CENTRAL BANK OF NIGERIA

GUIDELINES ON LIQUIDITY MONITORING TOOLS (LMT)

SEPTEMBER 2021

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1. Introduction

1. The Central Bank of Nigeria (CBN) Guidelines on Liquidity Coverage Ratio (LCR) is aimed at ensuring that banks hold sufficient unencumbered high-quality liquid assets (HQLA) to survive a 30-day stress period. The LCR requirements assume that 30 days is enough time for the bank's management and the CBN to take corrective action or resolve the bank in an orderly way.

2. **It is essential that banks deploy appropriate tools to monitor their liquidity position on a regular basis given the uncertainty around timing of outflows and inflows which could result in potential mismatches within the 30-day period and hence the need to hold sufficient HQLA to bridge any cash flow gaps that could ensue.**

3. The Basel Committee on Banking Supervision (BCBS)[1] specifies five additional tools and metrics for monitoring of banks' liquidity risk. These metrics capture specific information relating to a bank's cash flows, balance sheet structure, available unencumbered collateral, and certain market indicators. The metrics are expected to help supervisors in the ongoing assessment of the liquidity risk profile of banks in their jurisdictions.

4. The CBN will monitor the trends in individual bank's liquidity risk metrics and will take appropriate action when:

   a) potential liquidity difficulties are signalled through a negative trend in the metrics;
   b) a deteriorating liquidity position is identified; or
   c) the absolute result of the metric identifies a current or potential liquidity problem

5. The five monitoring tools (metrics) specified by BCBS are:

   a) Contractual maturity mismatch;
   b) Concentration of funding;
   c) Available unencumbered assets;
   d) LCR by significant currency; and
   e) Market-related monitoring tools.

[1] Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools, January 2013

2. Frequency of Reporting

6. A Reporting bank is required to report to the CBN on a monthly basis, not later than 5 days after the last day of each month on each of the metrics as tabulated below.

Table 1: Frequency of Reporting

Metric	Reporting Frequency	Implementation Date	Reporting Time
Contractual maturity mismatch	Monthly	01 January 2020	Not later than 5 working days after the last day of each month
Concentration of funding	Monthly		
Available unencumbered assets	monthly		
LCR by significant currency	Monthly		
Market-related monitoring tools.	Monthly		

3. Contractual Maturity Mismatch

7. The contractual maturity mismatch profile identifies the gaps between the contractual inflows and outflows of liquidity for defined time bands. These maturity gaps indicate how much liquidity a reporting bank would potentially need to raise in each of these time bands if all outflows occurred at the earliest possible date. This metric provides insight into the extent to which the reporting bank relies on maturity transformation under its current contracts.

8. A reporting bank should report contractual cash and security flows in the relevant time bands based on their residual contractual maturity. This is achieved by mapping contractual cash and security inflows from all on-and off- balance sheet items to defined bands based on their respective maturities.

9. A reporting bank should report instruments that have no specific maturity (non-defined or open maturity) separately, with details on the instruments and with no assumptions applied as to when maturity occurs. Reporting banks should also include information on possible cash flows arising from derivatives such as interest rate swaps and options to the extent that their contractual maturities are relevant to the understanding of the cash flow.

10. The data a reporting bank collects from the contractual maturity mismatch should be aligned with the categories outlined in the Guidelines on LCR.

3.1. Assumptions Underlying Contractual Cash Flows

11. A reporting bank should ensure that:

a) No rollover of existing liabilities is assumed to take place. For assets, the reporting bank is assumed not to enter any new contracts.

b) Contingent liability exposures that would require a change in the state of the world (such as contracts with triggers based on a change in prices of financial instruments or a downgrade in the bank's credit rating) is detailed, grouped by what would trigger the liability, with the respective exposures clearly identified.

c) All securities flows are recorded. This will allow the CBN to monitor movements in securities that mirror corresponding cash flows as well as the contractual maturity of collateral swaps and any uncollateralised stock lending/borrowing where stock movements occur without any corresponding cash flows.

d) It reports separately the customer collateral received that the reporting bank is permitted to rehypothecate as well as the amount of such collateral that is rehypothecated at each reporting date. This will also highlight instances when the bank is generating mismatches in the borrowing and lending of customer collateral.

3.2 Utilization of the Metric

12. Given that the metric is based solely on contractual maturities with no behavioural assumptions, the reporting bank's data will not reflect actual future forecasted flows under the bank's current, or future strategy or plans, i.e., under a going-concern view. Also, the contractual maturity mismatches do not capture outflows that a reporting bank may make in order to protect its franchise, even where contractually there is no obligation to do so. Contractual data provided by reporting banks will enable the CBN to build a market-wide view on liquidity and identify market outliers.

13. Reporting banks should also:

a) Conduct their own maturity mismatch analyses, based on going-concern behavioural assumptions of the inflows and outflows of funds in both normal situations and under stress;

b) Ensure that the analyses of maturity mismatches are based on strategic and business plans and are shared and discussed with the CBN and the data provided in the contractual maturity mismatch should be utilized as a basis of comparison;

c) Be able to demonstrate the appropriateness of the assumptions underpinning their projected mismatches and should ensure that such assumptions are adequately conservative (prudent);

d) Articulate how it plans to bridge any identified gaps in its internally generated maturity mismatches; and

e) Justify any differences between the assumptions applied and the underlying contractual terms.

14. The CBN will, as part of its supervisory review process, challenge the reporting bank's assumptions, its approach to bridging any maturity mismatches, and assess the feasibility of its funding plans under different stress scenarios.

15. The CBN will also require banks to submit projected mismatch reports as part of an assessment of impact of any material changes to their business models as a result of potential major acquisitions or mergers or the launch of new products that have not yet been contractually entered into.

4. Concentration of Funding

16. This metric is meant to identify those sources of wholesale funding that are of such significance that their withdrawal could trigger liquidity problems. The metric encourages the diversification of funding sources.

17. Definition and practical application of the metric

A. Funding liabilities sourced from each significant counterparty as a % of total liabilities;

B. Funding liabilities sourced from each significant product/instrument as a % of total liabilities

C. List of asset and liability amounts by significant currency

4.1 Calculation of the Metric

18. The numerator for A and B is determined by examining funding concentrations by counterparty or type of instrument/product. Banks should monitor both the absolute percentage of the funding exposure, as well as significant increases in concentrations.

19. The numerator for counterparties should be calculated by aggregating the total of all types of liabilities to a single counterparty or group of connected or affiliated counterparties, as well as all other direct borrowings, both secured and unsecured, which the reporting bank can determine arise from the same counterparty (such as for overnight commercial paper / certificate of deposit funding).

20. A **significant counterparty** is defined as a single counterparty or group of connected or affiliated counterparties accounting in aggregate for more than 1% of the reporting bank's total balance sheet. A group of connected counterparties shall be defined in the same way as in the **CBN Guidelines on Large Exposures**.

21. Intra-group deposits and deposits from related parties should be identified specifically under this metric, regardless of whether the metric is being calculated at a legal entity or group level, due to the potential limitations to intra-group transactions in stressed conditions.

22. The numerator for type of instrument or product should be calculated for each individually significant funding instrument or product, as well as by calculating groups of similar types of instruments or products.

23. A **significant instrument or product** is defined as a single instrument or product or group of similar instruments or products that in aggregate amount to more than 1% of the reporting bank's total balance sheet.

24. In order to capture the amount of structural currency mismatch in a bank's assets and liabilities, reporting banks are required to provide a list of the amount of assets and liabilities in each significant currency.

25. A currency is considered significant if the aggregate liabilities denominated in that currency amount to 5% or more of the bank's total liabilities.

26. The above metrics should be reported separately for the time horizons of less than one month, 1-3 months, 3-6 months, 6-12 months, and for longer than 12 months.

4.2 Utilization of the Metric

27. In utilizing this metric to determine the extent of funding concentration to a certain counterparty, the reporting bank must recognize that currently it is not possible to identify the actual funding counterparty for many types of debt.

28. The actual concentration of funding sources, therefore, could likely be higher than this metric indicates. The list of significant counterparties could change frequently, particularly during a crisis. The CBN will consider the potential for herding behavior on the part of funding counterparties in the case of an institution-specific problem. In addition, under market-wide stress, multiple funding counterparties and the reporting bank itself may experience concurrent liquidity pressures, making it difficult to sustain funding, even if sources appear well diversified.

29. In interpreting this metric, one must recognize that the existence of bilateral funding transactions may affect the strength of commercial ties and the amount of the net

outflow e.g., where the reporting bank also extends funding or has large unused credit lines outstanding to the significant counterparty.

30. These metrics do not indicate how difficult it would be to replace funding from any given source.

31. To capture potential foreign exchange risks, the comparison of the amount of assets and liabilities by currency will provide the CBN with a baseline for discussions with the banks about how they manage any currency mismatches through swaps, forwards, etc. It is meant to provide a base for further discussions with the bank rather than to provide a snapshot view of the potential risk.

5. Available Unencumbered Assets

5.1 Calculation of the Metric

32. The metrics on a reporting bank's available unencumbered assets will provide the CBN with data on the quantity and key characteristics, including currency denomination and location, of those assets. Available unencumbered assets have the potential to be used as collateral to raise additional HQLA or secured funding in secondary markets or are eligible at the central bank's standing facilities and as such may potentially be additional sources of liquidity for the bank.

33. A reporting bank is to report the amount, type and location of available unencumbered assets that could serve as collateral for secured borrowing in secondary markets at prearranged or current haircuts at reasonable costs.

34. For assets to be counted in this metric, a reporting bank must have already put in place the operational procedures that would be needed to monetise the collateral.

35. A reporting bank should report separately the customer collateral received that the bank is permitted to deliver or re-pledge, as well as the part of such collateral that it is delivering or re-pledging at each reporting date.

36. In addition to providing the total amounts available, a reporting bank should report these items categorised by significant currency. A currency is considered 'significant' if the aggregate stock of available unencumbered collateral denominated in that currency amounts 5% or more of the associated total amount of available unencumbered collateral (for secondary markets or central bank).

37. A reporting bank must report the estimated haircut that the secondary market or central bank would require for each asset. In the case of the latter, a reporting bank would be expected to reference, under business as usual, the haircut required by

the central bank that it would normally access (which likely involves matching funding currency).

38. As a second step after reporting the relevant haircuts, a reporting bank should report the expected monetised value of the collateral (rather than the notional amount) and where the assets are actually held, in terms of the location of the assets and what business lines have access to those assets.

39. **Reporting banks are required to report their available unencumbered assets on a monthly basis within 5 working day after the end of the month.**

5.2 Utilization of the Metric

40. These metrics are useful for examining the potential for a bank to generate an additional source of HQLA or secured funding. They will provide a standardised measure of the extent to which the LCR can be quickly replenished after a liquidity shock either via raising funds in private markets or utilising central bank standing facilities.

41. The metrics do not capture potential changes in counterparties' haircuts and lending policies that could occur under either a systemic or idiosyncratic event and could provide false comfort that the estimated monetised value of available unencumbered collateral is greater than it would be when it is most needed.

6. LCR by Significant Currency

42. While the LCR is required to be met in one single currency, in order to better capture potential currency mismatches, reporting banks should also monitor the LCR in significant currencies. This will allow the reporting banks to track potential currency mismatch issues that could arise.

Foreign Currency LCR = Stock of HQLA in each significant currency / Total net cash outflows over a 30-day time period in each significant currency[2]

43. The definition of the stock of high-quality foreign exchange assets and total net foreign exchange cash outflows should mirror those of the LCR for common currencies[3].

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[2] Amount of total net foreign exchange cash outflows should be net of foreign exchange hedges
[3] Cash flows from assets, liabilities and off-balance sheet items will be computed in the currency that the counterparties are obliged to deliver to settle the contract, independent of the currency to which the contract is indexed (or "linked"), or the currency whose fluctuation it is intended to hedge

44. A currency is considered “significant” if the aggregate liabilities denominated in that currency amount to 5% or more of the bank's total liabilities.

45. Reporting banks are required to submit their LCR by significant currency on monthly frequency to the CBN along with the main LCR return.

7. Market-related Monitoring Tools

46. This metric includes high frequency market data that can be used as early warning indicators in monitoring potential liquidity difficulties at banks.

7.1 Definition and Practical Application of the Metric

47. The CBN shall monitor the market data on the following levels to focus on potential liquidity difficulties:

a) **Market-wide information:** These include but are not limited to, equity prices[4] debt markets[5]; foreign exchange markets, commodities markets, and indices related to specific products, such as for certain securitised products.

b) **Information on the financial sector:** These include equity and debt market information for the financial sector broadly and for specific subsets of the financial sector, including indices.

c) **Bank-specific information:** These include information on equity prices, CDS spreads, money-market trading prices, the situation of roll-overs and prices for various lengths of funding, the price/yield of bank debenture or subordinated debt in the secondary market.

7.2 Utilization of the Metric/Data

48. Reporting bank should, where applicable, ensure that Information such as equity prices and credit spreads are readily available. However, the accurate interpretation of such information is important[6]. Also, when considering the liquidity impact of changes in certain data points, the reaction of other market participants to such information can be different, as various liquidity providers may emphasise different types of data.

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[4] Overall stock markets and sub-indices in various jurisdictions relevant to the activities of the supervised banks

[5] Money markets, medium-term notes, long term debt, derivatives, government bond markets, credit default spread indices, etc.

[6] For instance, the same CDS spread in numerical terms may not necessarily imply the same risk across markets due to market-specific conditions such as low market liquidity

49. To address this metric, bank specific information[7] shall be submitted not later than 5 working days after the last day of each month in the prescribed format as set out in **Section 8.5 of Appendix 1.**

[7] Other information on Liquidity

8. Appendix 1 – Reporting Templates

8.1 Contractual Maturity Mismatch

Table 1: Reporting Template for Contractual Cash Flow Mismatch

All amounts to be rounded off to the nearest N'000

Contractual Balance Sheet Mismatch	Line No.	Total	Next day	2 to 7 days	8 to 14 days	15 days to 1 month	1 month to 2 months	2 months to 3 months	3 months to 6 months	6 months to 9 months	9 months to 1 year	1 to 2 years	2 to 3 years	3 to 5 years	> 5 years	Non contract ual
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Contractual maturity of assets (items 2 to 4)	1															
Advances	2															
Trading, hedging and other investment instruments	3															
Other assets	4															
Contractual maturity of liabilities (items 6 to 9)	5															
Stable deposits	6															
Volatile deposits	7															
Trading and hedging instruments	8															
Other liabilities	9															
On-balance sheet contractual mismatch (item 1 less item 5)	10															
Cumulative on-balance sheet contractual mismatch	11															
Off-balance sheet exposure to liquidity risk	12															
of which:																
Liquidity facilities provided to off-balance sheet vehicles	13															
Undrawn commitments (items 15 to 17)	14															
Unutilised portion of irrevocable lending facilities	15															
Unutilised portion of irrevocable letters of credit	16															
Indemnities and guarantees	17															

Table 2: Information on Investments and Items with No Contractual Maturity

Name of Instrument/investments/Item without contractual maturity	Amount (N'000)
Instrument 1	
Instrument 2	
Instrument 3	
…………	
…………	
…………	
…………	
Instrument n	
Total	

Table 3: Customer Collateral Received

Customer collateral which can be re-hypothecated			
Name of Instrument	Total Amounts (N'000)	Amounts (N'000) already hypothecated	Amount (N'000) Available
	A	B	C = (A-B)
Instrument 1			
Instrument 2			
Instrument 3			
…………			
…………			
…………			
…………			
Instrument n			
Total			

8.2 Concentration of Funding

Table 4: Funding Liabilities Sourced from Significant Counterparties

Name of Significant counterparty	Amount of Funding (N'000)	Percentage of Total Liabilities	Intragroup or related parties (Yes or No) to be marked	
1	2	3	Yes	No
Significant counterparty 1			Yes	No
Significant counterparty 2			Yes	No
Significant counterparty 3			Yes	No
…………			Yes	No
…………			Yes	No
…………			Yes	No
Significant counterparty n			Yes	No
Total				

Table 5: Funding Liabilities Sourced from Significant Product/Instruments

Name of Significant Instrument or Groups of Similar Instruments	Amount (N'000)	Percentage of Total Liabilities
1	2	3
Significant instrument/product 1		
Significant instrument/product 2		
Significant instrument/product 3		
…………		
…………		
…………		
Significant instrument/product n		
Total		

Table 6: List of Assets and Liabilities by Significant Currencies

Name of Significant Currency	Amount (N'000)			Mismatch as a Percentage of Total Liabilities
	Assets	Liabilities	Mismatch	
1	2	3	4 = (2 – 3)	5
Significant currency 1				
Significant currency 2				
Significant currency 3				
…………				
…………				
…………				
Significant currency n				
Total				

Table 7: Time Buckets of Maturity of Exposures

All amounts to be rounded off to the nearest N'000

Item	Months					Total
	<1	1 - 3	3 - 6	6 – 12	>12	
A. Funding from Significant Counterparties						
Significant counterparty 1						
Significant counterparty 2						
…………						
…………						
Significant counterparty n						
Total						
B. Funding from Significant Instrument						
Significant instrument 1						
Significant instrument 2						
…………						
…………						
Significant instrument n						
Total						
C. Liabilities by Significant Currency						
Significant currency 1						
Significant currency 2						
…………						
…………						
Significant currency n						
Total						

Table 8: Concentration of Deposit Funding

All amounts to be rounded off to the nearest N'000

Concentration of deposit funding	Total	Next day	2 to 7 days	8 days to 1 month	1 to 2 months	2 to 3 months	3 to 6 months	6 to 12 months	> 12 months
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Funding supplied by associates of the reporting bank									
Ten largest depositors									
Ten largest financial institutions funding balances									
Ten largest government and parastatals funding balances									
Negotiable paper funding instruments									
of which: issued for a period not exceeding twelve months									
of which: issued for a period exceeding five years									

8.3 Unencumbered Assets

Table 9: Statement of Available Unencumbered Assets

S/No.	Description	Asset Type & Nature	Location	Carrying Value in Naira (N'000)	Estimated Haircut (%)[8]	Expected Monetized Value of Collateral
A. Available unencumbered assets that are marketable as collateral in secondary market						
1						
2						
3						
..						
n						
Total						
B. Available unencumbered assets that are eligible for central banks' standing facilities						
1						
2						
3						
..						
n						
Total						
C. By Significant Currency – Available unencumbered assets that are marketable as collateral in secondary markets or eligible for central banks' standing facilities						
Naira						
1						
2						
3						
..						
n						
Sub-Total						
USD						
1						
2						

[8] Required by Secondary Market

S/No.	Description	Asset Type & Nature	Location	Carrying Value in Naira (N'000)	Estimated Haircut (%)[8]	Expected Monetized Value of Collateral
3						
..						
n						
Sub-Total						
Pound						
1						
2						
3						
..						
n						
Sub-Total						
Euro						
1						
2						
3						
..						
n						
Sub-Total						
Yuan						
1						
2						
3						
..						
n						
Sub-Total						
Others						
1						
2						
3						
..						
n						
Sub-Total						
Total						

Table 10: Collateral received by the reporting bank

Collateral received by the reporting bank	Fair value of collateral received, or own debt securities issued available for encumbrance			Nominal of collateral received, or own debt securities issued but not available for encumbrance
	Total	Issued by other entities of the group	Central bank's eligible	
	1	2	3	4
Loans and advances				
Equity instruments				
Debt securities				
Asset-backed securities				
Government issued				
Issued by financial corporations				
Issued by non-financial corporations				
Other collateral received				
Own debt securities issued other than ABSs				
Total Assets, Collateral Received and Own Debt Securities Issued				

Table 11: Unencumbered assets of the reporting bank

All amounts to be rounded off to the nearest N'000

	Line No.	Carrying amount of unencumbered assets			Fair value of unencumbered assets	
		Total	Issued by other group entities	Central bank's eligible	Total	Central bank's eligible
		1	2	3	4	5
Assets of the reporting institution (item 2 to 9)	1					
Loans on demand	2					
Equity instruments	3					
Debt securities	4					
Government Issued	5					
Issued by financial corporations	6					
Issued by non-financial corporations	7					
Loans and advances other than loans on demand	8					
Other assets	9					

8.4 LCR by Significant Currency

Table 12: LCR by Significant Currency

All amounts to be rounded off to the nearest N'000

	LCR by Significant Currency					
	Naira	**USD**	**Pound**	**Euro**	**Yuan**	**Others**
		Values in Naira (₦'000)				
Stock of HQLA						
Level 1						
Level 2A						
Level 2B						
A) Total adjusted HQLA						
Net Cash Outflow						
Total Cash outflow (1)						
Total Cash inflow (2)						
B) Net Cash Outflow (2-1)						
Liquidity Coverage Ratio (LCR) (A/B*100)	%	%	%	%	%	%

8.5 Market Related Monitoring Tools

Table 13: Movement in Equity Prices[9]

All prices should be reported in Naira

Entity Name	Par Value	Price on the first trading of the month	Highest Price during the month with date		Lowest Price during the month with date		Price on the last trading day of the month	Standard Deviation of the Price
			Price	Date	Price	Date		
Bank								
Other Group Entities								
1								
2								
3								
…..								
…..								
n								

Table 14: Movement in Non-Equity Instruments[10]

Type of Instrument	Amount Outstanding	Face Value	Date of Issue	Date of Maturity	Dividend/ Markup rate	Price at the beginning of the month	Price at the end of the month
1							
2							
3							

Table 15: Penalties imposed in respect of Breach of Liquidity Requirements on Overseas Operations including subsidiaries

Name of Branch/ Subsidiary along with Jurisdiction	Particulars of breach and penalty imposed (in foreign currency)	Date of Breach	Amount of Breach (in foreign currency)	Action initiated by the Bank
1				
2				
3				

[9] Bank and Other Group Entities
[10] Preference shares, other instruments