

# EXAMINATION

18 May 2018 (am)

## Subject F206 – Banking Specialist Applications

Time allowed: Three hours

### *INSTRUCTIONS TO THE CANDIDATE*

- 1. You will receive instructions to log in using a password which will be issued to you at the exam centre.*
- 2. You are required to submit your answers in Word format only using the template provided. You MAY NOT use any other computer program (e.g. Excel) during the exam.*
- 3. Save your work throughout the exam on your computer's hard drive.*
- 4. You have 15 minutes at the start of the exam 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.*
- 7. Attempt all questions, beginning your answer to each question on a new page.*
- 8. You 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.**

**Hand in your question paper with any additional sheets firmly attached.**

<p>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.</p>
---

## QUESTION 1

You are an Executive Committee member of the Treasury department of a large South African bank. The bank's Treasury department is well established and considers asset and liability modelling, funding and liquidity management, capital management as well as execution services. The activities of the Treasury department are governed by an Executive Committee, the Asset Liability Committee (ALCO).

- i. List the activities that are covered in the terms of reference of the ALCO.

[7]

At a recent ALCO, the head of risk presented a case study of a European bank that has recently experienced severe liquidity stress and was placed into resolution as a result. Based on her presentation the ALCO has requested you to review the funding and liquidity risks the bank is exposed to and to explain the risk mitigating actions the bank can take.

Details of the bank's contractual balance sheet as at 31 December 2017 are presented below:

R'm	Overnight to 30 Days	31 Days to 6 Months	More than 6 Months	Total
<b>Assets</b>				
Sovereign	27,404	15,333	45,109	87,846
Banks	8,314	655	0	8,969
Corporate	27,779	37,777	54,611	120,167
Secured Retail	2,900	160	6,400	9,460
Unsecured Retail	34,533	23,199	131,224	188,956
Other	1,365	4,687	24,909	30,961
Total Assets	102,295	81,811	262,253	446,359
<b>Liabilities and Equity</b>				
Retail	174,342	5,230	34,587	214,159
Corporate	63,091	9,874	15,654	88,619
Debt securities	835	42,239	27,711	70,785
Other	7,658	1,204	22,099	30,961
Total Liabilities	245,926	58,547	100,051	404,524
Total Equity				41,835

- ii. Describe the points you would make to the ALCO.

[20]

After your presentation, the head of the corporate business notes that the ALCO has too strong a focus on risk management. He explains that the business cannot compete in the market as the Funds Transfer Pricing set by Treasury makes his business uncompetitive. He asks you to review the funds transfer pricing applied to aid the growth of his balance sheet.

- iii. Outline your response to the head of corporate business.

[11]

[Total 38]

**REMEMBER TO SAVE**

**PLEASE TURN OVER**

## QUESTION 2

- i. List the items included as Tier 1 capital under the Basel I framework. [3]

The regulator for a small developing banking market requires companies to calculate capital under a Basel I - equivalent approach. In a recent market survey, the majority of banks in the market noted that the capital requirements imposed by the regulator were a major contributor to their lack of expansion in the local retail market.

- ii. Explain why a Basel I approach could lead to a lack of growth in retail banking portfolios. [3]

The regulator has developed a risk-based approach to calculating capital requirements, and has hired a consulting actuary to provide a report explaining:

- The impact on different groups of consumers of changing to the new approach
- The impact on banks of changing to the new approach
- The practicalities of implementing the new regulations

- iii. Suggest the points that might be made in the report. [17]

Following the consultation, the regulator decides to make no immediate enforced changes to the regulations but proposes to allow banks to comply with the new risk-based framework on a voluntary basis for an initial period of 5 years, following which there will be a review of the proposal.

- iv. The CEO of a large bank decides not to move to the new regulations during the voluntary period.
- a. List 4 reasons why the CEO would make such a decision. [2]
- b. Discuss the impact of the decision on the banks performance. [6]

[Total 31]

**REMEMBER TO SAVE**

**PLEASE TURN OVER**

### QUESTION 3

You are the head of credit for the mortgage division of DIY, a Bank in an emerging market economy. The government has conducted consultations and research for a few months on land expropriation without compensation. After much deliberation, the constitution is amended allowing expropriation without compensation. Specific details regarding the implementation thereof are not available at this stage and will be addressed through subsequent regulatory standards.

Explain the potential risks that this legal change can bring to the mortgage portfolios of the bank and describe the actions to mitigate these risks.

[Total 14]

**REMEMBER TO SAVE  
PLEASE TURN OVER**

#### QUESTION 4

You are the CEO of Say-Little Bank that is based in South Africa. Your bank is currently structured similarly to other banks in the country. Say-Little has branches, contact centres, ATMs, online banking and a mobile banking application. You have just been to a global conference where banks exhibited the use of Natural Language processing and robotic advisors to replace many of the manual operations performed by staff.

Natural language processing converts speech into text, while robotic advisors use text or other methods of receiving instructions and then perform system driven tasks (especially repetitive tasks). Over a long term this technology has resulted in operational efficiencies and savings.

i. Describe the elements you would investigate to assess the feasibility of implementing such technology within your own bank.

[10]

ii. Explain the potential benefits and risks of such an implementation.

[3]

Your bank has decided to go ahead and implement the technology, both in online chat as well as in your Contact Centre environments. However, two years after the full implementation you have noted that calls into your Contact Centres have been going up, along with complaints. Both were originally reducing after the initial implementation.

iii. Describe your investigation into this unexpected outcome and the possible causes. [4]

[Total 17]

[Grand Total 100]

**REMEMBER TO SAVE**

**END OF EXAMINATION**