

EXAMINATION

20 October 2020

Subject F206 – Banking Specialist Applications

Time allowed: Three hours and fifteen minutes

Total marks: 100

INSTRUCTIONS TO THE CANDIDATE

1. *Ensure that you are logged into your ProctorU account before attempting the examination.*
2. *Questions are only available in this ASSA Examination platform and may not be printed.*
3. *You are required to submit all of your answers in the ASSA Examination platform only. No uploads of answers (handwritten or otherwise) to the ASSA Examination platform will be accepted.*
4. *You may not use any other computer program (e.g. Email, MS Word or Excel), files or open any other browsers during the examination.*
5. *You are strongly encouraged to use the first 15 minutes as reading time only, however, you may commence answering the paper whenever you are ready.*
6. *Mark allocations are shown in brackets.*
7. *Attempt all questions.*
8. *Show calculations where this is appropriate. You may use blank paper to carry out rough work calculations. You may use a calculator from the approved list only.*
9. *You may return to your answers to review and amend during the allotted examination time. Once you are happy with your answers you need to **Finish all and Submit** your work. Once you have submitted you will not be able to make any more changes to your answers.*
10. *It is the candidate's responsibility to ensure that all work is submitted BEFORE the end of the allotted examination time. Take this into account when planning your review and submission. There will be no time announcements.*

Note: Answers will be saved automatically during the examination. However, 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.

END OF INSTRUCTIONS

QUESTION 1

You are recently employed as an actuarial specialist at a South African bank with a subsidiary in the island nation of Carinthia. An epidemic causing severe fever has struck Carinthia and, though the illness has a very low mortality rate, the government of Carinthia has closed all ports of entry and exit and imposed strict local quarantine measures to contain the spread.

Residential mortgages represent approximately 80% of total advances in the subsidiary. In response to the in-country situation, the Carinthian management team has proposed suspending local mortgage repayments from their customers for a period of 3 months. The CRO of the bank has asked you to write a brief report highlighting the most important considerations in pursuing this course of action. You need to gather all relevant information from the Carinthian management team.

Outline the information you would request from the management team to inform your report.

[Total 16]

QUESTION 2

The state-owned airline in a neighbouring country has approached your bank in South Africa, indicating it wishes to renegotiate the terms on (firstly) an existing long term secured loan held with your bank and to (secondly) increase an existing unsecured credit line (an overdraft facility) used to fund working capital.

Relevant facts are:

- Both the existing loan and facility are denominated in US Dollars
- Currently the total exposure to this counterparty constitutes 8% of your bank's total advances
- The long term secured loan has 4 years remaining (it is a 10-year amortising loan secured by title to two airfields in the country)
- The loan agreement contains various covenants that gives your bank an early call-up right should any of these be breached
- Following recent elections in this country, the minister has replaced all existing board members, including the chairman
- The new board has replaced the existing CEO and CFO by two new individuals
- No covenants or other contractual terms have been breached
- Indications are that the airline seeks to re-negotiate:
 - The terms on the secured loan, specifically the cash-flow covenants and an extension to its repayment term
 - To double the existing unsecured credit line/ overdraft facility

As the CEO of the bank, discuss all the considerations you expect your integrated risk team to evaluate.

[Total 30]

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QUESTION 3

A recent internal audit revealed that the non-performing loans disclosed in the financial statements have been incorrect over the last two reporting periods. The CRO of the bank has approached you to evaluate the root cause for this incident and to develop a solution to reduce the likelihood of this type of incident to be repeated in any area within the Retail Bank.

- i. Discuss how you would go about identifying the root cause. [9]
- ii. Describe the solution you would put in place to reduce the risk of this being repeated in future. [7]
- iii. Briefly describe the main aims of the Basel Committee for Banking Supervision (BCBS) standard number 239 (BCBS 239), the standard dealing with risk data aggregation capabilities and internal risk reporting practices. [4]
- iv. Detail the 14 principles of BCBS 239. [7]

[Total 27]

QUESTION 4

You are the credit head for the unsecured loans division of Notre Bank. The bank recently started a new channel for sales (using WhatsApp as a channel) and the sales volumes from that channel are substantial. The CFO reviewed the abridged financials and is concerned by the results for the 2019 financial year after Q3; compared to 2018, quarter 3 profits are down substantially.

You can assume there have been no pricing changes, or deliberate changes in risk appetite or definitions used by the bank over the accounting period given. The bank has raised impairments under the IFRS9 accounting principles throughout the periods given.

Notre Bank financials & ratios:

| Quarterly new business per channel (R'm) | | | | | | |
|--|--------|--------|-------------|----------|--------------------|-----------------|
| Quarter | Branch | Online | Banking App | WhatsApp | Total new business | Total book size |
| 2018Q1 | R550 | R400 | R350 | R0 | R1 300 | R23 300 |
| 2018Q2 | R555 | R405 | R353 | R0 | R1 313 | R23 784 |
| 2018Q3 | R561 | R408 | R357 | R0 | R1 327 | R24 264 |
| 2018Q4 | R568 | R411 | R361 | R0 | R1 341 | R24 742 |
| 2019Q1 | R576 | R415 | R365 | R980 | R2 336 | R26 197 |
| 2019Q2 | R581 | R421 | R368 | R993 | R2 362 | R27 628 |
| 2019Q3 | R586 | R427 | R372 | R1 002 | R2 387 | R29 032 |

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| Quarter end income statement (R'm) | | | | | | | |
|------------------------------------|-----------------|------------------|----------------------|---------------|---------------|-------------------|------------------|
| Quarter | Average balance | Interest revenue | Non-interest revenue | Running costs | Cost of funds | Impairment charge | Quarterly profit |
| 2018Q1 | R22 650 | R1 020 | R170 | R113 | R396 | R530 | R151 |
| 2018Q2 | R23 542 | R1 055 | R177 | R113 | R412 | R567 | R140 |
| 2018Q3 | R24 024 | R1 077 | R180 | R113 | R420 | R587 | R137 |
| 2018Q4 | R24 503 | R1 100 | R184 | R113 | R429 | R576 | R166 |
| 2019Q1 | R25 470 | R1 144 | R191 | R113 | R446 | R630 | R146 |
| 2019Q2 | R26 913 | R1 211 | R202 | R114 | R471 | R788 | R40 |
| 2019Q3 | R28 330 | R1 279 | R212 | R114 | R496 | R780 | R101 |

| Quarter end exposures per impairment stage and write-offs (R'm) | | | | | | | |
|---|---------|---------|---------------|----------------------|---|------------------------------------|-----------------------------|
| Quarter | Stage 1 | Stage 2 | Stage 3 (NPL) | Quarterly write-offs | Provisions released as a result of write-offs | Total impairments on balance sheet | Quarterly impairment charge |
| 2018Q1 | R18 640 | R3 495 | R1 165 | R440 | R330 | R3 052 | R530 |
| 2018Q2 | R19 075 | R3 544 | R1 165 | R524 | R393 | R3 095 | R567 |
| 2018Q3 | R19 460 | R3 615 | R1 189 | R524 | R393 | R3 158 | R587 |
| 2018Q4 | R19 892 | R3 662 | R1 188 | R535 | R401 | R3 199 | R576 |
| 2019Q1 | R20 617 | R4 323 | R1 257 | R534 | R401 | R3 294 | R630 |
| 2019Q2 | R21 798 | R4 531 | R1 299 | R566 | R403 | R3 516 | R788 |
| 2019Q3 | R22 906 | R4 732 | R1 394 | R584 | R467 | R3 712 | R780 |

| Impairment coverage ratios | | | |
|----------------------------|-------------------|-------------------|---------------|
| Quarter | Stage 1 (Current) | Stage 2 (Arrears) | Stage 3 (NPL) |
| 2018Q1 | 7% | 25% | 75% |
| 2018Q2 | 7% | 25% | 75% |
| 2018Q3 | 7% | 25% | 75% |
| 2018Q4 | 7% | 25% | 75% |
| 2019Q1 | 7% | 21% | 75% |
| 2019Q2 | 7% | 21% | 80% |
| 2019Q3 | 7% | 21% | 80% |

| Quarter end income statement - Financial Ratios - Annualised | | | | | | | | |
|--|---------------|-------------------------|--------------------------------|--|---|--|--------------------------|-----------------------------|
| Quarter | % Book Growth | Average Interest Rate % | NIR expressed as % of advances | Running Costs expressed as % of advances | Cos of funds expressed as % of advances | Impairment charge expressed as % of advances | Return on average assets | Margin excluding impairment |
| 2018Q1 | | 18.0% | 3.0% | 2.0% | 7.0% | 9.4% | 2.7% | 12.0% |
| 2018Q2 | 16% | 17.9% | 3.0% | 1.9% | 7.0% | 9.6% | 2.4% | 12.0% |
| 2018Q3 | 8% | 17.9% | 3.0% | 1.9% | 7.0% | 9.8% | 2.3% | 12.1% |
| 2018Q4 | 8% | 18.0% | 3.0% | 1.9% | 7.0% | 9.4% | 2.7% | 12.1% |
| 2019Q1 | 16% | 18.0% | 3.0% | 1.8% | 7.0% | 9.9% | 2.3% | 12.2% |
| 2019Q2 | 23% | 18.0% | 3.0% | 1.7% | 7.0% | 11.7% | 0.6% | 12.3% |
| 2019Q3 | 21% | 18.1% | 3.0% | 1.6% | 7.0% | 11.0% | 1.4% | 12.4% |

| Percentage of book per stage | | | | | |
|------------------------------|-------------------|-------------------|---------------|--|--|
| Quarter | Stage 1 (Current) | Stage 2 (Arrears) | Stage 3 (NPL) | Write-Off as a % off previous NPL balances | Provisions Released as % of write-offs |
| 2018Q1 | 80.0% | 15.0% | 5.0% | | 75% |
| 2018Q2 | 80.2% | 14.9% | 4.9% | 45% | 75% |
| 2018Q3 | 80.2% | 14.9% | 4.9% | 45% | 75% |
| 2018Q4 | 80.4% | 14.8% | 4.8% | 45% | 75% |
| 2019Q1 | 78.7% | 16.5% | 4.8% | 45% | 75% |
| 2019Q2 | 78.9% | 16.4% | 4.7% | 45% | 71% |
| 2019Q3 | 78.9% | 16.3% | 4.8% | 45% | 80% |

| Balance sheet impairments per stage and movement (R'm) | | | | | | | | |
|--|-------------------|-------------------|---------------|------------------|------------------|------------------|------------|-------------------------|
| Quarter | Stage 1 (Current) | Stage 2 (Arrears) | Stage 3 (NPL) | Stage 1 Movement | Stage 2 Movement | Stage 3 Movement | Write-offs | Total impairment charge |
| 2018Q1 | R1 305 | R874 | R874 | | | | | |
| 2018Q2 | R1 335 | R886 | R874 | R30 | R12 | R0 | R524 | R567 |
| 2018Q3 | R1 362 | R904 | R892 | R27 | R18 | R18 | R524 | R587 |
| 2018Q4 | R1 392 | R915 | R891 | R30 | R12 | -R1 | R535 | R576 |
| 2019Q1 | R1 443 | R908 | R943 | R51 | -R8 | R52 | R534 | R630 |
| 2019Q2 | R1 526 | R951 | R1 039 | R83 | R44 | R96 | R566 | R788 |
| 2019Q3 | R1 603 | R994 | R1 115 | R78 | R42 | R76 | R584 | R780 |

- i. Explain the IFRS9 impairment principles for credit exposures. [3]
- ii. The CFO has requested that you review the financials provided and explain what caused the reduction in profits. [13]
- iii. Describe additional information that you may require to comprehensively understand the financial results to draw conclusions for the CFO. [6]
- iv. With one quarter remaining, the CFO has asked what can be done to improve the income statement profit for the current calendar year. Propose possible actions, reflecting on both short- and long-term implications. [5]

[Total 27]

[Grand Total 100]

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END OF EXAMINATION