ALMA

ASSET & LIABILITY MANAGEMENT ASSOCIATION

Practice Paper for Surpass System

Certificate of Banking Asset & Liability Management (CertBALM®)

Units 4 and 5 (Course 5)

Assessment October 2019

Past Paper for Units 4 and 5 of the Certificate of Banking Asset & Liability Management (CertBALM®)

Based on the syllabus assessed from 25th March 2019 to 10th January 2020 that was assessed in a live environment in October 2019.

Introduction

This past 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 past 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 past 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. Define 'LIBOR rate'.

(2 marks)

2. Describe the activities associated with instruments that are held in a Trading Book.

(2 marks)

3. Explain 're-margining capacity' in relation to the level at which a Bank chooses to set its Mortgage SVR rate.

(2 marks)

4. A ring-fenced bank has a loan to deposit ratio of 65%, no excess capital and no external bond issuance.

   Explain how the introduction of TLAC / MREL (Total Loss Absorbing Capacity / Minimum Requirement for own funds and Eligible Liabilities) requirements is likely to impact the bank's Net Interest Margin. You should assume that the TLAC / MREL does not replace any other liability positions.

   (Net Interest Margin = Net Interest Income / Average Interest Earning Assets)

(2 marks)

5. State the Basel definition of 'Operational Risk'.

(2 marks)

Section B – 30 marks

This section consists of 6 longer form questions

6. There must be a clear distinction between a macro-hedging strategy, designed to protect the Bank against a perceived market rate vulnerability and simply entering into a derivative position based on a 'view' about short interest rate movements.
   a) Outline the criteria that should exist for an interest rate strategy to constitute a genuine macro hedge.

   (3 marks)

   b) Describe, making reference to an interest rate swap position, how it could be considered part of a macro hedge strategy by one bank and a Trading Book position by another.

   (2 marks)
   (Maximum 5 marks)

7.
   a) Explain how foreign exchange risk arises, including within your answer reference to the impact of a strengthening or depreciating currency. Outline THREE of the principal sources of foreign exchange risk.

   (3 marks)

   b) Consider a UK bank that wishes to satisfy the appetite of US-based debt investors, by issuing a 5-year fixed rate bond in USD, the proceeds of which will be invested in local GBP-denominated variable rate loans. Propose the most suitable hedging derivative and explain how its structure hedges the inherent risks that arise.

   (2 marks)
   (Maximum 5 marks)

8. The risk function within a bank plays an important role in inputting to and challenging the bank's operating plan. Discuss the key issues and questions the risk function should consider in reviewing such a plan**.**

   (5 marks)

9. State the formula for the cost of equity using the Capital Asset Pricing Model and calculate the implied beta for each of the banks detailed in the table below. Within your answer explain what the different betas indicate about the market's perception of the levels of risk in the investment bank and challenger bank relative to the commercial bank.

Bank	Cost of Equity
Investment Bank	6.5%
New challenger Bank	5.5%
Commercial Bank	4.5%

You can assume the risk-free rate is 2% and the average market risk premium is 5%.

(5 marks)

10. Discuss the organisation of a typical FTP (Funds Transfer Pricing) process, including how deposit and lending businesses add value to the bank

(5 marks)

11. Explain the role of each of the following governance committees and stating where they sit within the 'three lines of defence' model:
    - Group Board
    - Group Remuneration Committee
    - Group Audit Committee
    - Group Risk Committee
    - Group ALCO

(5 marks)

Section C – 60 marks

This section consists of 4 longer form questions

12. As a small regional bank, Cashel Rock Bank's balance sheet comprises funding in the form of customer balances, some Issued Debt and Capital. Its lending portfolio is limited to Mortgages, a mix of Retail and Corporate Loans and a Securities portfolio. As at 31st Dec 2018, it looked like this:

Balance Sheet		£m
Assets	Mortgages	25,000
	Retail Loans	30,000
	Corporate Loans	20,000
	Securities	10,000
		85,000
Liabilities	Current Accounts	40,000
	Customer Deposits	25,000
	Debt Issued	8,000
	Capital	12,000
		85,000

The following portfolio attributes are relevant:

- Mortgages are priced at Base Rate + 1.5% margin
- Retail Loans are priced at Base Rate + 5% margin
- Corporate Loans are priced at Base Rate + 3% margin
- All Securities mature in five years and carry a fixed coupon of 3%
- Customer Deposits are priced at Base Rate
- Cashel Rock Bank's Debt has been issued at a fixed rate of 2% for five years

Given the path of the Base Rate is significant to Cashel Rock Bank's income, the bank's economist has provided the following forward guidance for forecasting purposes:

	Yr 1	Yr 2	Yr 3	Yr 4
Base Rate Evolution:	**0.75%**	**1.25%**	**1.75%**	**2.25%**

a) Calculate Cashel Rock Bank's forecast Net Interest Income (NII) and Net Interest Margin (NIM) for each of the Years 1 to 4. Show your workings.

(10 marks)

b) Calculate the sensitivity of NII to a 1% increase in the Base Rate for Years 1 and 2. Show your workings. The rates are therefore as below.

	Yr 1	Yr 2	Yr 3	Yr 4
Base Rate Evolution:	1.75%	2.25%	2.75%	3.25%

(4 marks)

c) Explain whether the sensitivity of the balance sheet to a -1% (or -100bps) change in rates would be symmetrical**.**

(1 mark)

(Maximum 15 marks in total)

13. As an ALM analyst, you can often be asked to run high level scenarios to assess the sensitivity of a bank's income to a particular rate move or hedging strategy. In situations where a fast turn-around is required and running a full analysis on the ALM system is not possible, simplifying the scenario is a useful technique. Such an approach can provide a reasonable insight into the actual outcome.

Consider Skellig Rock Bank's simplified balance sheet (B/S) below.

Its asset profile consists of Mortgages, a mix of Retail and Corporate loans and a Securities portfolio. The table also highlights the broad rate characteristics of these balance sheet components, showing where each sub-component is priced using an Administrated Rate, a (floating) Market Rate (e.g. Base/Libor) or a Fixed Rate.

Similarly, the liability side of Skellig Rock Bank's balance sheet comprises Customer Current Account and Deposit balances, some Issued Debt and its Capital base. Again, the portfolios are segmented by broad rate characteristics e.g. Current Accounts are rate insensitive while the Issued Debt is all fixed, etc.

Skellig Rock Bank		Rate Insensitive	Administered Rate	Market Rate (Flt.)	Fixed Rate	Total £m
Assets	Mortgages		10,000	3,000	2,000	15,000
	Retail Loans		15,000	3,000	3,000	21,000
	Corporate Loans			25,000	5,000	30,000
	Securities			2,000	5,000	7,000
		0	**25,000**	**33,000**	**15,000**	**73,000**
Liabilities	Current Accounts	-33,000				-33,000
	Customer Deposits		-20,000	-4,000		-24,000
	Debt Issued				-6,000	-6,000
	Capital	-10,000				-10,000
		-43,000	**-20,000**	**-4,000**	**-6,000**	**-73,000**

To facilitate your high level analysis, your manager acknowledges that you apply the following simplifying assumptions when forecasting potential income dynamics:

- All fixed rate portfolios, both asset and liability, have a five year term.
- Any movements in market rate portfolios (whether Base Rate or Libor) are fully correlated i.e. if Base Rate moves 50bps, Libor moves 50bps.
- The pass-through from Market Rate movements to Administrated Rate products is 50%.
- All Asset balances are assumed to be Earning and assume Skellig has a 2% NIM.
- 50% of Skellig Rock Bank's Current Accounts and Capital are considered "sticky" or "core".
- Earnings Sensitivity is defined to be (Change in NII/Earning Assets).

a) By careful reference to the balance sheet and associated assumptions above,

i. Calculate the Net Gap Profile for Skellig Rock Bank's balance sheet and briefly describe the key drivers of income that are evident**.**

Skellig Rock Bank	Rate Insensitive	Administered Rate	Market Rate (Flt.)	Fixed Rate
Net B/S Gaps:				

(2 marks)

ii. Estimate the sensitivity of Skellig Rock Bank's NII to a 1% increase in market rates**.**

Skellig Rock Bank	Rate Insensitive	Administered Rate	Market Rate (Flt.)	Fixed Rate	Total
Sensitivity to +100bps:					

(2 marks)

iii. Estimate the bank's Earnings Sensitivity (expressed as a %, review the assumptions above for the definition).

(1 mark)

b) Your manager is concerned about the level of "unhedged" Core NMDs and Core Capital and wants you to consider the potential impact a "Structural Hedging Programme" would have on Skellig Rock Bank's IRRBB profile.

i. What size (£m) replicating Swap portfolio would you propose and show how it would alter the Banks Net B/S gap profile. You can assume 50% of Capital and NMDs are core.

		Rate Insensitive	Administered Rate	Market Rate (Flt.)	Fixed Rate	Total £m
Structural Hedging Programme	Interest Rate Swaps					
	Fixed Leg					
	Floating Leg					
	Post Hedge Net B/S Gaps:					

(2 marks)

ii. Re-estimate the sensitivity of Skellig Rock Bank's NII to a 1% increase in market rates, now that a Structural Hedge (Swap position) is in place. Comment on the IRRBB Pillar 2 capital implications of executing such a hedge.

Skellig Rock Bank	Rate Insensitive	Administered Rate	Market Rate (Flt.)	Fixed Rate	Total
Post-hedge Sensitivity to +100bps:					

(2 marks)

iii. Re-estimate the Bank's Earnings Sensitivity (expressed as a %, review the assumptions above for the definition) and comment on the economic impact of the hedge.

(1 mark)

c) Following a meeting with Treasury, your manager is considering the benefit of hedging the fixed asset portfolios against the prospect of rising rates. Assuming the Structural Hedge in Part b) has NOT been executed:,

i. What size (£xm) Swap portfolio would you propose and show how it would alter the Banks Net B/S gap profile.

		Rate Insensitive	Administered Rate	Market Rate (Flt.)	Fixed Rate	Total £m
Fixed Asset Hedging	Interest Rate Swaps					
	Fixed Leg					
	Floating Leg					
	Post Hedge Net B/S Gaps:					

(2 marks)

ii. Re-estimate the sensitivity of Skellig Rock Bank's NII to a 1% increase in market rates, now that a Structural Hedge (Swap position) is in place. Comment on the IRRBB Pillar 2 capital implications of executing such a hedge.

Skellig Rock Bank	Rate Insensitive	Administered Rate	Market Rate (Flt.)	Fixed Rate	Total
Post-hedge Sensitivity to +100bps:					

(2 marks)

iii. Re-estimate the bank's Earnings Sensitivity (expressed as a %, review the assumptions above for the definition) and comment on the economic impact of the hedge.

(1 mark)

(Maximum 15 marks in total)

14.

a) Discuss what is meant by 'multi-dimensional optimisation' and give a reason for its importance.

Expanding Bank is looking for ways to grow its business and has identified three possible business lines to expand. The bank will only select one business line to enter and will use GBP5 billion of its surplus funds currently held at the central bank to finance the investment, so there will be no change to the liability side of the balance sheet.

The three business lines are as follows

- Buy GBP5 billion in government bonds
- Lend an additional GBP5 billion in residential mortgages
- Lend an additional GBP5 billion to small businesses

[The spreadsheet] below gives you the following information for Expanding Bank

- Summary financial and regulatory information for the bank
- Regulatory limits (including ratio definitions)
- Summary information for the three business lines and the central bank funding that they will replace

	GBP billions
Interest Income	3
Interest Expense	1
Available Stable Funding	85
Required Stable Funding	75
Risk Weighted Assets	60
Capital	8

The regulator has assigned the following limits to the bank

Net Stable Funding Ratio	110%	Available Stable Funding / Required Stable Funding
Capital Ratio	13%	Risk Weighted Assets / Capital

You have been given the following information on the three business lines and the central bank funding they will replace

Product	Central Bank Funding	Government Bonds	Residential Mortgages	Small Business Lending
Risk weight	0%	0%	35%	100%
Required Stable Funding	0%	5%	65%	85%
Net Interest Income	0.25%	0.40%	1.00%	2.00%

(5 marks)

b) Calculate the adjusted Net Interest Income, Net Stable Funding Ratio and Capital Ratio for Expanding Bank for each of the three options.

(8 marks)

c) Recommend and justify which business line Expanding Bank should enter. Assume there are no additional overhead costs associated with the expansion.

(2 marks)

(Maximum 15 marks in total)

15. A review of the effectiveness of the ALCO is about to commence in your organisation. You have been asked to document best practice for ALCO in terms of organisation, information and systems capabilities. Your work will be used to prepare a gap analysis of your organisation's ALCO against those standards.

a) Describe briefly the typical membership of ALCO

(3 marks)

b) Outline the SIX main areas that should be covered at a regular meeting of the ALCO

(3 marks)

c) Discuss the FIVE risk reporting principles set out in BCBS 239 to ensure that senior management receive appropriate information to make effective decisions about risk.

(5 marks)

d) Discuss FOUR capabilities that an ALM system should have in order to support an effective ALM process.

(4 marks)
(Maximum 15 marks in total)

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

Question No.	Syllabus ref:	Exemplar answers
SECTION A QUESTIONS **1**	Unit 4: LO1 (Ref: Ch 1,p5)	1 mark each for any two of the following points: • LIBOR stands for London Interbank Offered Rate • It is the average wholesale price for loans and deposits between banks and tends, at least in normal circumstances, to be driven by the risk-free rate. There is also an element of liquidity/credit premium associated with the rate. • Customer rates are often characterised as LIBOR plus a margin to cover various costs and risks. • The rate is calculated and published each day by the Intercontinental Exchange (ICE). **Maximum 2 marks**
2	Unit 4: LO6 (Ref: Ch1, p14)	1 mark each for any two of the following points: • Short-term resale • Profiting from short-term price movements • Locking in arbitrage profits Hedging risks that arise from the above. **Maximum 2 marks**
3	Unit 4: LO28 (Ref: Ch5 p10)	1 mark each: • For administrated rate products, such as SVR Mortgages, each Bank retains discretion over the level of the (SVR) rate and this offers the Bank some, albeit limited, protection against margin compression. • For example, a Bank may choose to: i. increase the SVR rate, and consequently, its margin when external rates rise; ii. delay reducing the SVR rate/passing on the benefit of any external rate decrease; iii. make unilateral changes to the SVR rate even if external rates do not move. **Maximum 2 marks**
4	Unit 5: LO28 (Ref: Ch7)	The increased debt is likely to reduce the reported Net Interest Margin • The higher cost will reduce net interest income (reducing the numerator) • The extra funding will inflate the balance sheet (increasing the denominator) **1 mark for each, maximum 2 marks**
5	Unit 5: LO9 (Ref: Ch3)	The risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events**.** **Maximum of 2 marks**

SECTION B QUESTIONS **6**	Unit 4: LO19 (Ref: Ch3, p10)	**Part a) 3 marks** • The purpose of the macro hedge should be clearly documented and approved at a Senior Management level and at the appropriate governance forum e.g. Group ALCO. • While consideration of the general path of interest rates, in terms of timing and direction over the medium term, is warranted within the overall strategy, it should be clearly distinguishable from a trading strategy aimed at exploiting a sudden rate move associated with a particular market event/news. • The positions should be held in a separate "book/portfolio" and their impact on balance sheet performance should be regularly monitored by the ALM team and reported to ALCO. • While some degree of "active management" may be necessary to maintain ongoing hedge effectiveness, frequent changes to the core position should be avoided. This discretion could be captured within a Banking Book risk appetite statement. • The authorising committee should be provided with an analysis of the impact of key assumptions associated with the hedging strategy breaking down. Examples include the ability to re-margin in a rising rate environment or the ability to retain low interest bearing deposits. **Part b) 2 marks** Consider a Bank that assumes it is at the bottom of a low rate environment and that the general level of rates will rise over the medium term. The Bank executes a series of pay fixed, receive float swaps. • As the Bank's Financial Plan assumes steady growth in its Fixed Rate Mortgage business, ALCO approves the purchase of the pay fixed swaps as a macro hedge against potential margin compression associated with the portfolio's anticipated rise in funding costs. This will prove to be an effective hedge if indeed rates rise faster than implied by the current yield curve. • Another Bank, without a fixed rate mortgage portfolio, could achieve exactly the same economic result by entering into an equivalent swap position, but internally, consider it just like any proprietary position. In this case, ALCO would expect to see the position captured within the Bank's Trading Book portfolio. **Maximum of 5 marks in total**
7	Unit 4: LO34/35 (Ref: Ch6, p3 and 9)	**Part a) 3 marks** • Foreign exchange risk exists where, for any currency, there is an imbalance between the assets and liabilities denominated in that currency. An excess of assets over liabilities in a particular currency means the bank is at risk of that currency depreciating relative to the Bank's base currency and excess of liabilities over assets puts the Bank at risk of that currency appreciating. The five principal sources the foreign exchange risk are: i. Funding mismatch: Funding in a currency different to that of the corresponding asset. Normally a Bank will fund an asset in the same currency, but on occasions, this may not be possible, or alternatively, in order to diversify its funding sources, it may deliberately raise funding at currency in which it has little or no natural asset base.

		ii. Customer FX: Provision of foreign exchange services to retail customers e.g. high street "bureau de change" desks through which a Bank will buy and sell small amounts of foreign cash, meaning it will always hold some stock of foreign notes and coins. iii. FX Payments: Provision of payment and collection services in foreign currency for retail and corporate customers. Such payments and receipts will typically be routed through the Bank's nostro accounts i.e. accounts being held with a foreign correspondent bank. A Bank will typically maintain small but adequate balances on its various nostro accounts to ensure its customer transactions can be executed properly, but any payment transaction will increase or decrease this balance meaning that, to restore the natural balance to its previous level, the Bank will need to enter into a formal exchange deal with the market. iv. FX Income: Interest and other income receipts in foreign currency is (net of corresponding payments and expenses). This occurs most often where the underlying loan (or deposit) is in a foreign currency because of either the domicile or borrowing requirements of the customer. While the funding will usually be in the same currency as the loan, the net proceeds or margin will nevertheless be in a foreign currency and the Bank will periodically need to sell this down in exchange for the Bank's base currency, but some operational lag will be normal. v. Foreign Subs: Activities of foreign branches or subsidiaries sometimes generate no more foreign exchange risk than would arise from foreign currency activities transacted in the home country, but, where capital and profits are retained in the foreign entity, *structural foreign exchange risk* can arise. **Part b) 2 marks** • A cross currency swap would be an appropriate hedge in this instance. Similar to an interest rate swap but with the two legs in different currencies and carrying the additional feature whereby the principals are exchanged at the outset and then returned at maturity. • In this example, a fixed/float GBP/USD cross currency swap would be structured as follows: On inception, Receive Fixed GBP, say £1m and Pay Floating USD, say $1.2m At maturity, unwind by repaying the $1.2m + int and receiving the £1m + int. The XCCY Swap cashflows would be offset by the cashflows on the underlying Issued Debt and Loans, meaning the Bank would not have incurred any FX P&L. **Maximum 5 marks in total**
8	Unit 4: LO49 (Ref: Ch8, p4)	**1 mark each for any five of the following points:** • The interest rate scenarios considered by the Plan are a key input to forecast performance. Base Plans tend to start with the implied forward curve, overlayed with the Bank Economist's view. The Risk function must first judge the relationship between macro-economic factors and the forward curve. In addition, they need to understand the impact of any material variance on results to highlight the level of rate sensitivity to senior management and to be able to assess the extent to which actual and planned performance deviate as a consequence of this factor. • Are the assumptions around new and retained business volumes and associated margin levels materially different to current assumptions and, if so, is there any

		possibility that the assumptions have been reverse engineered so as to achieve a certain target profit level? • Are material volume changes consistent with product repricing assumptions? For example, while current accounts may historically have been shown to be stable and price insensitive, a large projected growth might, in practice, be in the form of less stable balances so any plan based on investing these, for say 5 years, might introduce additional sensitivity to interest rates rising. • If the revised assumptions do appear reasonable, then these should be incorporated as soon as possible into the risk model so that the bank's future sensitivity to interest rate changes can be reassessed. This may then suggest either changes to the bank's risk appetite, its limit framework and to the capital required to support IRRBB. Alternatively, the projected level of risk implied by the plan may be judged too high and the plan would need revising. • Are there any elements of individual business unit plans that are not supported by underlying volume and margin projections e.g. unspecified "stretch" elements which cannot, by definition, be risk managed? • What impact will the overall plan have on the Treasury/ALM function's existing and future hedging strategy? A material change in the product mix could mean that the existing hedges have to be adjusted and unwound. For instance, if the bank had hedged its LIBOR risk, assuming a certain level of LIBOR lending, it could end up over-hedged if the Plan envisaged a material switch to fixed rate lending. • The Treasury function also needs to make some assumptions about its own behaviour under both base case and stress scenarios. For example, if the plan suggests a material increase in undated liabilities, the Risk function needs to ensure that its existing hedging strategy can be scaled up or, if not, the approach may need to be reviewed. **Maximum 5 marks in total**
9	Unit 5: LO33 (Ref: Ch 8)	Cost of equity = Risk-free rate + Beta * Average market risk premium **(1 mark)** <u>Bank</u> <u>Beta</u> Investment Bank 0.9 New challenger Bank 0.7 Commercial Bank 0.5 **(3 marks)** Both the investment bank and the New challenger bank are perceived to be riskier than the commercial bank. In the case of the investment bank, this is a result of the different business model. In the case of the challenger bank, this is a result of its limited trading history. **(1 mark)** **Maximum 5 marks in total**

10	Unit 5: LO8 (Ref: Ch 2)	• The treasury department stands at the centre of the process, acting as a clearing house between lending and deposit businesses. • The market and liquidity risks are centralised so that treasury can net natural offsets and manage the residual exposures against agreed limits. • Treasury pays the deposit business for the funds they provide and charges the lending business for the funds they consume. • A deposit business add value to the bank when it obtains savings at a rate below its transfer rate. • A lending business add value to the bank when it lends at a rate above its transfer rate. **(1 mark each, max 5 marks)** **(marks will be given for other reasonable suggestions)** **Maximum 5 marks in total**
11	Unit 5: LO24 (Ref: Ch 6)	• Group Board – Provide overall leadership and set the culture and ethos of the bank (1st Line) • Group Remuneration Committee – ensures the remuneration policies support the long term aims of the bank (1st Line) • Group Audit Committee – Assists the board in their oversight of internal controls, regulatory compliance, accounting and financial reporting (3rd Line) • Group Risk Committee – determines the risk appetite and sets the parameters within which the business manages its exposures (2nd Line) • Group ALCO – determines how financial resources are deployed across the business lines within a safe balance sheet framework (1st Line) **(1 mark for each combination of description and line of defence)** **Maximum 5 marks in total**

SECTION C QUESTIONS

12

Unit 4: LO12

(Ref: Ch2, p19+)

Part a) 10 marks

Up to 10 marks awarded for Interest Income, Interest Expense and NIM for Years 1 to 4 as follows:

Base Rate Evolution:		0.75%	1.25%	1.75%	2.25%
	Rate Profile	Y1	Y2	Y3	Y4
Assets	Mortgages	2.25%	2.75%	3.25%	3.75%
	Retail Loans	5.75%	6.25%	6.75%	7.25%
	Corporate Loans	3.75%	4.25%	4.75%	5.25%
	Securities	3.00%	3.00%	3.00%	3.00%
Liabilities	Current Accounts	0.00%	0.00%	0.00%	0.00%
	Customer Deposits	0.75%	1.25%	1.75%	2.25%
	Debt Issued	2.00%	2.00%	2.00%	2.00%
	Capital	0.00%	0.00%	0.00%	0.00%

	Net Interest Income	Y1	Y2	Y3	Y4	Marks
Assets	Mortgages	563	688	813	938	
	Retail Loans	1,725	1,875	2,025	2,175	
	Corporate Loans	750	850	950	1,050	
	Securities	300	300	300	300	
	Interest Income	**3,338**	**3,713**	**4,088**	**4,463**	4
Liabilities	Current Accounts	0	0	0	0	
	Customer Deposits	188	313	438	563	
	Debt Issued	160	160	160	160	
	Capital	0	0	0	0	
	Interest Expence	**348**	**473**	**598**	**723**	4
NII	Net Interest Income	2,990	3,240	3,490	3,740	1
Assets: £ 85m	NIM	3.52%	3.81%	4.11%	4.40%	1

Part b) 4 marks

Up to 4 marks awarded for updated Net Interest Income and NII Sensitivity for Years 1 & 2 as follows:

1%	Base Rate Evolution:	1.75%	2.25%	2.75%	3.25%
	Rate Profile	Y1	Y2	Y3	Y4
Assets	Mortgages	3.25%	3.75%	4.25%	4.75%
	Retail Loans	6.75%	7.25%	7.75%	8.25%
	Corporate Loans	4.75%	5.25%	5.75%	6.25%
	Securities	3.00%	3.00%	3.00%	3.00%
Liabilities	Current Accounts	0.00%	0.00%	0.00%	0.00%
	Customer Deposits	1.75%	2.25%	2.75%	3.25%
	Debt Issued	2.00%	2.00%	2.00%	2.00%
	Capital	0.00%	0.00%	0.00%	0.00%

	Net Interest Income	Y1	Y2	Y3	Y4	
Assets	Mortgages	813	938	1,063	1,188	
	Retail Loans	2,025	2,175	2,325	2,475	
	Corporate Loans	950	1,050	1,150	1,250	
	Securities	300	300	300	300	
	Interest Income	**4,088**	**4,463**	**4,838**	**5,213**	
Liabilities	Current Accounts	0	0	0	0	
	Customer Deposits	438	563	688	813	
	Debt Issued	160	160	160	160	
	Capital	0	0	0	0	
	Interest Expence	**598**	**723**	**848**	**973**	
NII	Net Interest Income	3,490	3,740	3,990	4,240	
	Sensitivity	500	500	500	500	4

Part c) 1 mark

1 mark awarded for a "NO" answer with an explanation that references the likelihood that the Customer Deposits would be floored at 0% instead of falling to -0.25% under the Yr1 -100bps scenario.

Maximum of 15 marks available in total

13 | Unit 4: LO16 & 19 (Ref: Ch3, p3 and 11+)

Part a) 5 marks

i.

	Net B/S Gaps:	-43,000	5,000	29,000	9,000
	Comment:	*The Bank retains discretion over the Administered Rate pricing policy/income generation capability. However, the Bank's income is heavily exposed to changes in market interest rates. Assuming the Fixed Rate portfolios are not repricing/maturing for 5 years, they have a clear and defined contribution to Plan income.*			

1

1

		Pass-through Rates:	0%	50%	100%	0%	
ii.	1%	Sensitivity to +100bps:	0	25	290	0	315
iii.	1,460	*...2% NIM on Earnig Assets*				Earnings Sensitivity:	22%

2

1

Part b) 5 marks

			Rate Insensitive	Administered Rate	Market Rate (Flt.)	Fixed Rate	Total £m
i.	Structural Hedging	Interest Rate Swaps					
		Received Fixed (A)				21,500	21,500
		Pay Floating (L)			-21,500		-21,500

1

		Post Hedge Net B/S Gaps:	-43,000	5,000	7,500	30,500
		Comment:	*While the quantum of 3rd party fixed assets has increased due to the new Swap position, the Pillar 2 capital assessment will benefit from the "behaviouralisation" of Core NMDs and Core Capital, minimising any capital impacts. Note the Standard Outlier Test would exclude behaviouralised Core Capital from its assessment.*			

1

1

		Pass-through Rates:	0%	50%	100%	0%	
ii.	1%	Sensitivity to +100bps:	0	25	75	0	100
iii.	1,460					Earnings Sensitivity:	7%
		Comment:	*The Hedge serves to reduce the sensitivity of NII to changes in market rates i.e. volatile floating income positions have been swapped for fixed income positions.*				

1

1

Part c) 5 marks

			Rate Insensitive	Administered Rate	Market Rate (Flt.)	Fixed Rate	Total £m
i.	Fixed Asset Hedging	Interest Rate Swaps					
		Receive Floating (A)			15,000		15,000
		Pay Fixed (L)				-15,000	-15,000

1

		Post Hedge Net B/S Gaps:	-43,000	5,000	44,000	-6,000
		Comment:	*While the quantum of exposure to fixed asset positions (i.e. rising rates) has reduced due to the new Swap position, Skellig has significantly increased the volatility of its NII.*			

1

1

		Pass-through Rates:	0%	50%	100%	0%	
ii.	1%	Sensitivity to +100bps:	0	25	440	0	465
iii.	1,460					Earnings Sensitivity:	32%
		Comment:	*The Hedge serves to increase the sensitivity of NII to changes in market rates i.e. more stable fixed income positions have been swapped for more volatile floating income positions.*				

1

1

Maximum of 15 marks in total

14 | Unit 5: LO14 (Ref: Ch4)

a)

- This is the problem of managing several, often mutually incompatible constraints at the same time
- A bank has 4 main groups of resources
  - Capital
  - Funding
  - Liquidity
  - Leverage
- A bank has 4 main groups of constraints
  - Regulatory Pillar 1
  - Regulatory Pillar 2
  - Internal Requirements
  - Investor and Rating agency expectations
- Looking at the impact of different scenarios on all these factors using consistent assumptions leads to better decision making
- Regulators want to see evidence of banks looking at their businesses in an integrated way. It is evidence that bank management understand what is happening in their organisation, particularly the interplay between different risks and overall reward.

(1 mark for each point, maximum 5 marks)
(marks will be given for other reasonable answers)

b)

Product	Government Bonds	Residential Mortgages	Small Business Lending
Net Interest Income	2.0075	2.0375	2.0875
Net Stable Funding Ratio	113.0%	108.6%	107.3%
Capital Ratio	13.3%	13.0%	12.3%

(1 mark for each correct calculation, maximum 8 marks)

c)

Expanding bank can only opt for the investment in Government Bonds.

The residential mortgages would result in a breach of its NSFR limit and the small business lending would result in a breach of both its NSFR and Capital Ratio limits. The Government Bonds option (despite having the lowest NII of the three) is the only one that is compliant with the bank's regulatory limits

(1 mark for correct option and 1 mark for justification of answer)

Maximum 15 marks in total

15	Unit 5: LO1 LO4 LO17	a) LO01 (Unit 5, Chapter 1) • Chief Executive Officer • Chief Financial Officer • Chief Risk Officer • Group Treasurer • Group Head – Balance Sheet Management • Divisional Business Heads **(0.5 marks for each member, maximum 3 marks)** b) LO04 (Unit 5, Chapter 1) • Impacts of current performance against operating plans • Liquidity and funding risk • Interest rate risk in the banking book (IRRBB), including net interest income sensitivity • Funds transfer pricing • Structural foreign exchange risk • Stress testing results • Contingency funding plans **(0.5 marks for each area, maximum 3 marks)** c) LO17 (Unit 5, Chapter 4) • Accuracy - Risk management reports should accurately and precisely convey aggregated risk data and reflect risk in an exact manner. Reports should be reconciled and validated. • Comprehensiveness - Risk management reports should cover all material risk areas within the organisation. The depth and scope of these reports should be consistent with the size and complexity of the bank's operations and risk profile, as well as the requirements of the recipients. • Clarity and usefulness - Risk management reports should communicate information in a clear and concise manner. Reports should be easy to understand yet comprehensive enough to facilitate informed decision-making. Reports should include meaningful information tailored to the needs of the recipients. • Frequency –Frequency requirements should reflect the needs of the recipients, the nature of the risk reported, and the speed, at which the risk can change, as well as the importance of reports in contributing to sound risk management and effective and efficient decision-making across the bank. The frequency of reports should be increased during times of stress/crisis. • Distribution - Risk management reports should be distributed to the relevant parties while ensuring confidentiality is maintained. **(1 mark for each)**

		d) LO04 – (Unit 5, Chapter 1) • Capture all relevant data from source systems • Forecast forward rates and balances • Measure and forecast interest rate risk and funding gaps • Identify and prove hedge relationships under IAS 39 • Enable funds transfer pricing for both interest rate risk and funding • Measure and forecast regulatory and economic capital • Support behavioural analysis for prepayments, rollovers and drawdown • Integrate with and support other reporting tools in the bank **(1 mark each, maximum 4 marks)** **Maximum of 15 marks in total**

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