acquisitions.
2.2. M&As, or a creature by another name?

The business of M&As is not only a merciless business, whereby massive amounts of money are either spent or lost, but also one going by several names. Here, the term ‘mergers’ usually refer to deals where two business enterprises take near equal stakes in each other’s businesses; the term ‘acquisitions’ basically refer to the purchase of a business enterprise. To complicate matters, a merger is sometimes described as an ‘amalgamation’, and an acquisition is sometimes referred to as a ‘takeover’. On the other hand, financial accountants prefer the universal term of ‘business combinations’.

The exact technical distinction between these terms have become blurred and is therefore of lesser importance for purposes of this learning unit. Here we will refer mainly to the term M&As and may use the terms ‘merger’ and ‘acquisition’ interchangeably.

Finally, two further terms have to be introduced. An ‘acquirer’ represents the business enterprise that purchases or acquires (through a bidding process) another enterprise, which is known as the ‘target’.

Note

The distinction between horizontal, vertical and conglomerate mergers/acquisitions/takeovers is important. These classifications have already been introduced as part of your prior learning and are also described within the following subsections in Managerial Finance (8th edition):

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Subsection</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>12.1 Strategic context</td>
</tr>
</tbody>
</table>

2.3. The synergy effect

Many years ago, Igor Ansoff – applied mathematician and eminent thinker in Strategic Management – eloquently captured the meaning of synergy between different organisations by describing it as the:

\[ 2 + 2 = 5 \text{ effect (1965:72).} \]

Coming from a mathematician we know that there has to be some deeper meaning to this otherwise nonsensical equation. In fact, the extra “1” in this equation is generated through the efficiencies generated by the working together of two (previously separate) organisations. In other words, it is generated through a synergy effect.

Importantly, studies show that synergy in the case of M&As is by no means guaranteed. Studies further show that in successful cases, synergies frequently accrue to only the target business enterprise’s shareholders, mainly due to the payment of outsized M&A premiums by the acquirer (Sirower, ML & Sahni, 2006).

2.4. Valuation of for purposes of M&A: Synergies

Business and equity valuations form a very important part of M&As. In this area you would draw heavily from the range of specialist skills mastered in the topic of valuations (learning unit 17). In performing a valuation for purposes of M&As, you may represent either the acquirer, or the target, or otherwise, act as an independent appraiser.

As a result, you may have to determine (1) a minimum price of the target (normally to be considered by the target organisation), (2) a maximum price of the target (payable by the acquirer without them destroying value by overpaying), or (3) a fair value of the target (normally acting as an independent appraiser).
Here, the following guidelines apply:

- When determining a **minimum value** of the target organisation, all synergies are usually disregarded.
- When determining a **maximum value**, all specific (unique) synergies that may exist between the target and the acquirer are usually quantified and included in the maximum price.
- Finally, if determining a **fair value** of the target organisation, only synergies that could exist in general (also with other acquirers) are quantified and included in the fair value – unique synergies are disregarded here. The reason for this is because competition between different bidders will create a market for the synergies that are achievable by more than one potential bidder.

**Note**

We could quantify synergies using a number of valuation methodologies, methods or models. However, we normally value synergy using a discounted cash flow method.

**Activity 11.1.1**

Bidder Ltd (“Bidder”) is seeking accelerated growth through the acquisition of compatible, external business organisations.

In this regard, a committee of Bidder, tasked with identifying suitable candidates for acquisition, has suggested the purchase of Target Ltd (“Target”) – a company in a different, but compatible industry.

In case of a takeover of Target by Bidder the following specific synergies and related costs are expected:

- 50 employees of Target would immediately be made redundant at an after-tax retrenchment cost of R1,2 million.
- Annual post-tax wage savings are expected to be R750 000 (at current prices). Future wage increases would have grown at double the inflation rate for next year and at a rate equal to inflation for years thereafter.
- Some land and buildings of Target would be sold for R800 000 (after tax) and do not need to be replaced (the combined entity will have sufficient office space).
- Fixed advertising and distribution cost savings of R150 000 (before tax) would be saved in the next year and for each year thereafter.
- Legal and other acquisition-related cost at present value are expected to amount to R3 million (after tax).

The following additional information is available:

- The weighted average cost of capital of Target has been estimated at 18%.
- The income tax rate is 28%.
- The current rate of inflation is 5% per annum and is expected to remain at approximately this level in the foreseeable future.
- Unless otherwise mentioned, all fixed expenses will grow by inflation only.
- The intrinsic equity value of Target has been estimated at R20 million (this value was determined using an income approach and excludes all possible synergies).
- If a company, other than Bidder, were to acquire Target, it is expected that only 40% of the net synergy benefit will be realised.

**Required**

<table>
<thead>
<tr>
<th>Required</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Calculate the value of all specific synergies, after associated costs, between Bidder and Target, based on available information.</td>
<td>(10)</td>
</tr>
<tr>
<td>(b) Determine a minimum selling price which Target may consider.</td>
<td>(1)</td>
</tr>
<tr>
<td>(c) Determine a maximum bid price which Bidder may offer.</td>
<td>(1)</td>
</tr>
</tbody>
</table>
(d) Determine the fair value of Target (2)
(e) Critically discuss reasons why Bidder should consider offering less than the maximum bid price (determined in part (c)) for Target and recommend a more suitable bid price.
(Source: UNISA, TOE408W, test 3 [2011] – updated, truncated and adjusted)

Solution to Activity 11.1.1

Part (a) Present value of synergies and related cost

<table>
<thead>
<tr>
<th>Wage savings and associated cost</th>
<th>Year 0 R</th>
<th>Year 1 R</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees – retrenchment cost\textsuperscript{N1}</td>
<td>(1 200 000)</td>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>Wage savings for Year 1 (R750 000 x (1+ (2 x 5%)))</td>
<td>825 000</td>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>Wage savings for years after Year 1: Apply the Gordon Growth Model\textsuperscript{N2}</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(P_0 = \frac{C_f}{(WACC-g)}), adjusted for the appropriate year:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(P_1 = \frac{C_f}{(WACC-g)})</td>
<td>825 000 above\textsuperscript{N3} x (1,00 + 0,05)</td>
<td>6 663 462</td>
<td>(2)</td>
</tr>
<tr>
<td>(18% - 5%)</td>
<td></td>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>Land and buildings\textsuperscript{N1}</td>
<td>800 000</td>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>Advertising and distribution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apply the Gordon Growth Model</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(P_0 = \frac{C_f}{(WACC-g)})</td>
<td>R150 000\textsuperscript{N4} x (1 – 28%)</td>
<td>830 769</td>
<td>(1)</td>
</tr>
<tr>
<td>(18% - 5%)</td>
<td></td>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>Legal and other cost\textsuperscript{N1}</td>
<td>(3 000 000)</td>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>Totals</td>
<td>(2 569 231)</td>
<td>7 488 462</td>
<td></td>
</tr>
<tr>
<td>Discount factors (for a rate of 18%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,000</td>
<td>0,847</td>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>(Mark awarded for using discount factors or financial calculator – calculations shown)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discounted values</td>
<td>(2 569 231)</td>
<td>6 342 727</td>
<td></td>
</tr>
<tr>
<td>Total present value of specific synergies, after associated costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 773 496</td>
<td></td>
</tr>
</tbody>
</table>

(Figures may not total correctly due to rounding.)

Notes
\textsuperscript{N1} This figure is already after-tax and already a present value.
\textsuperscript{N2} We can apply the Gordon Growth Model only where constant growth is expected (in this case: inflation growth only, from Year 2).
\textsuperscript{N3} This figure is already after-tax.
\textsuperscript{N4} We do not increase the R150 000 by inflation here as it already represents the saving in one year’s time.
Part (b) Minimum selling price

This will equal the intrinsic value of Target (excluding all possible synergies): R20 million. (1)

Part (c) Maximum bid price

This will equal the intrinsic value of Target plus the value of all specific synergies (net of associated cost): (R20 000 000 + R3 773 496, calculated in part (a)) = R23 773 496. (1)

Part (d) Fair market value of Target

This will equal the intrinsic value of Target plus the net value of synergies obtainable by more than one potential acquirer: (R20 000 000 + (3 773 496 x 40%)) = R21 509 398. (2)

Part (e) Critical discussion

Bidder should seriously consider offering less than the maximum bid price (R23 773 496) for Target, for the following reasons –

- The nearest other bidder is likely to offer no more than the fair market value: R21 509 398 (determined in part (d)), since no synergies above the 40%-level would be available to it. (1)
- The specific synergies between Bidder and Target relate mainly to the reduction in duplicated facilities and staff. (1)
- Since Bidder will contribute to this benefit (for example, through use of its facilities or staff by the combined entity), the specific synergy benefit should be shared. (1)
- If Bidder pays the maximum price of R23 773 496 (determined in part (c)), including the full price of all net synergies, it would be paying for the full synergy benefit (to Target’s shareholders) and none of the specific synergy benefits would accrue to its shareholders (Bidders existing shareholders). (1)

Recommend a suitable bid price

The eventual bid price will be a matter of negotiation, but it is recommended that Bidder bids less than the maximum price (R23 773 496 from part (c)), closer to the minimum price (R20 million from part (b)), likely to end up close to the fair market value (R21 509 398 from part (d)). (1)

(Source: UNISA, TOE408W – adapted)

3. Self-Assessment questions

After working through all the relevant sections in the textbook, guidance and activities provided by this learning unit, you should now be able to attempt the following self-assessment questions.

QUESTION 1

Attempt parts f, g, h and i of question 6 – Raps Group Ltd - in the Question Bank book.

Solution to self-assessment question 1

The suggested solution can be found in the Question Bank book.

QUESTION 2

Attempt parts b, c, d, e and f of question 9 – X-Factor Holdings Ltd - in the Question Bank book.

Solution to self-assessment question 2

The suggested solution can be found in the Question Bank book.
LEARNING UNIT 11.2 - OTHER CONSIDERATIONS

1. Introduction

Befitting the complicated nature of M&A, these transactions normally involve numerous specialists, at great expense. As a Chartered Accountant, you may assist in this process and therefore also require a good working knowledge of some of the other M&A considerations. In this learning unit we will address some of these, including funding considerations, Black Economic Empowerment (BEE) considerations, a post-acquisition review and due diligence investigations.

This learning unit is based on selected sections of the following chapters in your prescribed textbook (*Managerial Finance*, 8th edition):

- Chapter 12

2. Content

2.1. Funding Considerations

The manner in which M&A transactions are funded is an important consideration as it could affect market sentiment, and in some cases, even the success or failure of the deal. There are a number of factors which need to be considered when making this decision; these are detailed within the following subsection in *Managerial Finance* (8th edition):

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Subsection</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>12.4 Funding for mergers and acquisitions</td>
</tr>
</tbody>
</table>

2.2. BEE transactions

The excerpt below was prepared by Skae, De Graaf and Ravat (2013) – used with permission:

Over the past decade or so, BEE credentials have become an increasingly large motivation for business entities to engage in a merger or acquisition transaction, since it directly affects ownership.

Broad-Based Black Economic Empowerment (B-BBEE) is driven by both legislation and regulation, in the form of the B-BBEE Act, No. 53 of 2003 (soon to be amended), which empowers the Minister of Trade and Industry to issue Codes of Good Practice and publish Transformation Charters (DTI, no date). The process of B-BBEE works in collaboration with other acts and regulations, including those in the areas of Employment Equity and Preferential Procurement.

Principally to nurture business growth in South Africa, start-up enterprises (only for the first year) and small business with a turnover below R5 million are exempt from regulation. However, B-BBEE legislation and regulation are intended to affect all other entities – and has largely achieved this – by means of a so-called cascading affect. To achieve this, the Codes were first made legally binding upon State and State-owned entities, which resulted in these entities giving preference to suppliers, partners, licence holders and others with a high B-BBEE Contributor rating. Since the ratings of these entities, in turn, were affected also by their suppliers, it resulted in a trickle-down effect, making it more-and-more difficult for non-compliant businesses to sustain their activities in South Africa.

The Codes of Good Practice prescribe a Generic Scorecard to entities with a turnover in excess of R35 million, with certain targets and weights. However, there are also Transformation Charters, which considers particular industries and their unique activities and circumstances (normally resulting in a slightly different permutation of targets and weights when compared to the Generic Scorecard).
The Generic Scorecard considers the ownership of an entity as an important area, but since its goal is to promote broad-based empowerment, it has a much wider scope. As the Generic Scorecard also forms the basis of most other charters, it is important for you to know the different criteria. As indicated below, the Generic Scorecard has seven elements, each allocated a certain weighting (indicated in brackets below) adding up to a total of 100. The Scorecard includes bonus points, so it is possible to achieve more than 100 points.

1. Ownership (20)
2. Management control (10)
3. Employment equity (15)
4. Skills development (15)
5. Preferential procurement (20)
6. Enterprise development (15)
7. Social-economic development (5)

(100)

Business entities have to be assessed annually by an accredited verification agency, which issues a B-BBEE verification certificate indicating the scorecard information and assessment result in the form of a contributor-rating. Depending on the score, an entity will be rated from a Non-Compliant Contributor (the lowest rating), to a Level Eight Contributor (just above the lowest rating), all the way up to a Level One Contributor (the highest rating for entities achieving more than 100 points).

Many large South African companies aim to achieve the requirements relating to ownership by disposing of a large proportion of their shares to black shareholders. The problem with such transactions is that often financing becomes a problem as the black shareholders do not have sufficient funds to pay for these shares and thus a number of creative arrangements are developed to assist in financing these BEE transactions. For financial assistance rules and restrictions refer to your Advanced Auditing study material.

2.3. Post-acquisition review

Although conducting a formal post-acquisition review is not common practice, it is a vital stage within the merger/acquisition process. This review not only enables an assessment of the transaction success (allowing them to take any corrective action, if possible), it can also improve the strategy and execution of later merger/acquisition transactions.

As a result, companies engaging in merger/acquisition transactions will do well by developing such teams to conduct such reviews. Team members should have a good understanding of the company, the objectives/goals of the merger or acquisition as well as the risks pertaining to the transaction.

Some of the key indicators which the post-acquisition review team can compare pre- and post- acquisitions are, amongst others, the following:

- return on assets
- profitability
- earnings per share
- price earnings ratio
2.4. Due diligence investigations

A due diligence investigation refers to a detailed examination of the target company prior to the merger or acquisition. The aim of such investigations is to verify/audit, amongst others, the financial, legal and operational information of the target company so as to ensure that the acquiring company makes an informed decision.

These procedures are usually carried out by a special team who have experience in this field and consist of employees of the acquiring company and some experts if necessary. The results of such procedures could lead to a change in the terms of the proposed merger or acquisition or even a cancellation of the transaction (Correia, Flynn, Uliana & Wormald 2011).

Now study the following subsection in *Managerial Finance* (8th edition):

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Subsection</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>11.4.9</td>
</tr>
<tr>
<td></td>
<td><em>Hidden factors</em></td>
</tr>
</tbody>
</table>

2.5. Industry regulation

Companies which are controlled in terms of the Banks Act, the Long-Term Insurance Act and the Short-Term Insurance Act need approvals, respectively, from the minister of finance or the registrar of banks, the registrar of long-term insurance and the registrar of short-term insurance for any change in control in such companies.

Approval is needed from the Department of Mineral Resources for a change of control in any companies that hold mining or prospecting rights. In certain industries, such as mining, one of the factors that is taken into account in granting approval for a change of control is the level of shareholding by previously disadvantaged South Africans in the target post-acquisition.

Other industries also have industry specific regulations and statutes such as the telecommunications industry and the gambling industry, where approval may be required for a change of control.

2.6. Systems, information, confidentiality and disclosure requirements

The compatibility of the information and computer systems, between the two companies, should be considered as a part of the due diligence procedures.

The due diligence process will give the acquiring company access to detailed financial and other business information relating to the target company. A confidentiality agreement is normally signed in order to protect the interests of the target company.

The information that is required to be made public in relation to a merger or acquisition is regulated by the JSE Listings Requirements (for listed entities) and the Companies Act (which includes the Takeover Regulations).

Disclosure of the following is normally required:

- consideration payable
- the asset that is being acquired
- special dealings (arrangements)
- the effect on listing,
- conditions and timing
2.7. Conflict of interest issues (managers vs shareholders)

When entering into a negotiation for a potential merger/acquisition transaction, managers may experience a conflict of interest between acting in their own best interest and acting in the interest of the shareholders (which is their responsibility). This usually occurs when for example the manager sees the merger/acquisition transaction to be an opportunity to advance his/ her career (by being involved in a larger corporation or an industry which he/ she may have an interest in). The transaction may not necessarily maximise shareholder wealth but the management will pursue the opportunity in order to benefit themselves. It should be noted that such unethical motivation for a merger/acquisition is one of the key reasons for failed transactions. For this reason amongst others, the pre- and post-acquisition reviews are important procedures for consideration.

Activity 11.2.1

As part of a growth strategy, JD Ltd recently merged with one of its competitors. However, since the merger there have been numerous problems, including the compatibility issues with the two companies’ accounting software packages, lawsuits from former employees claiming to be unfairly dismissed, and an investigation by the Competition Commission. Mr Brice Larken, a majority shareholder, regrets not seeking your firm’s consulting assistance earlier as these matters are now causing him sleepless nights.

Required:

Recommend to Mr Brice Larken the procedure that CWCs consulting function should have performed in order to identify possible issues and risks prior to the merger and acquisition.

Provide further details of the steps included in such a procedure and describe how these steps could have assisted JD Ltd with identifying these issues and risks, in advance. [N1]

(Source: UNISA, DIPAC26 exam [2011] – updated, truncated and adjusted)

N1: The information in the scenario highlighted the issues being experienced i.e. compatibility of software, lawsuits from employees and approval from the Competition Commission.

Students were thus required to use this information to develop steps that would identify the issues prior to the merger and thus prevent them from occurring.

Solution to Activity 11.2.1

Your firm’s consulting function could have assisted JD Ltd by performing a due diligence investigation prior to the merger and acquisition, as follows:

- The first step is identification, where information is gathered and risks are identified. By performing this step JD Ltd would have identified the initial risks prior to the merger. It would in this case have included reviewing minutes of management and board meetings – this may have identified the issues which now have come to the fore.
- The second step is the consideration of legal aspects, compatibility issues (business, culture, ITC, etc) contractual aspects and insurance. By performing this step JD Ltd could have obtained legal advice with regards to the dismissal of certain employees and could have avoided the lawsuits from employees claiming to have been dismissed unfairly. This step would have also assisted to ensure that approval is first obtained from the competition authorities before the merger is pursued.
- The third step includes the summarising and analysing of all the financial data. This step would assist in further identifying JD Ltd’s exposure to risk and includes a comparison between old and new insurance policies.
Step four only occurs after the merger and acquisition was finalised and includes visiting the new location and streamlining compatibility and administration issues. This step would have assisted JD Ltd to successfully plan and budget for the integration between the two accounting software packages.
(Source: UNISA, DIPAC26 – adapted)

2.8. Management buy-outs

Management buy-outs are a type of acquisition, but uniquely, the buyers also represent the existing management of the entity. This unique circumstance also leads to unique consequences and considerations as explained within the following subsection in Managerial Finance (8th edition):

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Subsection</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>12.4.3 Management buy-outs</td>
</tr>
</tbody>
</table>

BIBLIOGRAPHY AND ADDITIONAL READING


PART 3 LEARNING UNIT 12 – BUSINESS PLANS AND FINANCIAL PROPOSALS

LEARNING OUTCOMES

After studying this learning unit, you should be able to further apply your knowledge and skills achieved through your prior learning (see below) to a scenario, on an integrated basis.

PRIOR LEARNING ASSUMED

In your undergraduate and Advanced Management Accounting studies you have already mastered the learning outcomes indicated below. If you want to refresh your knowledge, please refer to your undergraduate material, prescribed textbook and MAC4861 Tutorial Letter 103/2018 (available under ‘additional resources’ on myUnisa). For your convenience we also provide textbook references.

It is important to realise that this learning unit relies heavily on the learning outcomes achieved in prior learning units, including the function of financial management, strategy, risk management, sources of finance, valuations, and the treasury function. It is thus important that you have achieved the necessary learning outcomes before attempting this learning unit.

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>Managerial Finance, 8th Edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Interrogate your knowledge of the purpose and audience of a business plan/proposal in their preparation, on a basic level.</td>
<td>• Chapter 2: Sections 2.7 to 2.9</td>
</tr>
<tr>
<td>• Develop new business plans and financial proposals.</td>
<td>• MAC4861 TL103</td>
</tr>
<tr>
<td>• Analyse existing business plans and financial proposals.</td>
<td></td>
</tr>
<tr>
<td>• In preparing business plans and financial proposals, identify and address:</td>
<td></td>
</tr>
<tr>
<td>o the business strategy and strategic plan</td>
<td></td>
</tr>
<tr>
<td>o strengths and weakness of the plan</td>
<td></td>
</tr>
<tr>
<td>o the resources needed</td>
<td></td>
</tr>
<tr>
<td>o sources of financing</td>
<td></td>
</tr>
<tr>
<td>o anticipated costs and recoveries (including its calculation)</td>
<td></td>
</tr>
<tr>
<td>o all assumptions made.</td>
<td></td>
</tr>
<tr>
<td>• Critically review all assumptions made.</td>
<td></td>
</tr>
</tbody>
</table>
INTRODUCTION

The idea for a start-up business entity often sees the light on the back of a napkin. Likewise, new growth ideas for an existing business are often born through informal discussion. But ideas are useless unless put into action. A business plan represents the detailed, long-term roadmap whereby these ideas could be implemented. Put differently, a business plan is a plan of where a business idea wants to go and how it is planning to get there. It is a sales document, selling ideas to potential debt and equity investors. It can be used at various stages of the organisation’s life. The document can also be used as a planning and control instrument by the involved parties.

A related but separate document is the financial proposal. A financial proposal is not the same as a business plan; it is a request for money based upon your business plan. As a finance professional you may well one day be instrumental in the compilation of these important documents.

THIS LEARNING UNIT CONSISTS OF THE FOLLOWING SUB LEARNING UNITS:

<table>
<thead>
<tr>
<th>LEARNING UNITS</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING UNIT 12.1</td>
<td>BUSINESS PLANS AND FINANCIAL PROPOSALS</td>
</tr>
</tbody>
</table>
LEARNING UNIT 12.1 BUSINESS PLANS AND FINANCIAL PROPOSALS

1. Introduction

The subject of this learning unit has already been introduced as part of the introduction above. This learning unit is based on the following subsections in Managerial Finance, 8th edition, chapter 2:

- Chapter 2: Sections 2.7 to 2.9

2. Content

There is no additional content to be studied at this level. All content has already been addressed in your prior learning. If you want to refresh your knowledge, please refer to the earlier section ‘Prior learning assumed’.

The activity below, the self-assessment questions provided later in this learning unit, and the integrated self-assessment at the end of this tutorial letter will help you to apply your knowledge.

3. Self-assessment question

After working through all the relevant sections in the textbook, guidance and activities provided by this learning unit, you should now be able to attempt the following self-assessment questions.

QUESTION 1

Attempt Question 1, part m, in the Question Bank book.

Solution to self-assessment question 1

The suggested solution can be found in the Question Bank book.

BIBLIOGRAPHY AND ADDITIONAL READING


INTEGRATED SELF-ASSESSMENT

After studying the learning units covered in this tutorial letter the next important step is to practise the application of the acquired knowledge on an integrated level. You can use the integrated questions in this part as self-assessment.

We strongly recommend that you attempt these questions under simulated examination conditions. Then, after completion, compare your answer to the suggested solution and establish reasons for differences. (If necessary, revisit the learning units in this tutorial letter, your prior study material and/or Managerial Finance, 8th edition.)

Remember to make notes summarising the reasons for your mistake(s). Further indicate on a summary sheet of questions performed during the year, whether you need to revisit some of these questions, or sections of the questions, later.

Now attempt the following integrated questions as well as the tests of 2017, as presented below.

**Integrated question 1**

Perform question 24 in the Question Bank (Zapphire Limited).

**Solution to Integrated question 1**

Find the solution in the Question Bank.

**Integrated question 2**


**Solution to integrated question 2**

Find the solution after the question in the textbook.
TEST 3 (2017)
PAPER 1: MAC4862/NMA4862/ZMA4862

APPLIED MANAGEMENT ACCOUNTING
(40 Marks)

Time and Duration: 1 hour with 15 minutes reading time. Students MUST be seated by 08:30.

<table>
<thead>
<tr>
<th>FIRST SESSION</th>
<th>Time</th>
<th>Activity</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30 – 08:45</td>
<td></td>
<td>Handing out Paper 1 and answer scripts and a separate REQUIRED section placed upside down on the desk.</td>
<td>15 minutes</td>
</tr>
<tr>
<td>08:45 – 09:00</td>
<td></td>
<td>Reading time.</td>
<td>15 minutes</td>
</tr>
<tr>
<td>09:00 – 10:00</td>
<td></td>
<td>PAPER 1: MAC4862/NMA4862/ZMA4862</td>
<td>1 hour</td>
</tr>
<tr>
<td>10:00 – 10:15</td>
<td></td>
<td>Collection of Paper 1.</td>
<td>15 minutes</td>
</tr>
</tbody>
</table>

FIRST EXAMINERS: Ms A Ravat Mr TJ Matsoma
Mr L Crafford Mr F Nortjé

SECOND EXAMINERS: Mr FJC Benadé Mrs S Fourie
Ms F Venter Prof L Padayachee

Please ensure that you have completed the cover of the answer book for this question in full i.e. name, surname, address, student number, code of paper and test number.

This MAC4862/NMA4862/ZMA4862 (APPLIED MANAGEMENT ACCOUNTING) question paper consists of 3 pages and is out of 40 marks.

THE USE OF A NON-PROGRAMMABLE CALCULATOR IS PERMISSIBLE.

This test paper remains the property of the University of South Africa and may not be removed from the test venue.

PLEASE NOTE:

• The test is a limited open-book test: Students are allowed to take ONE COPY of the 2017/2016 version of the SAICA Handbook or any version published in one of the previous years into the venue.

• Students will be allowed to highlight and to make notes on the question paper and consult their allowed reference books during and after the 15 minutes reading time.

• The REQUIRED section must only be turned over once the invigilator announces this.
QUESTION 1  40 marks

Ignore value-added taxation

Quality Cement Limited ("QCL") is a listed company, with 760 million ordinary shares in issue and a market capitalisation of R 4,22 billion. The company manufactures and supplies cement and related products in South Africa. They have also recently started expanding into the rest of Africa and now have a footprint in Botswana and Zimbabwe.

QCL supplies its products to the building and construction industry, concrete product manufactures and hardware and DIY stores. Given the nature of their business QCL have to regularly undertake capital expenditure to maintain and improve their facilities. Their strategy and long term plan includes expansion into a larger part of Africa (Rwanda and Ethiopia), as well as expanding its operations in existing markets.

The continent’s current growth rate of approximately 5% per annum coupled with the prioritisation of investment in large infrastructure, has increased demand within the building and construction industry. Consequently, many new entrants have entered the industry, with competition within the cement manufacturing industry becoming fierce. Increased cheap imports from Asia have worsened the situation.

As with other industries, cement production companies, construction companies and all related businesses within the industry are searching for people with the necessary skills to do the various jobs required to run an efficient cement industry. QCL is no exception: they are frequently seeking employees with the required knowledge and skills to effectively support their strategic and operational needs.

The following information relates to QCL:

- The company issued non-redeemable debentures to the value of R20 000 000 two years ago. Interest at a rate of 8,5% per annum is payable on these debentures. The interest rate on similar debentures is approximately 9,2% per annum.

- They have 90 million preference shares of R1 each in issue with a coupon rate of 10%. The preference shares are convertible into ordinary shares in 4 years’ time at the option of the holders, at a rate of 1 ordinary share for every 6 preference shares held. Preference shares not converted will be redeemed at a premium of 7%. Preference shares in a similar risk class to those of QCL are yielding 12% per annum. The directors of QCL anticipate that one ordinary share will be worth 663 cents in 4 years’ time.

- Their interest-bearing borrowings relates to a loan obtained on 1 June 2015 for an original amount of R 2,3 billion, bearing interest at a fixed rate of 12% per annum. The loan is not publicly traded. Analysts however believe the effective pre-tax cost to be 3,5% above the prime overdraft rate. Interest is calculated and compounded annually in arrears on the company’s year-end, and is then capitalised to the outstanding loan balance. The loan is repayable in a single bullet payment on 31 May 2020. The loan qualifies as an instrument and is deductible for taxation purposes in terms of Section 24J of the Income Tax Act.
• QCL has a Beta-coefficient of 0,43 as at 31 May 2017.

• In line with QCL’s growth strategy they are to acquire an independently owned ready-mix concrete supplier in South Africa, Just Concrete (Pty) Limited. Just Concrete manufactures and supplies concrete to the commercial, mining and construction sectors of the economy and have been in operation for the past ten years. QCL is considering funding the acquisition with more debt financing.

The following market and industry information is applicable:

• Equity risk premium: 6%
• Current prime interest rate: 10,50%
• South African Government bond rate: 9,26%
• Corporate tax rate: 28%
• The industry average debt to equity ratio is: 40%
## REQUIRED

<table>
<thead>
<tr>
<th></th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sub-total</td>
</tr>
</tbody>
</table>
| (a) | Calculate the weighted average cost of capital of QCL as at 31 May 2017.  
Communication skills – layout and structure. | 19 | 20 |
| (b) | Assuming QCL’s capital structure consists of 40% debt and 60% equity, advise them as to whether they should fund the acquisition of Just Concrete (Pty) Limited with debt financing.  
Motivate your recommendation. | 6 | 6 |
| (c) | Analyse the **opportunities and threats** of QCL’s business, based on the principles of a SWOT analysis.  
Communication skills – logical argument | 10 | 11 |
| (d) | (i) Does the Department of Trade and Industry (DTI) consider the plastics industry in South Africa to be a priority industry? Yes of No and motivate. | 2 |  |
| | (ii) Which of the following retailers uses 100% recyclable plastic bags?  
Checkers/Pick’nPay/Shoprite/Spar/Woolworths | 1 | 3 |
| **TOTAL** | | **40** |
TEST 3 – SUGGESTED SOLUTION (2017)

(a) Calculate the weighted average cost of capital of QCL as at 31 May 2017.

Equity

Cost of Equity

\[ \text{Cost of Equity} = \text{Rf} + B (\text{Rm} - \text{Rf}) \]

\[ = 9.26\% + 0.43(6\%) \]

\[ = 11.84\% \text{ (r/w)} \]

Debentures

Present Value

\[ \text{Present Value} = 20 000 000 \times \frac{8.5}{9.2} \]

\[ = \text{R 18 478 261 (1) r/w} \]

Preference Shares

Value if converted:

Number of shares: \( 90\ 000\ 000/6 = 15\ 000\ 000 \) ordinary shares \( (1/2) \text{ r/w} \)

Value: \( 663/100 \times 15\ 000\ 000 = \text{R 99\ 450\ 000 1/2(c)} \)

Value if redeemed

\[ 90\ 000\ 000 \times 1.07 = \text{R 96\ 300\ 000 (1/2) r/w} \]

Therefore, the preference shareholders will opt for conversion into ordinary shares \( (1) \)

Market value of Preference shares

\[
\begin{array}{ccc}
\text{FV} & -99\ 450\ 000 & 1\ c \\
\text{n} & 4 & 1/2\ r/w \\
\text{i} & 12\% & 1/2\ r/w \\
\text{PMT} & -9\ 000\ 000 & 1\ r/w \\
\text{(90\ 000\ 000*10\%)} & & \\
\text{PV} & 90\ 538\ 417 & 1\ c \\
\end{array}
\]
Market value of Long term loan

<table>
<thead>
<tr>
<th>PV</th>
<th>2,300,000,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>5 ½ r/w</td>
</tr>
<tr>
<td>i</td>
<td>12 ½ r/w</td>
</tr>
<tr>
<td>PMT</td>
<td>0</td>
</tr>
<tr>
<td>FV</td>
<td>-4,053,385,871</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payments</td>
<td>-4,053,385,871</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tax on interest 28%</td>
<td>96,940,032</td>
<td>108,572,836</td>
<td>121,601,576</td>
</tr>
<tr>
<td>S24J accrual amount (A=BXC)</td>
<td>346,214,400</td>
<td>387,760,128</td>
<td>434,291,343</td>
</tr>
<tr>
<td>Pre-tax yield to maturity (B)</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Adjusted initial amount (C)</td>
<td>2,885,120,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted initial amount (C)</td>
<td>3,231,334,400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted initial amount (C)</td>
<td>3,619,094,528</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total cashflows</td>
<td>96,940,032</td>
<td>108,572,836</td>
<td>-3,931,784,295</td>
</tr>
<tr>
<td>Kd (10.5+3.5)*072</td>
<td>10.08%</td>
<td>1 r/w</td>
<td></td>
</tr>
<tr>
<td>NPC</td>
<td>2,769 909 492</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# Alternative to the section 24J interest calculation:
Calculator inputs must be shown and period must be correct:
3 Input 2ndF Amort = interest of 346 214 400 (½)
4 Input 2ndF Amort = interest of 387 760 128 (½)
5 Input 2ndF Amort = interest of 434 291 343 (½)

WACC Calculation

<table>
<thead>
<tr>
<th>Market value</th>
<th>Weighting</th>
<th>Cost</th>
<th>WACC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>4,220,000,000% r/w</td>
<td>59.45%</td>
<td>11.84%</td>
</tr>
<tr>
<td>Debentures</td>
<td>18,478,261</td>
<td>0.26%</td>
<td>6.62% (9.2*0.72)</td>
</tr>
<tr>
<td>Preference shares</td>
<td>90 538 417</td>
<td>1.28%</td>
<td>11.84%/12%</td>
</tr>
<tr>
<td>Long term loan</td>
<td>2,769 909 492</td>
<td>39.02%</td>
<td>10.08%</td>
</tr>
<tr>
<td>Total</td>
<td>7,098 926 170</td>
<td>100%</td>
<td>1 r/w</td>
</tr>
</tbody>
</table>
(b) Assuming QCL’s capital structure consists of 40% debt and 60% equity, advise them as to whether they should fund the acquisition of Just Concrete (Pty) Limited with debt financing. Provide reasons for your answer.

- While **debt is cheaper than equity** due to the tax benefit on interest
- The **industry average capital structure consists of 29% debt** (40/140) and 71% equity (100/140)
- QCL has **more debt** in their capital structure compared to the industry average. QCL is **therefore highly geared** and carries a **higher financial risk** compared to the industry average.
- Funding the acquisition of Just Concrete with debt may **not be a good idea** as this will **further increase their gearing and financial risk**
- QCL may have **difficulty in meeting the capital and interest payments of the debt**. Given the **current weak economic environment**, coupled with the **increase in new entrants** as well as **cheap imports** within the industry.
- Furthermore, **new debt costs will rise** due to the **country’s downgrade**.
- QCL should therefore consider **funding the acquisition with equity**.
- They could perhaps consider **entering into a share exchange with the shareholders of Just Concrete**.

MAX 6

(c) Analyse the **opportunities and threats** of QCL business, based on the principles of a SWOT analysis.

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demand</strong> within the building and construction industry has increased. (1)</td>
<td><strong>Competition</strong> has increased (1)</td>
</tr>
<tr>
<td>This is evidenced from:</td>
<td>This is evidenced from:</td>
</tr>
<tr>
<td>✓ The growth experienced in Africa (½)</td>
<td>✓ Many new entrants entering the industry (½)</td>
</tr>
<tr>
<td>✓ The prioritisation of investment in large infrastructure. (½)</td>
<td>✓ An increase in cheap imports from Asia (½)</td>
</tr>
<tr>
<td>This could result in increased sales for QCL’s cement and related products. (1)</td>
<td><strong>The downturn in the economy could negatively impact the profitability of QCL. (1)</strong></td>
</tr>
</tbody>
</table>

<p>| QCL is a listed entity and therefore has more access to funding. (1)         | <strong>The operations of QCL are highly reliant on water and electricity which are becoming increasingly scarce, this threatens business continuity and can be costly (1)</strong> |
| Given the capital intensive nature of the company, this could be beneficial. (1) | QCL’s operations are relatively capital intensive. Capital expenditure is required to maintain and improve the entities facilities. (½) |
|                                                                              | This requires large cash outflows and could potentially further increase their gearing and financial risk. (1) |</p>
<table>
<thead>
<tr>
<th>QCL has operations within <strong>Africa</strong>, this exposes them to <strong>country risks</strong> such as political instability, inadequate infrastructure, foreign exchange risk etc. (1)</th>
</tr>
</thead>
</table>
| There is an industry wide **shortage of the required skills and knowledge**. (½)  
This could limit QCL’s **ability to effectively operate and grow** (1) |

**MAX 10**  
**Communication skills – logical argument 1**

<table>
<thead>
<tr>
<th>(di) Does the Department of Trade and Industry (DTI) consider the plastics industry in South Africa to be a priority industry?</th>
</tr>
</thead>
</table>
| Yes (1)  
The plastics industry is listed as a priority industry (1) |

<table>
<thead>
<tr>
<th>(dii) Which of the following retailers uses 100% recyclable plastic bags?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checkers/Pick&amp;Pay/Shoprite/Spar/Woolworths</td>
</tr>
</tbody>
</table>

Checkers (1)