“Barclays-Digital-Liquidity-Risk-Analysis”

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ABSTRACT

This project evaluates Barclays Bank's liquidity risk profile and outlines a digital transformation roadmap to strengthen regulatory compliance under Basel III. Using data from Barclays' 2023 and 2024 annual reports and internal stress-testing models, the analysis applies Lagged Reserve Accounting (LRA) and the Liquidity Coverage Ratio (LCR) framework to measure short-term funding resilience. Barclays' calculated base-case LCR rose from 102 % in 2023 to 111 % in 2024, while the bank's reported figures (161 % → 172 %) highlight the impact of regulatory High-Quality Liquid Asset (HQLA) adjustments and off-balance-sheet treatments. A simulated 15 % cash-outflow shock reduces the LCR to ≈96.8 %, revealing potential stress-period vulnerability.

It recommends a multi-levelled approach to online strategy:

- Blockchain-based Anti-Money Laundering (AML) and inter-bank payments solutions for accelerating settlement and compliance;
- Improved contingency funding plans and stress-testing procedures.

These steps would keep Barclays' risk-management framework current, increase operational efficiency, and undergird stakeholder trust while keeping the bank in good position to meet evolving Basel III and future regulation requirements.

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1. INTRODUCTION

This document provides an extensive analysis of the risk exposure faced by Barclays Bank, presented in the annual reports for 2023 and 2024. The study pinpoints essential risks, including credit, liquidity, market, and operational aspects. The study further presents a scenario analysis that assesses the vulnerability of Barclays under normal, stressed, and adverse scenarios. The analysis further provides investment recommendations based on strategies to avoid risks.

2. BARCLAYS BANK

Barclays Bank is a major UK-based financial institution listed on the London Stock Exchange and a component of the FTSE 100 Index. Founded in 1690, Barclays operates in retail, corporate, and investment banking, serving customers worldwide.

Current Challenges Related to Bank Risk

Recently, Barclays has faced numerous banking risks resulting from economic uncertainty, regulation changes, and innovation in finance. The core risks include:

1. Credit Risk: Increasing loan defaults are due to inflationary pressures and recessions. Loans not past due., Loans with increased credit risk but not impaired, Credit-impaired loans.

As of June 30, 2024, the outstanding advances and loans stood at £149.9 billion, and this was how it was segmented:

Loan Category	Stage 1(£m)	Stage 2 (£m)	Stage 3 (£m)
Retail Mortgages	4,587	69	601
Retail Credit Cards	21,766	3,325	1,844
Retail Other	3,017	397	222
Corporate Loans	103,960	8,797	1,328
Total	133,330	12,588	3,995

2. Interest rate risk: One part examines how the interest rate changes influence the bank's net interest margin (NIM). This is analysed through interest rate sensitivity tests and stress test models. Both years indicate the sensitivity of the bank to changes in rates. Still, minor variations in the interest rate risk exposure for the bank for 2024 suggest that the bank is adapting to market interest rate changes. The interest rate risk forms part of the market risk plan, and constant monitoring ensures that the profits are not significantly affected by rate changes.

3. Liquidity Risk: Holding enough liquid funds to cover near-term obligations, especially during uncertain market times. Both reports indicate that Barclays possesses an LC Ratio considerably higher than the Basel III minimum (typically greater than 100%). This suggests that it has a robust liquidity buffer. Slight variations in the LC Ratio between 2023 and 2024 reflect variations in funding strategies and market circumstances. Barclays effectively manages liquidity risk through compliance with regulations and measures to diversify funding.

4. Market Risk: This includes potential losses from adverse changes in market variables such as interest rates, foreign currency rates, and stock prices. The bank uses Value at Risk (VaR) models to measure this risk. The precise figures from the 2023 and 2024 reports would indicate the extent to which market movements impact the bank.

5. Operational Risk: Cybercrime and tech disruptions to banking operations. This includes prospective losses from poor internal processes, systems, or external events. Barclays covers cyberattacks, system failures, and external fraud. The bank experienced an issue with motor finance in 2024 and provided £90 million to cover compensation for motor finance sold improperly.

6. Solvency and Capital Risk: The risk that the bank will lack sufficient capital to cover potential losses. This is quantified using the Common Equity Tier 1 (CET1) ratio to ensure it complies with Basel III regulations. The CET1 ratio decreased slightly from 2023 to 2024, from 13.8% to 13.6%, but remained within permissible limits, reflecting robust capital resilience. Despite these marginal variations, Barclays' capital position remains strong, reflecting good management.

7. Off-Balance-Sheet and Reputational Risk: Risks come from lending, trading in derivatives, and securitising. The risks are mitigated through the monitoring of counterparty credit risk. Both reports emphasise the off-balance sheet risks. The 2024 report mainly indicates how some events, such as the motor finance problem, impact the reputation of the company and the measures taken subsequently. The risks are mitigated by ensuring the rules are adhered to and keeping communication channels open to gain the trust of the stakeholders.

8. Treasury and Capital Risk: This risk is regarding the ability of the bank to manage its cash flows and money. Key indicators to look out for are the Common Equity Tier 1 (CET1) ratio and the Liquidity Coverage Ratio (LCR). For instance, in 2024, the bank reported that profits before taxation increased by 24% to £8.1 billion since interest rates remained constant and the investment banking division performed well.

Both annual reports emphasise intelligent means to manage legal and regulatory risks. Both emphasise that it is wise to manage legal risks that decrease the possibility of issues within operations.

3. OVERVIEW OF LIQUIDITY RISK AT BARCLAYS

Liquidity risk is the possibility that a bank will not be able to meet its bills in time and end up losing a significant amount of money. For Barclays, managing liquidity risk is crucial to operating smoothly and maintaining stakeholder confidence.

A) METHODOLOGIES

Lagged Reserve Accounting (LRA)

Lagged Reserve Accounting allows banks to hold reserves for a specified period. It is a timing system distinct from calculating what reserve is required and when to hold it. This system gives banks time to adjust their positions according to previous estimations. The CP (Computation Period) has two reporting periods of a week from Tuesday to Monday, and reserve percentages and average daily holdings will be decided in between. The MP(Maintenance Period) is 14 days from Thursday to Wednesday, the second. The reserve balance is determined from the CP requirement established 17 days before MP, excluding vault cash available.

2023: £53.9 billion (Davg), £8.09 billion (Base Reserve), £7.09 billion (Final Reserve)

2024: £56.1 billion (Davg), £8.42 billion (Base Reserve), £6.42 billion (Final Reserve)

In 2023, reserves stood at £7.09 billion and decreased to £6.42 billion in 2024, reflecting fluctuations in daily balances and changes in vault cash availability.

[Appendix: Steps and Calculations]

Liquidity Coverage Ratio (LCR)

LCR is a regulation that ensures banks maintain sufficient good liquid assets (HQLA) to cover cash demands in a 30-day stress period. A better LCR indicates a more solid liquidity position since it reflects a bank's ability to manage short-term funds issues.

The LCR is calculated using the formula:

$$\boldsymbol{LCR = \left(\frac{Stock\ of\ HQLA}{Total\ Net\ Cash\ Outflows}\right) \times 100\%}$$

HQLA includes those assets which can be easily converted to cash with minimal diminution in value. Total Net Cash Outflows indicate what we will spend, excluding what we will receive, in a hectic 30-day span.

This test measures the LCR by adding a percentage point to cash outflows and leaving HQLA constant. It tests the liquidity robustness in times of adverse market conditions. Using the formula for LCR and historical information, we highlighted the utmost significance of liquidity management in meeting Basel III demands. For 2023, the base-case LCR was 102%, well above Basel III's 100% requirement. 2024 the projected base-case LCR is 111%, still above Basel III's demands.

Liquidity coverage ratio[1]	As at 31.12.24	As at 31.12.23
	£bn	£bn
LCR Eligible High Quality Liquid Assets (HQLA)	304.4	310.3
Net stress outflows	(176.9)	(192.6)
Surplus	**127.5**	**117.7**
Liquidity coverage ratio	**172.4%**	**161.4%**

Figure 1 : Barclays Reported LCR 2024 and 2023

Our 2023 LCR (102%) differs from the reported LCR (161%).

Reasons for this divergence. Regulatory Updates: Barclays might have included unrecorded items in HQLA.

Stress scenario modelling could have impacted net outflows. Level 2A and 2B Asset Management Excluding more 2A/2B holdings would enhance HQLA for LCR.

Off-Balance-Sheet Commitments: Certain contingent liabilities can be omitted from the simplified method.

Our 2024 LCR (111%) is lower than LCR (172%).

Differences arise due to HQLA caps, inflow constraints, and regulation. Stress testing and regulations are motivators.

To match Barclays' reporting, we must account for Regulatory compliance limits on HQLA. Liability Changes Barclays may have constructed additional liquidity buffers.

[Appendix: Calculations and Excel]

B) KEY MOVEMENT OF LIQUIDITY RISK IN THE PAST TWO YEARS

Barclays had a reserve ratio of 15%, with 7.09 billion reserves in 2023 and 6.42 billion in 2024, indicating stable liquidity. The daily average balance increased from 53.9 billion to 56.1 billion, indicating stability in Deposits.

Barclays boosted liquidity levels in two years, with the Liquidity Coverage Ratio (LCR) improving from 102% in 2023 to 111% in 2024. High-Quality Liquid Assets (HQLA) rose from £224.63 billion to £318.36 billion, and net cash outflows reduced from £324.05 billion to £285.96 billion. This strengthens Barclays Basel III's capital adequacy, indicating its ability to meet short-term liabilities and liquidity risk.

External Economic Factors Impacting Liquidity Risk

Interest Rate Policies: The Bank of England has adjusted rules for money due to inflation, which has impacted how Barclays handles its cash flows and reserves.

Economic Uncertainty: Global economic slowdown, geopolitical instability, and recessionary risks have increased liquidity pressures, requiring banks to maintain firm HQLA reserves.

Regulatory Changes: Stricter Basel III regulations have forced banks to enhance their cash flow plans, which has impacted Barclays in managing liquidity risk.

C) RISK MITIGATION

In the last three years, Barclays addressed liquidity risk and increased stability. It diversified funding in 2022, decreasing market volatility reliance. A robust portfolio of high-quality liquid assets (HQLA) and an increased liquidity buffer were prioritised. Barclays supplemented stress testing and balance sheet optimisation in 2023 to meet liquidity regulations. Enhanced risk modelling increased market responses for liquidity monitoring. By 2024, this resulted in effective contingency funding plans and sophisticated liquidity management systems, improving the bank's Liquidity Coverage Ratio (LCR) and stress resilience.

Key Liquidity Risk Mitigation Strategies:

2022: Diversifying funding sources; enhanced liquidity buffers by increasing HQLA; tightening funding criteria to reduce short-term dependency.

2023: The implementation of more frequent and more stringent stress testing; balance sheet strengthening to enhance levels of liquidity; and integration of sophisticated modelling techniques for future surveillance.

2024: The development of effective contingency funding strategies; implementation of sophisticated liquidity management systems with new technologies; and continuous evaluation and adjusting of liquidity procedures.

Digital Risk Modeling:

Barclays applied machine learning to forecast liquidity demands and manage real-time reserves. It has established real-time systems to monitor cash flows with cloud-based AI analytics. This enabled a rapid response to surprise cash deficits. Blockchain can be applied to allow for fast interbank payments, correct errors in funds available, and improve cash flow.

Barclays has a robust liquidity profile with a 111% 2024 Liquidity Coverage Ratio, lowering risk. Stress tests indicate sustained prudence against market drawdown in liquidity. Actions between 2022 and 2024 have lowered liquidity risk, keeping in line with regulation and safeguarding against market volatility.

D) SCENARIO ANALYSIS- MARKET RISK METHOD

Market risk stress tests test whether a bank handles its funds well in adversity. We do this by raising what is happening and keeping high-value liquid funds safe. This is to find out how adversely market conditions can influence liquidity.

Imagine a 15% increase in cash outlays due to market pressure, such as making less and expending more. Typically, the LCR is 111%, a figure much more significant than is prescribed under regulations. In a state of stress, the LCR drops to around 96.8%, below 100%.

This significant decline in stress indicates that Barclays has limited funds to spend in a challenging market. This is to say that despite being in good shape currently, challenging market conditions can negatively affect Barclays' ability to repay debts in the short term. Thus, it requires robust backup strategies.

Mitigation Strategies in Case LCR Falls Below 100%

Increasing High-Quality Liquid Assets (HQLA): Barclays can diversify its liquid assets with more government and short-term bonds.

Getting Emergency Credit Lines: Banks must draw down central funds and establish credit lines in advance to manage short-term shortages of funds. Active Liability Management: Cutting short-term borrowings and enhancing overnight repos can enhance liquidity buffers.

4. INVESTMENT RECOMMENDATIONS

Future Performance Outlook

Barclay's 2023 and 2024 reports reflect good liquidity strengths:

Solid liquidity and risk control: Barclays maintains good liquidity with 102% LCR in 2023 and 111% in 2024. Efficient management is evident in cash through Lagged Reserve Accounting and increased deposit reserve levels, indicating conservative management and Basel III regulations.

Resilience in Everyday Life: Increased HQLA and reduced net outflows improve short-term obligation coverage for Barclays, leaving it well-positioned for stable market conditions and long-term stability.

Stress Scenario Threats: A 15% decrease in cash outflows can bring a sound LCR down to 96.8%, below the 100% level required by regulation and a sign of short-term vulnerability despite positive fundamentals.

Investment Recommendations

Hedging Strategies to Mitigate Short-Term Risks

Employing hedging techniques to protect central position against potential short-term loss. The stress test indicates that in a worst-case scenario (e.g., when cash outflows increase by 15%), Barclays's liquidity buffers deteriorate (LCR falls to around 96.8%). This can lead to sharp movements in the share price. These hedge strategies will shield your portfolio against such risks.

Options and futures are expensive, with additional fees such as margin fees or premiums, but with a collar strategy and ETF investments, you can cut down on such expenses. This strategy will prevent a market decline and allow you to profit from any uptrend. Periodic monitoring and switching positions can enhance security as market conditions alter in Q2.

As of Q2 2024, Barclays' stock price trades at approximately £305, reflecting market confidence in its risk management strategies.

The iShares MSCI UK Financials ETF, tracking UK banking stocks, has shown a 10.78% gain YTD, indicating broader sector trends impacting Barclays' performance.

Considerations for Strategies

Investors can hedge Q2 bank risk in Barclays using a multi-pronged strategy. Purchasing protective puts establishes a selling point and restricts losses. A collar strategy of owning shares, buying puts, and selling calls protects and offsets fees. Utilising finance sector ETFs and FTSE 100 futures reduces systemic dangers. Periodically revise hedge ratios in line with performance and market movements; dynamic hedging is crucial for safeguarding. Finally, diversify with lowly correlated sectors such as consumer staples or tech stocks for additional risk reduction.

Reasons Behind the Prediction

Risk Reduction: The proposed hedging tools directly address the risks associated with recognised liquidity pressures (e.g., a Liquidity Coverage Ratio below 100% in adverse conditions) and provide a cushion against sharp market declines.

Economic Feasibility: Strategies like the collar help offset hedging costs while offering protection, ensuring that overall portfolio returns are not unduly sacrificed.

Flexibility and Ongoing Supervision: Dynamic modifications enable hedges to be customised according to prevailing market conditions and quarterly performance measures, thus improving Barclays' ability to manage risks better.

Potential Risks

Hedging expenditures: Option and other hedging instrument premiums can reduce overall returns when market stability is assured.

Complexity: Effective hedging requires careful management and timely adjustments, which can be challenging without continuous market monitoring.

Potential Advantages

Downside Protection: Limits potential losses during periods of heightened market stress. Flexibility enhances a smoother entry into market recovery while reducing the severity of adverse short-term events.

Enhanced Portfolio Stability: Diversifying through sector ETFs and index futures can smooth out volatility, potentially leading to steadier returns over Q2.

5. CONCLUSION

Barclays is poised to manage risks and possesses good cash flows, evidenced by its LCR improving from 102% to 111% between 2023 and 2024. Although stress tests indicate short-term vulnerabilities, good decisions and funding changes improve it. Investing in Barclays and intelligent hedging is a good investment for long-term profits and short-term risk management. This is a solid stance in a changing market.

Barclays boosted liquidity in two years through Basel III and risk management. With short-term vulnerabilities notwithstanding, the bank is poised for growth through diversification, technological advancements, and improved liquidity. This report highlights sound financial planning and management of risks in uncertain markets.

EXECUTIVE SUMMARY

This report examines Barclays' liquidity risk management using 2023 and 2024 data and utilises LRA, LCR, and scenario analysis to evaluate financial stability and risk.

Key Points

Liquidity Risk and Reserve Management: The LRA reflects that reserve requirement fell from £7.09 billion in 2023 to £6.42 billion in 2024 due to cash movements. Barclays adjusted and held liquidity.

LCR and Market Strain

The Liquidity Coverage Ratio (LCR) increased from 102% in 2023 to 111% in 2024 with increased High-Quality Liquid Assets (HQLA) and reduced cash outflows. However, in stress (a 15% increase in cash outflows), LCR could fall below 100% (96.8%), which could reflect potential short-term liquidity risks.

Risk Strategies

Barclays used liquidity management with AI and enhanced contingency planning. Financial resilience is increased with real-time stress testing. Investment and Hedging Advice The report details a diversified investment strategy focusing on Barclays, employing protective puts, finance sector ETFs, and index futures to mitigate market risks. This strategy provides stability while taking advantage of Barclay's growth.

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APPENDIX

3. METHODOLOGIES

Lagged Reserve Accounting (LRA) Calculations

LRA

The CP (Computation Period) has two reporting periods of a week from Tuesday to Monday, and reserve percentages and average daily holdings will be decided in between. The MP(Maintenance Period) is 14 days from Thursday to Wednesday, the second. The reserve balance is determined from the CP requirement established 17 days before MP, excluding vault cash available.

Reserve Calculation Under Lagged Reserve Accounting (LRA)

Step 1: **Considering Global Barclays Group, total deposits are at amortised cost.** Calculate the Daily Average BalanceStep 2: Apply the Reserve Percentage

A reserve percentage of 15% is applied to the daily average balance. This represents the portion of deposits that must be held as reserves.

Reserve Calculation Under Lagged Reserve Accounting (LRA)

Step 1: Calculate Daily Average Balance

$$\boldsymbol{Davg = \frac{\sum_{i=1}^{n} Bi}{n}}$$

Bi = Balance on day i, n Number of days in the lag period

Considering Global Barclays Group, Total deposits at amortised cost

The sum of daily balances over the period 2023 is £539 billion for 10 days

$$Davg, 2023 = \frac{539\ billion}{10} = £53.9 \text{ billion}$$

For 2024, an increased total of £561 billion over 10 days

$$Davg, 2024 = \frac{561\ billion}{10} = £56.1 \text{ billion}$$

Step 2: Apply the Reserve Percentage

A reserve percentage of 15% is applied to the daily average balance. This represents the portion of deposits that must be held as reserves.

$$\textbf{Base Reserve} = \textbf{D}_{\textbf{avg}} \times \textbf{0.15}$$

$$\text{Base Reserve}_{2023} = £53.9 \text{ billion} \times 0.15 = £8.09 \text{ billion}$$

$$\text{Base Reserve}_{2024} = £56.1 \text{ billion} \times 0.15 = £8.42 \text{ billion}$$

Step 3: Subtract Vault Cash

Vault cash (physical currency on hand) is excluded because it is immediately available and does not require allocation as a reserve.

$$\textbf{Adjusted Reserve} = \textbf{Base Reserve} - \textbf{V}$$

Assume vault cash is £2 billion

$$\text{Adjusted Reserve}_{2023} = £8.09 \text{ billion} - 2 \text{ billion} = £6.09 \text{ billion}$$

If vault cash increases to £2.5 billion,

$$\text{Adjusted Reserve}_{2024} = £8.42 \text{ billion} - 2.5 \text{ billion} = £5.92 \text{ billion}$$

Step 4: Adjust for Allowable Reserve Carried Forward:

The required reserve from the last period reduces the last period's carried-over reserve.

$$\textbf{R}_{\textbf{final}} = \textbf{Adjusted Reserve} + \textbf{C}$$

C is the reserve carried forward from the previous period.

Assume the allowable reserve carried forward is £1billion

$$R_{final,2023} = £6.09 \text{ billion} + 1 \text{ billion} = £7.09 \text{ billion}$$

Suppose the carried forward amount is £0.5 billion

$$R_{final,2024} = £5.92 \text{ billion} + 0.5 \text{ billion} = £6.42 \text{ billion}$$

If a bank's calculated reserve falls below the required level by more than the allowable reserve carried forward, the bank faces a penalty. The penalty is determined as follows:

$$\textbf{Penalty} = \textbf{(Discount Rate+1\%)} \times \textbf{(Extraordinary Deficiency)}$$

2023: £53.9 billion (Davg), £8.09 billion (Base Reserve), £7.09 billion (Final Reserve)

2024: £56.1 billion (Davg), £8.42 billion (Base Reserve), £6.42 billion (Final Reserve)

In 2023, reserves stood at £7.09 billion and decreased to £6.42 billion in 2024, reflecting fluctuations in daily balances and changes in vault cash availability.

LCR CALCULATIONS

LCR is a regulation that ensures banks maintain sufficient good liquid assets (HQLA) to cover cash demands in a 30-day stress period. A better LCR indicates a more solid liquidity position since it reflects a bank's ability to manage short-term funds issues.

The LCR is calculated using the formula:

$$\boldsymbol{LCR} = \left(\frac{\boldsymbol{Stock\ of\ HQLA}}{\boldsymbol{Total\ Net\ Cash\ Outflows}}\right) \times \mathbf{100\%}$$

HQLA includes those assets which can be easily converted to cash with minimal diminution in value. Total Net Cash Outflows indicate what we will spend, excluding what we will receive, in a hectic 30-day span.

The stock of HQLA : £330.82 billion

Total Net Cash Outflows: £324.05 billion

$$\textbf{LCR}_{\textbf{2023}} = \left(\frac{330.82}{324.05}\right) \times 100 \approx 102\%$$

Stock of HQLA : £318.35 billion

Total Net Cash Outflows: £285.96 billion

$$\textbf{LCR}_{\textbf{2024}} = \left(\frac{318.35}{285.96}\right) \times 100 \approx 111\%$$

EXCEL CALCULATION

LCR 2023

Barclays 2023 -LCR	Source: Barclays (2023)	https://home.barclays/content/dam/home-barclays/document Annual-Report-2023.pdf		
			pg346	
Level	HQLA item	Coefficient	On demand	Not more than 3 months
1	Cash and balances at central banks	1	224634	0
2A	Debt securities (trading portfolio)	0.85	75498	0
2A	Debt securities (at fair value)	0.85	2586	0
2B	Equity securities (trading portfolio)	0.5	86353	0
2B	Equity securities (at fair value)	0.5	7185	0
Level	Total HQLA			
1	224634			
2A	66371		Levels 2A and 2B - no more than 40% of total HC	
2B	46769		Level 2B - no more than 15% of total HQLA	
Total	330828	337774	0.341991361	0.141369431
			113140	
HQLA	330828			
Outflows	684270			
Inflows	360219			
Net outflows	324051	324051.203	Inflows cannot compensate more than 75% of c	
Liquidity coverage ratio	102%	1.042348854		

LCR reported by Barclays	161%

Deposit run-off	Run-off rate	Value	Stress scenario outflow
Deposits		538789	
Of which deposits from banks	1	14472	14472
Commercial and consumer deposits		524317	
Of which commercial deposits	0.25	121130	30283
Consumer deposits		403187	
Of which international consumers	0.1	222767	22277
Of which UK consumers	0.05	180420	9021

Other outflow	On demand	Not more than 3 months	30-day proxy
Liabilities	1018244	127100	1060611
Deposits	440122	36812	452393
Other liabilities	578122	90288	608218

Inflow	On demand	Not more than 3 months	30-day proxy
Settlement balances	61837	47052	77521
Loans and advances	22457	5907	24426
Reverse repurchase agreements	1453	0	1453
Derivatives	254655	100	254688
Other financial assets	2122	26	2131

Deposit structure for group:	
UK	241100
International	297689
Percentage international	55.25%

Deposit structure for UK:	
Personal	185400
Business	55700
Percentage business	23.10%

G10

	A	B	C	D	E	F	G
1	Barclays 2023 -LCR	Source: Barclays (2023)	https://home.barclays/content/dam/home-barclays/documents/investor-relations/reports-and-events/annual-reports/2023/Barclays-PLC-Annual-Report-2023.pdf				
2							
3							
4				pg346			
5	Level	HQLA item	Coefficient	On demand	Not more than 3 months	30-day proxy	
6	1	Cash and balances at central bank	1	224634	0	224634	
7	2A	Debt securities (trading portfolio)	0.85	75498	0	64173	
8	2A	Debt securities (at fair value)	0.85	2586	0	2198	
9	2B	Equity securities (trading portfolio	0.5	86353	0	43177	
10	2B	Equity securities (at fair value)	0.5	7185	0	3593	
11							
12	Level	Total HQLA					
13	1	224634					
14	2A	66371		Levels 2A and 2B - no more than 40% of total HQLA			
15	2B	46769		Level 2B - no more than 15% of total HQLA			
16	Total	330828	337774	0.341991361	0.141369431		
17				113140			
18	HQLA	330828					
19	Outflows	684270					
20	Inflows	360219					
21	Net outflows	324051	324051.203	Inflows cannot compensate more than 75% of cash outflows in the stress scenario			
22	Liquidity coverage ratio	102%	1.042348854				
23	LCR reported by Barclays	161%					
24							

G10

	A	B	C	D	E	F	G
24							
25		Deposit run-off	Run-off rate	Value	Stress scenario outflow		
26		Deposits		538789			
27		Of which deposits from banks	1	14472	14472		
28		Commercial and consumer deposits		524317			
29		Of which commercial deposits	0.25	121130	30283		
30		Consumer deposits		403187			
31		Of which international consumers	0.1	222767	22277		
32		Of which UK consumers	0.05	180420	9021		
33							
34		Other outflow	On demand	Not more than 3 months	30-day proxy		
35		Liabilities	1018244	127100	1060611		
36		Deposits	440122	36812	452393		
37		Other liabilities	578122	90288	608218	Outflows "unaccounted for" in the deposit run-off scenario	
38							
39		Inflow	On demand	Not more than 3 months	30-day proxy		
40		Settlement balances	61837	47052	77521		
41		Loans and advances	22457	5907	24426		
42		Reverse repurchase agreements	1453	0	1453		
43		Derivatives	254655	100	254688		
44		Other financial assets	2122	26	2131	Only asset items not included in HQLA can be inflows (no "double-counting")	
45							

G10

	A	B	C	D	E	F	G
1		Loans and advances	22457	5907	24426		
2		Reverse repurchase agreements	1453	0	1453		
3		Derivatives	254655	100	254688		
4		Other financial assets	2122	26	2131	Only asset items not included in HQLA can be inflows (no "double-counting")	
5							
6							
7							
8		Deposit structure for group:					
9		UK	241100				
0		International	297689				
1		Percentage international	55.25%				
2							
3		Deposit structure for UK:					
4		Personal	185400				
5		Business	55700				
6		Percentage business	23.10%				
7							
8							
9							
0							
1							

LCR 2024

Barclays 2024-LCR	Source: Barclays (2024)	https://home.barclays/content/dam/home-barclays/documents/investor-relations/reports-and-events/annual-reports/2024/Barclays-PLC-Annual-Report-2024.pdf				
				pg346		
Level	HQLA item	Coefficient		On demand	Not more than 3 months	30-day proxy
1	Cash and balances at central banks	1		210184	0	210184
2A	Debt securities (trading portfolio)	0.85		78014	0	66312
2A	Debt securities (at fair value)	0.85		2965	0	2520
2B	Equity securities (trading portfolio)	0.5		74859	0	37430
2B	Equity securities (at fair value)	0.5		3818	0	1909
Level	Total HQLA					
1	210184					
2A	68832			Levels 2A and 2B - no more than 40% of total HQLA		
2B	39339			Level 2B - no more than 15% of total HQLA		
Total	318355		318355	0.339780336	0.123568165	
				108171		
HQLA	318355					
Outflows	700691					
Inflows	414726					

Net outflows	285965			285965.4892	Inflows cannot compensate more than 75% of cash outflows in the stress scenario		
Liquidity coverage ratio	111%			1.113262481			
LCR reported by Barclays	172%						
	Deposit run-off		Run-off rate		Value	Stress scenario outflow	
	Deposits				560663		
	Of which deposits from banks		1		13203	13203	
	Commercial and consumer deposits				547460		
	Of which commercial deposits		0.25		118370	29592	
	Consumer deposits				429090		
	Of which international consumers		0.1		242198	24220	
	Of which UK consumers		0.05		186893	9345	
	Other outflow		On demand		Not more than 3 months	30-day proxy	
	Liabilities		1050153		115890	1088783	
	Deposits		450889		40688	464452	
	Other liabilities		599264		75202	624331	Outflows "unaccounted for" in the deposit run-off scenario
	Inflow	On demand			Not more than 3 months	30-day proxy	
	Settlement balances		82661		37182	95055	

Loans and advances	24290		6237	26369	
Reverse repurchase agreements	1390		37	1402	
Derivatives	291006		293	291104	
Other financial assets	786		29	796	Only asset items not included in HQLA can be inflows (no "double-counting")
Deposit structure for group:					
UK	244200				
International	316463				
Percentage international	56.44%				
Deposit structure for UK:					
Personal	191400				
Business	52800				
Percentage business	21.62%				

	A	B	C	D	E	F	G
1	Barclays 2024-LCR	Source: Barclays (2024)	https://home.barclays/content/dam/home-barclays/documents/investor-relations/reports-and-events/annual-reports/2024/Barclays-PLC-Annual-Report-2024.pdf				
2							
3							
4				pg346			
5	Level	HQLA item	Coefficient	On demand	Not more than 3 months	30-day proxy	
6	1	Cash and balances at central banks	1	210184	0	210184	
7	2A	Debt securities (trading portfolio)	0.85	78014	0	66312	
8	2A	Debt securities (at fair value)	0.85	2965	0	2520	
9	2B	Equity securities (trading portfolio)	0.5	74859	0	37430	
10	2B	Equity securities (at fair value)	0.5	3818	0	1909	
11							

	A	B	C	D	E	F	G
11							
12	Level	Total HQLA					
13	1	210184					
14	2A	68832		Levels 2A and 2B - no more than 40% of total HQLA			
15	2B	39339		Level 2B - no more than 15% of total HQLA			
16	Total	318355	318355	0.339780336	0.123568165		
17				108171			
18	HQLA	318355					
19	Outflows	700691					
20	Inflows	414726					
21	Net outflows	285965	285965.4892	Inflows cannot compensate more than 75% of cash outflows in the stress scenario			
22	Liquidity coverage ratio	111%	1.113262481				
23	LCR reported by Barclays	172%					
24							

Deposit run-off	Run-off rate	Value	Stress scenario outflow	
Deposits		560663		
Of which deposits from banks	1	13203	13203	
Commercial and consumer deposits		547460		
Of which commercial deposits	0.25	118370	29592	
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Of which international consumers	0.1	242198	24220	
Of which UK consumers	0.05	186893	9345	
Other outflow	On demand	Not more than 3 months	30-day proxy	
Liabilities	1050153	115890	1088783	
Deposits	450889	40688	464452	
Other liabilities	599264	75202	624331	Outflows "unaccounted for" in the deposit run-off scenario

B	C	D	E	F
Inflow	On demand	Not more than 3 months	30-day proxy	
Settlement balances	82661	37182	95055	
Loans and advances	24290	6237	26369	
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MARKET RISK METHOD – SCENARIO ANALYSIS BASED ON LCR

Market Risk Method – Scenario Analysis Based on LCR

Market risk stress tests test whether a bank handles its funds well in adversity. We do this by raising what is happening and keeping high-value liquid funds safe. This is to find out how adversely market conditions can influence liquidity.

Imagine a 15% increase in cash outlays due to market pressure, such as making less and expending more.

Adjusted Net Cash Outflows under Stress

$$\text{Adjusted Outflows} = 285.96 \text{ x } 1.15 = 328.854\text{billion}$$

Recalculate LCR under Stress:

$$\text{LCR}_{\text{Stress}} = \left(\frac{318.355}{328.854}\right) \times 100 \approx 96.8\%$$

Typically, the LCR is 111%, a figure much more significant than is prescribed under regulations. In a state of stress, the LCR drops to around 96.8%, below 100%.

GOOGLE SPREAD SHEETS FOR LCR:

https://docs.google.com/spreadsheets/d/1AAKQxNeKdzXYaJ3CTbyZ5YhWPNgunshX7eo5RIbifyM/edit?usp=sharing