EXAMINATION

18 May 2017 (am)

Subject F206 – Banking
Fellowship Applications

Time allowed: Three hours

INSTRUCTIONS TO THE CANDIDATE

1. *Candidates will be issued with instructions to log-in using a password (which you will be provided with at the exam center).*
2. *Candidates are required to submit their answers in Word format only using the template provided. You MAY NOT use any other computer program (e.g. Excel) during the examination.*
3. *Save your work continuously throughout the exam, on your computer's hard drive with which you have been provided.*
4. *You have 15 minutes at the start of the examination in which to read the questions. You are strongly encouraged to use this time for reading only, but notes may be made. You then have three hours to complete the paper.*
5. *You must not start typing your answers until instructed to do so by the invigilator/supervisor.*
6. *Mark allocations are shown in brackets on exam papers.*
7. *Attempt all questions, beginning your answer to each question on a new page.*
8. *Candidates should show calculations where this is appropriate.*

Note: The Actuarial Society of South Africa will not be held responsible for loss of data where candidates have not followed instructions as set out above.

AT THE END OF THE EXAMINATION
Save your answers on the hard drive.

In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator from the approved list.

QUESTION 1

QuickBank is a retail bank that has recently launched in South Africa. QuickBank operates almost exclusively online, and has limited branch banking. A new customer can open an account with QuickBank through their online application (app) by providing their South African identification number and local address, and sending verification documents electronically. Transactions are carried out through the app that customers can download to their smart phone, or through the company's ATM machines.

i. Describe four advantages to the bank of the chosen business model compared with the traditional branch-banking model. [4]

ii. Discuss the risks that QuickBank faces as a result of their chosen business model. [6]

iii. Outline the mitigating actions QuickBank can take to minimize cyber risks. [6]

QuickBank currently offers small personal loans to customers, for which they can apply after operating an account with QuickBank for a certain period. The take-up of these loans has been relatively low since launching. The Head of Marketing has suggested that they should improve the take up by offering a flexible repayment option. This option would, for a small fee, allow customers the choice to skip a fixed number of their repayments over the loan term. The customer would be required to inform QuickBank through the app a week or more prior to the due date of the instalment they want to skip.

iv. Describe two advantages and two disadvantages to the company of offering such a product feature. [4]

v. Describe the challenges of modelling the credit risk of this product feature. [5]

[Total 25]

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QUESTION 2

i. Define the impairment charge and briefly describe the elements that contribute to its calculation. [3]

You are the Head of Credit for the total combined Mortgage portfolio of Green Bank. A new Chief Financial Officer has recently been appointed to your portfolio. He has generated the set of comparative numbers below based on published financials of other banks' combined Mortgage portfolios:

Bank	**Green**	**Red**	**Grey**
Total Exposure at Year-End (R'bn)	350	245	650
Impairment Charge in Financial Year (R'm)	5100	2310	5800
Impairment Charge As Percentage Of Book	1.46%	0.94%	0.89%
Annual Default Rate in Financial Year (obtained from SARB Returns)	4.1%	4.0%	4.3%
Annual Default Rate in prior Financial Year (obtained from SARB Returns)	3.9%	3.8%	4.2%
Non-Performing Loans at Year-End (R'bn)	7.1	12	35
Written-off Book size at Year-End (R'm)	287	113	280
Write-Off Recoveries in Financial Year (R'm)	7	4	9.5
Book growth in Financial Year	3.0%	2.8%	3.1%
Weighted average client rate	10.54%	10.63%	10.45%

He has questioned why the results are so different yet the default rates on the different portfolios are fairly similar. He has asked you to analyse the results and explain possible reasons for the differences. In addition, he requested advice on operational or reporting changes which would make the financials more comparable to peers and, in particular, that would make the bad debt charges more aligned.

ii. Outline the points you will make to the CFO. [21]

The CFO has reviewed your suggestions and wishes to diversify the product offering by introducing a Credit Life product. The CFO believes this will improve the financials as it will allow the portfolio to generate more revenue and specifically generate additional profits. The Bank already has an insurance licence through one of its subsidiaries.

iii. Explain the considerations you would take into account to provide the Credit Life product to the bank's customers. [12]

[Total 36]

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QUESTION 3

You are the actuary responsible for capital markets execution of a large South African Banking Group. The debt capital markets team has reviewed a white paper issued jointly by National Treasury and the South African Reserve Bank on strengthening South Africa's resolution framework for financial institutions. This paper outlines the proposed manner in which banks may be resolved when they are no longer viable. In particular, it considers the hierarchy of claims by creditors in the event that a bank is resolved. They have identified a new type of capital instrument that may be introduced into the market with the following characteristics:

Loss After Capital Instrument (LACI)	
Characteristic	**Description**
Tenor	Greater than 1 year
Seniority	Senior to Tier 2 capital
Call option	None
Coupon	Floating rate 3m Jibar + spread
Distribution	Half yearly
Bail-in	Instrument to be bailed in when the issuer enters resolution
Resolution	At the election of the South African Reserve Bank
Conversion	Nominal to be converted into equity at the average share price 2 months prior to resolution

i. Explain how you would set price guidance for this product. [14]

ii. Outline the steps you would take before issuing this bond. [6]

[Total 20]

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QUESTION 4

You are an Actuary working in a small retail bank within the South African banking industry. The bank currently only offers unsecured Personal Loans and Credit Cards to retail customers. Market share information is provided in the table below. The bank currently relies solely on wholesale funding to fund these assets. In order to improve profitability you have been tasked by the CEO to launch a cash investments division within the bank to offer retail customers products that will encourage deposits to be placed with the bank.

	Market Share	
Product	**Exposure**	**Number of clients**
Credit Card	7%	8%
Personal Loans	15%	14%

i. Explain why the bank may wish to change its funding sources. [3]

ii. Discuss items to consider when determining which types of products to launch in the market. [10]

The investment division launches an overnight savings product, 32 day notice account and 2 year fixed deposits. Two years after the launch of these products the bank's market share is as follows:

Product Name	**Market Share**		
	Exposure	**Number of clients**	**Credit Balances**
Credit Card	8%	10%	5%
Personal Loans	15%	15%	
Overnight Savings			4.5%
32 day notice account			0.5%
2 year fixed deposit			0.1%

iii. Give potential reasons why the market share of these products is so different. [6]

[Total 19]

[Grand Total 100]

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END OF EXAMINATION