



ALMA
ASSET & LIABILITY MANAGEMENT ASSOCIATION

Practice Paper

Certificate of Banking Asset
& Liability Management

(CertBALM®)

Units 4 and 5

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

Based on the syllabus assessed from March 2023 and January 2024.

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. Describe the difference between parallel and non-parallel yield curve risk and give an example of a position that can only be identified by non-parallel.

(2 marks)

2. Describe the difference between a static and a dynamic gap and explain how a fixed-rate mortgage might be treated differently between the two.

(2 marks)

3. Explain how currency basis risk differs from foreign exchange risk.

(2 marks)

4. Briefly describe the membership of a typical bank ALCO.

(2 marks)

5. Explain what is meant by the first and second lines in the 'three lines of defence' structure.

(2 marks)

Section B – 30 marks

This section consists of 6 longer form questions

6. Your bank is considering offering development capital to a new corporate customer. You are required to:
- (a) Describe the difference between specific and general equity risk is and how a development capital investment is exposed to each type of risk. **(2 marks)**
 - (b) Explain the two main methods of funding the position and the residual risk of each method. **(2 marks)**
 - (c) Describe the key elements of the reporting to ALCO on the position. **(1 mark)**
7. Your bank has just started trading interest rate swaps to hedge its 3 year fixed rate mortgage book. Your Treasurer is alarmed by the P&L volatility on the swaps and wants to understand more about how hedge accounting under IFRS9 works.
- (a) Explain the accounting asymmetry between the mortgage and hedging swap (without hedge accounting) and how this creates P&L volatility. **(2 marks)**
 - (b) The bank has GBP100m of three year mortgages with a customer rate of 7% hedged by swaps with a fixed rate of 5%. Create a simple example that shows the P&L impact immediately after the rate move if rates across the curve increase from 5% to 5.5% after one year. **(1 mark)**
 - (c) Explain the two methods of hedge accounting and the pros and cons of each. **(2 marks)**
8. Your bank has just offered GBP200m of five year fixed-rate mortgages to customers and the Treasurer wants to understand the risks that can arise from offering these products.
- (a) Describe the two main interest rate risks that occur **at origination** for fixed rate mortgages and how the bank can attempt to mitigate them. **(2 marks)**
 - (b) The fixed rate mortgages are hedged with a swap, removing all the outright interest rate risk. Describe the main behavioural risk that occurs **during the remaining life** of the mortgages and the main ways that the bank can use to mitigate this risk. **(3 marks)**

9. Describe the following resolution tools that the Bank of England has at its disposal.

- Modified insolvency.
- Private sector purchaser.
- Bridge bank.
- Bail-in.
- Asset management vehicle.

(5 marks)

10. Describe the role of each of the following governance committees:

- Group Board.
- Group Remuneration Committee.
- Group Audit Committee.
- Group Risk Committee.
- Group ALCO.

(5 marks)

11. Explain how banks' change agendas can impact the assessment of operational risk and **THREE** processes that seek to address these changes.

(5 marks)

Section C – 60 marks

This section consists of 4 longer form questions

12. The Treasurer of your bank would like to better understand what might happen to net interest income as interest rates rise and so has asked you to prepare some sensitivity analysis to explore the impact.

Your bank's balance sheet is as follows:

	Balance Sheet	GBPm
Assets	Mortgages	4,000
	Corporate loans	3,000
	Cash with BoE	2,000
	Gilts	1,000
		10,000
Liabilities	Current accounts	2,500
	Deposits	4,000
	Wholesale funding	1,500
	Capital	2,000
		10,000

The products have the following characteristics:

- Mortgages: 75% are fixed rate with a customer rate of 6%; the remaining 25% are administered rate that have a 80% pass-through assumption with a current rate of 6.4%.
- Corporate Loans: 60% are floating rate and are priced off BoE Base Rate + 3%; the remaining 40% are fixed rate paying 8%.
- Gilts: are comprised of a GBP300m five year fixed rate gilt paying 3.5% and a GBP700m two year fixed rate gilt paying 2.5%.
- Current Accounts are non-interest bearing. It is expected that 40% of the balances will move to the administered rate deposit product if base rate increases by 100 basis points.
- Deposits: 60% are administered rate currently paying 2% with a pass-through assumption of 50%; the remaining 40% are fixed rate with an average rate of 3.25%.
- Wholesale funding has 3 years to maturity and is fixed rate paying 4.8%.

Current BoE Base Rate is 5%.

(a) Calculate the bank's forecast Net Interest Income (NII) and Net Interest Margin (NIM) for the next four quarters using the following template and assuming:

- There are no changes in product volumes or product rates over the period.
- BoE Base Rate increases by 50 basis points in exactly six months.

(6 marks)

	Q1	Q2	Q3	Q4	Total
Assets					
Mortgages - fixed rate					
Mortgages - admin rate					
Corporate loans - floating rate					
Corporate loans - fixed rate					
Cash with BoE					
Gilts					
Total assets					
Liabilities					
Current accounts					
Deposits - admin rate					
Deposits - fixed rate					
Wholesale funding					
Capital					
Total liabilities					
Net interest income					
Net interest margin					

- (b) Calculate the NII and NIM impact of a 100bp increase in interest rates using the following template assuming that the 50bp BoE Base Rate increase in 6 months still occurs.

(7 marks)

	Q1	Q2	Q3	Q4	Total
Assets					
Mortgages - fixed rate					
Mortgages - admin rate					
Corporate Loans - floating rate					
Corporate Loans - fixed rate					
Cash with BoE					
Gilts					
Total assets					
Liabilities					
Current accounts - don't move to admin rate					
Current accounts - move to admin rate					
Deposits - admin rate					
Deposits - fixed rate					
Wholesale funding					
Capital					
Total liabilities					
Net interest income					
Net interest margin					

- (c) Describe what sensitivity the balance sheet has to interest rate rises, what is causing it and what could be done to reduce the exposure.

(2 marks)

13. Internal audit is about to conduct a review of your Treasury department's compliance with IRRBB regulations and the Treasurer has asked you to provide a briefing on the things they need to know when talking to audit. To this end, you are required to:

- (a) Discuss of each of the principle features of BCBS 368.

(7 marks)

- (b) Explain how the UK implementation of the IRRBB regulations differs from BCBS368.

(4 marks)

- (c) Discuss what structural foreign exchange risk is and how the regulator treats it.

(4 marks)

14. It is bank results reporting season and you are an equity analyst in a stockbroking firm looking at the announcements of each of the major commercial banks.

(a) Explain **THREE** factors that make bank equity of particular interest to investors.

(3 marks)

(b) Outline the limitations of comparing the Price: Earnings Ratio (PER) of two banks and **SIX** issues that should be considered when analysing the relative value of two banks.

(4 marks)

(c) You have been given the following information on two banks:

	Bank A	Bank B
Beta	1.5	1.75
Book value of equity	50,000	100,000
Dividend payout ratio	50%	50%
Equity risk premium	4%	4%
Return on assets	1.20%	1%
Return on equity	12%	12%
Risk-free rate	5%	5%
Stable growth rate	6%	6%

Calculate the Price to Book Value and Leverage Value of each bank and comment on how the relative leverage values impact on the price to book values.

(8 marks)

15. You have been asked by your corporate banking division to demonstrate how asset and liability management practices can help to assess the benefits of different lending strategies for their business and the bank as a whole.

(a) Describe the **THREE** key objectives of Funds Transfer Pricing (FTP).

(3 marks)

(b) Describe the **FOUR** dimensions of constraints that are considered in a multi-dimensional optimisation of a bank's business plan.

(4 marks)

(c) You have been given the following information on the bank's issued debt:

Term (years)	2	4	5
Issued Bond Yield	5.00%	6.00%	8.00%
Swap Cost	4.50%	4.00%	3.00%

Calculate the post FTP net interest income on the following two proposed loan structures:

Proposal A

GBP100m four year loan @ SONIA + 3%.

Proposal B

GBP50m two year loan @ SONIA + 1%.

GBP50m five year loan @ SONIA + 6%.

(3 marks)

(d) Explain how behavioural modelling could change the term liquidity premium associated with the following product categories:

- Mortgages
- Current and savings accounts.

(2 marks)

(e) Banks engage in maturity transformation, so the maturity profile of their assets and liabilities will not match. This tends to result in a net FTP profit in treasury, which the non-treasury business units do not like.

Describe **THREE** ways in which the FTP profit could be returned to the non-treasury business areas.

(3 marks)

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

Question No.	Syllabus ref:	Exemplar answers
SECTION A		
1	Unit 4: L03	<ul style="list-style-type: none"> Parallel YC Risk: A parallel change means that the interest rates for all tenors move by the same amount. Non-parallel YC Risk: Non-parallel yield curve risk is the risk of some other change to the shape of to the yield curve. Examples: if they give a valid example they get the mark. Example in the book is steepener or flattener trades. <p>1 mark for defining the difference. 1 mark for the example.</p> <p>Maximum 2 marks</p>
2	Unit 4: LO11	<ul style="list-style-type: none"> An interest rate gap is essentially a two dimensional grid as at a particular date and summarizing all the current positions of the bank by re-pricing date and product. Positions are then slotted in according to their contractual/behavioral terms. In a static gap the behaviour is constant in each scenario i.e. prepayment does not change in each scenario. In a dynamic gap all the various behavioural assumptions required to determine a re-pricing date may themselves be functions of other factors including potential interest rate change itself. For a fixed rate mortgage you would expect the prepayment rate to decrease as rates rise and it to increase as rates fall (as customers refinance on to a cheaper rate). <p>½ mark for defining what a gap report is. 1 for the difference between static and dynamic. ½ mark for the example.</p> <p>Maximum 2 marks</p>
3	Unit 4: LO22 LO34	<p>Currency Basis Risk: is the risk associated with the fact that that the <u>interest rates</u> of individual currencies will, to a greater or lesser extent, probably move differently. Currency basis risk most obviously arises when the currency of a variable rate asset and the corresponding variable rate funding are different.</p> <p>Foreign exchange risk exists where, for any currency, there is an imbalance between the assets and liabilities denominated in that currency. This exposes the bank to a risk that the currency fluctuates compared to the bank’s base currency i.e. <u>an fx risk</u>.</p> <p>The difference is effectively that FX risk is the risk that arises from movements in FX rates on the excess/short funding position in the foreign currency – currency basis risk can then arise if floating rate balances in one currency are funded by floating rate balances in another i.e. it is an interest rate risk resulting from the FX mismatch.</p> <p>1 mark for defining either currency basis risk or FX risk. 1 mark for making clear that one of an FX risk and the other a basis/interest rate risk.</p> <p>Maximum 2 marks</p>

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4	Unit 5: LO4	<ul style="list-style-type: none">• Chief Executive Officer• Chief Financial Officer• Chief Risk Offices• Group Treasurer• Group Head – Balance Sheet Management• Group Head – Capital Management• Divisional Business Heads <p>0.5 marks each.</p> <p>Maximum 2 marks</p>
5	Unit 5: LO10	<ul style="list-style-type: none">• The 1st line of defence (1LOD) refers to the majority of the bank, It is responsible for managing the day-to-day operations of the bank. It generates the risk and is responsible for implementing effective mechanisms to control it.• The 2nd line of defence (2LOD) contains the risk function. It reviews and challenges the first line, co-ordinates bank-wide risk initiatives and investigations and independently generates management information for stakeholders. <p>1 mark each.</p> <p>Maximum of 2 marks</p>

SECTION B		
6	Unit 4: LO38 LO39	<p>(a)</p> <ul style="list-style-type: none"> • Specific equity risk is the risk that the price of a particular share may fall due to the perceived weakness of the company concerned. • General equity risk is the risk that the whole share market or segment thereof – as represented by some index such as the FTSE 100 – might fall due to a wider decline in economic confidence. • While the specific equity risk associated with a particular investment may be regarded as economically equivalent to credit risk, general equity risk constitutes an additional threat to this type of business. This is not because it would necessarily make the investment inherently riskier from a credit perspective, but because a fall in the general level of equity prices would be likely to have some negative impact on the share price of a particular investment <u>thus lengthening the period over which the bank needed to remain invested.</u> <p>½ mark for explaining each option. 1 mark for how it is exposed.</p> <p>(Part (a) maximum of 2 marks)</p> <p>(b)</p> <ul style="list-style-type: none"> • Option 1: fix the funding for the average anticipated investment period. Risk: if the target price isn't reached at this point the investment may be held longer and will need to be re-hedged. • Option 2: lock in a pool of rolling funding that is independent of the length of individual investments. Risk: this leaves the bank exposed to movements in interest rates as the investment return isn't linked to interest rates. <p>½ mark for explaining each option. ½ mark for the resulting risk.</p> <p>(Part (b) maximum of 2 marks)</p> <p>(c)</p> <ul style="list-style-type: none"> • Focus on actual performance (dividends plus mark to market changes) against plan particularly in times of falling equity prices. • Analysis of turnover in the portfolio – decreasing turnover could indicate a more general problem. • Analysis of the funding duration focussing on any unexplained changes. • Input into the setting of the overall volume limit or cap – it should be accepted that this is not solely a credit risk appetite even if market risk element cannot be precisely identified. • Regular stress and scenario analysis – even if the relevance of the results is challenged it will at least ensure the issue is not ignored. <p>½ mark for each of the points captured.</p> <p>(Part (c) maximum of 1 mark)</p> <p>Maximum of 5 marks</p>

7	Unit 4: LO20	<p>(a)</p> <ul style="list-style-type: none"> Without hedge accounting, the mortgage is accounted for on an amortised cost basis while the swap is accounted for a mark to market / fair value basis. As interest rates move the accounting value of the mortgage remains unchanged, while the swap immediately revalues, creating P&L volatility. <p>1 mark for specifying the accounting treatment of the two products. 1 mark for explaining why this creates P&L volatility.</p> <p>(Part (a) maximum of 2 marks)</p> <p>(b)</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Pay</th> <th>Receive</th> <th>Net</th> <th>NPV @ 5%</th> <th>NPV @ 5.5%</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td>100,000,000</td> <td>100,000,000</td> <td>100,000,000</td> <td>100,000,000</td> <td></td> </tr> <tr> <td>1</td> <td>-5,000,000</td> <td></td> <td>-5,000,000</td> <td>-4,761,905</td> <td>-4,761,905</td> <td>0.5</td> </tr> <tr> <td>2</td> <td>-5,000,000</td> <td></td> <td>-5,000,000</td> <td>-4,535,147</td> <td>-4,492,262</td> <td rowspan="2">0.5</td> </tr> <tr> <td>3</td> <td>-105,000,000</td> <td></td> <td>-105,000,000</td> <td>-90,702,948</td> <td>-89,419,435</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Total</td> <td>0</td> <td>1,326,398</td> <td></td> </tr> </tbody> </table> <p>1 mark for the calculation above. (½ mark for realising year 1 is unchanged, but years 2-3 move)</p> <p>(Part (b) maximum of 1 mark)</p> <p>(c)</p> <p>Fair value hedging What it is: this essentially involves continuing to fair value the hedging derivative, but allows fair valuing also of the hedged item with changes being taken to P&L. This means that there should be no net impact on reported P&L in any year if the change in the fair value of the hedge is offset exactly by the change in the fair value of the hedged item.</p> <p>Pros/Cons: works well for big ticket items, but can become difficult where there are many offsetting products which are only hedged on a net basis.</p> <p>Cash flow hedging What it is: this tackles the same problem in another way. The derivative is still fair valued, but changes to this value are not passed to P&L but to another reserve termed “other comprehensive income” and will eventually reverse out by the end of the life of the derivative.</p> <p>Pros/Cons: is probably less onerous to demonstrate than fair value hedging, does impact TNAV which can cause an adverse impression on analysts and investors.</p> <p>½ mark for the explanation for each. ½ for the pros and cons of each.</p> <p>(Part (c) maximum of 2 marks)</p> <p>Maximum of 5 marks</p>	Year	Pay	Receive	Net	NPV @ 5%	NPV @ 5.5%	Marks	0		100,000,000	100,000,000	100,000,000	100,000,000		1	-5,000,000		-5,000,000	-4,761,905	-4,761,905	0.5	2	-5,000,000		-5,000,000	-4,535,147	-4,492,262	0.5	3	-105,000,000		-105,000,000	-90,702,948	-89,419,435				Total	0	1,326,398	
Year	Pay	Receive	Net	NPV @ 5%	NPV @ 5.5%	Marks																																					
0		100,000,000	100,000,000	100,000,000	100,000,000																																						
1	-5,000,000		-5,000,000	-4,761,905	-4,761,905	0.5																																					
2	-5,000,000		-5,000,000	-4,535,147	-4,492,262	0.5																																					
3	-105,000,000		-105,000,000	-90,702,948	-89,419,435																																						
			Total	0	1,326,398																																						

<p>8</p>	<p>Unit 4: LO26 LO27</p>	<p>(a)</p> <p>Pipeline / Pre-Sales Risk:</p> <ul style="list-style-type: none"> • Definition: When a bank launches a new fixed rate product it generally needs to set the price at the outset, and therefore it will be exposed to any interest rate changes that may occur between launch and completion. • Mitigant: Banks will typically hedge this risk by entering into forward starting interest rate swaps, or pre-hedges, the volume and timing of which are determined by the bank's estimate of total likely sales and the time it will take for these to materialise. For fixed rate loans, the bank will need a forward starting pay fixed interest rate swap in order to fix the funding cost over the expected life of the loan. <p>Pre-hedge Risk:</p> <ul style="list-style-type: none"> • Definition: This risk is essentially that the sales estimate proves to be wrong and that rates move against the bank meaning that the over or under-hedge will then make a loss. For example, if the bank estimates sales of a fixed rate mortgage product as being GBP100m and enters into a forward starting pay fixed swap for this amount, but only GBP80m are sold, the GBP20m open pay fixed swap position would lose money if rates had fallen because the bank would be receiving a lower variable rate. • Problem with mitigating: driven by factors outside the banks control (competitors pricing, elasticity of customer demand) and things like length of drawdown period. Changing economic conditions need to be taken into account and much will depend on the magnitude of any rate change as well as the product concerned. • Options are not an effective hedge as although it could theoretically eliminate the risk, is unlikely to be cost effective as the option premium will be a function of perceived market volatility which, in turn, is driven by the behaviour of traders who are focussed solely on making money from the smallest change in rates. • Any pre-hedge should match as closely as possible the optionality that the bank has granted the customer in terms of amount and likely duration. The position should be monitored regularly and updated with timely information on both applications and completions which together, particularly in the case of mortgages, can allow the original completion estimate to be refined in the light of actual experience. <p>½ mark for each definition. ½ for pipeline mitigant. ½ mark for pre-hedge mitigant.</p> <p>(Part (a) maximum of 2 marks)</p> <p>(b)</p> <p>Definition</p> <ul style="list-style-type: none"> • Prepayment risk is the risk that the bank will make a loss when a fixed rate loan is broken prematurely and the firm has to cancel any hedging in place. <p>Mitigants</p> <ul style="list-style-type: none"> • For UK mortgages, ERCs can only be based on a simple percentage formula advertised at the outset which, depending on how interest rates have moved, may or may not cover the actual break cost.
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		<ul style="list-style-type: none"> • Hedge to the minimum level of prepayment on the grounds that any risk from a higher level of prepayment will be broadly covered by the additional ERCs collected and that they are most unlikely to suffer any loss from prepayments being lower than the minimum. • Hedge to their estimate of the actual expected prepayment rate; if they are correct in their estimate, then a considerable portion of the ERC income will be retained (i.e. will not need to be used to offset an avoidable and predictable break cost). If, however, they are wrong, they are exposed to both the rate of prepayment increasing and to it decreasing. <p>1 mark for defining prepayment risk. 2 marks for mitigants (one mark for each mitigant).</p> <p><i>(Part (b) maximum of 3 marks)</i></p> <p>Maximum of 5 marks</p>
<p>9</p>	<p>Unit 5: LO21</p>	<ul style="list-style-type: none"> • Modified insolvency. Insured depositors have their deposits covered under the deposit guarantee scheme returned to them within 7 calendar days or transferred seamlessly to another bank, with remaining creditors following the normal insolvency process. • Private sector purchaser. The Bank of England transfers some or all of the business to a private purchaser. Non-viable parts are placed into a normal administration or insolvency process. • Bridge bank. Where a private sector purchaser cannot be found immediately, the viable parts of a failed bank are transferred on a temporary basis to a bridge bank owned by the Bank of England until a longer-term solution can be implemented. Non-viable parts are placed into a normal administration or insolvency process. • Bail-in. Holders of equity, other capital instruments and certain long term unsecured debt instruments (but not insured depositor) absorb losses in, and help the recapitalisation of, a failed bank. The Bank of England uses its legal powers to write-down in scope liabilities. • Asset management vehicle tool. Used in conjunction with other tools, it involves moving bad assets from a failed bank to enable the rest of it to survive in a bridge bank or move to a private sector purchaser. The assets removed are placed in an asset management vehicle and sold down in an orderly manner to maximise value. <p>1 mark each.</p> <p>Maximum of 5 marks</p>
<p>10</p>	<p>Unit 5: LO24</p>	<ul style="list-style-type: none"> • Group Board – Provide overall leadership and set the culture, strategy and ethos of the bank. • Group Remuneration Committee – ensures the remuneration policies support the long term aims of the bank. • Group Audit Committee – assists the board in their oversight of internal controls, regulatory compliance, accounting and financial reporting. • Group Risk Committee – determines the risk appetite and sets the parameters within which the business manages its exposures. • Group ALCO – determines how financial resources are deployed across the business lines within a safe balance sheet framework. <p>1 mark each.</p> <p>Maximum of 5 marks</p>

<p>11</p>	<p>Unit 5: LO12</p>	<p><i>Impacts:</i></p> <ul style="list-style-type: none">• Risks – there may be new inherent risks, or changes to the likelihood and impact of existing risks.• Controls – existing controls may have been rendered inadequate or new controls may be required to mitigate new risks.• Processes – new processes may have been created, requiring assessment.• Metrics – new monitoring metrics may be required. <p><i>Addressed by:</i></p> <ul style="list-style-type: none">• Process documentation – refresh risks assessment and controls implemented as a result of the change.• Project change assessment – track issues, dependencies and changes throughout a project, assessing changes against delivery objectives.• Product / Process approval committee – assess (during the development stage) the impact of new products, etc. on customers, internal processes, risk management and reporting. <p>2 marks for impact. 3 marks for ways of addressing.</p> <p>Maximum of 5 marks</p>
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Units 4 & 5 Assessment – Practice Paper

SECTION C								
12	Unit 4: LO14	(a) Each calculation is rewarded marks as per the table below:						
			Q1	Q2	Q3	Q4	Total	Marks
		Assets						
		Mortgages – fixed rate	45	45	45	45	180	0.5
		Mortgages – admin rate	16	16	17	17	66	0.5
		Corporate loans – floating rate	36	36	38.25	38.25	148.5	0.5
		Corporate loans – fixed rate	24	24	24	24	96	0.5
		Cash with BoE	25	25	27.5	27.5	28	0.5
		Gilts	7	7	7	7	28	0.5
		Total assets	153	153	158.75	158.75	623.5	
		Liabilities						
		Current accounts	0	0	0	0	0	0.5
		Deposits – admin rate	(12)	(12)	(13.5)	(13.5)	(51)	0.5
		Deposits – fixed rate	(13)	(13)	(13)	(13)	(52)	0.5
		Wholesale funding	(18)	(18)	(18)	(18)	(72)	0.5
		Capital	0	0	0	0	0	0.5
		Total liabilities	(43)	(43)	(44.5)	(44.5)	(175)	
		Net interest income	110	110	114.25	114.25	448.5	
		Net interest Margin					4.485%	0.5
		(Part (a) maximum of 6 marks)						
		(b) Each calculation is rewarded marks as per the table below:						
			Q1	Q2	Q3	Q4	Total	Marks
		Assets						
		Mortgages – fixed rate	45	45	45	45	180	0.5
		Mortgages – admin rate	18	18	19	19	74	0.5
		Corporate loans – floating rate	40.5	40.5	42.75	42.75	166.5	0.5
		Corporate loans – fixed rate	24	24	24	24	96	0.5
		Cash with BoE	30	30	32.5	32.5	125	0.5
		Gilts	7	7	7	7	28	0.5
		Total Assets	164.5	164.5	170.25	170.25	669.5	
		Liabilities						
		Current accounts – don't move to admin rate	0	0	0	0	0	0.5
		Current accounts – move to admin rate	(6.25)	(6.25)	(6.875)	(6.875)	(26.25)	0.5
		Deposits – admin rate	(15)	(15)	(16.5)	(16.5)	(63)	0.5
		Deposits – fixed rate	(13)	(13)	(13)	(13)	(52)	0.5
		Wholesale funding	(18)	(18)	(18)	(18)	(72)	0.5
		Capital	0	0	0	0	0	0.5
		Total liabilities	(52.25)	(52.25)	(54.375)	(54.375)	(213.25)	
		Net interest	112.25	112.25	115.875	115.875	456.25	
		Net interest margin					4.563%	0.5
		(Part (b) maximum of 7 marks)						

		<p>(c)</p> <ul style="list-style-type: none"> • The balance sheet is exposed to increasing interest rates because a greater proportion of the assets are floating rate than the liabilities (GBP4,600 of the assets, GBP1,200 of the liabilities in the base case factoring in passthrough rates). • This mismatch has a limited impact over the 12 month period (e.g. NII only moved cGBP8mn under a 100bp shock). • Therefore to reduce the exposure to interest rate moves this imbalance needs to be closed, either through adjusting the balance sheet composition e.g. writing more floating rate liabilities/fixed rate assets or through swapping some of the fixed rate liabilities into floating. <p>Award between ½ - 1 mark (depending on the level of detail) for each point.</p> <p>(Part (c) maximum of 2 marks)</p> <p>Maximum of 15 marks</p>
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<p>13</p>	<p>Unit 4: LO52, LO53, LO55,</p>	<p>(a)</p> <ul style="list-style-type: none"> • Pillar 2: IRRBB was confirmed as being a Pillar 2 risk within the capital framework and, as such, the method of capital computation remains largely un-prescribed, thus the appropriate level of capital is determined individually by the bank and its supervisor without the imposition of prescriptive standards. • Disclosure: Banks are required to publicly disclose both quantitative and qualitative information on IRRBB exposures and must specifically disclose the measured EVE and NII sensitivities under the prescribed interest rate scenarios i.e. The outcomes of EVE sensitivity to six prescribed interest rate shocks. • Standard Outlier Test: regulators are required to publish their criteria for identifying outlier banks. However at least one of their outlier tests must use the EVE sensitivity outcomes that banks disclose inclusive of the quantitative comparability requirements. • Credit Spread Risk in the Banking Book (CSRBB): CSRBB, for the first time is within the scope of regulation and needs to be monitored and assessed. The Basel Committee define CSRBB as any kind of asset/liability spread risk of credit risky instruments which is not explained by IRRBB, nor by the expected credit/jump to-default risk. • Standardised EVE Framework: A standardised EVE framework is provided in the event of either a bank opting itself to use it as its internal measurement system or its supervisor directing that it should be used as the banks internal measurement system. • Treatment of Commercial Margin and Discount Curves: Both the EVE disclosure requirements and the Standardised EVE Framework give banks the option to include or exclude commercial margin from the interest flows in the underlying gap report. • Strengthening of Supervisory Scrutiny: The Basel Standards strengthens the powers of scrutiny by supervisors arising from the enhanced supervisory review process and the expectation that supervisors are expected to force outlier banks to de-risk and/or hold additional capital. <p>Award 1 mark for some mention of each point.</p> <p>(Part (a) maximum of 7 marks)</p>
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	<p>(b)</p> <ul style="list-style-type: none"> • Supervisory Outlier Test: allowing of 50% cross currency offsets, tapered floor in applying shocks, reflection of behavioural and automatic options, that it needs to be calculated quarterly. • Commercial Margins and Discount Curves: The Basel requirement, in respect of variable rate products, to include margin flows up to the final contractual maturity, has not been adopted. This should significantly reduce the impact on banks that either wish to include margins or are incapable of removing them. • Standardised Framework: Minor banks can <u>apply</u> to use it and there are minor differences in NMDs – 10 years of data requirement has been replaced the words “data history of appropriate length” and The two stage classification of NMDs – i.e. stable/non-stable and core/non-core is replaced by a simpler core/non-core distinction for all NMDs based on both history and expected sensitivity to future interest rate changes. • General Guidance: Banks should also measure potential income volatility. This includes a requirement to look at a three-to-five-year time horizon and to consider planned volumes and pricing strategies – i.e. not just look simply at interest rate moves. • Public Disclosure: Were not covered in the initial regulation but were subsequently covered in PS17/21. These are essentially identical to what it says in the Basel Standards – i.e. the six EVE shocks and the two NII shocks, repricing maturities assigned to NMDs and the qualitative disclosures. <p>Award 1 mark for each.</p> <p>(Part (b) maximum of 4 marks)</p> <ul style="list-style-type: none"> • Definition: the extent to which capital ratios are exposed to movements in FX rates through the retranslation of net assets through reverses and retranslation of currency deductions and RWAs. • In general, FX exposures in the banking book are treated the same as trading book, however they don't explicitly capitalise for structural FX risk. • However, for risks that arise from having investment in subsidiaries i.e. net assets, in a currency that is different to the Group's reporting currency, the PRA requires banks to capitalise structural FX exposures in pillar 1. • The net open position in each currency is substituted with net assets investments in subsidiaries and branches by currency, inclusive of the benefit of any hedges and/or positions specifically taken for hedging the impact on capital ratios. Resulting long positions are capitalised under Pillar 1 with the benefit of closely correlated currencies being taken into account and are converted into RWAs. Any resulting risk (e.g. where the Pillar 1 approach is not sufficient or risk from short positions) is assessed under Pillar 2a. <p>Award 1 mark for each.</p> <p>(Part (c) maximum of 4 marks)</p> <p>Maximum of 15 marks</p>
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14	<p>Unit 5: LO30 LO32 LO33</p>	<p>(a)</p> <ul style="list-style-type: none"> • Leverage to the economic cycle – economic growth benefits from credit expansion and fuels credit expansion. • Leverage to the stock market – banks and financial institutions make up around 25% of the FTSE-350. The correct investment call on the sector will have a meaningful impact on overall portfolio performance. • Leverage of the balance sheet – bank deposits allow investors to leverage up their profit from the total balance sheet. <p>Award 1 mark for each.</p> <p>(Part (a) maximum of 3 marks)</p> <p>(b)</p> <p>The Price: Earnings ratio is a simple measure. It doesn't capture risk, capital utilisation or the time value of money.</p> <ul style="list-style-type: none"> • Why do they have different growth rates? Is one operating in faster growing markets or are they taking greater risks? • What competitive threats do they face in their marketplace? • How do the banks compare under different economic scenarios? • How do their credit metrics compare? • Are both banks investing sufficient amounts of money? • How much regulatory capital do they need to support their growth? • Do they have similar funding structures? • How do their structural hedging programmes compare? • What is the track record of the two sets of management? <p>Award 1 mark for the limitation. Award 0.5 marks each for the issue.</p> <p>(Part (b) maximum of 3 marks)</p> <p>(c)</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th></th> <th><u>Bank A</u></th> <th><u>Bank B</u></th> </tr> </thead> <tbody> <tr> <td>Beta</td> <td>1.5</td> <td>1.75</td> </tr> <tr> <td>Book Value of Equity</td> <td>50,000</td> <td>100,000</td> </tr> <tr> <td>Dividend payout ratio</td> <td>50%</td> <td>50%</td> </tr> <tr> <td>Equity risk premium</td> <td>4%</td> <td>4%</td> </tr> <tr> <td>Return on assets</td> <td>1.20%</td> <td>1%</td> </tr> <tr> <td>Return on equity</td> <td>12%</td> <td>12%</td> </tr> <tr> <td>Risk-free rate</td> <td>5%</td> <td>5%</td> </tr> <tr> <td>Stable growth rate</td> <td>6%</td> <td>6%</td> </tr> <tr> <td>Cost of capital</td> <td>0.11</td> <td>0.12</td> </tr> <tr> <td>Value of equity</td> <td>60,000</td> <td>100,000</td> </tr> <tr> <td>Price to book value</td> <td>1.2</td> <td>1</td> </tr> <tr> <td></td> <td>(2 marks)</td> <td>(2 marks)</td> </tr> <tr> <td>Leverage</td> <td>10</td> <td>12</td> </tr> <tr> <td></td> <td>(1 mark)</td> <td>(1 mark)</td> </tr> </tbody> </table>		<u>Bank A</u>	<u>Bank B</u>	Beta	1.5	1.75	Book Value of Equity	50,000	100,000	Dividend payout ratio	50%	50%	Equity risk premium	4%	4%	Return on assets	1.20%	1%	Return on equity	12%	12%	Risk-free rate	5%	5%	Stable growth rate	6%	6%	Cost of capital	0.11	0.12	Value of equity	60,000	100,000	Price to book value	1.2	1		(2 marks)	(2 marks)	Leverage	10	12		(1 mark)	(1 mark)
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	<p>Bank A has the higher price to book value. The higher leverage value for bank B suggests that it is riskier. The higher Beta for Bank B would support this view and results in a lower price to book value.</p> <p>(Part (c) maximum of 8 marks)</p> <p>Maximum 15 marks in total</p>
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15	<p>Unit 5: LO05 LO06 LO07 LO08 LO14</p> <p>(a)</p> <ul style="list-style-type: none"> • Transfer interest rate and liquidity risk from the business to a central treasury. • Ensure that external product pricing incorporates interest rate and funding costs. • Ensure there is a transparent and arms-length process for allocating FTP correctly to products and businesses. <p>1 mark for each. Other answers may be appropriate and will be given merit.</p> <p>(Part (a) maximum of 3 marks)</p> <p>(b)</p> <ul style="list-style-type: none"> • Regulatory Pillar 1 view – TLAC/MREL, IRRBB, Counterparty risk, LCR, NSRF, RWA, Capital & Leverage. • Regulatory Pillar 2 view - Business model analysis, Internal governance assessment, ILAAP, ICAAP, SREP. • Investor & rating agency – Asset encumbrance, loan to deposit ratio, liquidity & funding, Capital, Earning and Market share. • Internal requirements – Risk appetite driving Internal risk measures (market risk, liquidity, funding, credit risk) Business model analysis, ILAAP, ICAAP, SREP, Survival periods, Profitability (P&L, NII, NIM). <p>1 mark for each point.</p> <p>(Part (b) maximum of 4 marks)</p> <p>(c)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Term (years)</u></th> <th style="text-align: center;"><u>2</u></th> <th style="text-align: center;"><u>4</u></th> <th style="text-align: center;"><u>5</u></th> <th></th> </tr> </thead> <tbody> <tr> <td>Issued bond yield</td> <td style="text-align: center;">5.00%</td> <td style="text-align: center;">6.00%</td> <td style="text-align: center;">8.00%</td> <td></td> </tr> <tr> <td>Swap cost</td> <td style="text-align: center;">4.50%</td> <td style="text-align: center;">4.00%</td> <td style="text-align: center;">3.00%</td> <td></td> </tr> <tr> <td>TLP - issued bond</td> <td style="text-align: center;">0.50%</td> <td style="text-align: center;">2.00%</td> <td style="text-align: center;">5.00%</td> <td style="text-align: right;">(1 mark)</td> </tr> <tr> <td></td> <td style="text-align: center;"><u>Margin</u></td> <td style="text-align: center;"><u>TLP</u></td> <td style="text-align: center;"><u>NII</u></td> <td></td> </tr> <tr> <td><u>Proposal A</u></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>GBP100m 4yr loan @ SONIA +3%</td> <td style="text-align: center;">3.00%</td> <td style="text-align: center;">2.00%</td> <td style="text-align: center;">1.00%</td> <td style="text-align: right;">(1 mark)</td> </tr> <tr> <td><u>Proposal B</u></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>GBP50m 2yr loan @ SONIA + 1%</td> <td style="text-align: center;">1.00%</td> <td style="text-align: center;">0.50%</td> <td style="text-align: center;">0.50%</td> <td></td> </tr> <tr> <td>GBP50m 5yr loan @ SONIA + 6%</td> <td style="text-align: center;">6.00%</td> <td style="text-align: center;">5.00%</td> <td style="text-align: center;">1.00%</td> <td></td> </tr> <tr> <td>Total</td> <td style="text-align: center;">3.50%</td> <td style="text-align: center;">2.75%</td> <td style="text-align: center;">0.75%</td> <td style="text-align: right;">(1 mark)</td> </tr> </tbody> </table> <p>(Part (c) maximum of 3 marks)</p>	<u>Term (years)</u>	<u>2</u>	<u>4</u>	<u>5</u>		Issued bond yield	5.00%	6.00%	8.00%		Swap cost	4.50%	4.00%	3.00%		TLP - issued bond	0.50%	2.00%	5.00%	(1 mark)		<u>Margin</u>	<u>TLP</u>	<u>NII</u>		<u>Proposal A</u>					GBP100m 4yr loan @ SONIA +3%	3.00%	2.00%	1.00%	(1 mark)	<u>Proposal B</u>					GBP50m 2yr loan @ SONIA + 1%	1.00%	0.50%	0.50%		GBP50m 5yr loan @ SONIA + 6%	6.00%	5.00%	1.00%		Total	3.50%	2.75%	0.75%	(1 mark)
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	<p>(d)</p> <ul style="list-style-type: none">• Mortgages – Contractually, this lending typically has a term of 25 years or so. However, some borrowers tend to move house or refinance their mortgage, so the average life of a mortgage is typically 7-10 years, a much lower term and so a lower term liquidity premium charge.• Current and saving accounts – Contractually, most of these funds are repayable on demand or in a very short time period. However, some of these funds are very stable and provide a reliable source of long-term funding. They may therefore attract a higher term liquidity premium reward. <p>1 mark for each.</p> <p>(Part (d) maximum of 2 marks)</p> <p>(e)</p> <ul style="list-style-type: none">• Allocate the profit to the deposit gathering businesses to encourage long term stable core funding that improves the funding position of the bank.• Allocate to specific lending business lines where a bank wants to support customers, diversify its risk or support ESG objectives.• Reduce the blended FTP curves so that the central benefit is reduced and the lower FTP curves lead to a more neutral position between lending and deposit gathering businesses. <p>1 mark for each.</p> <p>(Part (e) maximum of 3 marks)</p> <p>Maximum of 15 marks</p>
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