Tutorial letter 101/3/2012

Investments: An Introduction
INV2601
Semesters 1 and 2

Department of Finance, Risk Management and Banking

This tutorial letter contains important information about your module.

Bar code

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CONTENTS

Please note / important notes:

Please register as a user of myUnisa as soon as possible. It is free of charge. Visit https://my.unisa.ac.za for details. At myUnisa you will be able to get in touch with fellow students, submit your assignments, update your details, find self assessment questions, as well as participate in discussion forums and blogs.

It is also important that you provide Unisa with your cellular number because important announcements may be sent to you by sms.

It is highly recommended that you use an HP10B II financial calculator in order to perform the calculations required. Although the Sharp EL738 and other models are available, the lecturer will be able to assist you with the HP10B II only.

Dear Student

1 INTRODUCTION AND WELCOME

Welcome to the module, Investments: An Introduction (INV2601).

You have enrolled for an interesting, yet challenging module.

In order to pass the module you will have to devote at least two hours per day reading and summarizing, as well as practicing the calculations.

1.1 Tutorial matter

Your tutorial matter for Investments: An Introduction (INV2601) consists of the following:

● A study guide for Investments: An Introduction (INV2601).

● You will also receive a tutorial letter shortly after the closing date of the assignment, which will contain the solutions to the assignment questions of INV2601.

● Additional resources provided at https://my.unisa.ac.za.

2 PURPOSE OF AND OUTCOMES FOR THE MODULE

2.1 Purpose

The purpose of this module is to equip students with the necessary knowledge and skills to perform investment analysis and portfolio management.

2.2 Outcomes

On completion of this module, you should:

● have an overall view of the investment setting and the portfolio management process

● understand the organisation and functioning of the securities market in South Africa

● know about the developments in investment theory

● understand the concept and apply the principles of the time value of money

● know the basic security valuation principles and practices

● understand that fundamental analysis is a three-step process consisting of the evaluation of the economy, industry and individual company

● be able to apply basic valuation principles to value a company

● know the basic principles related to technical analysis

● understand the fundamentals of fixed-interest securities

- be able to apply basic valuation principles to value fixed-interest securities
- understand the basics of derivative instruments and their application
- know the important aspects related to the construction and management of a portfolio
- be able to evaluate portfolio management

3 LECTURERS AND CONTACT DETAILS

3.1 Lecturers

Any enquiries of an academic nature concerning this module, such as an enquiry about a specific calculation in the prescribed book, may (during office hours) be directed to:

Miss Josephine Njuguna:	email:	njugujm@unisa.ac.za
	Fax:	086 569 8845
Miss Musi Dowelani:	email:	dowelm@unisa.ac.za
	Fax:	086 641 5572
Help Desk:	Tel:	(012) 429-4949 or (012) 429-6723

3.2 Department

This module is offered by academic staff members from the Department of Finance, Risk Management and Banking (DFRB). Administrative queries may be directed to the appropriate department as indicated in the *myStudies @ Unisa brochure*. Examples of administrative queries are registration matters, study material matters, account queries and graduation issues.

> Please note that you may get in touch with fellow students, download study material, submit assignments, change your address and/or examination venue, view your assignment marks, download previous examination papers, find self assessment questions and get in touch with your lecturer at https://my.unisa.ac.za.

Academic enquiries may also be directed to Tel 012 429-4949 or Tel 012 429-6723.

E-mail queries may be sent to:

Subject area	e-mail address
Banking	banking@unisa.ac.za
Financial Management	finman@unisa.ac.za
Investments	invest@unisa.ac.za

3.3 University

E-mail enquiries may be directed to info@unisa.ac.za Registration matters may be directed to econ@unisa.ac.za or Fax: 012 429 4150.

4   MODULE RELATED RESOURCES

4.1   Prescribed book

You must acquire the following prescribed book from one of the official Unisa bookstores:

Prescribed book: *Investment Management*

Edition: 3rd edition

Year: 2010

Authors: Marx, J., Mpofu, R.T., De Beer, J.S., Nortje, A & Van de Venter, TWG

Publisher: Pretoria: Van Schaik

4.2   Recommended books

None.

4.3   Electronic Reserves (e-Reserves)

None.

5   STUDENT SUPPORT SERVICES FOR THE MODULE

Important information appears in your *my Studies @ Unisa* brochure.

6   MODULE SPECIFIC STUDY PLAN

Use your *my Studies @ Unisa* brochure for general time management and planning skills.

7   MODULE PRACTICAL WORK AND WORK INTEGRATED LEARNING

None.

8   ASSESSMENT

8.1   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 *my Studies @ Unisa* that you received with your study material.

Compulsory assignments

There are two compulsory assignments for this module in the form of multiple-choice questions. There are non-negotiable submission deadlines for each of the assignments of this module and you must submit these assignments if you wish to gain entry to the examination. These assignments contribute to your year mark.

Year marks

Your year mark, based on the average mark obtained of the two compulsory assignments, contributes 10% towards your final mark, while your examination mark contributes 90%.

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 = 50% and assignment mark 02 = 70%.

Assignment 01 and 02 contribute 50% each towards your year mark.

The year mark = $[(0.5 \times 50) + (0.5 \times 70)] = 60\%$.

10% of the year mark = 6%

Assume an examination mark of 80%

90% of the examination mark = 72%

Final mark = (10% year mark) + (90% examination mark)
= 6% + 72%
= 78%

You will need a final mark of at least 40% in order to qualify for a supplementary examination.

For general information and requirements as far as assignments are concerned, see the brochure *my Studies @ Unisa,* which you received with your study material.

8.2   General assignment numbers

Assignments are numbered consecutively per module, starting from 01.

8.2.1   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.

8.2.2   Due dates of assignment

As indicated earlier, you should preferably submit your assignments at https://my.unisa.ac.za 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.

Please ensure that your assignments reach the Unisa main campus by the due dates should you not be able to submit your assignments at myUnisa and need to mail us your assignments in hard copy format. 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.

First semester:

Assignment number	Due dates	Unique number
01	12 March 2012	719020
02	10 April 2012	812404

Second semester:

Assignment number	Due dates	Unique number
01	3 September 2012	778421
02	1 October 2012	815034

8.3   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 mark-reading sheet and **mail it to Unisa**. If you are using a mark-reading sheet, remember to:

1. Use a HB pencil.

2. Indicate your student number and the above-mentioned unique number on the mark-reading sheet.

3. Follow the instructions for completing mark-reading sheets. Incomplete mark-reading sheets will be returned to you unmarked.

4. Submit the assignment in good time. It must have reached the Unisa Main Campus by the above-mentioned date. Otherwise it might not be in time to be marked by the Assignment Section.

How to submit your multiple-choice assignment answers using the Unisa mobile application

- Open Access and Mobility – the inspiration behind the design of the Unisa Mobile service
- Students can now submit their multiple choice assignments via their mobile phones!

Requirements:

- A mobile device with Java MIDP 2.0 support. If you are unsure about your device's capability, just download the app and try it out!
- Data Services with your provider and Credit/Airtime
- A myUnisa account (If you do not have an account, simply join by visiting https://my.unisa.ac.za/portal/pda)

Watch the demo in:

▶ Mobile 3gp (5MB)
▶ Standard Definition (60MB)
▶ High Definition (94MB)

Steps to follow:

Download and install the Unisa Mobile application from the link located at the bottom of the page

1.   Install and start the application on your phone
2.   Select the "MCQ Assignment" option
3.   Login with your myUnisa* credentials
4.   Select your module
5.   Select the appropriate unique assignment number
6.   Select appropriate answers to the assignment questions
7.   Send your answers
8.   Receive immediate onscreen confirmation

Note: You can view a complete set of assignment information by logging onto https://my.unisa.ac.za/portal/pda using an HTML web browser from any internet enabled device.

Conditions:

1.   Unisa takes no responsibility if an assignment submission results from the unauthorized use of one's password.
2.   Unisa will not tolerate abuse of any part of this service.
3.   Unisa reserves the right to modify or discontinue this service at any time.
4.   Unisa cannot guarantee the compatibility of this application with your particular phone model. Nevertheless, Unisa will strive to accommodate as many as possible.

Costs:

- Data usage (rates as per mobile service provider)

Features:

- Submit MCQ
- View Memorandum
- View Submissions
- Contact Info

8.4   ASSIGNMENTS

ASSIGNMENT 01   Due date: 12 March 2012

Unique number: 719020

Aim: To evaluate your knowledge of some of the fundamental aspects of investment background, industry and company analysis.

Answer the following questions and submit your assignment at https://my.unisa.ac.za.

1. Which investment do these characteristics belong to?
     a. It is illiquid thus may not be able to redeem at any time.
     b. There is usually a lock-in period to prevent aborting any strategy.
     c. There is a private pool of investment capital that is limited to the partners.
     d. It is managed by a general partner who earns fees based only on investors' profits, not losses.

     1. Unit trusts
     2. Hedge funds
     3. Investment trusts
     4. Participation bonds schemes

2. Which transaction involves the sale of shares the investor does not own with the intention of buying them back at a later stage at a lower price?

     1. Market orders
     2. Limit orders
     3. Short sales
     4. Margin transactions

3. The .....(i)..... decision is made by an investor to be on the capital market line (CML) efficient frontier as he initially decides to invest in the market portfolio; while the .....(ii)..... decision is made by the investor when he either borrows or lends to attain his preference on the CML.

	(i)	(ii)
1.	investment	asset allocation
2.	financing	investment
3.	investment	financing
4.	asset allocation	financing

4. Global Limited expects its share price to rise from R100 to R110 over the next year. The beta of Global Limited is 1.5, the return on the market is 13% and the risk-free rate of return is 9%. Calculate the required rate of return using CAPM and determine whether you will purchase the share.

1. 10%   buy
2. 10%   sell
3. 15%   buy
4. 15%   sell

5. James Sithole will start making R500 equal annual beginning of year deposits five years from now for a period of ten years at an interest rate of 10% compounded semi-annually. Determine how much this investment is worth today.

1. R3 860.87
2. R4 016.63
3. R6 231.11
4. R6 542.66

6. A company just paid dividends of R2.00 per share. Assume that the dividends will grow by 20% per year during the next two years. After that, growth is expected to level off to a constant growth rate of 10% per year. The required rate of return is 12%. Calculate the share's intrinsic value using the two stage dividend growth model.

1. R126.28
2. R130.71
3. R131.56
4. R158.40

Use the information in the table below to answer question 7.

Gauteng Manufacturing Limited Balance Sheet at 31 December 2011 (R'000)			
Cash	200	Accounts payable	205
Receivables	245	Notes payable	425
Inventory	625	Other current liabilities	115
Total current assets	1 070	Total current liabilities	745
Net non-current assets	1 200	Long-term debt	420
		Common equity	1 105
TOTAL ASSETS	2 270	**TOTAL LIABILITIES AND EQUITY**	2 270

Gauteng Manufacturing Limited Income Statement for the year ended 31 December 2011 (R'000)	
Sales	2 400
Cost of goods sold	1 834
Gross profit	556
Selling expenses	175
General and administrative expenses	216
Earnings before interest and taxes (EBIT)	175
Less: Interest expense	35
Earnings before taxes (EBT)	140
Less: Taxes (30%)	42
NET INCOME (NI)	98

7. Calculate the acid test (quick) ratio and the interest coverage ratio of Gauteng Manufacturing Limited.

Acid test ratio	Interest coverage ratio
1. 0.60	4
2. 0.60	5
3. 1.44	4
4. 1.44	5

8. The following are characteristics that relate to a specific stage of the industry life cycle:

   a) The industry's sales declines because of shifts in demand or growth of substitutes.
   b) Profit margins continue to be squeezed and some firms experience low profits or even losses.
   c) Firms that remain profitable may show very slow rates of return on capital.
   d) Investors begin thinking about alternative uses for the capital tied up in this industry.

   To which stage do these characteristics belong?
   1. Pioneering development
   2. Mature growth
   3. Stabilisation and market maturity
   4. Deceleration of growth and sales decline

9. Bronze Limited currently retains 30% of its earnings which are R4.00 a share this year. It earns a return on equity (ROE) of 25%. Assume a required rate of return of 12%. Determine the price earnings ratio (P_0/E_1) ratio and the price of Bronze Limited on the basis of the earnings multiplier model?

	P_0/E_1	Price
1.	6.67	R15.56
2.	6.67	R28.67
3.	15.56	R62.22
4.	15.56	R66.89

10. In technical analysis, a .... level is the point at which sellers take control of prices and prevent them from rising higher.

   1. support
   2. resistance
   3. absolute breadth thrust
   4. breadth thrust

ASSIGNMENT 02   Due date: 10 April 2012

Unique number: 812404

Aim: To evaluate your knowledge of some of the fundamental aspects of fixed income securities, derivative instruments and portfolio management.

Answer the following questions and submit your assignment at https://my.unisa.ac.za.

1. Which one of the following statements about options is true? When the share price is ....

    1. above the strike price, a put option is in-the money.
    2. below the strike price, a call option is in-the-money.
    3. below the strike price, a call option is at-the-money.
    4. above the strike price, a put option is out-of-the-money.

2. A put option on share A with a strike price of R40 is priced at R2, while a call with a strike price of R40 is priced at R3.50. What is the maximum per share loss to the writer (seller) of the put and the maximum per share gain to the writer (seller) of the call?

	Maximum loss to put writer	Maximum gain to call writer
1.	R38.00	R3.50
2.	R38.00	R36.50
3.	R40.00	R3.50
4.	R40.00	R40.00

3. Suppose the current 4 year spot rate is 18% and the current 3 year spot rate is 17%. What is the one year forward rate in three years?

    1. 14.05%
    2. 17.50%
    3. 21.05%
    4. 23.10%

4. Three years ago you purchased a bond for R974.69. The bond had three years to maturity, a coupon rate of 8%, paid annually, and a face value of R1 000. Each year you reinvested all coupon interest at the prevailing reinvestment rate **shown in the table below**. Today is the bond's maturity date. What is your realized compound yield on the bond?

Time	Prevailing Reinvestment Rate
0 (purchase date)	6.0%
1	7.2%
2	9.4%
3 (maturity date)	8.2%

1. 6.43%
2. 7.96%
3. 8.23%
4. 8.97%

5. Calculate the equivalent 12-month spot rate of bond B using the bootstrapping method. All bonds have a face value of R100 and semi-annual coupon payments.

Bond	Maturity (months)	Annual coupon	Price	Yield to maturity
A	6	8%	R100	8%
B	12	15%	R102.75	12%

1. 9.25%
2. 12.00%
3. 12.15%
4. 12.52%

6. Which of the following bond will have the longest duration?

1. A bond with a 10-year maturity and coupon rate of 8%.
2. A bond with a 10-year maturity and coupon rate of 10%.
3. A bond with a 20-year maturity and coupon rate of 8%.
4. A bond with a 20-year maturity and coupon rate of 10%.

7. Calculate duration of the following bond assuming a 1% change in the yield to maturity.

Time to maturity	5 years
Coupon rate	8% per annum
Coupon payments	semi-annual
Face value	R1000
Yield to maturity	12%
Market price	R852.79

1. 3.80
2. 3.91
3. 7.82
4. 7.83

8. Suppose you have a 12%, 20 year bond trading at R896. If it is callable in 5 years at R1 100, what is the bond's yield to call? Interest is paid semi-annually.

1. 9.00%
2. 9.40%
3. 16.00%
4. 16.50%

9. If the standard deviation of return is 0.45 for share A and 0.70 for share B, what is the correlation between A and B if the covariance between the two is 0.295?

1. 0.42
2. 0.66
3. 0.94
4. 1.08

10. You wish to evaluate three unit trusts using the Treynor measure for performance evaluation. The risk-free return during the sample period is 6%. The average returns, standard deviations, and betas for the three funds are given below, in addition to information regarding the ALSI 40 index. The fund with the highest Treynor measure is ...

Unit trust	Average Return	Standard Deviation	Beta
Fund A	13%	10%	0.5
Fund B	19%	20%	1.0
Fund C	25%	30%	1.5
ALSI 40	18%	16%	1.0

1. Fund A
2. Fund B
3. Fund C
4. Funds A and C are tied for highest

11. You wish to evaluate three unit trusts using the Jensen measure for performance evaluation. The risk-free return during the sample period is 6%, and the average return on the market portfolio is 18%. The average returns, standard deviations and betas for the three funds are given below. The fund with the highest Jensen measure is ...

Unit trust	Average Return	Standard Deviation	Beta
Fund A	17.6%	10%	1.2
Fund B	17.5%	20%	1.0
Fund C	17.4%	30%	0.9

1. Fund A
2. Fund B
3. Fund C
4. Funds A and B are tied for highest

12. A 6-month European call option with a strike price of R40 sells at a premium of R5. It has a risk free rate of 8% and a current share price of R42. Using the put-call parity, what is the equivalent value of the European put option?

   1. –R3.51
   2. R1.49
   3. R5.42
   4. R8.51

13. An investor owns an underlying share and wants to protect himself against the downward movement in the price of the underlying share. Which of the following strategies would he enter into?

   1. A protective put strategy: by taking a long position in a put.
   2. A protective put strategy: by taking a short position in a put.
   3. A covered call strategy: by taking a short position in a call.
   4. A covered call strategy: by taking a long position in a call.

   Use the information below to answer questions 14 and 15.
   Lucy Cotz believes she has identified an arbitrage opportunity for a commodity, she gathers the following information:

   Commodity price and interest rate information

Spot price for commodity	R130
Futures price for commodity expiring in 1 year	R150
One-year interest rate	10%

14. Calculate the theoretical price on behalf of Lucy.

   1. R130
   2. R143
   3. R150
   4. R165

15. The following actions will realise an arbitrage profit.

   1. Buy futures, short spot, borrow money.
   2. Buy futures, sell spot, borrow money.
   3. Buy futures, long spot, invest proceeds.
   4. Buy futures, short spot, invest proceeds.

SEMESTER 02 ASSIGNMENTS

ASSIGNMENT 01   Due date: 3 September 2012

Unique number: 778421

Aim: To evaluate your knowledge of some of the fundamental aspects of investment background, industry and company analysis.

Answer the following questions and submit your assignment at https://my.unisa.ac.za.

Use the information below to answer question 1.

Brown Stone Limited Balance Sheet at 28 February 2012 (R'000)			
Cash	200	Accounts payable	205
Receivables	245	Notes payable	425
Inventory	625	Other current liabilities	115
Total current assets	1 070	Total current liabilities	745
Net non-current assets	1 200	Long-term debt	420
		Common equity	1 105
TOTAL ASSETS	2 270	**TOTAL LIABILITIES AND EQUITY**	2 270

Brown Stone Limited Income Statement for the year ended 28 February 2012 (R'000)	
Sales	2 400
Cost of goods sold	1 834
Gross profit	556
Selling expenses	175
General and administrative expenses	216
Earnings before interest and taxes (EBIT)	175
Less: Interest expense	35
Earnings before taxes (EBT)	140
Less: Taxes (30%)	42
NET INCOME (NI)	98

1. Calculate the current asset ratio and ROE of Brown Stone Limited.

      Current asset ratio   ROE

  1. 0.60x   4.32%

  2. 0.60x   8.87%

  3. 1.44x   4.32%

  4. 1.44x   8.87%

2. An analyst has gathered the following information on Big Bank Limited, use the information to determine the value of the share and whether the share is over, under or fairly valued.

Expected return of the market	15%
Risk-free rate	8%
Estimated return of Big Bank Limited	20%
Beta of Big Bank Limited	1.35
Constant growth rate of Big Bank Limited	11%
Current dividend	R2.00
Market value	R36.42

      Value of share   The share is

  1. R34.42   overvalued by 2.55%

  2. R34.42   undervalued by 2.55%

  3. R36.42   overvalued by 5%

  4. R36.42   undervalued by 5%

3. An investor should not expect to receive additional return for assuming .... risk because it is diversifiable.

  1. liquidity
  2. systematic
  3. total
  4. unsystematic

4. Assume the expected inflation is 5% and the real risk-free rate is 8%. Calculate the nominal risk-free rate of return (NRFR).

  1. 11.34%
  2. 13.00%
  3. 13.40%
  4. 21.30%

5. What determines the slope in the SML?

    1. The expected rate of inflation.
    2. The attitude of the investor towards the market.
    3. The market risk premium.
    4. The change in beta.

6. Which one of the following statements is **false**?

    1. A market order is an order to buy or sell at the best price available.
    2. A limit order is an order to buy or sell at a price different from the current market price.
    3. A short sale is the sale of a share that an investor does not own with the intent of buying it back later at a lower price.
    4. A stop order is a conditional market order by which an investor directs the sale of a share if it drops to a given price.

7. Assume Gold Rivers Limited has issued 5 million shares and that the shares trades at R22 on the JSE. The firm's assets amount to R95 million and the total liabilities to R2.5 million. The share has a NAV of..........?

    1. R18.50
    2. R19.00
    3. R22.00
    4. R23.00

8. John Black will receive R55 million when his father passes away in 20 years time; how much is this inheritance worth today, if the discount rate is 12% compounded annually?

    1. R5.70 million
    2. R55.00 million
    3. R61.60 million
    4. R458.33 million

Use the information below to answer questions 9 and 10.

Possible outcomes	Probability (%)	Return (%)
Pessimistic	20	9
Most likely	35	17
Optimistic	45	23

9. Calculate the expected return.

   1. 9.89%
   2. 15.60%
   3. 18.10%
   4. 29.67%

10. Calculate the coefficient of variation if the variance of returns is 3.

   1. 0.06
   2. 0.10
   3. 0.14
   4. 0.17

ASSIGNMENT 02   Due date: 1 October 2012

Unique number: 815034

Aim: To evaluate your knowledge of some of the fundamental aspects of fixed income securities, derivative instruments and portfolio management.

Answer the following questions and submit your assignment at https://my.unisa.ac.za.

1. Which bond risk exposure entails the possibility that the issuer will fail to meet its obligations regarding the timely payment of coupons and principal?

    1. Credit spread risk
    2. Default risk
    3. Downgrade risk
    4. Interest risk

2. A zero coupon bond has a par value of R1 000 with a maturity of 20 years and a yield to maturity of 8% compounded semi-annually. Calculate the present value of the bond.

    1. R214.55
    2. R208.29
    3. R456.39
    4. R1 000.00

3. A/An .... yield curve is one in which the yields on intermediate-term issues are above the yields on short-term issues and the rates on long-term issues decline to levels below those for the short-term issues before levelling out.

    1. upward sloping
    2. downward sloping
    3. flat
    4. humped

4. An investor has an 8% annual paying bond with a par value of R100 000. The bond has a market price of R88 401 and is 25 years to maturity. Calculate the yield to maturity and bond equivalent yield of the bond.

Yield to maturity	Bond equivalent yield
1. 4.60%	4.55%
2. 4.60%	9.41%
3. 9.20%	9.00%
4. 9.20%	19.25%

5. A 20 year, 15% semi-annual coupon bond (R1 000 par value) is priced at a yield to maturity of 12%. The yield changes by 150 basis points. Calculate the convexity of the bond.

   1. 36.85
   2. 41.35
   3. 44.95
   4. 51.47

6. A 9-month European put with a strike price of R70 sells at a premium of R3.00. It has a risk-free rate of return of 6% and a current share price of R68. Using the put-call parity, calculate the equivalent value of the European call option.

   1. R2.00
   2. R3.00
   3. R3.20
   4. R3.99

Use the information below to answer questions 7 and 8.

Themba Sibeco believes he has identified an arbitrage opportunity for a commodity, he has gathered the following information.

Commodity price and interest rate information:

Spot price for commodity	R200
Futures price for commodity expiring in 1 year	R210
One-year interest rate	8%

7. Calculate the theoretical futures price of the commodity.

    1. R200
    2. R216
    3. R220
    4. R227

8. Determine the actions that will realise an arbitrage opportunity.

    1. Buy futures, sell spot and invest money.
    2. Buy futures, buy spot and borrow money.
    3. Sell futures, buy spot and invest money.
    4. Sell futures, buy spot and borrow money.

9. A callable bond exhibits negative convexity, meaning that the price .....(i)..... in response to a decreasing market rate is limited. While, a putable bond exhibits positive convexity, meaning that the price .....(ii)..... in response to an increasing market rate is limited.

       (i)   (ii)
    1. increase   decrease
    2. increase   increase
    3. decrease   decrease
    4. decrease   increase

Use the information in the table below to answer questions 10 to 12.

Shares	Expected return	Standard deviation	Weight in portfolio
Y	6%	5%	60%
Z	14%	12%	40%

A portfolio is made up of shares Y and Z. The correlation coefficient of shares Y and Z is 0.90.

10. Calculate the expected return of the portfolio.

    1. 3.60%
    2. 5.60%
    3. 9.20%
    4. 10.00%

11. Calculate the standard deviation of the portfolio.

    1. 5.80%
    2. 6.00%
    3. 7.62%
    4. 8.50%

12. Determine the optional asset allocation between shares Y and Z that will produce the lowest risk, assuming the covariance of shares Y and Z is 4.

	Optimal weight Y	Optimal weight Z
1.	85.00%	13.04%
2.	85.00%	15.00%
3.	86.96%	13.04%
4.	86.96%	15.00%

13. Which active management strategy, considered to be relatively high risk strategy can a fixed income portfolio manager use to anticipate changes in yields and yield curve formations?

    1. Interest rate anticipation
    2. Credit analysis
    3. Yield spread analysis
    4. Bond swaps

Use the information in the table below to answer questions 14 and 15.

Performance measure	Portfolio C	Portfolio D	Market index	Best performer
Treynor performance index	5.20	3.10	2.86	Portfolio C
Sharpe performance index	0.95	1.64	0.61	Portfolio D
Jensen measure	0.74%	0.42%	0.00%	Portfolio C

14. When there is a contradiction in the ranking of portfolios between the performance measures as indicated in the table above, it is a result of lack of proper ....

   1. asset allocation.
   2. correlation.
   3. diversification.
   4. hedging.

15. Based on the information in the table above, which portfolio is better diversified?

   1. Portfolio C
   2. Portfolio D
   3. Market index
   4. None of the above

9   SELF ASSESSMENT QUESTIONS

1. The annual holding period return of an investment that was held for four years is 5.74%. The ending value of this investment was R1 000. Calculate the beginning value of the investment.

    1. R799.94
    2. R945.72
    3. R1 057.40
    4. R1 250.00

2. Which of the following is **not** a purpose of market indices?

    1. To predict past market movements.
    2. To create and monitor an index fund.
    3. To measure market rates of return in economic studies.
    4. As benchmarks to evaluate the performance of professional portfolio managers.

3. If a risk-free asset has a correlation of zero with all other risky assets the expected return will be .... to/than the actual return.

    1. lower
    2. equal
    3. greater
    4. not related

4. .....(i)..... risk is the only risk that a share contributes to a well diversified portfolio while .....(ii)..... risk is diversified away from this portfolio.

	(i)	(ii)
1.	Financial	unsystematic
2.	Systematic	financial
3.	Systematic	unsystematic
4.	Unsystematic	systematic

Use the information in the table below to answer question 5.

	Average rate of return	Standard deviation	Correlation coefficient with market index
Green Limited	26%	14%	0.45
Market Index	10%	6%	

5. Calculate the beta of Green Limited.

   1. 0.01
   2. 0.06
   3. 0.55
   4. 1.06

6. Brainchild Limited has a current dividend of R2.00 per share. It has a beta of 1.1 and a constant growth rate of 5%. The risk-free rate is 8% and the return of the market is 12%. Calculate the intrinsic value of Brainchild Limited using the constant growth model.

   1. R27.03
   2. R28.38
   3. R28.57
   4. R30.00

7. Maroon Limited has just paid dividends of R1.00 per share this year. The dividend is expected to grow at 15% over the next two years and at 8% in year three. There after growth is expected to level off to a constant growth of 4%. Maroon Limited has a required rate of return of 18%. Calculate the intrinsic value of Maroon Limited using the three stage dividend model.

   1. R6.46
   2. R9.28
   3. R9.37
   4. R10.61

Use the information in the table below to answer question 8.

Fashion Corporation	
Dividend payout ratio	30%
Net profit margin	15%
Total asset turnover	2.0
Financial leverage	0.9

8. Calculate the growth rate of Fashion Corporation.

    1. 8.10%
    2. 15.00%
    3. 18.90%
    4. 27.00%

9. A .....(i)..... shares are shares with low betas, regardless of the nature of the company while .....(ii)..... companies are firms whose business involves great risk.

	(i)	(ii)
1.	cyclical	defensive
2.	cyclical	speculative
3.	defensive	cyclical
4.	defensive	speculative

10. Based on technical analysis, a share should be bought if:

    1. the moving average line decreases and crosses the share price line.
    2. the moving average line increases and crosses the share price line.
    3. the overbought-oversold (OB-OS) line starts to increase from its maximum negative value.
    4. alternative 2 and 3 above.

11. Consider a bond selling at par with effective duration of 10.6 years and convexity of 210. A 2% decrease in yield would cause the price to change by 21.2%, according to the duration rule. What would be the percentage price change according to the total effect?

   1. 10.60%
   2. 17.00%
   3. 21.20%
   4. 29.60%

Use the following information to answer questions 12 and 13.
A bond that pays 8% coupon payment rate annually on its R1000 face value matures in 4 years and is selling for R967.59.

12. Calculate the expected yield to maturity of the bond.

   1. 3.00%
   2. 7.00%
   3. 8.00%
   4. 9.00%

13. Calculate the current yield of the bond.

   1. 8.06%
   2. 8.27%
   3. 9.00%
   4. 9.50%

14. Calculate the effective duration of an 18%, R1000 par bond maturing in 15 years if the yield to maturity is 7% and interest is paid semi-annually.

   1. 5.23%
   2. 6.54%
   3. 7.74%
   4. 9.23%

15. An instrument issued by a company that gives an investor the right to buy shares in that company is a ....

   1. warrant.
   2. call option.
   3. put option.
   4. futures.

16. If two parties enter into an agreement to exchange 10% per annum interest (compounded annually) and a 3-month JIBAR on a notional amount of R35 million. What is the name of this agreement?

   1. Interest futures
   2. Interest rate swap
   3. Interest rate contract
   4. Interest rate forward

17. A call option on a share is currently selling for R35. The call option is in the money by R3. What is the strike price of the call?

   1. R32
   2. R35
   3. R38
   4. R42

18. Assume that at the end of four months, the price of a share currently trading at R80 will either move up or down by R5. Calculate the delta of an at-the-money European put option with a strike price of R73.

   1. 0.25
   2. 0.50
   3. 1.00
   4. 1.20

19. If there is a one-year spot rate of 6% and a two-year spot rate of 8%, the forward rate from year 1 to 2 is?

    1. 8.12%
    2. 9.06%
    3. 9.72%
    4. 10.04%

Use the information below to answer questions 20 to 22.

Probability of occurrence	Security A	Security B
50%	12%	10%
25%	10%	11%
25%	8%	9%

20. Calculate the standard deviation of Security A.

    1. 0.71%
    2. 0.97%
    3. 1.23%
    4. 1.66%

21. Calculate the correlation between security A and B; if the standard deviation of B is 1.23 and the covariance between the two is 1.30.

    1. 0.21
    2. 0.64
    3. 0.87
    4. 0.81

22. Calculate the portfolio risk if the measurement is 50% in A and 50% in B.

    1. 0.85%
    2. 1.31%
    3. 1.66%
    4. 2.72%

Use the information below to answer questions 23 to 25.

Portfolio	Average Return	Standard Deviation	Beta
A	8%	3	0.4
B	11%	8	1.0
C	14%	6	1.1
R	3%	0	0
Market index	9%	9	1.0

The risk-free rate of return is 3%.

23. Calculate the Sharpe measure of Portfolio A.

1. 0.50
2. 1.00
3. 1.67
4. 1.83

24. Calculate the Jensen measure of Portfolio B.

1. 2.00
2. 2.60
3. 3.00
4. 4.40

25. Calculate the Treynor measure of Portfolio C.

1. 8.00
2. 10.00
3. 12.50
4. 14.00

ANSWERS TO THE SELF ASSESSMENT QUESTIONS

Questions	Correct Options
1	1
2	1
3	2
4	3
5	4
6	2
7	2
8	3
9	4
10	4
11	4
12	4
13	2
14	3
15	2
16	2
17	1
18	3
19	4
20	4
21	2
22	2
23	3
24	1
25	2

The complete solutions to the self assessment questions will be uploaded on myUnisa and will also be included in TL201 which will be sent to you in due course. TL201 also contains the solutions to assignments 1 and 2.

10   EXAMINATIONS

Examination admission will be granted to all students who submit the compulsory assignment. Students who do not submit the assignment will NOT be allowed to write the examination.

The provisional examination dates have been published at https://my.unisa.ac.za

The examination paper for INV2601 will consist of 40 multiple questions. No equations are provided in the examination paper.

A student must attain a mark of at least 40% in order to qualify for admission to the supplementary examination.

11   OTHER ASSESSMENT METHODS

None.

12   FREQUENTLY ASKED QUESTIONS

SECTION A: ADMINISTRATIVE MATTERS

1   MATTERS PERTAINING TO REGISTRATION

What should I do if any of my personal details (name, address, etc) have been incorrectly captured during the registration process?

Please use myUnisa (https://my.unisa.ac.za) to rectify any mistakes. Alternatively send an e-mail to econ@unisa.ac.za. Alternatively mail us a letter addressed to The Registrar, PO Box 392, Unisa, 0003. Please remember to quote your student number in all correspondence.

What do I need to do to obtain items that were out of stock when I registered?

Please use the internet facility at https://my.unisa.ac.za in order to download copies of any of the study material. Alternatively send us an e-mail to despatch@unisa.ac.za. Please remember to quote your student number in all correspondence. Please allow ± 4 weeks for delivery of any outstanding items before contacting Unisa about out-of-stock items.

2   ASSIGNMENTS

My assignment is late because .... .Can I submit it at a later date?

It is your responsibility to ensure that your assignment is submitted at myUnisa or reaches the Unisa Main Campus on or before the closing date. Please do not call us to request an extension for the submission of an assignment. Once you have received the tutorial letter containing the solutions you will know that you definitely can no longer submit the assignment.

Are the assignments of this programme compulsory?

The assignments are compulsory. The intention is that you should use the assignments to prepare yourself for the examination.

Do the marks obtained for assignments count towards the final mark?

The assignment marks do count towards the final marks, as explained in this tutorial letter.

Who do I contact to find out if Unisa received my assignment(s) that I sent by mail?

Preferably submit your assignments via myUnisa. To determine if Unisa received your assignment(s), you can send and SMS to 43584.

What do I do if my assignment goes missing in the mail?

Preferably submit your assignments via myUnisa. Always make a copy of your assignment and keep it in a safe place in case you need to submit a duplicate copy.

Can I submit my assignments by e-mail?

Assignments should be submitted via the myUnisa facility. Please do not e-mail assignments to the centre via e-mail.

Can I send my assignments by e-mail directly to the relevant lecturer?

Please do not send your assignments directly to the lecturers. Please use the myUnisa facility.

How long will I have to wait before I can expect my assignment(s) results?

We aim to have assignments marked within three (3) weeks after each due date. Visit https://my.unisa.ac.za to determine what mark you achieved. Allow an additional week or two for the post office to deliver the results to your postal address. The assignment results will be returned to the postal address that you indicated. Please do not call us to make enquiries about your assignment before four (4) weeks after the due date have elapsed.

Can I expect my assignment to be returned sooner if I submit it well before the due date?

The marking of assignments normally starts on the due dates indicated in the relevant tutorial letters 101. Assignments are not marked or returned prior to the due dates.

What mark did I obtain for my assignment(s)?

Register as a user of the myUnisa facility and visit https://my.unisa.ac.za to find out the mark you received for your assignment(s).

3   EXAMINATION

What happens if I am unable to write the examination because of ill health, work commitments or any other crisis?

Any requests for aegrotat examinations need to be done in writing and directed to the Head: Examinations, Box 392, Unisa, 0003 or exams@unisa.ac.za. A fee is payable for such requests. The amount payable is determined by the Examination Section.

What happens if I fail any papers?

Students who fail any of the papers may be granted admission to write the supplementary examination scheduled for the next examination, provided they achieved a final mark of at least 45%. Any enquiries in this regard need to be directed to the Head: Examinations, Box 392, Unisa, 0003 or exams@unisa.ac.za

What will happen if I do not write any of the papers during the supplementary examination?

In such a case you will have to obtain a registration form, complete it, pay the required fees and register again. Registration forms are available from www.unisa.ac.za

What do I need to bring to the examination venue?

Bring your identity document (ID), student card, an HB pencil, black pen, financial calculator, ruler, eraser, and pencil sharpener.

Will it be an open-book examination?

No.

Could you give me an idea of the scope of the examination paper?

The examination paper is based on your prescribed book and the learning outcomes provided in your study guide. Each learning outcome statement and assessment criterion may be used to set examination questions. Please do not call us to enquire about the "scope" of the examination paper.

4   RESULTS

I am going to be away when the examination results are due to be released. Could you please tell me what mark I obtained for this paper?

The results should be available four (4) weeks after completion of the examination period. Please do not call the lecturers to request your results.

How will the results be announced?

The results are normally mailed to students. They are also published at myUnisa https://my.unisa.ac.za and the MTN results facility, cellular number 083 1234.

5   STUDY GUIDE AND TUTORIAL LETTERS

I have lost my study guide and tutorial letters. Could you please mail or fax me a copy?

Please download a copy from the myUnisa. Register as a user at https://my.unisa.ac.za. The lecturers do not mail or fax copies of study guides to students. You may also order

replacement copies of study guides from Unisa's Despatch Department. Please send an e-mail to despatch@unisa.ac.za or a letter to The Head, Despatch, PO Box 392, Unisa, 0003.

6   CHANGES IN REGISTRATION DETAILS

What do I need to do if I want to add or cancel any of the modules?

Please update your details at myUnisa. Alternatively send us an e-mail, facsimile or letter to indicate any changes that need to be made to your registration. Any such changes must be completed two months before the examination. Please send us an e-mail to econ@unisa.ac.za. Alternatively mail us a letter addressed to The Registrar, Box 392, Unisa, 0003. Please remember to quote your student number in all correspondence.

7   ACCOUNTS

What do I do if I do not agree with my account statement?

Please send a letter addressed to The Head, Student Accounts, Box 392, Unisa, 0003.

Please provide a copy of your receipt(s), deposit slips or electronic funds transfer (EFT) as proof of payment.

To which fax number can I send a copy of my receipt?

012 429 4150

Will the payment immediately appear on my account statement?

Please note that your payment will only be reflected on your next account statement.

8   SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

Is the programme accredited with SAQA?

Unisa is a public provider of higher learning accredited by the CHE. Specific qualifications offered by Unisa need not be accredited by SETAs. Unisa must be accredited by the Council for Higher Education (CHE).

9.   CLOSURE OF THE UNISA CONTACT CENTRE (UCC)

Why is Unisa closing the UCC?

As per a Mancom decision, Unisa's Contact Centre (UCC) will close on 31 July 2011. This decision, which eliminates telephonic communication with the student, simplifies the way we communicate with students, as it requires enquiries to be submitted eithervia e-mail, SMS or fax which can then be channelled to the workflow.

What if you call the UCC number?

From 1 August 2011, an automated answering service with the following detailed message on all previous UCC numbers will inform students that the Contact Centre has closed:

Thank you for calling the Unisa Contact Centre. You'll be pleased to know that "Please hold" has now turned into "Just a click". That's because we've closed our telephonic Contact Centre to simplify the way we communicate with you. So instead of being put on

hold, send us an SMS to 32695 and we'll send you details of how to contact Unisa or send us an e-mail at info@unisa.ac.za. That's an SMS to 32695 or e-mail to info@unisa.ac.za. Unisa is trying to make your study life easier, so talk to us.

How can students now contact Unisa?

- **Unisa website** (http://www.unisa.ac.za & http://mobi.unisa.ac.za)

  All study-related information is now available on the new Unisa corporate website in both web and mobi formats.

- **myUnisa** (https://my.unisa.ac.za/portal & https://my.unisa.ac.za/portal/pda)

  Students can access their own information via the *my*Unisa website or mobi site.

- **E-mail** (info@unisa.ac.za)

  Students may send an e-mail to info@unisa.ac.za for information on how to contact Unisa via e-mail.

- **SMS** (32695 - only for students in South Africa)

  Students may send an SMS to 32695 for more information on how to contact Unisa via SMS. The sender will receive an auto response SMS with the various SMS options. The cost to the student per SMS is R1.00.

- **Fax** (012 429 4150)

  Students will be able to fax their enquiries to 012 429 4150, whereafter it will be distributed to and processed by the relevant department.

Which departments will take over the functions of the UCC?

Directorate/Business Unit	Description of enquiry	Short SMS code	E-mail address
Student Admissions and Registrations	Applications and registrations	43578	Study-info@unisa.ac.za
Student Assessment Administration	Assignments and examinations	43584	For assignments: Assign@unisa.ac.za For examination: Exams@unisa.ac.za
Despatch	Study material	43579	despatch@unisa.ac.za
Finance	Student accounts	43583	finan@unisa.ac.za
ICT (myUnisa &myLife)	*my*Unisa myLife e-mail	43582	MyUnisaHelp@unisa.ac.za MyLifeHelp@unisa.ac.za

How will we inform our stakeholders of this?

A comprehensive campaign will be launched early in August to inform students of this change and will include the following:

- E-mail to all students on Monday 1 August 2011
- SMS to all students on Monday 1 August 2011
- Radio campaign launching in the first half of August
- Online campaign launching in the first half of August
- Print campaign launching in the first half of August

How can you assist?

- What should I do if I receive a student enquiry via e-mail?

  Reply to the student and ask him or her to send the enquiry/e-mail to info@unisa.ac.za. Do not forward enquiries to individual staff members as this will just delay the process of a response to the student.

- Students phone me on a regular basis asking for information. What should I do?

  Direct the students to the Unisa corporate website (http://www.unisa.ac.za or http://mobi.unisa.ac.za) or ask them to send their enquiry via e-mail (info@unisa.ac.za), SMS (32695) or fax (012 429 4150).

- Can international students also send SMSs to Unisa?

  Only students in South Africa can make use of the SMS numbers. Advise all international students to send an e-mail to info@unisa.ac.za.

SECTION B: ACADEMIC MATTERS

1   THE PRESCRIBED BOOK

May I use any alternative books?

We strongly recommend the use of the prescribed book. You are welcome to consult additional reading material but the examination paper is based on the prescribed book.

Which specific pages do I need to study and which can I leave out?

The chapters that need to be studied are indicated in your study guide. The study guide will indicate if any pages may be left out. You need to focus on achieving the learning outcome statements.

Could you highlight the most important aspects of each chapter?

Some students are inclined to study only the "most important aspects". This may prove to be disastrous in the examination. All aspects of the prescribed chapters identified by means of the learning outcome statements should be regarded as important for the examination.

2 CALCULATORS

Am I allowed to use a calculator?

Yes. In fact we would like to encourage you to use a **financial calculator**.

I have a scientific calculator. Will it be sufficient for this paper?

No. Please use a financial calculator.

Which calculator is prescribed or recommended?

We recommend the use of the HP10-B II.

Am I allowed to use a programmable calculator in the exam?

No.

3 GROUP DISCUSSION CLASSES

Will any discussion classes be offered?

Details of discussion classes will be announced on myUnisa and an sms will sent to all students who provided their cellular numbers to Unisa.

Is it compulsory to attend any group discussion classes?

No.

4 SUPPLEMENTARY BOOKS AND VIDEOS

Are there any supplementary books and videos which I can use?

No supplementary books and videos are prescribed.

I would like to do some additional exercises and calculations. Could you provide me with the tutorial letters of 20..?

Because of limited storage space at Unisa, no tutorial letters from previous years are kept and/or made available to students.

5 CONTACT WITH FELLOW STUDENTS

I wish to contact other students enrolled for this module in my area. Please provide me with their contact details.

Contact may be established with fellow students at the discussion forum and blog at myUnisa. Due to the constitutional right to privacy we may not disclose the details of students to their fellow students.

6 EXAMINATION

Are any old examination papers available?

Previous examination papers are published at myUnisa, but no memoranda are made available to students. Old questions will not necessarily be repeated in subsequent examination papers and students are warned not to rely on old examination papers in order to pass the module.

What will the format of the examination paper be like?

The format of the examination paper will be confirmed in one of the tutorial letters (normally tutorial letter 201) which will be sent to you during the year.

Will the examination paper contain any theory questions or will there only be calculations and interpretations?

Most of the questions involve applications, calculations and interpretations.

Will all the equations be provided as an annexure to the examination paper?

The equations will not be provided as part of the examination paper. You must be able to <u>apply</u> the equations in the exam. No marks are awarded for quoting equations in the examination script.

If I study only the assignment questions, will I be adequately prepared for the examination?

No. It is unlikely that you will be adequately prepared by studying only the assignment questions. The assignment questions represent a sample of the work and cannot be regarded as being representative of all the study material.

Can you give me the "scope" of or any "hints" for the exam?

No "hints" are provided to students. Please do not call the lecturers about the "scope" of or "hints" for the exam. Base your preparation for the examination on the learning outcome statements.