

# Tutorial letter 101/3/2018

## BANKING: TREASURY MANAGEMENT

## BAN3702

## Semesters 1 & 2

## Department of Finance, Risk Management and Banking

### IMPORTANT INFORMATION

Please register on myUnisa, activate your myLife e-mail address and make sure that you have regular access to the myUnisa.

Please note that this module is offered online only. All material will be made available on myUnisa under “official study material”, “additional resources” and/or under “learning units”. However, in order to support you in your learning process, you will also receive some study materials in printed format.

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## 1 INTRODUCTION

Dear Student,

Welcome to the module for BAN3702. This module is for students to acquire the requisite knowledge and application skills in Banking: Treasury Management necessary to obtain either the B Com (Banking) degree or the Diploma in Banking. The Banking: Treasury Management (BAN3702) module enables students to understand how the treasury functions are structured and managed in banks. The module assumes knowledge of the earlier module - Banking: Introduction to Treasury Management - offered as level 2 of the degree programme.

Do not hesitate to contact your lecturer on myUnisa, by email or by telephone if you are experiencing problems with the content of this tutorial letter or any aspect of the module.

I sincerely hope that you find this module, as well as your online learning experience interesting and rewarding and trust that you will complete the module successfully.

## 2 MODULE FORMAT: BAN3702

### 2.1 Fully online module

**Please note that this module is offered fully online.**

All study material for this module will be available on myUnisa. It is thus very important that you register on myUnisa and access the module site on a regular basis. You must be registered on myUnisa to be able to access your learning material, submit your assignments, gain access to various learning resources, "chat" to your lecturer and fellow students about your studies and the challenges that you might encounter, and to participate in online discussion forums and blogs.

### 2.2 Tutorial matter

Your tutorial matter for Banking: Treasury Management (BAN3702) consists of the following:

- A study guide for Banking: Treasury Management (BAN3702)
- A tutorial letter (tutorial letter 201) that will contain the solutions to the assignment questions of BAN3702. This tutorial letter will be made available shortly after the closing date for the second assignment BUT only on myUnisa. TL201 will also provide you with further information on the structure of the examination.

- Additional resources about new developments and additional activities, including revision questions, will be provided during the semester at <https://my.unisa.ac.za>. Please log-on to myUnisa at least twice per month.

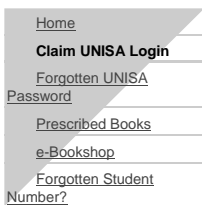
### 2.3 Printed materials to support the online module

Because we want you to be successful in this online module, we also provide you with some of the study materials in printed format. This will allow you to read the study materials, even if you are not online.

You will receive this tutorial letter and a printed copy of the study guide. While these printed materials may sometimes appear slightly different from the online study materials, the contents are basically the same. Remember, the printed support materials are a back-up to everything that is found online, on myUnisa. There are no extra things there. **In other words, you should NOT wait for the Printed support materials to arrive to start studying.**

**Please consult the myStudies @Unisa publication for more information on the activation of your myLife email address as well as obtaining access to the myUnisa module site. Also, see the example below:**

#### Claim UNISA Login



Welcome to UNISA.

Please complete the application below to access your initial UNISA Login details.

The initial login details will give you access to:

myUnisa – teaching and learning system and the Unisa Library  
myLife – a web-based email for UNISA students

### 3 LECTURER AND CONTACT DETAILS

The Primary Lecturer for this module Mrs. R du Randt from the Department of Finance, Risk Management and Banking.



Email: [duvanr@unisa.ac.za](mailto:duvanr@unisa.ac.za)

Tel: (012) 429-8969

When you contact the Lecturer, please do not forget to always include your student number and the module code in your correspondence.

The Secondary Lecturer for this module is Prof Joseph Chisasa. E-mail: [Chisaj@unisa.ac.za](mailto:Chisaj@unisa.ac.za).

## 4. MODULE RELATED RESOURCES

### 4.1 Prescribed books

Rose, Peter S & Hudgins, Sylvia C. 2013. *Bank Management & Financial Services*, 9<sup>th</sup> Edition, McGraw-Hill International.

### 4.2 Recommended books

There are no recommended books for this module.

### 4.3 Electronic Reserves (e-Reserves)

There are no e-Reserves for this module.

## 5. STUDENT SUPPORT SERVICES FOR THE MODULE

Important information appears in your *myStudies @ Unisa* brochure.

## 6. MODULE SPECIFIC STUDY PLAN

Please note that this module carries 12 credits and requires at least 120 hours of study, including the time required to complete the assignments and the examination. Devote at least 120 hours to this module in order to ensure your success Use your *myStudies @ Unisa* brochure for general time management and planning skills.

## 7. ASSESSMENT

### 7.1 Assessment plan

Assignments are seen as part of the learning material for this module. As you do the assignment, study the reading texts, consult other resources, discuss the work with fellow students or tutors or do research, you are actively engaged in learning. Paying attention to the assessment criteria for each assignment will help you to understand what is required of you more clearly.

You may submit written assignments and assignments done on mark-reading sheets either by post or electronically via myUnisa. Assignments may not be submitted by fax or e-mail. For detailed information and requirements as far as assignments are concerned, see the brochure *myStudies @ Unisa* that you received with your study material.

### **Compulsory assignment to gain admission to the examination**

There are two compulsory assignments. The submission deadline is non-negotiable. You must complete at least one assignment to gain admission to the examination. However, both the assignments contribute to your year mark.

### **Year marks**

Your year mark, based on the average mark obtained for the two compulsory assignments (assignment 1 and assignment 2), contributes 20% towards your final mark, while your examination mark contributes 80%.

The combined weighted average of your year mark and examination mark must be 50% or higher for you to pass the module/subject. However, you must obtain a minimum of 40% in the examination, regardless of your year mark. If you obtain less than 40% in the examination your year mark will not be taken into account and you will fail.

For example:

Assignment mark 01 = 62%

Assignment mark 02 = 78%

Average = 70%

and 20% of the average assignment mark = 14%

Assume an examination mark of 45%

80% of the examination mark = 36%

$$\begin{aligned}\text{Final mark} &= (20\% \text{ of the average of assignment marks}) + (80\% \text{ of examination mark}) \\ &= 14\% + 36\% \\ &= 50\%\end{aligned}$$

The example demonstrates that your year mark can assist you to pass the module when you obtain between 40% and 49% in the examination.

## 7.2 General assignment numbers

Assignments are numbered consecutively per module, starting from 01.

### 7.2.1 Unique assignment numbers

Each assignment has been allocated a unique number in order to identify it in the Unisa assessment plans. Please ensure you always indicate the correct unique number when submitting assignments.

### 7.2.2 Due dates of assignment

*You should submit your assignments at <https://my.unisa.ac.za> in .pdf format prior to the due date of each assignment. Do not wait until the day just prior to the due date. Technical problems with the computer servers of myUnisa may prevent you from submitting your assignment at the last minute.*

Should you not be able to submit your assignments at myUnisa and need to mail us your assignments in hard copy format, please ensure that they reach the Unisa main campus by the due dates. Otherwise, it might not be in time to be processed by the assignment section.

Requests for extension of due dates for assignments will not be granted. These due dates have been set to allow you sufficient time for the completion of other assignments and your preparation for the examination.

Information about whether Unisa has received your assignment and the mark attained for an assignment can be obtained from <https://my.unisa.ac.za>. Enquiries can also be directed by e-mail to [assign@unisa.ac.za](mailto:assign@unisa.ac.za).

## 7.3 Submission of assignments

To submit an assignment **via myUnisa**:

- Go to myUnisa at <https://my.unisa.ac.za>
- Log in with your student number and password.
- Select the module.
- Click on assignments in the left-hand menu.

- Click on the assignment number you want to submit.
- Follow the instructions on the screen.

Only if you do not have access to the Internet should you submit your assignment by means of a hard copy and mail it to Unisa.

## 7.4 Assignments

Here is a breakdown of the Assignments, as well as the due dates.

### SEMESTER 1

- **ASSIGNMENT 01**

**Due date: 15 March 2018**

**Unique number: 680921**

1. Briefly discuss how bank size affects the importance of balance sheet items. [4]
2. Consider the following Bond:
 

Nominal value	R1 000 000
Coupon rate (half-yearly)	13% per annum
Maturity date	15 July 2029
Yield to maturity	15.90% per a
Settlement date	24 May 2014
Interest dates	15 January and 15 July
All-in price	88.14037%

  - Calculate the accrued interest and the clean price. [4]
3. Briefly describe the different types of bonds available in the South African market. [10]
4. You have to prepare a Treasury Bill (TB) tender on behalf of your bank's treasury department. [10]

You are given the following information:

Yield required 91-day bills: 7%; 182-day bills: 7.5%; 273-day bills: 8%

Amount to tender respectively: R10 000 000; R15 000 000; and R20 000 000.

- 4.1 Calculate the discount rate and tender price for each maturity. (5)
- 4.2 Assume all three of your bank's bids are accepted. Calculate the consideration for each maturity. (5)
5. Explain why do the managers of financial firms today often pay close attention to the net interest margin and noninterest margin. Why is the earning spread important to treasurers? [8]
6. Provide two reasons why South African banks keep a portion of their assets in vaults and near-cash assets. [4]

**TOTAL: 40 MARKS**

• **ASSIGNMENT 02**

**Due date: 5 April 2018**

**Unique number: 700306**

1. Explain the meaning and the goal of *hedging*. [2]
2. Suppose the securities portfolio of a bank contains R10 million in 7 per cent, 15-year paying semi-annual bonds and market yields increase from 7 per cent to 7.5 per cent. Explain what would happen to the market value of the bonds. Will it mean a loss or profit in the cash market? Moreover, the bank is concerned about the declining asset values. How would you recommend that the bank use a futures contract? [5]
3. What are the advantages of using duration as an asset-liability management tool as opposed to interest-sensitive gap analysis? [4]
4. Explain the difference between a negative interest-sensitive gap, a positive interest-sensitive gap and a sensitive gap that is equal to zero. [3]
5. Describe the principal limitations of the duration gap analysis. Indicate the way of reducing the impact of these limitations. [7]
6. Explain the kinds of risk that financial firms face when interest rates change. [7]
7. African Bank's economics department is forecasting a significant recession in economic activity in the country. Output and employment are projected to decline significantly over the next 18 months.

Analyse the implications of this forecast for an investment portfolio manager. For example, what is the outlook for interest rates and inflation under the foregoing assumptions? What types of investment securities would the treasury manager recommend as good additions to the portfolio during the period covered by the recession forecast and why? What other kinds of information would the treasury manager like to have about the bank's current balance sheet and earnings report in order to help you make the best quality decisions regarding the investment portfolio? [7]

8. Explain the powerful forces that are shaping financial markets and institutions today. [5]

**TOTAL: 40 MARKS**

## **SEMESTER 2**

### • **ASSIGNMENT 01**

**Due date: 3 August 2018**

**Unique number: 741961**

1. Treasury bills (TBs) are available for purchase this week at the following prices (based upon R100 par value) and with the indicated maturities:
- 1.1 R97.25, 182 days.
  - 1.2 R95.75, 270 days.
  - 1.3 R98.75, 91 days.

Calculate the bank discount rate (DR) on each TB if it is held to maturity. What is the equivalent yield to maturity (sometimes called the bond-equivalent or coupon-equivalent yield) of each of these Treasury Bills? [15]

2. Stilwater Bank and Trust Company has an average asset duration of 3.25 years and an average liability duration of 1.75 years. Its liabilities amount to R485 million, while its assets total R512 million. Suppose that interest rates were 7 per cent and then rise to 8 per cent. What will happen to the value of the Stilwater bank's net worth because of an increase in interest rates? [6]
3. A bond has a coupon rate of 6.5 per cent and 5 years to maturity. It has a yield to maturity of 8 per cent and is selling in the market for R940.11. This bond has a face value of R1 000. Determine the duration of this bond. [5]
4. Suppose a banker tells you that his bank in the year just completed had total interest expenses on all borrowings of R10 million and noninterest expenses of R5 million, while interest income from earning assets totalled R16 million and noninterest revenues totalled R2 million. Suppose further that assets amounted to R500 million, of which earning assets represented 75 per cent of that total

while total interest-bearing liabilities amounted to 75 per cent of total assets. Determine this bank's (i) net interest and non-interest margins and; (ii) its earnings base and earnings spread. [10]

5. A bank estimates that its total revenues will amount to R155 million and its total expenses (including taxes) will equal R107 million this year. Its liabilities total R4,96 million while its equity capital amounts to R52 million. Calculate bank's return on assets (ROA). Determine whether the ROA is high or low. What method did you use to determine this? [4]

**TOTAL: 40 MARKS**

• **ASSIGNMENT 02**

**Due date: 30 August 2018**

**Unique number: 858188**

1. Explain the forces that cause interest rates to change? [4]
2. Explain how you measure: [6]
  - (i) The Rand interest-sensitive gap.
  - (ii) The relative interest-sensitive gap.
  - (iii) The interest sensitivity ratio.
3. Describe how a financial institution's *duration gap* is determined. [3]
4. Suppose that a savings institution has an average asset duration of 2.5 years and an average liability duration of 3.0 years. If the savings institution holds total assets of R560 million and total liabilities of R467 million, does it have a significant leverage-adjusted duration gap? If interest rates rise, what will happen to the value of its net worth? [6]
5. Peoples' Savings Bank has a cumulative gap for the coming year of + R135 million, and interest rates are expected to fall by two and a half percentage points. Calculate the expected change in net interest income that this savings institution might experience. What change will occur in net interest income if interest rates rise by one and a quarter percentage points? [4]
6. Define securitisation and briefly explain how securitisation led to the sub-prime mortgage crisis in the US. In your view, what type of regulation should be introduced to avoid a repeat of this happening? [7]
7. It is March and Cavalier Financial Services Corporation is concerned about what an increase in interest rates will do to the value of its bond portfolio. The portfolio currently has a market value of R101.1 million, and Cavalier's management intends to liquidate R1.1 million in bonds in June to fund

additional corporate loans. If interest rates increase to 6 per cent, the bond will sell for R1 million with a loss of R100 000. Cavalier's management sells ten June Treasury bond contracts at 109-050 in March. Interest rates eventually do increase, and in June Cavalier's management offsets its position by buying ten June Treasury bond contracts at 100-030. [10]

- a) What is the dollar gain/loss to Cavalier from the combined cash and futures market operations described above? (4)
- b) What is the basis at the initiation of the hedge? (3)
- c) What is the basis at the termination of the hedge? (3)

**TOTAL: 40 MARKS**

## **8. CONCLUSION**

I wish you a fascinating and satisfying journey through the learning material and trust that you will complete the module successfully. Please email me if you have any further questions on the assignments. Good luck!

Your lecturer  
Mrs. R du Randt (durandr@unisa.ac.za)

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