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Group Internal Audit Report

Issued to: Business Owners (See Distribution) & BRCC

Audit Title:	Balance sheet and Liquidity Management (Excluding Model Validation)
Business Unit:	Market and Liquidity Risk Management Department
MANCO Members:	• Abiodun Odubola – Chief Risk Officer • Adesola Adeduntan – Chief Financial Officer
Business Owner:	Tekena Miller- Lawson – Head, Market and Liquidity Risk Management Department
Audit Period:	January 1, 2014 to March 31, 2015.
Audit Date:	May 4, 2015 to June 29, 2015
Audit Type:	Standard

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1. Executive summary

The primary objective of Market and Liquidity Risk department is to provide accurate, timely and complete reporting to management for decision making on market and liquidity risks as well as ensuring that regulatory requirements on market risk trading exposures of the bank are complied with. Although the Treasury department as the Risk Taking Unit (RTU) is saddled with the responsibility of managing liquidity and funding risk, Market and Liquidity Risk department formulates the liquidity risk management frameworks which are designed to identify measure and manage the Bank's liquidity risk position.

1.1 Introduction and scope

The audit of Balance Sheet and Liquidity Management (Excluding Model Validation) focused on the following:

i. Governance
   - Charters
   - ALM/Market Risk Framework and other frameworks
   - Regulatory Guidelines/Circulars
   - Basel Accords on Market Risk and Liquidity management
   - Leading and Emerging Practices

ii. Organs and Structures
   - Secretariat
   - Committees
   - Interfaces/Stakeholders
   - Roles and Responsibilities

iii. Policy implementation
   - Measurement – Balance Sheet Management, Liquidity Management and Trading Market risk

- Review and Monitoring
- Escalation

iv. **Reporting**

- Reports issued (Adequacy, Timeliness and Integrity)
- Reports received

v. **Evaluation and Review**

- Review of methodology (Frequency, scope and adequacy)

1.2 Report rating and opinion

The audit has been rated "Low Risk" (84%) as shown below:

Findings Rating	Total	Open	Closed
High	-	-	-
Medium	4	4	-
Low	4	4	-
Process improvement	9	9	-

The key themes noted by the review are set out in section 1.3 below and detailed findings described in section 2 to this report.

Reports are graded in relation to the findings identified against the agreed scope as communicated in the Terms of Reference.

1.3 Summary of Observations

Audit Observations

a) Stress Test Assumptions not Based on Cumulative Cash Flow:

The Stress Test assumptions and scenarios used to measure the impact of extreme events on the Bank's Liquidity, Profitability and Capital Adequacy as at October, 2014 was based on the general cash flows instead of on the fourteen (14) calendar days cumulative cash flow basis.

Furthermore, Liquidity Stress Testing was conducted only once in October, 2014 for the audit period covering January 2014 to April 2015 (fourteen months). This is at variance with the quarterly/half yearly performance as stated in both the Asset and Liability Management (ALM) Framework and Guide to Liquidity and Price Risk Stress Testing.

b) Annual Review of Stress Testing Methodology for Effectiveness is not in Place:

The yearly review of Stress Testing methodology taking into cognizance changes in portfolio characteristics, external conditions and validity of underlying assumptions is not being done. There has been no review of the existing guidelines which has been in use since June 2012.

c) Management Action Trigger (MAT) Breaks not Communicated to the Chief Risk Officer (CRO):

The month-to-date losses on trading activities as against the approved Management Action Trigger (MAT) limits for both Bonds (N18.58million) and Treasury Bill (N12.74million) as at 16/10/2014 and 13/02/2015 respectively were not communicated to the Chief Risk Officer (CRO) as stated in the MAT framework which requires that "All limit trigger breaks must be reported to the CRO immediately and shall be reported to ALCO at its earliest subsequent meeting" The MAT breaks were only reported to Treasury department with requests for steps being taken to reverse the losses.

d) (i) Management Action Trigger (MAT) Break not reported by Market and Liquidity Risk Management department:

The actual month-to-date loss of N26.91million as against the approved limit of N15.625million for Bonds as at May 14, 2014 was not reported to both Treasury department and Chief Risk Officer (CRO) as required by section 5 of the MAT framework.

(ii) Non-Monitoring of various Internal and Market Risk Indicators that may lead to Potential Loss to the Bank:

Trading losses/MAT breaks were recorded for seven (7) consecutive days for Bonds from October 23, 2014 to October 31, 2014. This is part of the internal indicators "Silent" triggers which does not require drastic corrective action when discovered but ordinarily, this should have prompted the department to conduct closer monitoring or analysis. However, there was no evidence of action taken by the department for the period the losses were incurred.

e) Non-usage of the Acquired Bank Asset and Liability Management (BALM) Software for Processing Data:

The department currently makes use of excel developed templates for processing data for ALM Market Risk instead of the installed Surya Bank Asset and Liability Management (BALM) software. This is attributable to the inability of IT department to provide adequate support services for the application since deployment in 2009. The bank paid $69,250 (sixty nine thousand two hundred and fifty dollars) as licence fee and a total of $24,099 (twenty four thousand and ninety nine dollars) as Annual Technical Support (ATS) fees between November 1, 2009 and October 31, 2013 despite non-usage of the application.

The last update provided on the non-functionality of the software by Market and Liquidity Risk Management department dated August 14, 2013 was not escalated for necessary management attention.

f) Assumptions for Liquidity Gap preparation not documented:

The ALM and Market Risk Framework requires that all underlying assumptions for Liquidity Gap preparation must be fully documented for reasonableness and consistency. This requirement is yet to be complied with.

g) Application of uniform Risk Premium of 1% on all State Bonds:

It was noted that same risk premium of 1% is being applied to all the state bonds in the bank's portfolio despite having different maturity tenor, coupon rate and operating environment. Risk premium is a form of compensation for investors who tolerate the extra risk compared to investments in risk-free assets such as FGN Bonds. Currently, the bank's bond portfolio consists of investments in

Lagos, Oyo, Edo, Ondo and Kwara state etc. There is need to factor different risk premium for each state portfolio taking into cognizance risk exposure of each state bond. The assumption that all states have the same risk exposure should be reconsidered.

h) Absence of a Rogue Trading Monitoring system:

The bank does not have a system that monitors potential suspicious trading activities. Such a system will trigger abnormal trading patterns and allow early detection of unusual and suspicious trading activities that could threaten the Bank's position.

Section 2.1	Policy Implementation

Ref	2.1.1	Review of Stress Testing:	Rating	Medium

Finding:

a) Stress Test Assumptions not Based on Cumulative Cash Flow:

Stress Test template and scenarios used to measure the impact of extreme events on the Bank's Liquidity, Profitability and Capital Adequacy as at October, 2014 was not conducted for a period of fourteen (14) calendar days on a cumulative cash flow basis as entrenched under Section (6.2) of the Guide to Liquidity and Price Risk Stress Testing. The assumptions used were based on general cash flows.

Management response:

The new Stress Testing template has now been completed and will be deployed in Q3 2015.

b) Periodic/Regular Liquidity Stress Testing not Carried Out:

Liquidity Stress Testing was conducted only once by the department in October, 2014 for the audit period covering January 2014 to April 2015. This is at variance with the quarterly/half yearly performance as stated in both the Asset and Liability Management (ALM) framework and Guide to Liquidity and Price Risk Stress Testing.

Management response:

We will revise the reporting frequency and align same with ALCO meeting calendar.

Impact:	Root cause:
a) Usage of general cash flows does not allow enough time to communicate to stakeholders. b) The bank's ability to survive low-tail Risks (unexpected risks) is in doubt.	a) Stress Testing template was built to align with the Bank's guidelines. However, the CBN's template was used for periodic stress testing. b) Stress testing frequency was not aligned with ALCO meeting periods.

Recommendation / Agreed Action

a) The completed stress testing template should be deployed and should include all necessary input to align with the CBN's template.

b) The stress testing frequency in Asset and Liability Management (ALM) framework and Guide to Liquidity and Price Risk Stress Testing should be reviewed and aligned with ALCO meeting for consistency.	
Action Owner: Tekena Miller-Lawson – Head, MLRMD	Action Date:31/03/2016

<table>
<tr><td>Ref</td><td>2.1.2</td><td colspan="2">Annual Review of Stress Testing Methodology for Effectiveness not in Place:</td><td>Rating</td><td>Medium</td></tr>
<tr><td colspan="6">Finding:
The yearly review of Stress Testing methodology taking into cognizance changes in portfolio characteristics, external conditions and validity of underlying assumptions is not being done. The current guidelines in use took effect from June 2012 without any review till date.

Management response:

The guide will be presented for ratification yearly, even if major changes do not occur.</td></tr>
<tr><td colspan="3">Impact:
Methodology not in tune with current realities</td><td colspan="3">Root cause:
Methodology is reviewed regularly, but there has been no significant change to necessitate revisions to the guide.</td></tr>
<tr><td colspan="6">Recommendation / Agreed Action:
The Head, MLRMD should ensure that updated methodologies are presented to ALCO yearly for ratification to serve as evidence of review in line with the stress testing framework.</td></tr>
<tr><td colspan="3">Action Owner: Tekena Miller-Lawson – Head, MLRMD</td><td colspan="3">Action Date:30/09/2015</td></tr>
</table>

Ref	2.1.3	Management Action Trigger (MAT) Breaks not Communicated to the Chief Risk Officer (CRO):	Rating	Medium

Finding:

The month-to-date losses on trading activities as against the approved Management Action Trigger (MAT) limits tabulated below were not communicated to the Chief risk Officer (CRO) as stated in the MAT framework which requires that "All limit trigger breaks must be reported to the CRO immediately and shall be reported to ALCO at its earliest subsequent meeting" The MAT breaks were only reported to Treasury department with requests for steps being taken to reverse the losses.

S/N	Date	Type of Portfolio	Month-to-date Loss	Limit
1	16/10/2014	Bond	(N18.58)million	(N15.625)million
2	13/02/2015	Treasury Bills	(N12.74)million	(N12.50)million

Management response:

All trigger breaks are usually reported to the Head, M&LRMD and included in the earliest subsequent ALCO report. Whether the trigger break is reported to the CRO is solely determined by the Head, MLRMD after considering the materiality of the loss.

Impact:

Inability of management to plan against unexpected risks

Root cause:

This is usually dependent on the materiality of the loss.

Recommendation / Agreed Action:

The MAT framework should be reviewed to reflect the threshold of what constitute the materiality of loss to be communicated to the CRO.

Action Owner: Tekena Miller-Lawson – Head, MLRMD

Action Date: 31/03/2016

Ref	2.1.4	Management Action Triggers (MAT) not reported	Rating	Medium

Finding:

a) Management Action Trigger (MAT) Break not reported by the department

The actual month-to-date loss of N26.91million as against the approved limit of N15.625million for Bonds as at May 14, 2014 was not reported to both Treasury department and Chief Risk Officer (CRO) as required by section 5 of the MAT framework.

Management response: Trigger or MAT break exceptions will be via printed correspondences going forward, for easy tracking.

b) Non-Monitoring of various Internal and Market Risk Indicators that may Lead to Potential Loss to the Bank:

Trading losses/MAT breaks were recorded for seven (7) consecutive days for Bonds from October 23, 2014 to October 31, 2014. This is part of the internal indicators "Silent" triggers which does not require drastic corrective action when discovered but ordinarily, should have prompted the department to conduct closer monitoring or analysis. However, there was no single evidence of action taken by the department for the duration of the consistent losses/MAT Breaks. See schedule of losses below:

S/N	Date of Loss	Actual Loss (N)	Bond Limit (N)
1	23/10/2014	16.19M	15.625M
2	24/10/2014	16.43M	15.625M
3	27/10/2014	15.84M	15.625M
4	28/10/2014	16.01M	15.625M
5	29/10/2014	15.64M	15.625M
6	30/10/2014	15.64M	15.625M
7	31/10/2014	16.43M	15.625M

Management response:

A trigger break was reported a week earlier, which Treasury responded to, citing the volatility in the market as the reason. The same volatility issues were still at play in this particular case, hence, the reason for not sending another mail. However, all Trigger or MAT break exceptions will be via printed correspondences going forward, for easy tracking.

Impact:	**Root cause:**
a) Current trigger limits may not be in sync with the size, complexity, risk tolerance and capital adequacy of the bank b) Potential loss to the Bank	i) Evidence of correspondence could not be provided because the staff who sent the mail exited the Bank in October 2014. ii) A trigger break was reported a week earlier, which Treasury responded to, citing the volatility in the market as the reason.
Recommendation / Agreed Action: a) Evidences of all correspondence between the department and Treasury should be properly documented for easy tracking irrespective of the officer that handles the task. b) The Head, MLRMD should ensure that all trigger breaks are reported and explanations obtained as required by the MAT framework.	
Action Owner: Tekena Miller-Lawson – Head, MLRMD	**Action Date:** 30/09/2015

Ref	2.1.5	Non-usage of the Acquired Bank Asset and Liability Management (BALM) Software for Processing Data:	Rating	Low

Finding:

The department currently make use of excel-developed templates for processing data for ALM Market Risk instead of the installed Surya Bank Asset and Liability Management (BALM) software. This is attributable to the inability of IT department to provide adequate support services for the application since deployment in 2009. The bank paid $69,250 (sixty nine thousand two hundred and fifty dollars) as licence fee and ($24,099 (twenty four thousand and ninety nine dollars) as Annual Technical Support (ATS) fees between November 1, 2009 and October 31, 2013 despite non-usage of the application. Post Installation challenges with the software include the following:

a) Incomplete data imports to the Finacle data dump

b) Discrepancies between Finacle data available on the BALM Server (Finacle data dump) and data retrieved directly from Finacle Core.

c) Data for Treasury Bills and Bonds not currently spooled to the Treasury Data folder on the BALM server.

d) The BALM server currently does not have enough disk space.

The last update provided on the non-functionality of the software by MLRMD dated August 14, 2013 was not escalated for necessary management attention.

Management response:

The software is no longer in use and alternatives are currently being explored.

Impact:	Root cause:
a) Usage of Excel/manual processing of data leading to data integrity b) Financial loss due to non-utilisation of the software.	Lack of IT support.

Recommendation / Agreed Action:

The Head, MLRMD should inform management formally on the non-functionality of the application to enable them take a position in view of the huge investment already sunk into the project from inception till date..

Action Owner: Tekena Miller-Lawson – Head, MLRMD	Action Date:31/10/2015

Ref	2.1.6	Process Improvement Issues	Rating	Process Improvement

Findings:

i) Application of uniform Risk Premium of 1% on all State Bonds:

It was observed that same risk premium of 1% is being applied to all the state bonds in the bank's portfolio despite having different maturity tenor, coupon rate and operating environment. Risk premium is a form of compensation for investors who tolerate the extra risk compared to investments in risk-free assets such as FGN Bonds. Currently, the bank's bond portfolio consists of investments in Lagos, Oyo, Edo, Ondo, Kwara States etc. There is need to factor different risk premium for each state portfolio taking into cognizance risk exposure of each state bond . The assumption that all states have the same risk exposure should be reconsidered.

Management response:

Marked (model) prices will now be sourced from FMDQ for the state bonds.

ii) Need for Alignment of Timing for the Performance of Liquidity Stress Testing for the Bank:

The Asset and Liquidity Management framework under section 12.3.3 requires that "It is the responsibility of the Head, Market & Liquidity Risk Management of the Reporting Entity to ensure that stress tests are performed at least quarterly, unless the Reporting Entity ALCO requires more frequent testing" while the Guide to Liquidity and Price Risk Stress Testing requires half yearly performance of the exercise. There is urgent need for the alignment of the two (2) policies in order to remove ambiguity.

Management response:

Corrective actions for the highlighted issue would be reflected in the Guide to Liquidity and Price Risk Stress Testing at the next review cycle.

iii) Need to Amend Mark-to-Market Framework:

The mark-to-market framework requires the department to revalue all exposures categorized under the trading portfolio on a daily basis whilst all exposures under the Available for Sale portfolio (AFS) are to be re-valued on a monthly basis. It was noted that the department currently does daily revaluation of AFS portfolio in compliance with CBN fair value reporting of the Bank's portfolio. However, there is need to amend the M-T-M framework which requires monthly revaluation of AFS portfolio to daily revaluation since this is a regulatory requirement.

Management response: The frequency stipulated in the framework will be updated at the next review cycle. **iv) Gaps in the Standard Operating Procedure (SOP):** Review of the SOP for the department revealed the following gaps: a) Process flow for Mark-to-Market Available for Sales (AFS) Treasury Bills is not entrenched in the SOP. b) No threshold for what constitute significant movements (inflows and outflows) when providing explanation for significant deposit movements and loans and advances to management. The current situation where an Officer has to use his discretion to determine what can be termed "significant" is highly subjective. c) There is no process flow for Maintenance of Yield Curves on Finacle Treasury Software and Currency Swap Valuation. In addition, the document did not separate the processes for valuation of securities into the various categories of securities held e.g. Held for Trading (HFT), Available for Sale (AFS) and Held to Maturity (HTM) which require different procedures. **Management response:** The highlighted issues would be properly reflected in the SOP at the next review cycle.	
Impact: i. Financial loss due to under estimation of risk. ii. Ambiguity in timing for performance of task. iii. Non-alignment of internal policy with regulatory requirement. iv. Non - uniformity in processes could lead to wrong decision making.	**Root cause:** i. Non-availability of a more accurate modelling method ii. The correct frequency is at least quarterly; the specification of half yearly frequency in the Guide to Liquidity and Price Risk Stress Testing was done in error. iii. The CBN only changed the frequency recently to daily, and the bank has already complied. iv. Omission during the documentation of operating procedures.
Recommendation / Agreed Action: i. Rating criteria should be created for the valuation of state bonds in conjunction with Specialized Lending Department (SLD) aside the	

usage of marked to model prices from FMDQ for state bonds. ii. The Asset and Liquidity Management framework and Guide to Liquidity and Price Risk Stress Testing should be aligned to reflect the correct frequency to avoid ambiguity. iii. The frequency stipulated in the Mark-to-Market Framework should be updated to align with regulatory requirement. iv. The departmental Standard Operating Procedure should be reviewed to redress the highlighted gaps.	
Action Owner: Tekena Miller-Lawson – Head, MLRMD	Action Date:31/12/2015

Section 2.2	Governance

Ref	2.2.1	Underlying Assumptions for Liquidity Gap preparation was not documented:	Rating	Low

Finding:

The ALM and Market Risk Framework requires that all underlying assumptions for Liquidity Gap preparation must be fully documented for reasonableness and consistency. This requirement is yet to be complied with.

Management response:

Gap assumptions will be fully documented in the framework and liquidity risk policy.

Impact:	Root cause:
Gap report may be subjected to different interpretation by the stakeholders.	Gap assumptions are in the behavioural runoff templates and gap template.

Recommendation / Agreed Action:

The assumptions underlying liquidity Gap preparation should be documented so that other stakeholders would have an overview of the process and to allow for consistency of its application.

Action Owner: Tekena Miller-Lawson – Head, MLRMD	Action Date:30/09/2015

Ref	2.2.2	Expired Policies/Frameworks:	Rating	Low

Finding:

The underlisted documents have expired.

S/N	Document	Frequency of Review	Date Due for Review
1	Mark to Market Methodology	Annual	March 2015
2	Mark to Model Methodology	Annual	March 2015

Management response:

The documents shall be reviewed at the next review cycle.

Impact:	Root cause:
Documents not in tune with current realities.	No changes were deemed necessary to both methodologies.

Recommendation / Agreed Action:

The review/renewal process should be initiated by the Head of department for the documents to be in tune with current realities.

Action Owner: Tekena Miller-Lawson – Head, MLRMD	Action Date:31/03/2016

<table>
<tr><td>Ref</td><td>2.2.3</td><td colspan="2">Date of approval of Asset and Liability Committee (ALCO) Charter not indicated:</td><td>Rating</td><td>Low</td></tr>
<tr><td colspan="6">Finding:
The ALCO charter stipulated that its adequacy shall be reviewed annually. However, the approval date of the charter was not stated to ascertain the expected review date.

Management response:
The Charter shall be reviewed together with the Framework at the next review cycle.</td></tr>
<tr><td colspan="3">Impact:
Ambiguity in determining the next review date.</td><td colspan="3">Root cause:
Omission in the Charter</td></tr>
<tr><td colspan="6">Recommendation / Agreed Action:
The Charter should be reviewed to include date of approval to allow accurate determination of next review date.</td></tr>
<tr><td colspan="3">Action Owner: Tekena Miller-Lawson – Head, MLRMD</td><td colspan="3">Action Date:31/03/2016</td></tr>
</table>

Ref	2.2.4		Rating	Process Improvement

Finding:

i) Target/limit for Liquidity Coverage and Net Stable Fund Ratios not defined as recommended by the Market Risk Framework:

The Market Risk Framework requires the Head, Market and Liquidity Risk Management to set appropriate targets for Liquidity Coverage (LCR) and Net Stable Funding Ratios (NSFR) for all the banking entities in the group and monitor same in accordance with Basel Committee's Sound Principles of Liquidity Risk Management. These targets have not been set by MLRMD.

Management response:

Internal Limits will be proposed before the stipulated regulatory commencement date.

ii) Frequency of review not stated in the ALM and Market Risk Framework:

It was noted that the ALM and Market Risk Framework does not have a review date. The Framework merely stated that it will be continuously updated to ensure it aligns with international best practice, captures regulatory standards and major changes or developments in the financial markets without stating the frequency of review.

Management response:

Framework will be reviewed at the next cycle

iii) Absence of a Rogue Trading Monitoring system:

The bank does not have a system that monitors potential suspicious trading activities. Such a system will trigger abnormal trading patterns and allow early detection of unusual and suspicious trading activities that could threaten the Bank's position.

Management response:

We are working with KPMG consultants to design a rogue trading monitoring system

iv) Non-activation of derivative module on Finacle Treasury:

The derivative module on Finacle Treasury Application is not activated hence forward contract transactions are manually obtained from Treasury Department in the determination of Pre-Settlement Exposures.

Management response: The department is in discussions with other stakeholders to evaluate and possibly select a tool for booking, valuation and reporting of derivatives.	
Impact: i) Liquidity management process not in tune with global trends/ leading practices. ii) Framework may not be reviewed. iii) Potential Financial loss iv) Manual extraction is prone to error	**Root cause:** i) Regulatory monitoring will commence in January 2018. ii) Omission in the Framework iii) Non-availability of suitable rogue trading monitoring system iv) The Bank did not acquire the derivatives module of Finacle Treasury
Recommendation / Agreed Action: i) The project team working with KPMG should ensure timely completion to avoid possible regulatory breach. ii) The Head MLRMD should ensure that the frequency of review is included in the framework at the next review period. iii) The proposed design of a rogue trading monitoring system should be concluded expeditiously so as to aid early detection of potential suspicious trading activities. iv) The department should ensure continuous engagement with other stakeholders in order to select the right application.	
Action Owner: Tekena Miller-Lawson – Head, MLRMD	**Action Date:** 30/06/2017

Section 2.3	Organs and Structure

Ref	2.3.1	Non - documentation of Liquidity Gap and Stress Test assumptions across the Group:	Rating	Process Improvement

Finding:

One of the responsibilities of the Head, Market and Liquidity Risk Management Department as stated in the ALM and Market Risk Framework is to review Liquidity Gap and Stress Test assumptions and enforce consistent treatment across the Group. Presently, the Head of department does not provide oversight function to other entities in the Group.

Management response:

This will be implemented as soon as the Group framework is approved and deployed.

Impact:	Root cause:
Lack of uniformity in the liquidity stress assumptions across the Group.	Implementation of Group framework is in progress.

Recommendation / Agreed Action:

The Head of Department should follow-up the approval process of the Group framework to facilitate its deployment.

Action Owner: Tekena Miller-Lawson – Head, MLRMD	Action Date:30/06/2017

Issued by:

Uduak Nelson Udoh

Chief Internal Auditor

29/07/2015

Appendix 1 Internal Audit Terms of Reference (TOR)