ALMA

ASSET & LIABILITY MANAGEMENT ASSOCIATION

Practice Paper

Certificate of Banking Asset & Liability Management (CertBALM®)

Units 2 and 3

Practice Paper for Units 2 and 3 of the Certificate of Banking Asset & Liability Management (CertBALM®)

Based on the syllabus assessed from September 2023 and April 2024.

Introduction

This practice paper has been produced by the Education Board at the Asset & Liability Management Association (ALMA) to assist students in their preparation for the CertBALM® assessments. It contains a copy of the exam held in a live environment for the specified units as well as example answers that could achieve maximum marks available.

Ideally, students should have completed the majority of their CertBALM® studies for Units 4 and 5 before attempting this practice paper. Students should allow themselves 180 minutes to complete the exam. They should then review their performance to identify areas of weakness on which to concentrate the remainder of their study time.

Although this practice paper is typical of a CertBALM® assessment, it should be noted that it is not possible to test every single aspect of the syllabus in any one particular exam. To prepare properly for the examination, candidates should make full use of the tuition options where available and read as widely as possible to ensure that the whole syllabus has been covered.

Assessment technique: CertBALM®

This paper is a professional paper that as well as testing theory expects application to practice at an operational level.

The best way to approach written assessments is to work methodically through the questions. Candidates should not spend too much time on any one question if you are struggling to think of an adequate answer. Remember you can flag any question to come back to later should you want to continue your way through the exam.

When all of the questions have been answered, it is prudent to use any remaining time to go through each question again, carefully, to double-check that nothing has been missed. Altering just one response could make the difference between passing and failing.

Please ensure you show your workings within your answer when prompted as this means there are marks available for the workings out. You will be able to make rough workings on a piece of paper during the exam and on screen should you wish to, however these will not count towards your final mark.

Assessment information

The CertBALM® assessments for both Units 2 & 3 as well as 4 & 5 each consist of 15 written questions, split into sections A, B and C; each assessment is worth a total of 100 marks.

CertBALM® assessment test specification:

Section	Amount of questions	Marks available	Question format
Section A	5 short form questions	10	This section will test a cross-section of knowledge to achieve breadth of syllabus coverage.
Section B	6 longer form questions	30	This section will test knowledge, analysis, application and justification as appropriate.
Section C	4 longer form questions	60	This section will be based on mini-scenarios common to practice. Questions will test knowledge, analysis, application and justification as appropriate.
Total	**15**	**100**	

Under exam conditions, **3 hours** (180 minutes) is allowed for the CertBALM® assessments as well as 15 minutes reading time.

When you take your actual exam, you will be sitting online using your own PC/Laptop. You have access to an online scientific calculator, but for the purpose of this paper test, you may use a non-programmable scientific calculator.

In order for you to determine how well you have performed, exemplar answers are listed at the end of this paper. There are also references to the relevant Learning Outcomes if you need to revisit the associated material.

Section A – 10 marks

This section consists of 5 short form questions

1. List the following four elements of the credit hierarchy for banks in order of seniority, starting with the most senior element first and placing the most junior element last:
   - Insured deposits
   - Tier 2 capital instruments
   - Senior debt
   - Secured deposits

(2 marks)

2. A UK bank has been informed by the PRA that it has a Total Capital Requirement (TCR) of 12.45% of Risk Weighted Assets. It is also subject to the following capital buffers, expressed as a percentage of Risk Weighted Assets:
   - Capital Conservation Buffer of 2.5%
   - Countercyclical Capital Buffer of 1.92%
   - PRA Buffer of 0.22%

   Calculate the minimum level of the CET1 ratio the bank would need to maintain so it does not trigger the Maximum Distributable Amount (MDA) distribution restrictions. You are required to show your workings.

(2 marks)

3. In relation to concurrent stress testing:
   (a) Outline the principal difference between the UK Solvency Stress Test ran in 2021 and the regular Annual Cyclical Scenario (ACS).
   (b) State the title of the annual concurrent stress test run by the US Federal Reserve.

(1 mark + 1 mark)

4. Define TWO criteria for identifying an established operational relationship between a depositor and a credit institution, excluding where clearing, custody, cash management or other comparable services are provided to the depositor by the credit institution.

(2 marks)

5. In the Basel III NSFR, explain the intention of Required Stable Funding ('RSF') factors.

(2 marks)

Section B – 30 marks

This section consists of 6 longer form questions

1. Burrow Bank, a UK bank, is considering potential recovery actions to improve the position of its Total Capital Ratio. It is currently March 2023 and the bank's projected end-2023 position is outlined in Table 1 below. The bank's projection includes a senior unsecured funding issuance of GBP500m at end-June 2023, paying a coupon of 5%.

Table 1: Forecast end-2023 capital position

	GBPm
Common equity tier 1 (CET1) capital	2,621
Additional tier 1 capital	605
Tier 2 capital	338
Risk Weighted Assets (RWA)	21,298

Burrow Bank is targeting a Total Capital Ratio of 17.5% at end 2023 and is not planning to pay a profit-based dividend for its 2023 performance. The bank is subject to an effective tax rate of 25%.

(a) Assume that Burrow Bank performs an issuance of GBP500m Tier 2 capital with a 10% coupon at end-June 2023 instead of its planned GBP500m issuance of senior unsecured funding. Calculate the bank's end-2023 Total Capital Ratio. You are required to show your workings.

(3 marks)

(b) Instead of performing the Tier 2 issuance outlined in part a), Burrow Bank plans to sell a portfolio on 31st December 2023 for a loss of GBP11.2m after tax, which would reduce end-year RWA by GBP650m. Demonstrate whether this transaction would increase the bank's projected end-2023 Total Capital Ratio above its target level and if so by how much. You are required to show your workings for any calculations that support your answer.

(2 marks)

2. Operational risk is one of the three principal solvency risks that banks face. The UK is planning to implement the 'Basel 3.1'/'Basel 4' standard by setting the Internal Loss Multiplier to 1 in the calculation of Operational Risk Pillar 1 requirements.

a) Define 'Operational risk'?

(1 mark)

b) Explain the function of the Internal Loss Multiplier in the calculation of Operational Risk Pillar 1 capital requirements, and where a bank has an Internal Loss Multiplier of greater than 1 what this would represent.

(2 marks)

c) Explain why the PRA elected to set the Internal Loss Multiplier to 1 for the UK implementation of the 'Basel 3.1'/'Basel 4' standard.

(2 marks)

3. A large UK banking group (the Group) has, as its ultimate parent, a holding company. The Group is subject to a 'Bail In' resolution strategy with a single point of entry, with the holding company being the resolution entity. For its Loss-Absorbing Capacity (LAC, equal to MREL + Buffers), the binding minimum capital requirement and buffers are set based on Risk Weighted Assets (RWA) and not by Leverage Exposure.

   The consolidated group has a minimum capital requirement (Pillar 1 + Pillar 2A) of 11.2%*RWA, and Buffers of 5.7%*RWA. Its capital base is comprised of:

   - Common Equity Tier 1 (CET1) capital - GBP57,298m
   - Additional Tier 1 (AT1) capital - GBP14,852m
   - Tier 2 (T2) Capital - GBP10,194m

   Tier 2 capital is comprised of the following:

	GBPm
Holding Company-issued instruments	9,365
Instruments issued by subsidiaries and held by third parties	746
Credit risk adjustments (excess of provisions over expected loss for IRB exposures)	83

   (a) If the Group has RWA of GBP345,263m, calculate the minimum amount of Holding Company-issued MREL-eligible liabilities would need to have in issue (in addition to the capital instruments outlined above) to meet its minimum LAC requirement. You are required to show your workings.

   (3 marks)

   (b) MREL-eligible liabilities are a subset of non-capital liabilities that could be bailed in during resolution. Describe the key conditions that MREL-eligible liabilities must satisfy.

   (2 marks)

4. Fenchurch Bank utilises stress testing to assess minimum central bank cash reserves required to survive a liquidity stress.

   (a) List the three main types of liquidity stress test.

   (1 mark)

   (b) Recommend key aspects that should be assessed when determining minimum central bank cash reserves required to survive a liquidity stress.

   (4 marks)

5. The head of liquidity risk for Bishopsgate Bank has asked you to comment on its Liquidity Coverage Ratio (LCR), using the data provided below.

Assets	**GBPm**
Central bank reserves	1,650
Level 1 government securities	3,000
Level 1 covered bonds	300
Outflows (<30 days)	
Operational deposits	3,300
Non-operational corporate deposits	5,600
Financial deposits	1,050
Inflows (<30 days)	
Loans to customers	700

The head of liquidity risk has informed you that the LCR increased over the previous quarter due to outflows from financial depositors.

(a) Calculate an LCR for Bishopsgate Bank. You are required to show your workings.

(3 marks)

(b) Explain why the LCR would increase after the bank experienced financial deposit outflows (assume all other elements remained unchanged).

(2 marks)

6. Liquidity Risk Appetite Statements are central to a bank's liquidity risk management framework.

(a) Recommend how a liquidity risk appetite statement should define the stress or stresses a bank aims to survive.

(4 marks)

(b) State who should establish the Liquidity Risk Appetite Statement of a bank.

(1 mark)

Section C – 60 marks

This section consists of 4 longer form questions

1. The following questions relate to the Internal Capital Adequacy Assessment Process ("ICAAP") undertaken by UK banks.

   (a) Discuss the purposes of an ICAAP.

   (3 marks)

   (b) A key component of an ICAAP is a bank's capital plan. Describe SIX elements of a bank's capital plan.

   (6 marks)

   (c) Explain what is meant by a 'Reverse Stress Test' and the purposes of including such exercises within a bank's ICAAP.

   (3 marks)

   (d) Explain the Supervisory Review and Evaluation Process ("SREP").

   (3 marks)

2. You work for Herbert Bank, a globally systemic bank headquartered in the UK and subject to consolidated supervision by the PRA.

   Profit after tax for Herbert Bank for the year ended 31 December 2022 was GBP3,508m. The bank pays ordinary share dividends of 50% of Profit after Tax and paid a dividend in September 2022 of GBP985m in relation to the profits for the first six months of 2022.

   You have received the end-2022 information shown in Tables 1, 2 and 3 below. You have been informed that the retained earnings information incorporates profit after tax for 2022, and that provisions related to defaulted exposures under the IRB approach are less than the Expected Losses or such exposures.

   Table 1: Equity

	GBPm
Ordinary share capital (including share premium)	5,317
Other equity instruments – additional tier 1	3,583
Retained earnings	17,037
Accumulated other comprehensive income (and other reserves)	(2,502)

Table 2: Additional information to support CET1 adjustments

	GBPm
Intangible assets	132
Defined benefit pension asset	1,247
Additional value adjustments	(760)
Gains from changes in own credit standing	300
Cash flow reserves related to financial instruments: - Related to financial instruments that are not valued at Fair Value	(1,645)
- Related to financial instruments that are valued at Fair Value	(351)

Table 3: Risk Weighted Assets (RWA), Expected Loss (EL), Provisions and Leverage Exposure

	GBPm
RWA	129,332
Expected Loss (from IRB Models)	1,844
Provisions related to exposures modelled using the IRB approach	1,653
Leverage exposure	463,536

(a) Calculate the Foreseeable Ordinary Share dividend for end-2022. You are required to show your workings.

(2 marks)

(b) Using the level of Foreseeable Dividends from part a), calculate Herbert Banks CET1 ratio, Tier 1 ratio and Leverage Ratio at end-2022. Ignore tax effects on the items in Table 2 and show your workings.

(8 marks)

(c) Calculate Herbert Bank's Return on Tangible Equity for 2022, using the level of Tangible Equity at end-2022. You are required to show your workings.

(2 marks)

(d) Explain why a Large Exposures regime is in place for banks and what Herbert Bank's Large Exposure limit would be for the following counterparties:

(i) A UK corporate borrower
(ii) A Globally Systemic Bank
(iii) The UK Government

(3 marks)

3. The Treasurer of Morville Bank has asked you to assess the bank's Basel III LCR in response to liquidity stress events in the US and UK in 2023.

LCR	**GBPm**
Notes and coins	50
Withdrawable reserves	1,600
L1 securities	3,300
L2A corporate debt	0
L2B equities	1,850
Total liquid assets	**6,800**
Stable retail deposits	2,400
Operational deposits	3,300
Non-operational deposits (corporate)	5,600
Financial deposits	1,050
Total outflows	**12,350**
Inflows <30 days	700

The Treasurer has informed you that recent stress events were characterised by short- but intense periods of deposit outflows, which were significantly higher than outflow factors in the LCR, and which rapidly depleted HQLA.

(a) Calculate an LCR for Morville Bank as at 1 November, 2023. You are required to show your workings.

(6 marks)

(b) Discuss how monetising excess Level 2B securities could impact encumbrance during a liquidity stress.

(2 marks)

(c) Recommend and justify to the Treasurer actions that could be taken to ensure the bank has adequate liquidity capacity to survive a short but intense period of deposit outflows.

(7 marks)

4. The Treasurer of Plaza Bank has informed you that certain deposits are considered 'operational' or 'non-operational' on an account level, under the European Commission's Delegated Act, and has highlighted sections that apply to the Bank;

"Credit institutions shall multiply by 25% liabilities resulting from deposits that are maintained as follows:

- *by the depositor in order to obtain clearing, custody, cash management or other comparable services in the context of an established operational relationship from the credit institution*
- *Clearing, custody, cash management or other comparable services only cover such services to the extent that they are rendered in the context of an established relationship which is critically important to the depositor."*

(a) Recommend ways in which an established operational relationship can be made critically important to the depositor.

(4 marks)

(b) Discuss any flaws in behavioural assumptions that could make the operational/non-operational split unreliable.

The Treasurer has informed you that liquidity stress events in 2023 were characterised by short- but intense periods of deposit outflows, which were significantly higher than outflow factors in the LCR, driven by SME customers that were treated as retail in LCR, but exhibited behaviour similar to corporate depositors.

(4 marks)

(c) Evaluate any mitigants that Plaza Bank can put in place to reduce the impact of deposits being less stable than their regulatory classification.

The Treasurer of Plaza Bank has assessed that certain SME customers with operational deposits now have deposit balances below EUR 1 million, and would be considered retail SME in liquidity regulatory metrics going forward. Details of the bank's NSFR as at 1 November 2023 are below:

NSFR	**EURm**
Cash & withdrawable reserves	1,600
L1 securities	3,300
Mortgages and loans	10,500
Other assets	100
Total assets	**15,500**
Stable retail deposits	5,600
Operational deposits	1,300
Non-operational deposits (corp)	5,600
Financial deposits	1,050
Capital	1,850
Other liabilities	100
Total equity & liabilities	**15,500**

(4 marks)

(d) Calculate the NSFR of Plaza Bank as at 1 November, 2023, assuming half of the bank's operational deposits are treated as less stable retail deposits. You are required to show your workings.

(3 marks)

Specimen guide: Answers and references to relevant Unit and Learning Outcome

Question No.	Syllabus ref:	Exemplar answers
SECTION A QUESTIONS		
1	Unit 1: 1.3 LO2	The correct order is: • Secured Deposits • Insured Deposits • Senior Debt • Tier 2 capital instruments Award two marks for a fully correct answer. Award one mark if one element is incorrectly ordered. **Maximum 2 marks**
2		Calculation: Minimum CET1 ratio + P2A Method 1: = TCR * .5625 = 12.45% *.5625 = 7.00% Method 2 • CET1 ratio minimum = 4.5% • Pillar 2A CET1 = (TCR-8%)*.5625 = 2.5% • Total = 4.5% + 2.5 % = 7.00% Buffers: For MDA limit – do not include PRA Buffer • Total Buffers = CCoB+CCyB = 2.5%+1.92% = 4.42% Min CET1 ratio = CET1 min + Buffers = 7%+4.42% = 11.42% Award: • 1 mark for correct CET1 min (inc P2A): under method 2 award 0.5 marks for CET1 ratio min and 0.5 marks for calculation of P2A CET1 • 0.5 marks for correct calculation of Buffer total • 0.5 marks for correct calculation of total CET1 minimum ratio (CET1 min + buffers) **Maximum 2 marks**
3	Unit 2 7.4 LO36, Unit 2 7.5 LO36	(a) SST vs ACS - The SST was calibrated to represent a severe but plausible COVID19 scenario, rather than a cyclical stress test (b) US Stress Test - Comprehensive Capital Analysis and Review (or CCAR)

		For part (a) award one mark for each part for a clear answer, 0.5 marks for a less clear answer. For part (b), aware one mark for a correct full name, or 0.5 marks for 'CCAR' **Maximum 2 marks**
4	Unit 3, LO13	In order to identify the deposits, a credit institution shall consider that there is an established operational relationship with a non-financial customer, excluding term deposits, savings deposits and brokered deposits, where all of the following criteria are met: (a) the remuneration of the account is priced at least 5 basis points below the prevailing rate for wholesale deposits with comparable characteristics, but need not be negative; (b) the deposit is held in specifically designated accounts and priced without creating economic incentives for the depositor to maintain funds in the deposit in excess of what is needed for the operational relationship; (c) material transactions are credited and debited on a frequent basis on the account considered; (d) one of the following criteria is met: (i) the relationship with the depositor has existed for at least 24 months; (ii) the deposit is used for a minimum of 2 active services. These services may include direct or indirect access to national or international payment services, security trading or depository services. **Any of (a) to (c) are acceptable for ONE mark each, and (d)(i) and (d)(ii) count for ONE mark each**
5	Unit 3, LO18	The RSF factors assigned to various types of assets are intended to (i) approximate the amount of a particular asset that would have to be funded, either because (ii) it will be rolled over, or because it could not be monetised through sale or used as collateral in a secured borrowing transaction over the course of one year without significant expense. Under the standard, such amounts are expected to be supported by stable funding. **Maximum 2 marks**

SECTION B QUESTIONS		
1	Unit 2 6.4 LO30 Unit 2 3.1 LO10	Additional cost of Tier 2 coupon • Additional CET1 cost of Tier 2 coupon = GBP500m * (T2 coupon – Sen Unsec coupon) * (1 – Tax rate) * (6 months/12 months) =500 *(10% - 5%) * (1-25%) * 0.5 = GBP9.375m • Total Capital = CET1+AT1+T2+ GBP500m (issuance) – Addition T2 coupon impact = 2621+605+338+500-9.375 (from above) = GBP4,054.6 • TC Ratio = TC/RWA = 4054.6 (from above)/21298 = 19.04% Award 0.5 marks for consideration of T2 v Sen Unsec coupon difference Award 0.5 marks for consideration of correct tax application Award 0.5 marks for 6 month coupon impact Award 0.5 marks for reflection of GBP500m issuance in Total Capital Award 0.5 marks for correct calculation of Total Capital Award 0.5 marks for correct calculation of TC Ratio ***(Part (a) maximum of 3 marks)*** (b) Portfolio sale • Total Capital = CET1+AT1+T2+ loss (no tax adjustment needed as after tax) = 2621+605+338-11.2 (from question) = GBP3552.8m • RWA = RWA – RWA reduction = 21298 – 650 = GBP20,648m • TC ratio = TC/RWA = 3552.8/20648 = 17.21% Below Target Ratio (of 17.5%) Award 0.5 marks for correct calculation of Total Capital Award 0.5 marks for correct calculation of RWA Award 0.5 marks for correct calculation of TC ratio Award 0.5 marks for relevant conclusion (TC ratio vs Target level) ***(Part (b) 2 marks)*** **Maximum of 5 marks in total**

<table>
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<td>2</td>
<td>Unit 2
2.2
LO06

Unit 2
4.9
LO18

Unit 2
3.6
LO13</td>
<td>Part (a)
Definition of Operational Risk

• Risk of loss from:
- inadequate of failed internal processes, people or systems
- or from external events
- includes legal risk (risk of litigation or fines)
NOT strategic/reputational risks

This list is not exhaustive, i.e. other points might also be valid and would be rewarded.

Award 0.5 mark for an answer outlining ‘risk of loss’ or similar
Award 0.5 for reference to failed internal processes, people or systems, or legal risk

(Part (a) maximum 1 mark)

Part (b)
ILM

Function of ILM
• Scaling factor to Business Indicator Component (BIC) to determine capital requirement
• To reflect historical losses experienced by a bank
• Assessed from ‘Loss Component’ of 15 times average annual operational risk losses incurred over last 10 years

ILM > 1
• Bank with higher (than average) levels of operational risk losses historically
• [Loss Component > BIC]

This list is not exhaustive, i.e. other points might also be valid and would be rewarded.

Award 0.5 marks for each of the functions of ILM (applied to BIC & reflects level of historical operational losses).
Award 1 mark for clear description of ILM > 1, or 0.5 marks for a less clear answer.

(Part (b) maximum 2 marks)

Part (c)
Why PRA ILM = 1

• Historical large losses (high impact, low probability) generally not good predictors of future large losses
• Historic operational losses less informative of future as business models and lending activities change
• Pillar 2A regarded as better approach: more flexible, more risk sensitive</td>
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		• ILM non-linear calculation, capital requirements increase more slowly as historical losses increase Award 1 mark for clear description of one of these shortcomings, 0.5 marks for a less clear answer ***(Part (c) maximum 2 marks)*** **Maximum 5 marks in total**
3	Unit 4: LO49 (Ref: Ch8, p4)	Part (a) MREL-eligible instruments required Min LAC requirement (% RWA) = (Min cap requirement * 2) [bail in] + Buffers = (11.2% * 2) + 5.7% = 28.1% Min LAC requirements GBPm = %age requirement * RWA = 28.1% * 345,263 = GBP97,019m MREL-eligible capital = CET1 + AT1 + HoldCo T2 + Credit Risk adj [NOT subsidiary issued T2] = 57,298 + 14,852 + 9,365 + 83 = GBP81,598m Required additional MREL liabilities = Total LAC – MREL-eligible capital = 97,019 - 81,598 = GBP15,421m Award 0.5 marks for using 2* min capital requirements in LAC Award 1 mark for calculation of LAC including buffers Award 0.5 marks for correct Tier 2 elements to use in MREL-eligible capital Award 0.5 marks for calculation MREL-eligible capital Award 0.5 marks for calculation of require additional MREL-eligible liabilities ***(Maximum 3 marks for this section)*** Part (b) Key conditions for MREL-eligible liabilities: • Do not contain features that make them more difficult to value rapidly or bail in - contain derivative structures other than simple call or put features - liabilities subject to set-off or netting (repo, derivatives) - liabilities that do not arise through a contract, e.g. tax liabilities • Long Term - (>1-year residual maturity or residual time to earliest call date) • legal recognition that the liability may be bailed-in in resolution

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Award 1 mark for clear description of one of the key conditions, or 0.5 marks for a less clear answer.
Award 1 mark in total for a general statement the liabilities should not be complicated (able to be valued) and need remain on the balance sheet for a year.
(Maximum 2 marks for this section)
Maximum 5 marks in total
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<td>4</td>
<td>Unit 3, LO19</td>
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Part (a)

Idiosyncratic
Market-wide
Combined

(Maximum 1 mark)
Part (b)

Quantum of outflows.
Time period over which they occur.
Prefunding of payment schemes and other intraday obligations.
Ability to monetise further cash i.e. minimum time to settle)(i.e. receive funds) through sale or repo with central banks or market counterparties.

(1 mark per bullet – 4 marks total)
Maximum 5 marks in total
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<tr>
<td>5</td>
<td>Unit 3, LO18</td>
<td>
<table>
<tr><th>Assets</th><th>EURbn</th><th>Weight</th><th>Weighted amount</th></tr>
<tr><td>Central bank reserves</td><td>1650</td><td>1</td><td>1650</td></tr>
<tr><td>Level 1 government securities</td><td>3000</td><td>1</td><td>3000</td></tr>
<tr><td>Level 1 covered bonds</td><td>300</td><td>0.93</td><td>279</td></tr>
<tr><td>Outflows (<30 days)</td><td></td><td></td><td></td></tr>
<tr><td>Operational deposits</td><td>3300</td><td>0.25</td><td>825</td></tr>
<tr><td>Non-operational corporate deposits</td><td>5600</td><td>0.4</td><td>2240</td></tr>
<tr><td>Financial deposits</td><td>1050</td><td>1</td><td>1050</td></tr>
<tr><td>Inflows (<30 days)</td><td></td><td></td><td></td></tr>
<tr><td>Loans to customers</td><td>700</td><td>0.5</td><td>350</td></tr>
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Part (a)
Numerator = 1650 + 3000 + 279 = 4929
Denominator = Outflows – Min(Inflows; 75% of Outflows)
= (825 + 2240 + 1050) – Min(350, 3086)
= 4115 – 350
= 3765
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		LCR = 4905/3765 = 131% ***(Maximum 3 marks)*** Part (b) An outflow that stems from a 100% liquidity requirement will cause the LCR to increase, all things being equal, as the reduction in the numerator and denominator does not have a symmetrical impact on the ratio. ***(Maximum 2 marks)*** **Maximum 5 marks in total**
6	Unit 3: LO2	Part (i) The liquidity risk appetite statement should clearly articulate the duration (e.g. 90 days) of the stress and type of stress or stresses that the firm aims to survive (i.e. a combined idiosyncratic and market-wide liquidity stress event), as well as the quality of assets with which it needs to meet stressed outflows. It may also articulate that its appetite is to survive the stress and recover. ***(Maximum 4 marks)*** Part (b) The 'management body'; usually the Board. (for CertBALM® examiner: definition per CRR and the PRA rulebook). ***(Maximum 1 mark)*** **Maximum 5 marks in total**

SECTION C QUESTIONS		
1	Unit 2 5.3 LO25, 5.2 LO23, 5.2 LO26, 5.5 LO27	Part (a) Purposes of an ICAAP for a bank • To understand risk profile • To detail the processes and systems it has in place to identify, quantify and control risks • To demonstrate the bank is appropriately capitalised relative to its current risk profile • To identify and assess Pillar 2 risks • To demonstrate the bank is appropriately capitalised relative to its future risk profile • To enable to regulator to assess that the processes in operation - the 'use test' • To enable the bank to meet regulatory requirements *This list is not exhaustive, i.e. other points might also be valid and would be rewarded.* One half mark awarded for each relevant purpose outlined (maximum 2.5 marks) One half mark awarded for answer in the form of a paragraph (as requested in question) ***(Maximum 3 marks for this section)*** Part (b) Banks Capital Plan • Forward–looking projection of RWAs and capital resources – CET1, T2, etc • Forward-looking assessment of risks on an internal and regulatory view. This would cover all material risk types (Credit, Market, Operational etc, including significant Pillar 2 risks). For credit risk this will include a forecast Probability of Default (PD) and LGD trajectory • Forecast of capital accretion (new issuance, retained profits) and capital outflows (dividends, maturing instruments). • Impact of changing regulation (e.g. Basel 3.1 impacts) • A minimum 3-year forward-looking view of the bank (many banks will do five year plans). • Sensitivity analysis. All budgets are built on assumed economic outlooks for various sectors and geographies. A prudent Capital Plan would indicate what happens if certain of these assumptions do not hold true e.g. credit migration. • A disclosure of key risks to the Capital Plan, e.g. failure to issue Tier 2 due to adverse market conditions *These lists are not exhaustive, i.e. other points might also be valid and would be rewarded.* One half mark awarded for each Section outlined with an additional one half mark where a relevant short description is made (maximum 1 mark per section) **Maximum 6 marks for this section.**

		Part (c) Reverse Stress Test • Begins with a pre-set outcome, which is usually that the bank's business plan is no longer viable • Counterparties will no longer deal with it, so recovery plan is no longer capable of 'saving' the bank • Such a point may be reached well before capital has been exhausted. Purpose • To explore scenarios and circumstances that might lead to this point • The likelihood of the resulting scenarios will be remote and the business strategy and plan therefore well-founded • Increase a firm's awareness of its business model vulnerabilities • Can be used as a starting point for recovery plan scenarios *This list is not exhaustive, i.e. other points might also be valid and would be rewarded.* One half mark awarded for each relevant purpose outlined (maximum 2.5 marks) – maximum 1 mark for meaning and maximum 1.5 marks for purpose One half mark awarded for answer in the form of a paragraph (as requested in question) **Maximum 3 marks for this section.** **Part (d)** SREP Explanation: • Undertaken by regulators – in the UK the PRA • To ensure risks not included in Pillar 1 are identified and subject to capital requirements where appropriate (Pillar 2A risks) • To ensure risks to which the bank/building society may become exposed over a forward looking planning horizon are identified • To assess whether there are risk management and governance weaknesses • To identify other bank-specific vulnerabilities, including leverage, systemic importance • The Total Capital Requirement ("TCR") is an outcome, which details Pillar 2A requirements a bank/building society will need to hold • Overall SREP Assessment is an outcome, a comprehensive/holistic view of the risk profile and a viability of a bank/ building society business model • Bank/Building society assigned a Category based on risk to viability. (Ranges from Category 1 - no risk to viability to Category 4 - high risk to viability, with Category F for firms near failure/failed) *This list is not exhaustive, i.e. other points might also be valid and would be rewarded.* **One half mark awarded for point outlined, maximum 3 marks for this section** **Maximum of 15 marks available in total**

2	Unit 2 2.3 LO7, 1.3 LO2, 3.5 LO13, 1.4 LO3, Unit 4 4.13 LO20	Part (a) Foreseeable Dividend H1 Profits (determine from H1 dividend) = H1 dividend * 2 = 985 * 2 = GBP1970m H2 Profits = FY profits – H1 profits = = 3508 – 1970 = GBP1538m Foreseeable dividend = 50% of H2 profits = 50% * 1538 = GBP769m Award 1 mark for correct formula for H1 2023 dividend and calculation Award 0.5 mark for correct calculation of H2 profits from FY/h1 profits Award 0.5 marks for foreseeable dividend based on 50% H2 profits ***(Maximum 2 marks for this section)*** Part (b) CET1 and Leverage Ratio CET1 Capital before regulatory adjustments *Include all items except AT1* = Ord share cap +Retained earnings + OCI = 5317+17037-2502 = GBP19,852m EL-P = EL – P = 1844 – 1653 = GBP191m CET1 adjustments all items except cash flow Fair Valued = Intangibles+AVA+Pension Asset+Own Credit+Cash flow non FV = 132+760+1247+300-1645 = GBP794m CET1 capital = Reserves – (EL-P)– CET1 adjs– foreseeable dividend (part a) = 19852-191-794-769 = GBP18,098m

		CET1 ratio = CET1 capital/RWA = 18098 (above)/129332 = 13.99% Tier 1 = Tier 1 capital/RWA = (CET1 capital + AT1)/129332 = (18098+3583)/129332 = 16.76% Leverage Ratio *Check AT1 as %age of Leverage Exposure* *= 3583/463536 = 0.77% - so no issue as less than 0.8125%* = Tier 1 capital/Leverage Exposure = 21681/463536 = 4.68% Award: • 0.5 marks for CET1 capital pre-adjustment – all elements except AT1 • 1 mark for EL-P assessment • 0.5 marks for correctly excluding Cash flow fair valued • 0.5 marks for correct sign of Cash flow non FV in CET1 adjs • 0.5 marks for correct inclusion of all other CET1 adjs • 0.5 marks for correct calculation CET1 adjs • 0.5 mark for correct inclusion of Reserves, EL-P, foreseeable dividend and CET1 adjs in CET1 capital • 0.5 marks for correct calculation of CET1 capital • 1 mark for correct CET1 ratio calculation • 0.5 marks for correct calculation of Tier 1 capital • 1 mark for correct T1 ratio calculation • 1 mark for correct calculation of Leverage Ratio ***(Maximum 8 marks for this section)*** Part (c) RoTE Equity (from Table 1) less AT1 = 23435 – 3583 = GBP19.852m Tangible Equity = Equity – Intangible Assets (Table 2) = 19852 (above) – 132 = GBP19,720m

		RoTE = PAT (from question)/Tangible Equity = 3508/19720 = 17.79% Award 0.5 marks for correct Equity Award 1 mark for identifying reducing Equity by Intangible Assets Award 0.5 marks for correct RoTE calculation using PAT ***(Maximum 2 marks for this section)*** Part (d) Large Exposures Why large exposures • Capital held may not be sufficient to absorb losses if a particularly large counterparty were to fail suddenly, i.e. a "jump to default" • regulatory large exposure regime is intended to mitigate against such concentrations LE limits: • UK Corporate = 25% Tier 1 capital = 0.25 * 21681 = GBP5,420m • G-SIB Bank = 15% Tier 1 capital = 0.15 * 21681 = GBP3,252m • UK Govt = No limit Award 1 mark for clearly outlined explanation of why LE limit, 0.5 marks for a less well explained answer. Award 0.5 marks for correct formula for UK Corporate limit. Award 0.5 marks for correct calculation of UK Corporate limit. Award 0.5 marks for correct answer for G-SIB bank limit. Award 0.5 marks for correct answer for UK Govt limit. ***(Maximum 3 marks for this section)*** **Maximum 15 marks in total**
3	Unit 3: LO18	Part (a)

LCR	Amount, GBP millions	Weight	Weighted amount
Notes and coins	50	1	50
Withdrawable reserves	1600	1	1600
L1 securities	3300	1	3300
L2A corporate debt	0	0.85	0
L2B Equities	1850	0.5	925
Total liquid assets	6800		5875
Stable retail deposits	2400	0.05	120
Operational deposits	3300	0.25	825
Non-operational deposits	5600	0.4	2240
Financial deposits	1050	1	1050
Total outflows	12350		4235
Inflows <30 days	700	1	700
Net Outflows	13050		3535

Adjustment = (L1+L2A+L2B) – ((L1+L2A)*(100/85))

Unadjusted unencumbered HQLA – Adjustment for excess HQLA

Unadjusted unencumbered HQLA

5875

Level 2 cap breach?			
Level 2B	15.74%	**YES**	**1 mark**
Total Level 2	15.74%	**FALSE**	

Adjustment for excess HQLA		
(L1+L2A+L2B)	5875	
(L1+L2A)	4950	
(100/85)	1.176471	
Adjustment	51	
Adjusted HQLA	5824	**4 marks**

ANSWER		
Numerator	5824	
Denominator	3535	
Final LCR	165%	**1 mark**

Level 2B = The Level 2B cap is breached as 925/5875 = 16% (L2B cannot be more than 15% of the total buffer), however once adjusted, total Level 2 is below 40% cap therefore all of Level 2A can remain.

Adjusted numerator: Unadjusted unencumbered HQLA – Adjustment for excess HQLA

LCR=165%

(Maximum 6 marks)

Part (b)

Level 2B securities have a larger haircut than other securities in LCR because it assumes they will receive larger haircuts when monetised via repo during combined liquidity stresses (or, perhaps sold at fire-sale prices).

If monetised during a combined scenario-stress, the bank can expect that these large haircuts would also be applied, causing more securities to be used to collateralise a repo etc – this will increase encumbrance during this type of stress, all things being equal.

(Maximum 2 marks)

Part (c)

LCR significantly above 100%. The bank must assume that a stress more severe than the LCR could occur.

Large portion of liquidity buffer held as cash. With outflows so quick e.g. SVB in 1-3 days, the bank may not be able to settle sale or repo transactions in time.

Significant proportion of contingent liquidity available. Assuming that the bank conducts customer lending, these should be prepared into loan pools that could be drawn against at central bank facilities (for example).

		Positioning of HQLA at the central bank. The bank should be able to access cash as quickly as possible and using the central bank may be the only way if a stress occurs over days instead of weeks. Regular testing of repo with counterparties to ensure that if/when liquidity is needed, the repo lines are available. Maintain an encumbrance ratio with headroom to access repo and central bank facilities (this headroom will be based on internal risk appetite and a local regulator's defined thresholds, if any). Maintain a leverage ratio with headroom to access repo and central bank facilities (this headroom will be based on internal risk appetite and a local regulator's defined thresholds, if any). This point is only relevant in a regime where cash proceeds from repo are included in the leverage ratio exposure measure. Essentially; more cash reserves, more contingent liquidity, and the ability to monetise at the central bank e.g. same day or T+1. ***(Maximum 7 marks)*** **Maximum 15 marks in total**
4	Unit 3, LO13, LO26	Part (a) Criticality is caused by various factors; Legal: The depositor may have a legally binding agreement with the bank that prevents it from changing service provider at short notice. ***(1 mark)*** Operational: Costs and/or operational delay of switching by the depositors to another service provider or due to limitations that would arise from a withdrawal of deposits compromising the operational service for which the deposits are a by-product. ***(1 mark)*** Depth: The number of different products the depositor has with the bank, and the provision of loans and overdrafts. ***(1 mark)*** Duration: The length of relationship the depositor has with the bank. Whether the bank is primary banker of the firm. ***(1 mark)*** ***(Maximum 4 marks)***

		Part (b) Assumptions are ultimately based on human behaviour, therefore models are fallible. Additionally, major but remote exogenous sources can destroy assumptions made about products on a portfolio basis; Time subordination: Although many bank runs start by what may be an entirely irrational event, it is entirely rational to join a queue once it has started because you don't want to be the last to join a queue. (***1 mark)*** Media risk: The psychology outlined above connects very closely to media risk. With ever more devices enabling communication, any rumours, however spurious or not, can lead to over inflated reactions. ***(1 mark)*** Reputation risk: Customers like to be associated with a bank that has moral standards, provides an excellent level of service and treats them well. Reputation is important as banking is a fiduciary activity (one based upon trust). It is easily lost and can quickly upend behavioural assumptions when it does. (***1 mark)*** Regulation risk: The impact of regulatory risk for firms comes in three main forms, the first is increased general scrutiny and requirements to produce data and analytics; this is generally a cost of management time and general effort. The second is the amount of fines that are handed out by the regulators for general breaches of rules or system and control procedures. The final, and most important in our context, is that the regulator can add on an amount of funding/liquidity that is required to be held as a penalty for poor risk policies, governance, controls and possibly increased risk the regulator perceives the firm to have. Most of this is classified under what is termed "Pillar II" risks. ***(1 mark)*** ***(Maximum 4 marks)*** Part (c) Retail SME sector concentration limit. The impact of the flightier deposits will be reduced overall. Ensure 100% HQLA held against uninsured portion of deposits. The portion above the DGS limit is likely to be most flighty, and customers with larger deposits are also more likely to 'zero' their accounts in a stress. Increase fixed term funding from the relevant customers. Attempt to reduce the amount on non-maturing deposits from these customers. Minimum LCR/NSFR thresholds above 100%. Since regulatory stress/RSF % cannot be adjusted. ***(Maximum 4 marks)***

Part (d)

Reduction of operational deposits that transformed to less stable retail deposits leads to an increase of the NSFR from 150% to 153%.

NSFR	Amount, GBP billions	Weight	Weighted amount
Cash & withdrawable reserves	1600	0	0
L1 securities	3300	0.05	165
Mortgages and loans	10500	0.65	6825
Other assets	100	1	100
Total assets	15500		7090
Stable retail deposits	5600	0.95	5320
Operational deposits	1300	0.5	650
Non-operational deposits (corp)	5600	0.5	2800
Financial deposits	1050	0	0
Capital	1850	1	1850
Other liabilities	100	0	0
Total equity & liabilities	15500		10620
			150%

NSFR	Amount, GBP billions	Weight	Weighted amount
Cash & withdrawable reserves	1600	0	0
L1 securities	3300	0.05	165
Mortgages and loans	10500	0.65	6825
Other assets	100	1	100
Total assets	15500		7090
Stable retail deposits	5600	0.95	5320
Less stable retail deposits	650	0.9	585
Operational deposits	650	0.5	325
Non-operational deposits (corp)	5600	0.5	2800
Financial deposits	1050	0	0
Capital	1850	1	1850
Other liabilities	100	0	0
Total equity & liabilities	15500		10880
			153%

Adjustment for half of op depos becoming retail as now they are SMEs below 1mil depos

(Maximum 3 marks)

Maximum of 15 marks in total

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