CENTRAL BANK OF LIBERIA

GUIDELINES No. CBL/RSD/001/2014
CONCERNING
GUIDELINES FOR STRESS TESTING AT LIBERIAN BANKS

January 6, 2014

REGULATION & SUPERVISION DEPARTMENT
MONROVIA, LIBERIA

1.0 Introduction

The Risk Management Guideline issued by the Central Bank of Liberia (CBL) in October, 2009 requires financial institutions to regularly conduct stress testing on major business or functional areas of their activities. Stress testing is an integral part of sound risk management practices of a financial institution. The board of directors of a financial institution has the ultimate responsibility for the overall stress testing program, whereas the senior management is accountable for the program's implementation and management. Results of stress testing should be used by the board and senior management of financial institutions for the purpose of contingency planning, setting of internal limits, strategy formulation, and policy reviews etc...

These Stress Testing Guidelines have been developed to assist bank financial institutions in preparing and implementing their internal stress testing frameworks. The guidelines also define the responsibilities of individuals involved in the chain of activities related to stress testing. These guidelines also seek to enhance the nexus among macro prudential monitoring, continuous supervisory review and risk management system in the banking system.

2.0 Definitions

Stress Testing: A collection of methods used to assess the potential effects of changes in risk factors, corresponding to exceptional but plausible events on an individual bank's financial condition or on the financial stability of the banking sector. It is a generic term that describes various techniques used to gauge the potential vulnerability of a financial system to exceptional, extreme or simply unexpected but plausible events. Sensitivity test and scenario analysis are two techniques of stress testing.

Sensitivity test: This estimates the impact on a portfolio's value (quantitative) due to predefined movements in a single risk factor or a set of related risk factors.

Scenario Analysis: This measures the combined effect of adverse movements in a number of risk factors.

Exercise: Regular or ad hoc performance of stress testing.

Scenario: Projected sequence of events in the real economy, domestic and international financial markets which has substantial impact on the Liberian financial system. The scenario is followed by a set of various macroeconomic and financial variables.

Baseline Scenario: Scenario based on the most likely macroeconomic development (the latest macroeconomic forecast).

Adverse Scenario: Scenario based on the less likely, however, high impact macroeconomic development.

Bottom-up exercise: An exercise performed by individual financial institutions based on specific conditions and risk profile of each institution.

Top-down exercise: An exercise performed by the Central Bank of Liberia (CBL) through the Regulation and Supervision Department (RSD) using, bank-by-bank data and broad assumptions about economic and financial developments in the country.

3.0 Stress Testing by Commercial Banks

Commercial banks are required to conduct bottom-up exercises at least semi-annually. Bottom up exercises could be based on common or individualized scenarios. Banks should use individualized scenarios to conduct their regular stress tests. However, the CBL may present common scenarios which should be used by all banks to conduct stress test at times determined by the Central Bank.

Individual banks are required to develop and implement stress testing programs commensurate with the size and complexity of their business activities. A comprehensive stress testing program should entail the following:

a) A review of the bank’s activities and external environment. This should yield the identification of major risk factors that implicitly impact on the bank’s financial position. This process should cover both on and off-balance sheet positions.

b) The design of appropriate stress tests based on the identification of risk factors and the complexity of the banks' portfolios. Stress tests should be both quantitative and qualitative in nature. An example of quantitative test is the identification of plausible stress scenarios, preferably with different levels of severity, to which a bank is exposed. Qualitative tests would evaluate the capacity of the bank's capital to absorb potential large losses and identify steps that could be taken to mitigate its risks and preserve capital.

c) The documentation of the underlying assumptions used in the stress tests and how they were derived.

d) The identification and documentation of appropriate types of remedial actions to be implemented to address potential risks highlighted from the stress tests. The banks should consider the use of triggers to determine the type and extent of remedial actions, given the risk exposure.

e) An adequate management information system to accommodate stress testing. This system should be capable of running stress tests on different portfolios and business units and have the ability to aggregate the stress tests for the institution as a whole.

Banks are expected to identify their own risk factors based on the nature of their business activities. However, below is a list of some risks that banks are expected to consider as a minimum standard:

1) Credit and counterparty risks;
2) Concentration risk as it relates to exposures to individual counterparties, products, industries, market sectors, countries or regions;
3) Interest rate risk
4) Market or price risk arising from adverse changes in asset prices (e.g. Currencies, commodities, real estate, government securities etc.);
5) Liquidity risk(market liquidity, funding liquidity etc);

6) Operational risk caused by various factors such as internal or external fraud, system failure and security risks; and
7) Macroeconomic factors (e.g. changes in GDP, property prices, unemployment, and inflation).

4.0 Board of Directors and Senior Management

(i) Board of Directors

The board of directors has the ultimate responsibility for understanding the risks of a financial institution and ensuring that the risks are properly managed. Because stress testing is integral to the overall risk management process of a financial institution, adequate oversight of the stress testing program implemented by senior management rests with the board. The board of directors among other things should:

a) Review and approve the stress-testing policy and program;
b) Monitor the results of stress testing and assess the adequacy of remedial actions and contingency planning to mitigate risk exposures;
c) Use the results of stress testing in the formulation of various operational policies, limits and controls; and
d) Ensure that the stress testing program is independently reviewed. The review should include an assessment of the validity of the underlying assumptions used to develop the stress test and the adequacy of the test, given the complexity of the business activities of the financial institution.

(ii) Senior Management

The responsibility for the daily management and control of the risk exposures, including developing and implementing a stress testing program rests with the senior management of the financial institution. Senior management should review the financial institution’s activities to determine its risk profile and the underlying assumptions that will form the basis of the stress testing.

Although stress testing programs will differ from one bank to another because of size, complexity and activities, at a minimum, the senior management of each financial institution is responsible for the following:

a) Compiling a list of major risk factors stemming from a review of the institution's business activities and external environment;
b) Documenting the assumptions underlying the stress test and how these assumptions were derived;
c) Designing stress tests that are institution-wide and cater to the major types of risks that are appropriate to the institution's activities and profile;
d) Conducting bottom-up exercise at least semi-annually and analyzing the results so as to identify potential vulnerabilities and risks;
e) Determining and documenting appropriate remedial actions to address potential risks identified from the stress testing;
f) Designating specific responsibility and levels of authority for the implementation of remedial actions;
g) Implementing an adequate management information system that would support stress testing and that has the ability to aggregate individual stress tests conducted for different business units;
h) Providing the board with a summary report outlining the stress test results and the corrective actions taken;
i) Regularly assessing the appropriateness of the stress tests and assumptions used to ensure that they are still relevant to the financial institution, considering changing risk characteristics as well as happenings in the institution's external environment;
j) Ensuring that any changes to the stress testing methodology and procedures due to its review are documented and approved; and
k) Reporting the results of stress testing as well as plans for risk mitigating activities to the Regulation and Supervision Department of the Central Bank of Liberia. This report should be submitted to the Regulation & Supervision Department, Central Bank of Liberia, not later than ten (10) days after the conduct of each stress testing exercise.

5.0 Central Bank of Liberia

The Central Bank will regularly perform top-down stress testing, mainly in the context of a forward-looking financial stability and macro prudential analysis and reporting. The results of the top-down stress testing would be used by the Bank as a basis for discussion with banks on approaches to risk mitigation at an institutional or sectoral level.

Stress testing results would be made available to the Financial Stability Committee of the Central Bank, which would then provide recommendations/guidance on risk mitigation measures to be communicated to the banks. These measures, depending on the particular circumstances, may aim to limit individual and/or systemic risks. The measures used for limiting risks may include micro and macro-prudential measures such as:

i) Higher capital and liquidity requirements;
ii) Capital conservation buffer;
iii) Higher risk weights;
iv) FX position; maturity mismatches; sectoral and cross boarder limits;
v) Individual and large exposure limits;
vi) Restriction on compensation and/or dividend policy
vii) Countercyclical capital buffer;
viii) Maximum loan –to –value ratio, maximum debt-to-income ratio;
ix) Loan-to-deposit ratio;
x) Leverage ratio;
xi) Minimum reserve requirement;
xii) Dynamic provisioning; and
xiii) Limits to credit growth.

The Regulation and Supervision Department of the Central Bank of Liberia will periodically evaluate the appropriateness and effectiveness of the stress tests conducted by banks through its on-site examination and off-site monitoring programs. In reviewing a bank's stress testing program, the RSD will consider the following:

i) The level of oversight exercised by the board and senior management over the stress testing program and the results generated;
ii) The complexity and level of risks of the bank's business activities and the adequacy and sophistication of the corresponding stress tests employed;
iii) Suitability of the underlying assumptions used in the stress tests;

iv) Capacity of the bank's capital and earnings to absorb potential losses under stressed situations and the bank's plans to close any highlighted gaps;

v) The adequacy of the risk management policies and stress testing procedures;

vi) The adequacy of the contingency planning developed to mitigate risks associated with the occurrence of a given stress scenario; and

vii) The adequacy of the bank's internal review/audit of the stress testing program.

The Regulation and Supervision Department may require a bank to perform additional stress tests on areas considered important to the overall financial stability of the banking sector.

6. Reporting Requirements

Banks are given a period of 3 months from the date of issuance of this guideline to ensure full compliance with the minimum requirements stated herein; including, the establishment of internal arrangements, MIS, internal policy and procedures.

All inquiries concerning these guidelines should be addressed to:

Director
Regulation and Supervision Department
Central Bank of Liberia
Carey and Warren Streets
Monrovia, Liberia