NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF COMMERCE
DEPARTMENT OF BANKING

BANK LENDING AND CREDIT RISK MANAGEMENT II
CBA 4206

FINAL EXAMINATION **AUGUST 2009**

TIME: 3 HOURS

INSTRUCTIONS TO CANDIDATES

Answer any FOUR (4) questions.

Indicate on your answer booklet whether you are in the conventional or parallel programme.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets [ ] at the end of each question or part question.

Questions may be written in any order, but must be legibly numbered.

The businesses in this question paper are intended to be fictitious.

This paper consists of 5 printed pages

[Turn over]

QUESTION 1

a) While credit risk should be of concern for the whole bank, explain why a Lending Officer and a Money Market Dealer would most probably view the impact of credit risk differently and therefore approach its management differently. **[5 marks]**

b) Describe the following services that an investment banking arm of a financial institution may be involved in. For each service, identify the risk that the service may expose the institution to.

i) Mergers and Acquisitions
ii) Advisory services
iii) Leveraged Buy-Out (LBO)
iv) Securitization

[8 marks]

c)
i) Identify; and with the aid of a clearly labeled diagram, describe the risk management process that employs a hierarchal approach to both the identification and management of risk. From a practical point of view, what could be the shortcomings of this approach? **[12 marks]**

TOTAL [25 MARKS]

QUESTION 2

a)
i) Explain what a liquidity gap is and differentiate between *static* liquidity gaps and *dynamic* liquidity gaps. **[2 marks]**

ii) Of the two types of liquidity gaps above, which one is appropriate for use in calculating the gap profile? Explain **[2 marks]**

b)
You are given the following abridged Balance Sheet for a bank as at 30 June 2009

Assets	
Total Assets	1000 000
	1 000 000
Liabilities	
Total Liabilities	1 000 000
	1 000 000

Notes

1. Figures are in US$ and all calculations should be to the nearest $'000
2. It is projected that total assets and total liabilities will be increasing by 20% per year for the foreseeable future as a result of new transactions.

3. The **existing** interest rate sensitive assets are expected to be 90% of the current level on the 30th June 2010, 80% of the previous year's level on the 30th June 2011, 90% of the previous year's level on 30th June 2012 and 77% of the previous year's level on 30th June 2013
4. The **existing** interest rate sensitive liabilities are expected to be 80% of the current level on the 30th June 2010, 62.5% of the previous year's level on the 30th June 2011, 80% of the previous year's level on 30th June 2012 and 87.5% of the previous year's level on 30th June 2013
5. Interest rate sensitive assets constitute 90% of the total assets as at 30th June 2009
6. Interest rate sensitive liabilities constitute 90% of the total liabilities as at 30th June 2009

Required

i) Calculate the static liquidity gap for each year starting with the balance sheet date; and the respective marginal gaps. Show all workings **[11 marks]**

ii) From your calculations in i) above, state which one, of the existing rate sensitive assets and existing rate sensitive liabilities amortizes faster. What are the implications of this for the bank? **[2 marks]**

c) Identify the main characteristics of an Asset-Liability Management (ALM) structure and **describe** them i**n point form**. **[8 marks]**

TOTAL **[25 MARKS]**

QUESTION 3

(a) Differentiate between internal and external ratings. Why do external ratings concentrate on the Issue (the instrument or paper) and not so much on the Issuer? **[8 Marks]**

(i) Rating Agencies tend to differentiate between *Borrower risk* & *Transaction risk*. What is the difference between these two? Identify the four sources of Borrower risk and, in point form, write detailed notes on each of them **[9 Marks]**

(ii) Identify any four (4) variables that affect the (risk) rating of a facility and discuss their impact on the overall rating. **[8 Marks]**

TOTAL **[25 MARKS]**

QUESTION 4

(a) "Models, including credit risk models, do not guarantee success. They are mere simplifications or replications of reality. In fact a substantial number of banks that purport to use these models have suffered heavy losses as a result of default by clients and counterparties"

Given the above statement, why should banks continue to employ models in trying to manage credit risk? **[10 Marks]**

(b) KMV Portfolio Manager is one of many Credit Risk Models. Describe this model in detail including the importance of the Expected Default frequencies. **[8 marks]**

(c) What challenges do you think local banks could face in using models such as the one in b) above? **[7 marks]**

TOTAL [25 MARKS]

<u>QUESTION 5</u>

(a) Identify the **essential** steps followed when pricing loans. **[3 marks]**

(b) You have been asked to price a facility whose details are given below:-

A company has approached your bank with a request for a $3 billion unsecured Line of Credit. The facility will be fully utilized. Your bank's policy on such facilities is to request clients to maintain 12-month average balances equivalent to 5% of the Line of Credit with the bank for the duration of the loan and the activity costs on the balance is 4%. The bank charges arrangement fees of 2%, its funding cost is 8.25% and it incurs 3% in administering the facility. Loan loss expenses have averaged 1% in the past but are expected to rise by 50% immediately. The bank falls in the 7% equity reserve requirement bracket and its profits are taxable at 35%.

Required

i) Calculate the **Yield**, **Return on Assets (ROA**) and **Return on Equity (ROE)** given that a hurdle interest rate of 12% has been suggested for the facility. **State formulae and show all workings.** **[16 marks]**

ii) Is the hurdle rate in i) above appropriate given that the required ROE is 10%? Explain

(c) Identify and explain any three sub categories of expenses that have to be considered in calculating the cost of funds **[6 marks]**

TOTAL [25 MARKS]

<u>QUESTION 6</u>

(a) With the use of examples, illustrate how the following techniques can be used to improve the credit quality of the loan portfolio, for both the "selling bank" and the "buying bank".

(i) Syndication (also discuss advantages to the borrower) **[9 marks]**
(ii) Novation **[6 Marks]**
(iii) Participation **[6 marks]**

(b) Why would banks in Zimbabwe not use (some of) these techniques?

[4 Marks]

TOTAL **[25 MARKS]**

QUESTION 7

a) Illustrate clearly how banks can use *predictive modeling* as a way of avoiding financial distress that may result from the following areas of the bank's lending activities:-

i) Customer acquisition
ii) Credit Origination
iii) Customer Retention and
iv) Customer Value Management

[8 marks]

b) In point form, state and expound the other benefits that banks can derive from predictive models besides those covered in question a) above. [6 marks]

c) Compare the two basic types of forecasting techniques. Which of the two do you think a bank should use in evaluating factors that may influence a borrower's ability to repay and service a debt? [11 marks]

TOTAL **[25 MARKS]**

END OF THE EXAMINATION