2023 FINANCIAL STABILITY REPORT

CENTRAL BANK OF LESOTHO

BANKA E KHOLO EA LESOTHO

CENTRAL BANK OF LESOTHO

FINANCIAL STABILITY REPORT

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The *Financial Stability Report* is available on the Central Bank of Lesotho website at **www.centralbank.org.ls.**

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GOVERNANCE, MISSION & OBJECTIVES

Ownership and Governance

The Central Bank of Lesotho is a statutory organisation fully owned by the Government of Lesotho.

The Central Bank enjoys a fair amount of independence in formulating and implementing monetary policy. The Governor, who is also the chairman of the Board of Directors, together with the two Deputy Governors, are appointed by His Majesty The King on the advice of the Prime Minister.
The Minister of Finance appoints the other Board Members.

Mission Statement

The Mission of the Central Bank of Lesotho is to achieve and maintain monetary and financial system stability to support balanced macroeconomic development of Lesotho.

Objectives

The principal objective of the Central Bank of Lesotho, as stipulated in the Central Bank of Lesotho Act of 2000, is to achieve and maintain price stability.
Other related objectives which are supportive to this mission are:

- To foster the liquidity, solvency and proper functioning of a stable market-based financial systems;
- To formulate, adopt and execute the monetary policy of Lesotho;
- To issue, manage and redeem the currency of Lesotho;
- To formulate, adopt and execute the foreign exchange policy of Lesotho;
- To license, register and supervise institutions pursuant to the Financial Institutions;
- To own, hold and manage its official international reserves;
- To act as a banker and advisor to, and as fiscal agent of the Government of Lesotho;
- To promote the efficient operations of the payments system;
- To promote the safe and sound development of the financial system; and
- To monitor and regulate the capital market.

PREFACE

FINANCIAL STABILITY refers to the resilience of the financial system to adverse shocks while continuing to function smoothly and supporting households and firms to use their financial assets with confidence. A stable financial system contributes towards broader economic growth and an improved standard of living for all people.

The Central Bank of Lesotho (CBL) has the mandate to promote the stability and soundness of the financial system of the country. It achieves this objective through delivering on its core functions, notably: fostering the liquidity, solvency, and proper functioning of a stable market-based financial system; promoting the safe and sound development of the financial system; conducting effective supervision and regulation of financial institutions; and providing efficient, reliable and safe payment and settlement systems.

This Financial Stability Report is a tool used by the CBL for financial stability surveillance. The report seeks to play a role in preventing crises by identifying risks and vulnerabilities in the financial system and assessing the resilience of the financial system to domestic and external shocks, as well as highlighting policies that may mitigate systemic risks, thereby contributing to global financial stability and the sustained economic growth. The CBL publishes the Financial Stability Report once a year, in March. Through this Report, the CBL seeks to enhance awareness of the soundness of Lesotho's financial system ❑

LIST OF ABBREVIATIONS

AGOA	Africa Growth Opportunity Act
BIS	Bank for International Settlements
CAR	Capital Adequacy Ratio
CBL	Central Bank of Lesotho
CMA	Common Monetary Area
CPSS	Committee on Payment and Settlement Systems
CSD	Centralised Securities Depository
EU	European Union
EWI	Early Warning Indicator
GDP	Gross Domestic Product
IOSCO	International Organisation of Securities Commission
LACH	Lesotho Automated Clearing House
LHWP	Lesotho Highlands Water Project
LSW	Lesotho Wire
MNO	Mobile Network Operators
MFI	Micro-finance Institution
MTI	Money Transfer Institution
NPL	Non-performing Loans
NSDP	National Strategic Development Plan
OFC	Other Financial Corporations
PAL	Payments Association of Lesotho
PFMI	Principles for Financial Market Infrastructures
ROA	Return on Assets
ROE	Return on Equity
RTGS	Real Time Gross Settlement System
RWA	Risk-Weighted Assets
SA	South Africa
SACU	Southern African Customs Union
SIPS	Systemically Important Payment Systems
UK	United Kingdom
US	United States
MoF	Ministry of Finance

CONTENTS

EXECUTIVE SUMMARY

1. Since the last Financial Stability Report, vulnerabilities have declined from external environment, households, and corporate sectors, while they increased in the payment systems sector. While lower inflation has provided some relief, persistent inflationary pressures and high interest rates remain a threat to financial stability. Domestic corporates and households balance sheets remained under pressure due to weak global economic growth, resulting in firm closures and loss of income. The cyber-attack on the Central Bank of Lesotho disrupted payment systems for two weeks, affecting local banks' transaction handling. Manual processing introduced errors and higher costs, particularly for time-sensitive transactions.

2. Global economic activity has decelerated, with advanced economies experiencing a slowdown while emerging markets, except for China, showed robust growth. The slowdown in AEs was attributed to the weak primary sector, high interest rates and cost of living as well as the geopolitical tensions. In addition, adverse weather conditions also added to the prolonged deceleration in economic activity and uncertainty, with most economies experiencing heavy rainfall and heatwaves, which negatively affected crop harvests and infrastructure.

3. In South Africa, persistent challenges continue to hamper economic growth, with little change from the previous year. Electricity generation challenges, low commodity prices, and infrastructure deficiencies, especially in railway and ports, hindered productivity, particularly in the mining sector. Sluggish demand domestically and internationally continued to limit manufacturing output. High inflation persists due to ongoing power cuts and elevated food prices, worsened by avian influenza outbreak during the year. However, slight improvements in power interruptions have led to upward revisions in economic forecasts for 2024.

4. Lesotho's economic growth remain subdued and the outlook gloomy. Geopolitical tensions, adverse weather conditions, weak manufacturing and textiles production, widening fiscal and external deficits, and declining investments compounded economic challenges for the domestic economy during the review period.

5. The banking sector's performance improved compared to the previous year. The sector's performance improved despite facing risks from credit concentration, reliance on wholesale funding, weak global activity, high inflation and tighter monetary policy. The sector maintained strong capital and liquidity positions, with improved profitability and asset quality. Stress tests confirmed the sector's resilience to shocks, but key risks remain.

6. The overall performance of OFCs remained robust during the review period despite the challenging economic environment. The insurance sector remained resilient, financially sound and expanded its asset base. The sector's profitability also improved in line with the observed economic recovery. Likewise, the Credit-only MFIs sector maintained a healthy credit portfolio and its asset base continued to grow.

7. The financial market infrastructures operated effectively and efficiently during 2023 despite the cyberattack on the CBL and continue to anchor financial stability. The systemically important payment systems (SIPS) remained reliable and stable, capable of handling the growing volume of transactions. The mobile money sector remains a key role player in promoting financial inclusion. However, the market's growth rates have declined significantly, indicating the market's transition to maturity. Vulnerabilities associated with mobile money operations have been minimal during the review period and pose negligible systemic threats ❑

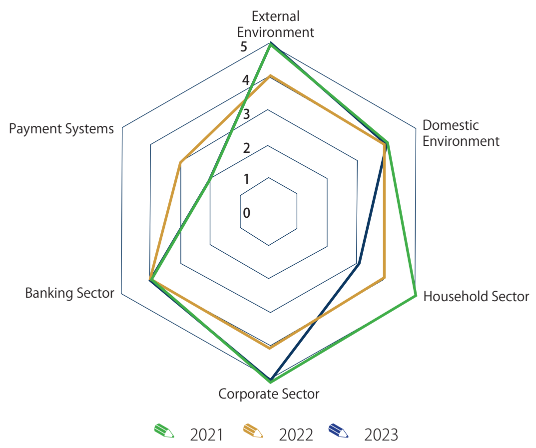
FINANCIAL STABILITY RISKS

1. FINANCIAL STABILITY RISKS

Since the last FSR, vulnerabilities from various sectors have decreased significantly, except for the payments systems as indicated in Figure 1. The household and corporate sectors saw reduced vulnerabilities due to lower inflation compared to the peak of inflation in 2022. However, persistent inflationary pressures and high policy rates remain a concern for both households and corporations, because they reduce their ability to meet their debt obligations. Moreover, both corporate and household balance sheets were impacted by the weak global economic activity and low demand, leading to business closures and loss of income for many households. Nevertheless, compared to the previous year, the global economy showed resilience and experienced marginal growth despite the challenges affecting economic activity, hence the reduction in the external environment's vulnerabilities.

The cyber-attack on the Central Bank of Lesotho (CBL) in December 2023 sent shockwaves across the National Payment Systems. In response, the CBL suspended payment and settlement services for about two weeks to prevent further breaches. The interruption deprived the banking sector of access to SIPS, severely impacting local banks' ability to handle and execute interbank transactions, which negatively affected households and businesses. Banks had to resort to manual payment processing, leading to challenges such as human errors and increased costs, especially for time-sensitive transactions subject to penalties if not settled promptly.

Figure 1 Financial Stability Risk Map



Source: Central Bank of Lesotho

The cyber-attack on the Central Bank of Lesotho (CBL) in December 2023 sent shockwaves across the National Payment Systems.

2. MACRO-FINANCIAL ENVIRONMENT

2.1 International Developments

Global economic activity slowed considerably since the last FSR report, despite some countries showing resilience. The pace of economic growth has slowed down in advanced economies (AEs), except for the United States (US) which has shown strong economic activity. In contrast, emerging market and developing economies (EMDEs), with the exception of China, have shown robust growth. China's economic growth was weighed down by its struggling real estate sector and waning consumer confidence. The primary cause of the sluggishness in global economic activity stemmed from a combination of factors. Firstly, subdued manufacturing and industrial productivity due to declining demand. Secondly, the continuation of a restrictive monetary policy aimed at curbing persistent inflationary pressures, tightening financial conditions, and ongoing geopolitical tensions.

Adverse and unpredictable climate conditions add uncertainty to the economic growth path and financial markets. Climate change-triggered natural calamities amplify pre-existing weaknesses and introduce fresh risks that could jeopardize financial stability and impede sustainable economic progress. In Sub-Saharan Africa (SSA), heavy rainfall and prolonged heatwaves are expected to lead to below-average harvests and drive-up food prices. Moreover, vital infrastructure such as roads is damaged, resulting in delays in new projects that could otherwise boost economic activity, as governments need to allocate resources for repairs.

Volatility in food and energy prices continues. Energy prices have decreased since the last FSR, due to China's slow post-pandemic recovery and a decline in worldwide demand, partially offsetting supply channel limits. However, there is a possibility that energy costs may rise again due to more shocks or persistent domestic inflation in some countries, particularly those in the Middle East. These factors could hinder progress towards expected central banks' policy rate cuts in the upcoming year.

Persistent challenges continue to hinder economic growth in South Africa (SA). The country's economic growth has not changed much compared to the previous year. Key obstacles such as low power generating capacity, low commodity prices, and higher operational costs due to deficiencies in railway and port infrastructure have hindered productivity, especially in the mining sector. Additionally, sluggish demand both domestically and internationally has constrained manufacturing output. Furthermore, both consumer and producer price inflationary pressures remain high due to production cost pressures from ongoing load-shedding and elevated food prices, which were worsened by the outbreak of avian influenza. However, there has been a slight improvement in the severity of power interruptions, leading to upward revisions in economic forecasts for 2024.

Overall, the outlook and economic growth prospects are somewhat promising. The likelihood of a significant economic downturn has diminished, and risks to global economic growth are generally balanced due to disinflation and stable economic growth[1]. However, unexpected spikes in commodity prices due to geopolitical disruptions, such as ongoing attacks in the Red Sea, coupled with supply interruptions or enduring underlying inflation, could extend tight monetary conditions. Furthermore, elevated interest rates aimed at combating inflation, coupled with the withdrawal of fiscal assistance amidst high debt levels, are anticipated to hinder growth in 2024.

Vulnerabilities and risks associated with international developments

Weak global economic activity affects the financial institutions' balance sheets through macro-financial linkages. Lesotho's economy is dependent on the global economy. If international growth remains weak, it may have major repercussions for Lesotho's export-dependent industries. These industries export goods and rely on banks for funding, so any revenue shock could compromise their ability to service their debt, ultimately affecting banks' profitability.

[1] World economic outlook update: January 2024.

MACRO-FINANCIAL ENVIRONMENT

Persistent inflationary pressures and continuous supply chain disruptions in AEs, leave developing economies like Lesotho vulnerable to tightening monetary policy. The continuous tightening of monetary policies in advanced economies leads to prolonged periods of significant portfolio outflows, currency depreciation, and wider fiscal deficits and poses a significant threat to the country's financial stability.

The rand remains sensitive to international policies and political developments, volatile commodity prices, global financial market developments, and investors' sentiment. Lesotho's economy relies heavily on the stability of its currency, the loti. This stability is maintained through the loti's peg to the South African rand, which helps to control inflation and strengthen Lesotho's economic and financial ties with SA. However, when the rand becomes volatile, it poses a risk to Lesotho's financial stability. The value of the loti is largely influenced by changes in capital flows to emerging markets and global risk perception through the rand-loti peg. If the currency appreciates against major international currencies, it reduces Lesotho's export competitiveness, while the depreciation of the loti increases input costs as raw materials are sourced from international markets. These factors, combined with weak global demand, can have a negative impact on Lesotho's trade balance.

SA's subdued economic activity and deteriorating public finances remain a potential source of vulnerabilities and spillover risk for the domestic financial system. Loss of confidence in SA by investors could trigger capital outflows and generate negative feedback loops due to extensive macro-financial linkages between SA and the rest of the world. Such linkages could amplify shocks given SA's high reliance on external finance and banks' increasing role in intermediating capital flows. The resulting capital outflow may lead to a higher cost of capital and reduced access to funding. This could increase contagion risks since two-thirds of banks operating in Lesotho are subsidiaries of South African banks. Moreover, the Southern African Customs Union (SACU) revenue pool largely depends on the performance of the South African economy. The fluctuations in SACU revenue share for Lesotho will have a negative impact on the budget since it is a significant source of revenue for fiscal operations.

Table 1 Selected Economic Indicators

	GDP Growth		△ pps	Interest Rates		△ pps	Inflation		△ pps
	2022	2023	y/y	2022	2023	y/y	2022	2023	y/y
Advanced Economies									
US	1.00	3.10	**2.10**	4.50	5.50	**1.00**	6.50	3.40	**-3.10**
UK	0.40	-0.20	**-0.60**	3.50	5.25	**1.75**	10.50	4.00	**-6.50**
Euro Area	1.90	0.10	**-1.80**	2.50	4.50	**2.00**	9.20	2.80	**-6.40**
Japan	0.60	-0.40	**-1.00**	-0.10	-0.10	**0.00**	4.00	2.60	**-1.40**
Emerging Market Economies									
Brazil	2.70	2.10	**-0.60**	13.75	11.75	**-2.00**	5.79	4.62	**-1.17**
Russia	-2.70	4.90	**7.60**	7.50	16.00	**8.5**	11.90	7.40	**-4.50**
India	4.30	8.40	**4.10**	6.25	6.50	**0.25**	5.72	5.69	**-0.03**
China	2.90	5.20	**2.30**	2.75	3.45	**0.7**	1.80	-0.30	**-2.10**
SA	0.80	1.20	**0.40**	7.00	8.25	**1.25**	7.20	5.10	**-2.10**

Source: Federal Reserve Bank, OECD data, Bank of Japan, ECB, SARB, STATS SA, Bank of Brazil, Reuters, Bank of India, Trading Economics.

2.2 Domestic Developments

Lesotho's economic growth remains subdued and the outlook gloomy. In 2023, excessive rainfall and prolonged heatwaves, negatively affected agricultural production and put significant pressure on economic activity and cost of living[2]. The prohibition on chicken products importation exacerbated the situation, causing shortages of chicken products in the market and business closures. Weak textile productivity, as a result of low global demand, weighed down on economic activity. The construction sector, especially Phase II of the Lesotho Highlands Water Project (LHWP-II), and the mining sector[3] were the main contributors to economic growth in 2023.

Policy and political instability in Lesotho remain a concern. The slow or non-implementation of reforms threatens good governance and political stability in the country. Despite the reforms having support locally and internationally, they have been stalling and this increases uncertainty in economic growth prospects as these reforms are a prerequisite to trade agreements like AGOA. Without such agreements, Lesotho's competitiveness, export growth and access to the American and other markets is likely to diminish. This may lead to firm closures in the manufacturing sector, the country's second-largest employers.

The country's fiscal and external positions remain weak. Although SACU revenues are expected to improve, the fiscal deficit has widened as the country continues to spend more than it earns over time. Investment in the manufacturing sector continues to decline due to low global demand and limited domestic opportunities. The temporary ban on imports of some chicken products from South Africa led to businesses finding alternative suppliers across the world, which resulted in higher importation costs and further widening of the current account deficit. The government is still grappling with rising debt levels, which are expected to increase further in 2024 to finance the budget deficit.

[2] These circumstances resulted in reduced crop yields and subsequent rises in food prices.

[3] Relatively favourable diamond prices for some mines despite the downward trend in prices in the global diamond market – (*Lesotho Economic Outlook 2023 – 2025 an Update*).

Vulnerabilities and risks associated with domestic developments

The slow and uneven global economic activity continues to have a huge knock-on effect on financial institutions' balance sheets through macro-financial linkages. Lesotho's economy, heavily reliant on global performance, faces significant risks during a global recession, particularly through the export sector. Export-dependent companies, reliant on bank funding, may struggle to service debt if revenues are impacted, affecting banks' profitability. Macroeconomic conditions, including the risk of stagflation, are likely to result in borrower defaults and delinquencies. High-interest rates further deter consumer and investment spending and may contribute to an increase in non-performing loans, worsening the banking sector's asset quality.

Developing countries such as Lesotho are susceptible to swift monetary policy normalisation in AEs. AEs' strict monetary policy stance can result in prolonged periods of substantial portfolio withdrawals, significant currency depreciations, increased public expenditures, and slow economic growth. This slow growth could compel the government to delay projects intended for the private sector, as well as postpone payments for services provided by the private sector. Since the government is the biggest player in the economy and the primary source of business for the private sector, this could have a significant impact. The banking sector's balance sheets will eventually suffer due to the increase in non-performing loans (NPLs) from the private sector.

The rand is still susceptible to shifts in global financial markets, international politics and policy, commodity price movements, and investor sentiments. The stability of Lesotho's economy is heavily reliant on the loti's peg to the rand, which maintains macroeconomic stability and strengthens ties with South Africa. However, this stability is threatened by fluctuations in the rand. Changes in capital flows to Emerging Markets and Developing Economies (EMDEs) and perceptions of global risk affect the loti's value. While the currency's appreciation reduces export competitiveness, its depreciation raises input prices due to imported raw materials. Coupled with a global decline in demand, these factors may negatively impact the trade balance.

MACRO-FINANCIAL ENVIRONMENT

The subdued economic activity in SA, coupled with struggles towards fiscal consolidation, represents potential sources of vulnerabilities and spillover risk for the domestic financial system. The Southern African Customs Union (SACU) revenue pool largely depends on the performance of the South African economy. The reduction in the SACU pool will adversely affect Lesotho as it is a major revenue source for fiscal operations. Since the private sector largely depends on doing business with the government, a decrease in government spending will lead to a decline in business activity and profits, which will ultimately impact their ability to repay debts.

Most of the obstacles impeding growth are structural. Additional delays in the implementation of reforms could reduce competitiveness, exacerbate negative investor sentiment, and jeopardise trade agreements such as the Africa Growth Opportunity Act (AGOA). If trade agreements can be terminated, that would reduce productivity and increase unemployment as well as household disposable income. Since most textiles produced in the country are intended for export, the country's restricted competitive advantage due to potential trade agreement termination may, in the worst case, force textile companies to experience operating losses and firm closures.

Cyberterrorism has the potential to threaten financial stability. As digitalization continues to expand, the risk of cyber threats against financial institutions increases as well. If left unaddressed, these attacks could result in severe financial crises. Attackers may obtain vital information that could result in financial losses. Payment, clearing, and settlement systems are often targeted by attackers, and any disruption to these systems could significantly affect the functioning of financial markets by impeding credit and liquidity flows.

Box 1 - Bank-Sovereign Nexus

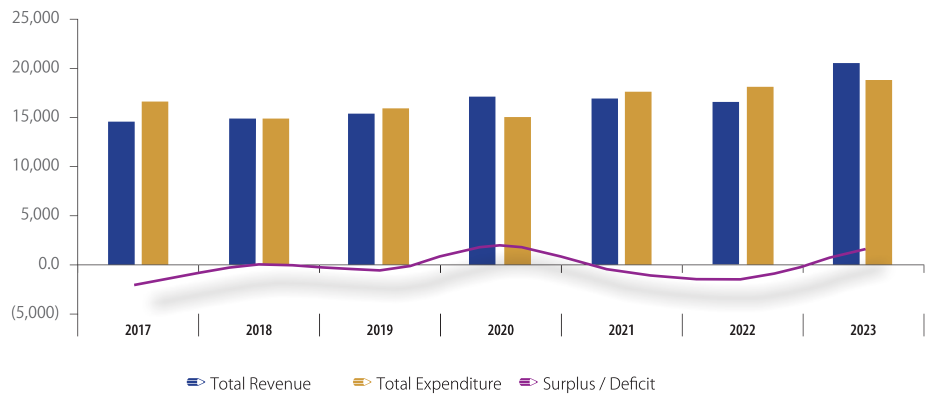
Economic Overview & 2023/2024 budget performances

The economy expanded by 2.0 percent in 2023, mainly driven by the public sector and construction, especially the Lesotho Highlands Water Project-II and its spillover effects on transportation, logistics, and financial services.

In the 2023/24 budget, parliament approved M25.1 billion in revenue for the execution of public policies across various sectors[4], including those of healthcare, human capital development, building enabling infrastructure, as well as strengthening governance accountability and building effective institutions. Total expenditures were estimated to be at M24.1 billion, with M17.8 billion designated for recurrent spending and M6.3 billion allocated for capital investments. Overall, there was an anticipated surplus of M 1.0 billion for the financial year 2023/2024 as shown in Figure 2.

[4] https://www.finance.gov.ls/documents/Budget%20Formulation budget%20book/Budget%20Speech%202024-25%2021-02-2024%20Final.pdf.

Figure 2 Government Budget (million maloti)



Source: Central Bank of Lesotho

Revenue

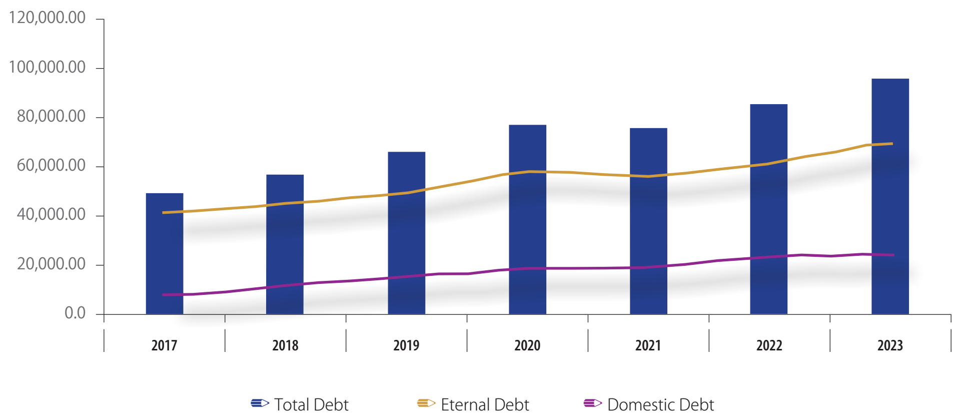
Lesotho's revenue experienced a significant boost during the fiscal year 2023/24. Total revenue rose by 33.4 percent, driven largely by a surge in the Southern African Customs Union (SACU) transfers. The rise in revenue was a result of increases in the GDP growth rates from member countries. Particularly, key sector contributors to the SACU revenue from member countries were mining and quarrying, manufacturing, as well as the financial and business services. For the next fiscal year 2024/25, an uptick of SACU revenues is projected, from M 10,148.5 million to M 11,548.0 million. Additionally, Lesotho's revenue increased due to value-added tax (VAT) collection that grew by 12.4 percent year-on-year.

Expenditure

In 2023/24, government spending continued to be dominated by wage expenditures, although there was a slight decrease of one percentage point compared to the prior year. In contrast, all other categories of government spending increased, including spending on goods and services, healthcare, interest payments, subsidies, grants, and other social benefits. This rise in expenses resulted in a 9.1 percent increase in overall total government expenditure in 2023.

MACRO-FINANCIAL ENVIRONMENT

Figure 3 Total Debt (million maloti)



Source: Central Bank of Lesotho

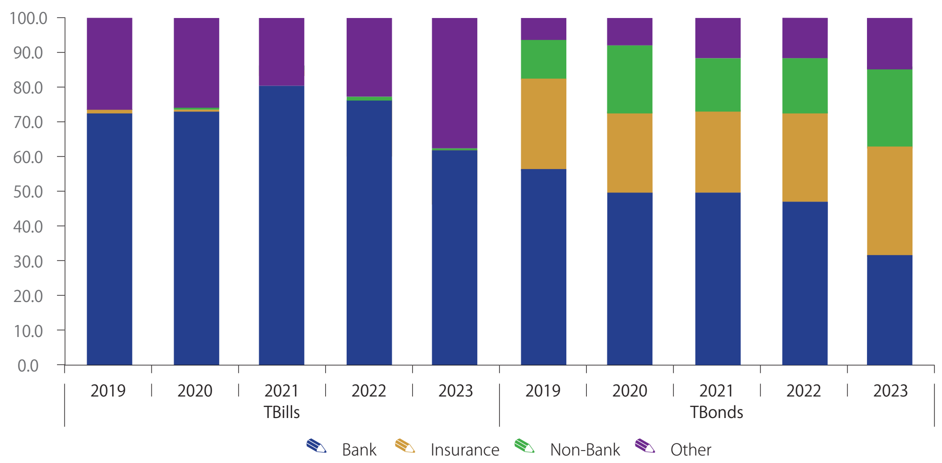
The public debt burden showed signs of slight improvement in 2023/24 (see Figure 3). The debt-to-GDP ratio fell to an estimated 59.8 percent from the 60.6 percent observed in 2022/23, and this was primarily due to the redemption of Treasury bonds. In the previous years, the majority of Lesotho's public debt originated from external sources, primarily in the form of bilateral and multilateral loans. These accounted for roughly 77.0 percent of the total debt in 2023/24, while domestic sources contributed the remaining 23.0 percent. The share of external debt to GDP stood at 46.2 percent while domestic debt accounted for 13.6 percent. Of this domestic debt, 47.0 percent was funded by the commercial banks through the purchase of treasury bills and bonds. Although the risk of external and overall debt distress remained moderate in 2023/24, a year-on-year increase of 14.1 percent in multilateral loans elevated risks to the country's long-term debt sustainability. Albeit modestly elevated risks, 91.4 percent of the external debt is concessional, implying favourable loan terms. This therefore means that the default vulnerability is moderated. For the fiscal year 2024/25, the government plans to issue M 500 million worth of Treasury bonds to finance infrastructure development and to support economic growth.

Sovereign bank nexus

The concept of the sovereign-bank nexus highlights the interdependence between a government's financial health (often referred to as the "sovereign") and the stability of its banking system. If one of these sectors encounters a problem it can create a domino effect, exacerbating pre-existing vulnerabilities in the other.

Before 2022, banks had a growing interest in government debt. However, there was a decrease in 2023, with the total government debt shrinking by 11.0 percent and commercial banks' holdings of government bonds dropping by 39.0 percent. In 2023, a significant number of government bonds held by commercial banks matured, resulting in the banks' overall exposure to sovereign debt decreasing. The reduction in government debt and improvement in fiscal health suggest a lower risk of government financial strain (sovereign stress). The decline in bond and Treasury-bill (T-bill) holdings is a positive development for the financial system's stability, as it reduces the potential for problems in the government sector to spill over and negatively impact the banks, thereby strengthening the overall financial health (see Figure 4).

Figure 4 T-Bills & Bonds Holdings (Percent)



Source: Central Bank of Lesotho

3. FINANCIAL STABILITY DEVELOPMENTS AND TRENDS

3.1 The Structure of the Financial System

The financial sector is dominated by the banking sector, which consists of three subsidiaries of South African banks and one local bank. The banking sector remains the main provider of financial services and products in the country. The three foreign-owned banks control about 90.0 percent of the total banking industry's assets, revenue, and deposits. The insurance sector (made up of ten insurers) is the second largest in terms of asset base. Table 2 displays the relative size of financial players in Lesotho.

Table 2 Number of Financial Institutions in Lesotho

Type of Institution	Number
Banks	4
Insurance	10
Microfinance Institutions	148
Asset Managers	4
Insurance Brokers	50
Foreign Exchange Bureau	2
Stockbrokers	11
Mobile Money Issuers	5
Pension Funds	11
Pension Fund Administrators	6
Pension Fund Intermediaries	5

***Source**: Central Bank of Lesotho*

The total financial system[5] assets to GDP stood at 99.4 percent. The banking industry's total assets constituted 69.8 percent of the total financial sector assets and about 71.6 percent of the gross domestic product (GDP) in 2023. The share of other non-bank financial institutions'[6] assets to total financial system assets, was 30.2 percent as shown in Figure 5. The financial markets in Lesotho comprise mainly money markets and securities markets with the latter being the larger of the two markets. In both markets, government securities make up the entire portfolio of investments. This shows that Lesotho's financial market remains relatively small, concentrated, and has limited investment options. The CBL is the sole regulator of all the financial institutions in the country.

The four commercial banks collectively have 50 branches across the country. The banking sector is characterised by limited competitiveness and is highly concentrated with a Herfindal-Hirschman index[7] (HHI) of 4 255. In 2023, the total banking industry assets were M27.5 billion and relative to the previous year, the total assets increased by 38.5 percent. The insurance industry assets base grew by 14.8 percent from the previous year, reaching M10.8 billion. MFIs recorded a 13.2 percent increase in assets on annual basis to M1.3 billion.

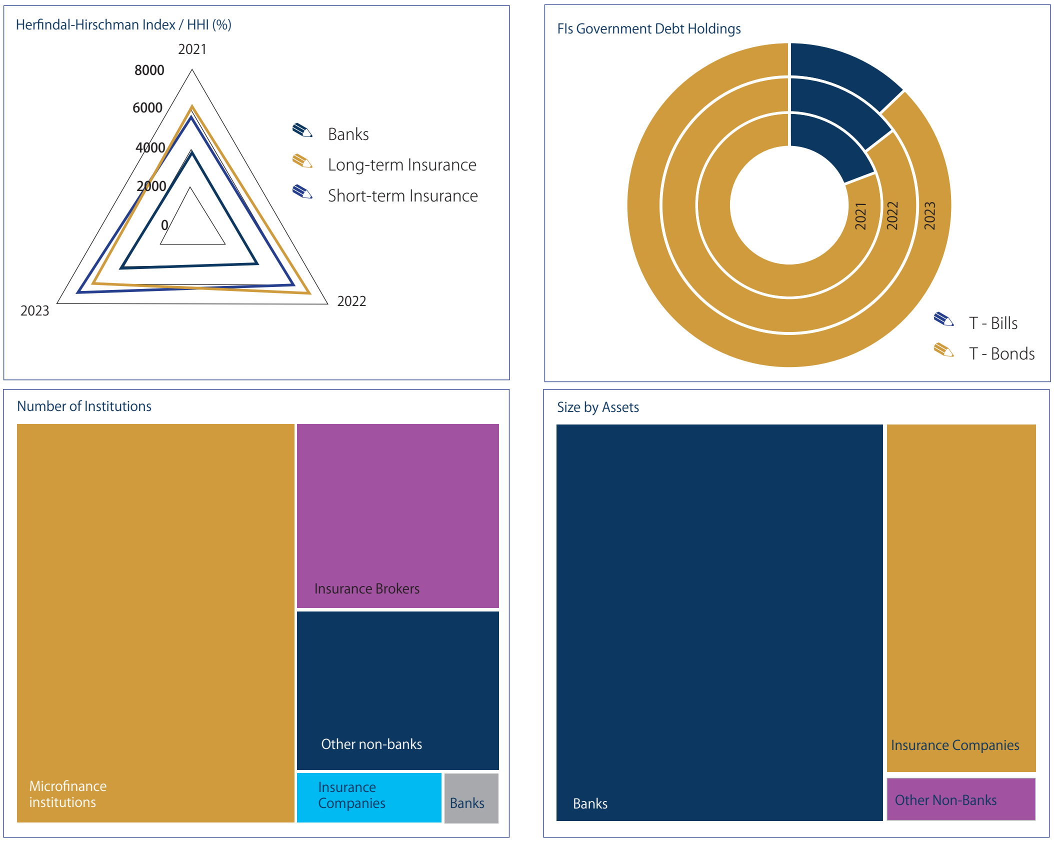
Similarly, the insurance sector showed high concentration in both long-term and short-term categories, with HHI scores of 6 886 and 5 858, respectively. Lesotho's legal and regulatory framework allowed for both deposit-taking MFIs and credit-only MFIs, only the latter operate in Lesotho at the moment. The four largest MFIs held a significant market share. Furthermore, the sector experienced growth in credit extension, which increased the asset base. The MFIs industry continued to expand in terms of licensed institutions with no systemic risk.

[5] Banking, insurance and the microfinance institutions.

[6] The Insurance industry commanded 26.6 percent of the total financial system assets and 28.1 percent of the GDP.

[7] The Herfindal-Hirschman index (HHI) is a measure of market concentration which, unlike other methods, takes into account the relative size and number of institutions in the industry. It can assume values from zero (a situation close to perfect competition) to 10000 (a situation that reflects monopolistic behaviour). There are three HHI thresholds that determine the market structure of an industry: (1) less than 1000 suggests a competitive industry, (2) 1000 to 1800 indicates a moderately concentrated industry, and (3) a value greater than 1800 depicts a highly concentrated industry.

Figure 5 Financial System Structure



Source: Central Bank of Lesotho

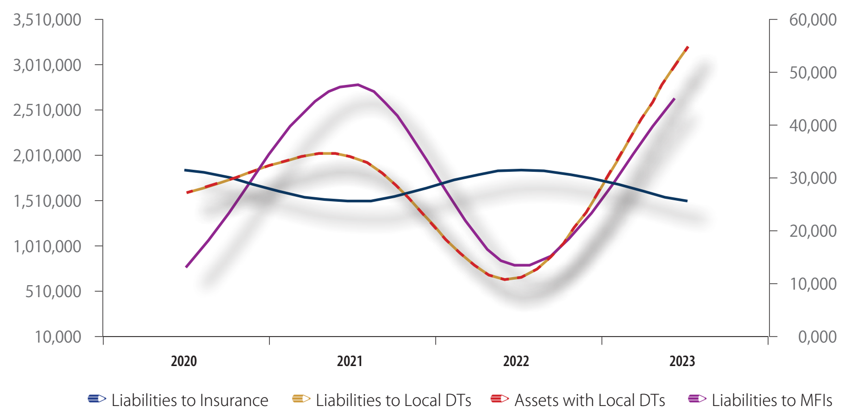
3.2 Cross Linkages in the Financial Sector

The following sections highlight the level of Lesotho's financial sector interconnectedness among the sub-sectors of the financial system, as well as with the Government of Lesotho (GoL). The level of interconnectedness in the financial sector and linkages thereof are very important for macro-prudential surveillance and financial stability. A shock in one sector can result in spillover effects on other sectors or the rest of the financial system through these linkages. Therefore, it is important that the CBL monitors vulnerabilities emanating from the inter-linkages among the financial institutions and ensures that it takes prompt corrective actions to prevent or remedy contagion risk within the financial system.

3.2.1 Linkages between Financial Institutions

The linkages between domestic banks are predominantly in a form of placements for purposes of payments and settlements instead of interbank loans. Furthermore, banks are interconnected because of investments they make with each other. Similarly, cross-border linkages are mostly placements with parent banks (see Figure 6). Banks and other non-bank financial institutions engage in credit, maturity and liquidity transformation and that can underpin the accumulation of imbalances and pockets of stress in a downturn. Furthermore, risks associated with placements with banks from abroad expose domestic banks to exchange rate risks (except in the case of SA due to the loti's peg to the South African rand, at least in the short to medium term).

Figure 6 Bank's Interconnectedness with OFCs



Source: Central Bank of Lesotho

The linkages between domestic banks are predominantly in a form of placements for purposes of payments and settlements instead of interbank loans.

3.2.2 Linkages between financial institutions and Government

Financial sector development is an important determinant of economic growth. Sound and efficient financial systems channel capital to its most productive use which is beneficial for sustaining development. Besides linkages between various sub-sectors of the financial system, linkages between the financial sector and the government can be a critical source of systemic risk through fiscal imbalances. The GoL's debt held by the financial sector primarily consists of Treasury securities[8]. The banking sector held more Treasury-bills (T-bills) than other financial institutions during the review period. The insurance sector was the second and then followed by other non-bank financial institutions. Overall, the T-bill holding by financial institutions have been declining since 2020. Similarly, commercial banks were the largest holders of Treasury bonds, followed by insurance and then other non-bank financial institutions.

Table 3 Financial Sector Exposure to Lesotho's Sovereign debt, in thousands of maloti

Period	2018	2019	2020	2021	2022	2023	△YoY
Total Financial Sector Exposure	**1 932.6**	**3 118.9**	**3 344.4**	**3 687.0**	**4 420.6**	**3 731.3**	**-689.3**
% of Total Government Debt	78.6	88.4	87.7	86.8	86.3	81.4	-4.9
T-Bill Holders' Amounts Outstanding	**644.4**	**647.7**	**654.9**	**709.1**	**668.7**	**466.1**	**-202.6**
% of Total, of which	33.3	20.8	19.7	19.2	15.1	12.5	-2.6
Commercial Banks	32.1	20.5	19.3	19.2	14.9	12.4	-2.5
Insurance Companies	1.2	0.3	0.2	0.0	0.0	0.0	0.0
Non-Bank Financial Corporations	0.0	0.0	0.2	0.0	0.2	0.1	-0.1
Bond Holders' Amounts Outstanding	**1 288.2**	**2 471.2**	**2 689.5**	**2 978.0**	**3 751.9**	**3 265.1**	**-486.8**
% of Total, of which	66.7	79.3	80.4	80.6	84.8	87.5	2.7
Commercial Banks	40.7	48.1	43.7	45.3	45.1	32.8	-12.3
Insurance Companies	26.0	21.9	19.6	21.4	24.7	31.9	7.2
Non-Bank Financial Corporations	0.0	9.3	17.1	13.9	15.0	22.8	7.8

Source: *Central Bank of Lesotho*

[8] Treasury Bonds and Bills.

4. BANKING SECTOR

The banking sector's performance improved in 2023 despite facing risks from credit concentration, reliance on wholesale funding, weak global activity, high inflation, and tighter monetary policy. The improved performance in sector was attributed to the recovery in asset quality, net income, paid-up capital and revaluation reserves. In addition, the stress-test results indicated that the existing levels of capitalisation, liquidity, and profitability ensured a high level of resilience in the sector.

Table 4 Bank Health Index

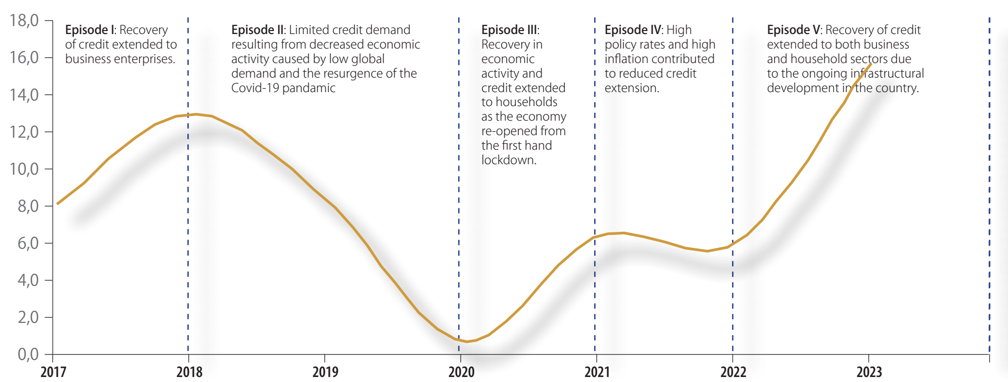
Bank Health Index	2016	2017	2018	2019	2020	2021	2022	2023
Overall Industry Health								
Capital Adequacy								
Asset Quality								
Earnings								
Liquidity								
Leverage								
Sensitivity to Market Risk								

Source: *Central Bank of Lesotho*

4.1 Credit Developments

Overall credit extension improved in 2023 compared to 2022, as depicted in Figure 7. The primary drivers of this increase were the household and business sectors. The rise in the business sector credit was primarily attributed to the spillover effects of the LHWP phase II construction works, which created demand for goods and services in related sectors and thus generating additional demand for credit across those sectors. On an annual basis, total credit increased by 15.8 percent from M8.41 billion in the previous year. Nonetheless, high policy rates and sticky inflationary pressures, dwindling global demand and weak economic activity remain the major downside risks to the credit market.

Figure 7 Annual Credit Growth (%)



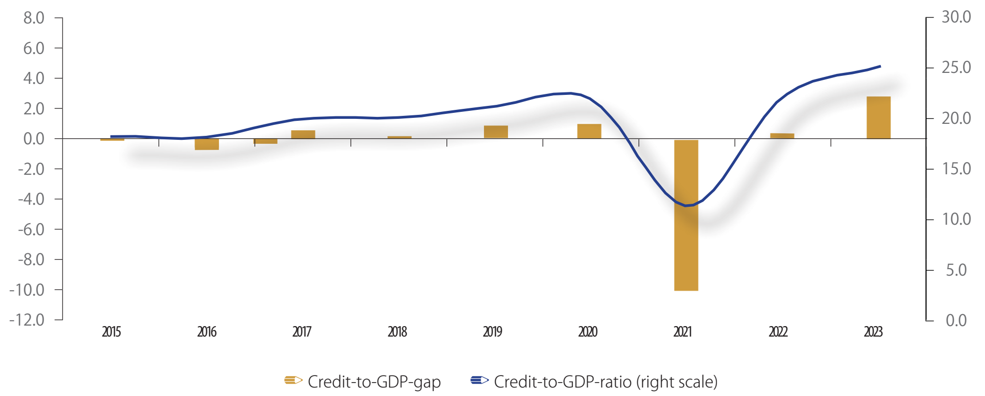
Source: Central Bank of Lesotho

BANKING SECTOR

Figure 8 depicts the evolution of the credit-to-GDP gap, which is used as an early warning indicator (EWI) for a potential banking crisis or credit bubble. The gap is measured as the difference or deviation of the credit-to-GDP ratio from its long-term trend. A positive gap suggests that the private sector may have borrowed more than what was justified by the economy's current output-producing capacity. Conversely, a negative gap implies that there is potential for additional safe borrowing for either consumption or investment purposes. Over time, the credit-to-GDP gap mostly remained positive and nearly aligned with its long-term trend, although it notably declined in 2021, suggesting that credit extended to various sectors exceeded economic output.

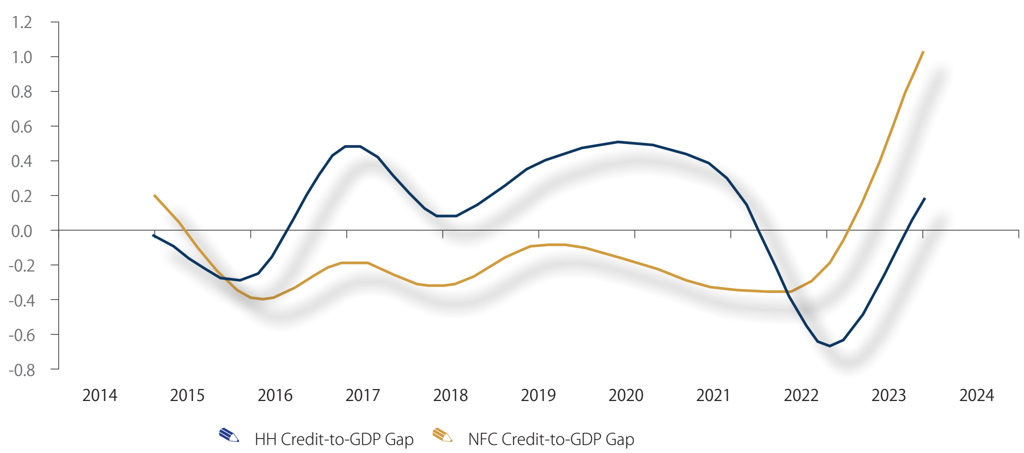
Furthermore, Figure 9 shows the credit-to-GDP gap for both households and NFC. Households credit extension has been more sustainable relative to NFC from 2021 backwards. However, the trend reversed after 2021, where households credit sustainability deteriorated rapidly due to low economic activity post COVID-19 pandemic.

Figure 8 Annual Credit-to-GDP Gap (%)



Source: Central Bank of Lesotho

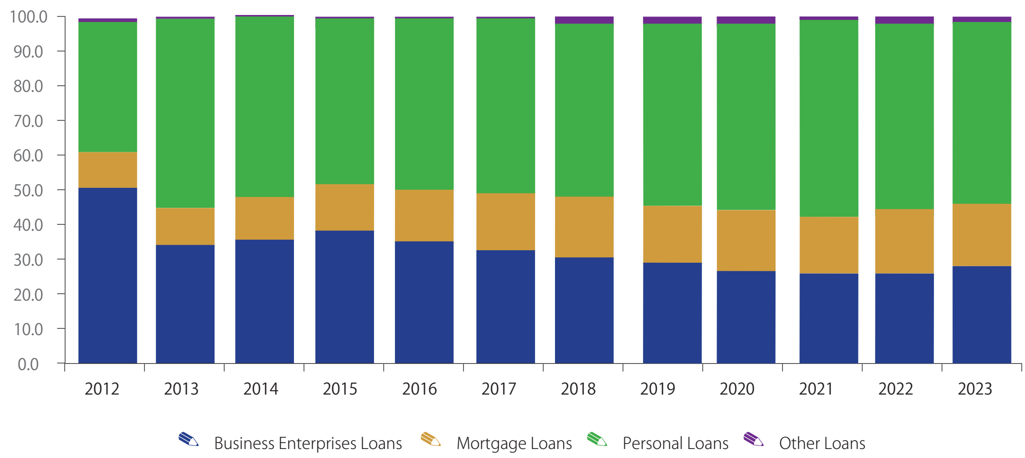
Figure 9 Annual Credit-to-GDP Gap (%) (continued)



Source: Central Bank of Lesotho

Figure 10 shows the distribution of loans extended to different sectors as a percentage of the total credit over time. In 2023, credit extended to both households and business sector constituted 70.2 percent and 27.2 percent of the total banks' loan portfolio, respectively, while the remaining 1.9 percent of credit was spread between other sectors. Among the household loans, personal loans comprised 52.3 percent of the total 70.2 percent while mortgage loans constituted the remaining portion. This highlights the degree of exposure of the banking sector to the household sector. On an annual basis, personal loans experienced a growth of 12.9 percent, reaching approximately M5.1 billion, and mortgage loans increased by 14.5 percent, amounting to M1.7 billion. However, even though there was an increase in both personal and mortgage loans, the mortgage loans increased at a higher rate than the personal loans at the end of 2023. Credit to business sector also demonstrated a notable growth of 23.0 percent, reaching M2.7 billion at the end of 2023.

Figure 10 Distribution of Loans by Sector to Total Loans (%)

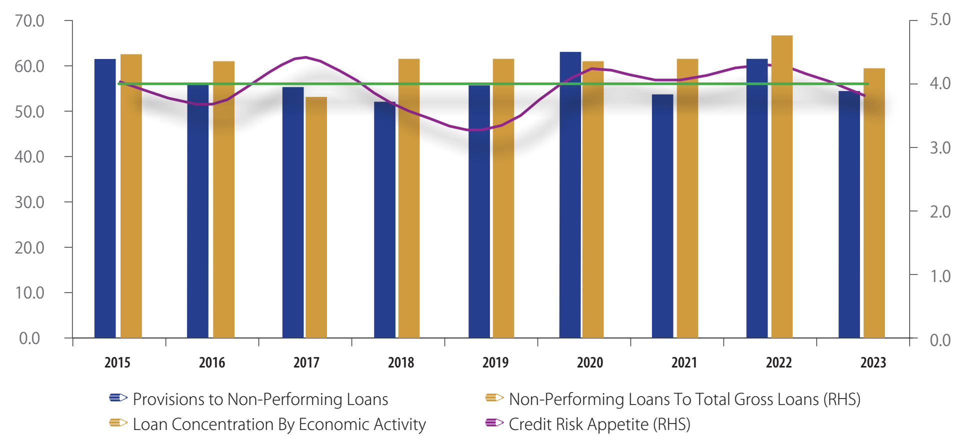


Source: Central Bank of Lesotho

Figure 11 shows the assessment of banks' asset quality using key indicators such as the non-performing loans (NPLs) ratio, provisions to NPLs ratio, and loan concentration by economic activity. NPLs as a ratio of total gross loans decreased from 4.3 percent in 2022 to 3.8 percent in 2023, demonstrating some improvement in overall asset quality. In addition, the provisions to NPLs ratio declined from 61.2 percent in 2022 to 54.2 percent in 2023, which indicates improved asset quality outlook.

Furthermore, the assessment of loan concentration by economic activity reveals that in 2023, the top three economic sectors accounted for 59.2 percent of the total business sector loans. These sectors include wholesale, retail trade, restaurants & hotels, real estate & business services and construction. This shows that over half of the loans extended to the business sector are concentrated within these three sectors, thereby increasing the concentration risk and exposing banks to risks associated with the three sectors' performance. Notably, these three sectors were also identified as having the highest NPLs in 2023.

Figure 11 Non-performing Loans and Provisions to Total Loans (%)

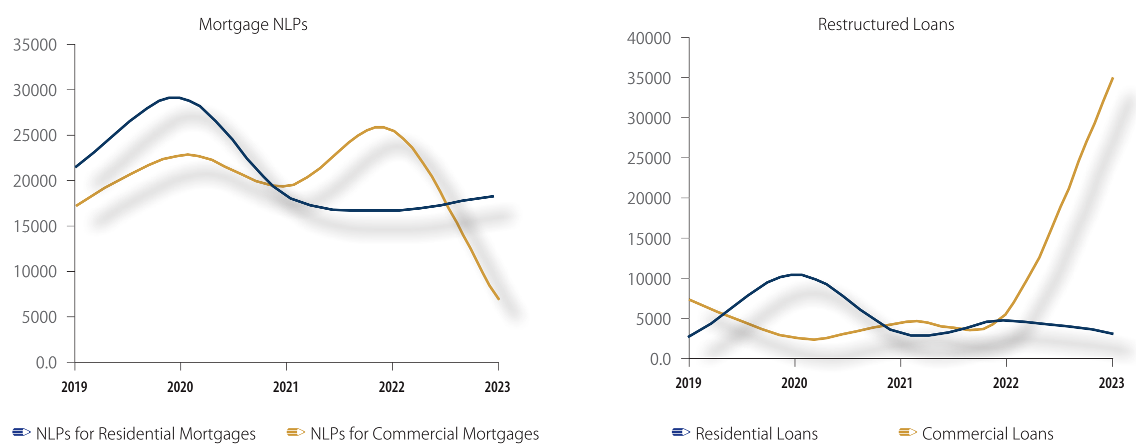


Source: Central Bank of Lesotho

Asset quality improved further during the review period.

Figure 12 depicts the mortgage loan portfolio performance through the analysis of NPLs and restructured loans for both residential and commercial loans. Commercial mortgages NPLs significantly rose during COVID-19, reaching a record of M25 million. This was a sign that the business sector was not doing well enough to pay off some of the bank-owed outstanding mortgage debt. However, in 2023, these NPLs drastically dropped to approximately M6 million. This decline, however, does not signify an improvement in the asset quality of the banking sector; rather, it may suggest that firms were overburdened to the point where they were unable to meet their obligations and applied for loan restructuring. On the contrary, from 2021 to the current reporting period, residential mortgage NPLs remained mostly unchanged, and little in the way of loan restructuring has occurred.

Figure 12 Mortgage Loans (million maloti)



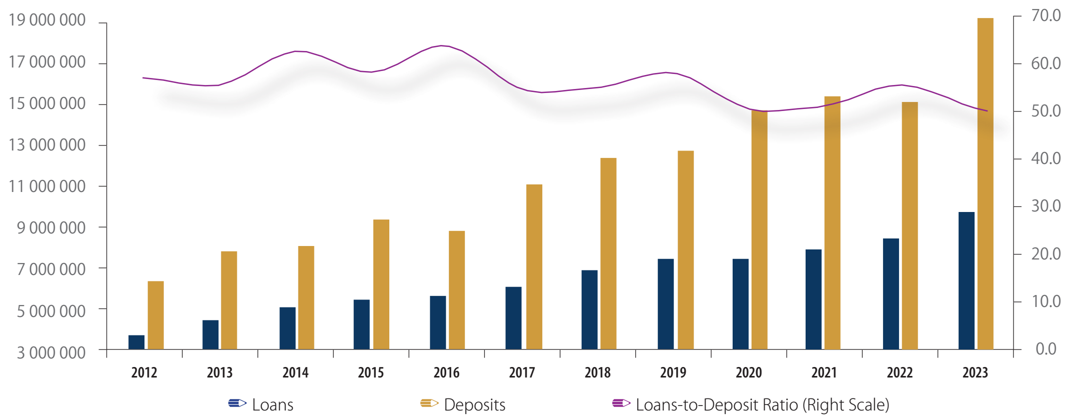
Source: Central Bank of Lesotho

4.2 Liquidity Developments and Funding Structure

Capital, being arguably the most crucial safety buffer for banks, provides the resources for them to recover from substantial losses and instills confidence in depositors. However, the primary cause of bank failures often stems from a liquidity problem, making it challenging to survive a classic 'bank run' or a modern equivalent, such as the inability to access the debt markets for new funding. A bank can be solvent - with the economic value of its assets exceeding all its claims - and still face an insolvency crisis due to illiquid assets and short-term maturities of liabilities.

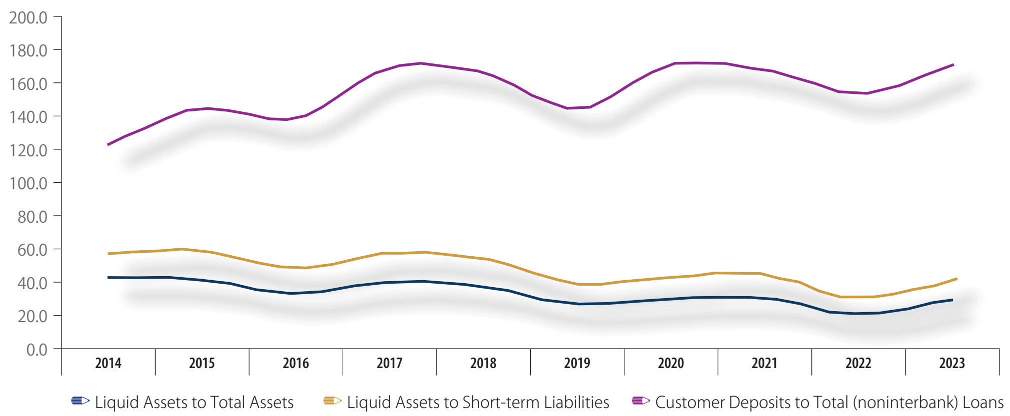
The loan-to-deposit ratio, presented in Figure 13, is an important indicator used to determine the financial institutions' short-term viability. A lending institution that accepts deposits must have a certain level of liquidity to maintain its normal daily operations. This ratio decreased by 4.9 pps to 50.6 percent in 2023. Another short-term viability ratio, liquid assets to short-term liabilities, increased from 30.3 percent in 2022 to 42.6 percent in 2023 (see Figure 14). Liquid assets increased significantly by 105.1 percent in the review period mainly due to an increase in transferable deposits with both resident and non-resident banks as well as the increase in currency and other cash items.

Figure 13 Loan to Deposit Ratio (%)



Source: Central Bank of Lesotho

Figure 14 Liquidity Ratios (%)



Source: Central Bank of Lesotho

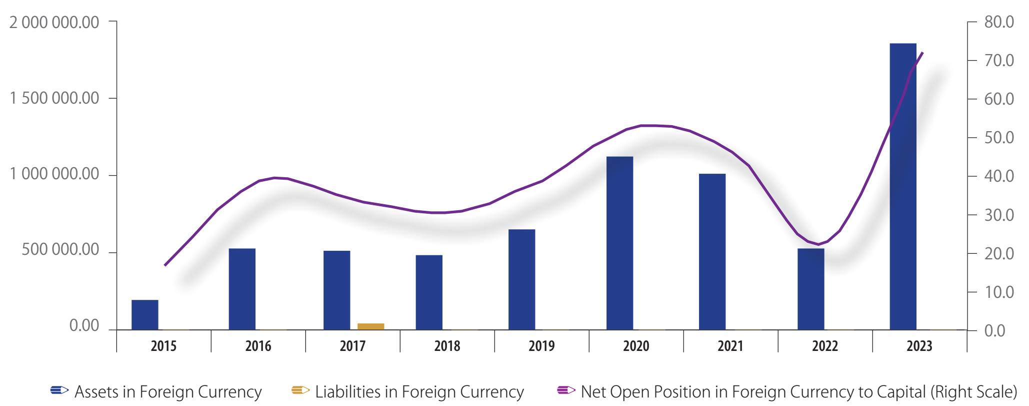
The ratio of liquid assets to total assets shows, on an ongoing basis, the liquidity availability to deposit takers to meet expected and unexpected cash outflows. In 2023, the ratio increased by 9.3 pps from 20.6 percent which was observed in 2022. The ratio of customer deposits to total (non-interbank) loans is another measure of banks' liquidity, which shows the share of deposit takers' gross loans, excluding interbank activity, funded through customer deposits, which are generally presumed to be more stable than the wholesale funding. In 2023, the ratio stood at 170.1 percent reflecting an increase of 16.1 pps from the rate observed in 2022. The primary factor contributing to the ratio's increase during the review period was an overall rise in customer deposits, attributed to the expansion of the construction sector. This expansion, fostered employment opportunities for numerous individuals, prompting them to initiate bank accounts to facilitate their remuneration and savings objectives. Nonetheless, as far as the stability of funding is concerned, the ratio is deemed relatively satisfactory by industry standards with customer deposits being almost twice the amount of total loans.

4.3 Market Risk

Market risk encompasses the risk of financial loss resulting from movements in market prices such as interest and exchange rates. In this report, market risk is assessed based on one FSI, the net open position in foreign exchange to capital, due to the limited amount of data required to assess interest rate exposure. Banks with a short open position in a foreign currency get exposed to exchange rate risk in an instance where the foreign currency appreciates, while those with a long open position get exposed in a case where the foreign currency depreciates.

During the review period, foreign currency-denominated assets for the banking sector increased, thereby maintaining the long position in foreign currency assets. Consequently, the net open position in the foreign exchange to capital ratio increased from 22.7 percent in 2022 to 71.5 percent in 2023 as shown in Figure 15. The level of capital relative to the net open position has increased, which indicates that the banks' exposure to revaluation risk has decreased.

Figure 15 Sensitivity to Market Risk

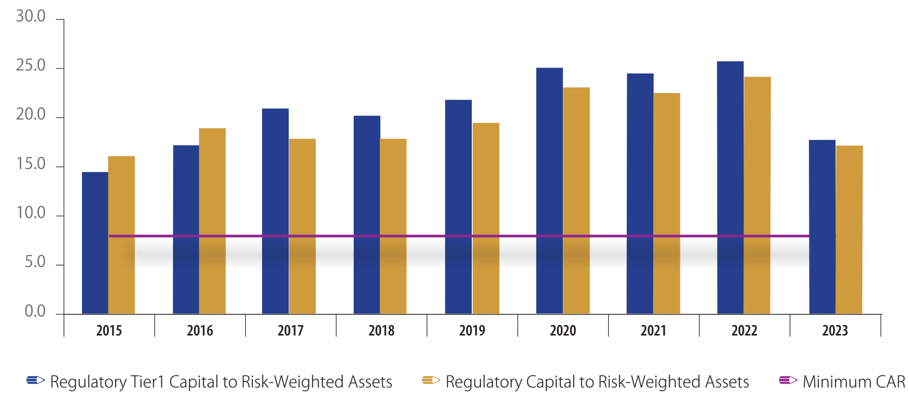


Source: Central Bank of Lesotho

4.4 Capital Adequacy

Capital adequacy ratios (CAR)[9] measure banks' health and soundness relative to insolvency risk. Minimum CAR serves to protect depositors and promote the stability and efficiency of the banking system[10] by ensuring that banks can absorb a reasonable amount of losses before becoming insolvent and depositors' funds are lost. The higher the capital adequacy ratio a bank has, the greater the level of unexpected losses it can absorb.

Figure 16 Capital Adequacy Ratios (%)



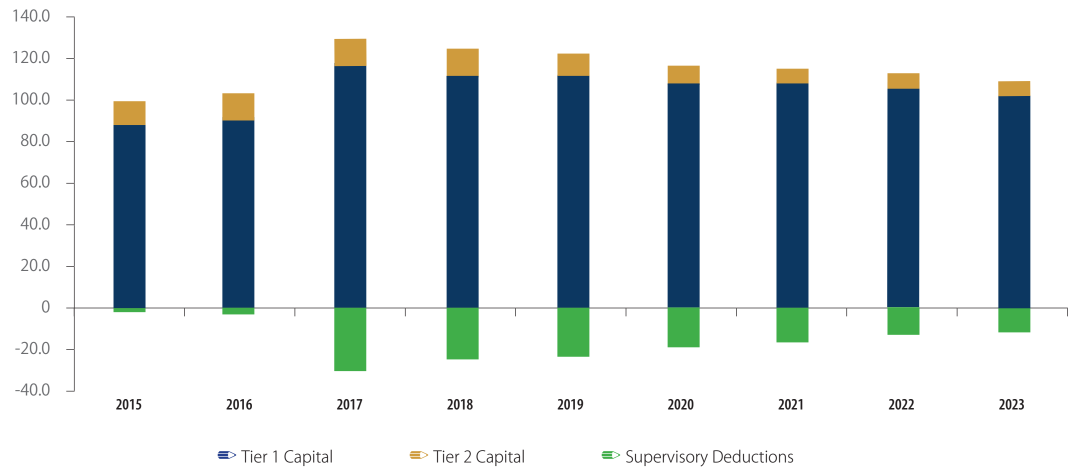
Source: Central Bank of Lesotho

The banking sector maintained CAR above the eight percent minimum prudential requirement in 2023 as indicated in Figure 16. The ratio of total regulatory capital to risk-weighted assets stood at 17.2 percent, 6.8 pps lower than the level observed in 2022. Similarly, the ratio of tier-1 capital to risk-weighted assets decreased from 25.6 percent in 2022 to 17.6 percent in 2023. Despite the decreasing trend in the capital ratios, the banking industry continued to maintain core capital buffers higher than the prudential minimum requirement, which is a positive sign of the resilience of the sector. Figure 17 shows the breakdown of total regulatory capital as of 2023.

[9] Currently, the minimum requirement for CAR is eight percent (8%).

[10] http://www.rbnz.govt.nz/finstab/banking/regulation/0091769.html

Figure 17 Composition of Total Ragulatory Capital (%)

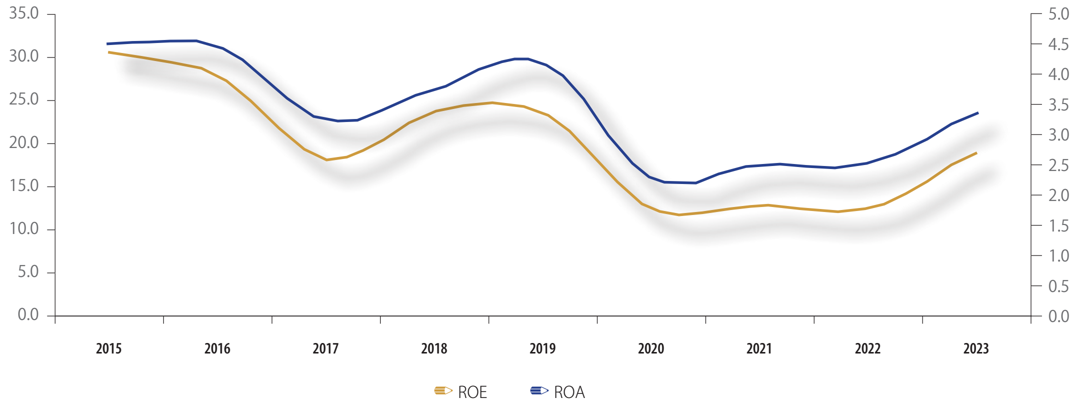


Source: Central Bank of Lesotho

4.5 Earnings and Profitability

Profitability ratios assess the ability of a company to generate earnings, profits, and cash flows relative to the amount of money invested. The banking sector profitability has been recovering from the impact of COVID-19, which weighed heavily on the performance of the sector and overall economic activity. The industry profitability increased during the review period, mostly due to increases in interest income, commission income, and the proceeds from government securities, which increased overall annualised net income. ROA increased to 3.4 percent from 2.5 percent recorded in 2022 as illustrated in Figure 18. Similarly, ROE increased to 19.0 percent in 2023 from 12.5 percent recorded in 2022.

Figure 18 Profitability Ratios (%)



Source: Central Bank of Lesotho, ROE (rhs)

The ratio of net interest margin to gross income, on the other hand, is a measure of the difference between the interest income generated by banks and the amount of interest paid out. The ratio decreased slightly by 0.5 pps to 56.3 percent in 2023. Overall, the ratio shows that over half of the banks' income came from core business, which is intermediation. On the contrary, the ratio of non-interest expense to gross income remained relatively unchanged at 64.1 percent in 2023, as compared to 2022. The ratio also indicates that over half of the income generated during the year was allocated to administrative expenses as opposed to expenses on income-earning assets ❑

5. OTHER FINANCIAL CORPORATION'S FINANCIAL PERFORMANCE

5.1 Insurance Sector

The structure and the composition of the insurance sector in 2023 remained the same as in the previous year. The sector consists of ten (10) insurers, with six (6) long-term (LT) insurers and four (4) short-term (ST) insurers. Furthermore, the sector had 50 insurance brokers at the end of 2023. The LT insurance industry had most of its net written premiums from its life cover segment (70.6 percent), followed by the assistance (funeral insurance) (15.2 percent) and credit life (13.8 percent). On the other hand, the ST insurance business consists largely of motor and property insurance products with a combined share of 60.1 percent of total ST insurance net written premiums.

Overall, both LT and ST insurance industries remained sound and stable during the review period. The LT insurance experienced an increase in total assets of 10.4 percent to M9.5 billion in 2023. This growth was driven by increases in the investments made by the sector. The ST insurance industry also experienced an increase in total assets of 77.8 percent to M1.3 billion.

Table 5 Insurance Industry Selected Ratios

	2019	2020	2021	2022	2023	%△y/y
Short-term insurance						
Claims	59.6	31.2	77.9	39.8	41.7	**1.9**
Expense	82.4	73.9	77.8	76.5	65.1	**-11.4**
Combined	142.0	105.1	155.7	116.3	106.8	**-10.0**
Investment Returns	1.7	2.0	3.1	2.2	2.7	**0.5**
Net Investment Income	14.2	12.0	18.6	14.6	16.1	**1.5**
Underwriting Expense	79.2	58.3	96.5	62.6	48.9	**-13.7**
Long-term insurance						
Claims	52.8	56.4	71.5	60.1	61.8	**1.7**
Expense	25.0	24.2	22.1	34.4	46.2	**11.8**
Combined	77.8	80.6	93.6	94.5	108	**13.5**
Investment Returns	2.2	1.4	1.7	2.0	2.9	**0.9**
Net Investment Income	28.7	16.9	26.0	33.1	68.2	**35.1**
Underwriting Expense	71.8	71.4	87.3	72.7	64.7	**-8.0**

Source: *Central Bank of Lesotho*

Investment Mix: LT insurance and ST insurance

The LT insurance industry held 48.4 percent of its investment assets in non-money market investment funds while 0.5 percent was held in money markets at the end of 2023. A sizeable proportion of the industry's investment assets were held in various asset classes such as government securities (23.9 percent), non-governmental securities (10.6 percent), investment property (1.6 percent), and investment in subsidiaries and affiliates (1.6 percent). LT insurance also increased their deposits held with local banks, attracted by rising interest rates in the banking sector. On the other hand, the ST insurance held 40.6 percent of its investment assets in money market funds while non-money market funds constituted 13.8 percent of the investment assets. The other asset classes the ST sector invested in include government securities (13.7 percent), deposits at financial institutions (30.2 percent), and investment in subsidiaries and affiliates (1.4 percent).

Profitability

The insurance industry remained profitable, with both return on investment (ROI) and net investment income ratios increasing compared to the previous year, as indicated in Table 6. The ST insurance sector experienced a 178.4 percent surge in gross written premiums, reaching M493.8 million. This rise stemmed from heightened underwriting activities in the engineering category, driven by the LHWP-II project in 2023. Conversely, LT insurance sector experienced a 17.2 percent decrease in gross written premiums to M422.7 million and a 20.0 percent decline in net written premiums to M314.2 million, attributed to increased reinsurance from the previous year.

5.2 Microfinance Institutions (MFIs)

In terms of size, the MFI sector is relatively small compared to the banking sector and the insurance sector. In 2023, MFIs constituted 3.6 percent of the total financial sector assets. This was a 0.2 pps decrease from the previous year. The number of institutions increased by 2.8 percent to 148 institutions. Additionally, the MFIs' asset base grew by 17.5 percent to M1.4 billion, with loans repayable within one year increasing by 14.1 percent and loans repayable beyond one year rising by 8.7 percent. Overall, loans increased by 8.5 percent to M1.3 billion.

The asset mix of the MFIs sector remained largely unchanged, with loans accounting for the majority of assets at 93.3 percent, followed by placements in banks at 3.5 percent. Other asset categories included accounts receivables (0.5 percent) and net intangible assets (0.2 percent). The MFIs industry remained profitable, despite a 32.3 percent decrease in net income, as it continued to generate income from its assets and equity.

Table 6 MFIs Performance Indicators (Summary)

Indicators	2019	2020	2021	2022	2023
Assets	949 153	1 046 612	1 206 018	1 199 032	1 409 206
Total Loans	875 288	1 012 840	1 140 254	1 159 032	1 266 506
Loans payable > 1 year	792 401	917 959	1 042 196	1 032 518	1 122 191
Loans payable < 1 year	82 887	94881	106 273	`126 515	144 315
Net profit/loss	88 926	131 501	65 585	75 397	56 376
ROA	7.5	10.0	8.0	6.4	5.8
ROE	22.8	28.1	22.1	18.0	15.9

Source: *Central Bank of Lesotho*

FINANCIAL MARKETS INFRASTRUCTURE

6. FINANCIAL MARKETS INFRASTRUCTURE

Financial market infrastructures (FMIs) – such as payment systems, settlement systems, central counterparties, central securities depositories, and trade repositories – deliver services that are vital to the smooth functioning of the financial system and the domestic economy. The services provided by FMIs enable payments for goods and services to be made, allow trading of securities and facilitate risk management.

The CBL is mandated to provide efficient, reliable, and safe payment and settlement systems. In line with this mandate, the Payment Systems Act 2014, Section 2(a) empowers the CBL to oversee, inspect, and monitor the national payment systems in Lesotho. This mandate is not only achieved by ensuring that the payment system in Lesotho complies with the domestic legal and regulatory framework, but also with other international standards and best practices in the payment system sphere[11].

6.1 Systemically Important Payment Systems

Lesotho's critically important systems (SIPS), like the Lesotho Wire (LSW), the Centralised Securities Depository (CSD), and the Lesotho Automated Clearing House (LACH), all operated by the Central Bank of Lesotho (CBL), are vital for a stable financial environment, effective monetary policy implementation, and broad financial inclusion. These SIPS underpin the smooth functioning of financial markets and economic activity by reducing settlement uncertainties and facilitating efficient payments.

However, there are many ways through which risks may manifest in large-value payment systems such as LSW. These include (a) protracted system unavailability (downtimes), (b) the degree of utilisation, and (c) the inability of system participants to settle their obligations on time. Critical financial system disruptions can make it more difficult for people and institutions to meet their financial obligations on schedule. As such, if these interruptions are not immediately resolved, they may lead to a series of late payments that could eventually result in defaults. Therefore, close monitoring of these key aspects in LSW is crucial as they represent the main operational and financial risks that could adversely affect LSW and might lead to a systemic crisis.

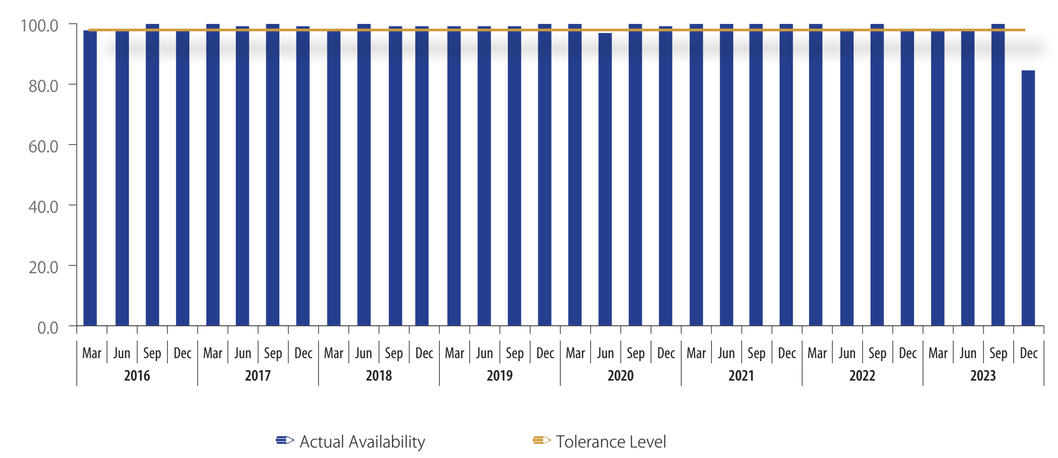
The LSW plays a critical role in the nation's financial infrastructure by enabling real-time transfers of funds (RTGS). Its uninterrupted operation is essential to ensure financial stability. Frequent or extended outages of the LSW could cause significant economic disruptions, impacting a wide range of sectors and participants. Ideally, system downtime should be minimal[12]. However, the recent cyberattack on the Central Bank of Lesotho (CBL) resulted in 84.9 percent LSW availability in December 2023, which is below the acceptable threshold of 98.0 percent (Figure 19). Consequently, the LSW transaction volumes contracted by 0.25 percent[13].

[11] These include the CPSS-IOSCO Principles for Financial Market Infrastructures (PFMI's) and the CPSS-BIS Central Bank Oversight of Payment and Settlement Systems.

[12] Among other safety threats, which continue to escalate globally, is cyber-crime. Therefore, there is a need to continue to improve security measures and to launch cyber-crime awareness campaign to help people protect themselves this type of crime. In addition, cyber security law is of paramount importance to protect the financial system.

[13] CBL Payment System Oversight Policy Framework

Figure 19 LSW System Availability, Measured in Percentage of Time Available

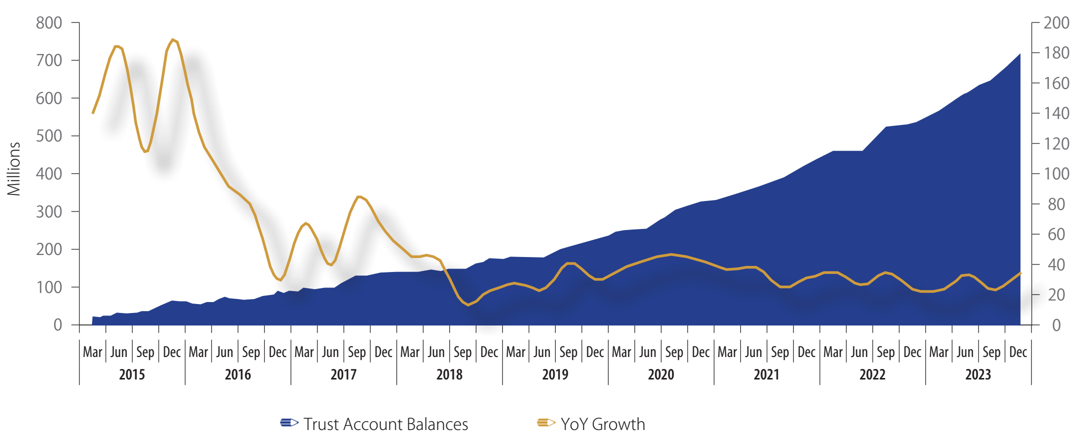


Source: Central Bank of Lesotho

6.2 Mobile Money

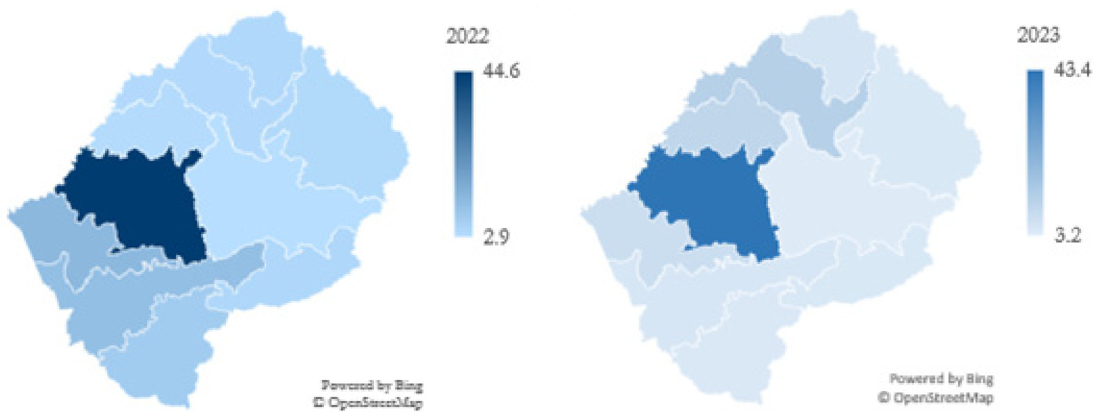
This section examines the trust account balance, which represents the total maloti equivalent to funds held per unit of mobile money in circulation. The trust account balance stood at M 714.3 million at the end of 2023, reflecting an annual increase of 34.1 percent (See Figure 20). Additionally, the number of mobile money agents grew by 18.8 percent compared to 2022. Growth in the number of mobile money agents can increase financial inclusion within the country, particularly in the highland districts where the number of agents increased by 26.5 percent ❑

Figure 20 Mobile Network Operators' Aggregate Trust Account Balance over Time, in Millions of Maloti



Source: Central Bank of Lesotho

Figure 21 Mobile Money Agents (% per district)



Source: Central Bank of Lesotho

Box 2 - Cyber Risks and Financial Stability

The global financial ecosystem is highly integrated and dependent as a result of the current push for globalisation and digitalisation. Although there are many financial and economic benefits accrued from this convergence, it has however, also increased the susceptibility to cyberattacks. According to IMF data, over the last 20 years, there have been over 20 000 cyberattacks targeting the global financial sector, costing $12 billion in losses. In addition, the risk of extreme losses from cyber incidents is increasing and such losses could potentially cause funding problems for banks and even jeopardise their solvency. In 2023, there were major significant cyber incidents such as the ransomware attack on the US arm of China's largest bank, the Industrial and Commercial Bank of China, which temporarily disrupted trades in the US Treasury market.

Cyber incidents are a key operational risk that could threaten financial institutions' operational resilience and adversely affect overall macro-financial stability. A cyber incident at a financial institution or a country's critical infrastructure could generate macro-financial stability risks through three key channels which are loss of confidence, lack of substitutes for the services rendered, and interconnectedness.

In December 2023, the CBL encountered a ransomware attack which prompted a total shutdown of the main payment system. In particular, the electronic interbank transfers suffered the most since local banks' ability to make payments was restricted by this network unavailability.

However, during this time of uncertainty, Lesotho's financial sector showcased remarkable resilience, thanks to the cooperation between the regulator and the banking institutions that ensured business continuity through alternative routes. With immediate support from cybersecurity experts from external partners, the CBL was able to swiftly implement crisis management protocols which helped mitigate the potential impact of the attack on the broader financial ecosystem. Consequently, this safeguarded the integrity and restored public confidence in the country's financial sector. The CBL did not succumb to any financial losses during this cyberstorm. These collaborative efforts and proactive approaches demonstrated the strength and resilience of Lesotho's financial sector in the face of a daunting cyber threat.

The cyber breach at the CBL has served as a valuable lesson, prompting the Bank to bolster its ICT security measures significantly. Recognising the importance of ensuring financial stability, the CBL has engaged triple-layer security walls, enhanced employee training on cyber threats, and established robust incident response plans. However, despite all the diligent efforts, the advancements in technology have created an environment conducive to more severe cyberattacks in the future. Most importantly, these intrusions have the potential to be catastrophic for the financial stability of any nation. Nevertheless, amidst this growing threat landscape, the key to financial resilience lies in collaboration. By fostering partnerships between government agencies, private enterprises, and international organizations, defences against the cyber challenges ahead can collectively be strengthen.

FINANCIAL SYSTEM RESILIENCE

7. FINANCIAL SYSTEM RESILIENCE

The Central Bank Act of 2000 gives the CBL the mandate and powers to promote and safeguard the stability and soundness of the financial system in Lesotho. The Bank uses stress-testing[14], among other tools, to achieve its objective of promoting the resilience of the domestic financial system and mitigating vulnerabilities arising from financial and economic shocks. In 2023, the CBL ran two stress-tests to determine the resilience of the banking system in Lesotho to adverse and plausible credit, interest rate, and liquidity shocks[15]. The tests covered all four commercial banks. The results covered in this report highlight June and December 2023 stress-test results and their implications for the banking industry and Lesotho's economy. The stress-test results demonstrate that the banking sector is highly resilient and could withstand shocks assumed in the stress-test.

The level of non–performing loans is used as an indicator of inherent credit risk in a bank's loan portfolio.

[14] The Bank uses a simple sensitivity test model which is static and does not perform any form of forecasting. A static model assesses the impact of a particular shock or a group of shocks at a certain point in time. The stress-testing approach applied is a top-down one. This implies that CBL collected necessary data and conducted stress-testing based on the information received.

[15] Shocks are defined as exceptional but plausible idiosyncratic and/or system-wide adverse economic events. They are classified in different levels of severity ranging from low to severe, and are used to stress various risk-factors to determine their resilience. The calibration of shocks is made on the basis of both historical and hypothetical approaches. The historical approach uses past-crises information to formulate shocks and scenarios while the hypothetical approach is used in the absence of such information.

7.1 Stress-test Key Assumptions and Shocks

7.1.1 Credit Risk Shocks

Credit risk is defined as the potential that a bank borrower, or counterparty, will fail to meet its payment obligations as stipulated in the contractual terms agreed with the bank. The level of non-performing loans (NPLs) is normally used as an indicator of credit risk inherent in a bank's loan portfolio. A non-performing loan is the sum of borrowed money for which the debtor has not made his or her scheduled payments for at least 90 days[16]. Banks normally set aside funds to cover potential losses on loans in the form of loan-loss provisions. Consequently, since loan-loss provisions are an expense to a bank, they erode the institution's capital levels by decreasing retained earnings and reducing the value of the risk-weighted assets (RWA). The credit risk shock transmission channel is summarised in Figure 22.

Figure 22 Credit Risk Shock Transmission

Source: Central Bank of Lesotho

7.1.2 Liquidity Risk

Liquidity risk is the risk that a bank will not be able to meet its current and future cash flow and collateral needs, both expected and unexpected, without materially affecting its daily operations or overall financial condition. Liquidity stress-tests are used to assess banks' resilience against maturity mismatches between short-term assets and liabilities or in a case where banks experience unexpected adverse events such as a bank run. CBL runs stress-tests that entail the latter. The bank-run type of shock can be transmitted within the banking sector as indicated in Figure 23.

[16] Financial Institutions (Loan portfolio classification) Regulations 2016.

Figure 23 **Liquidity Risk Shock Transmission**

Source: Central Bank of Lesotho

Liquidity risk is the risk that a bank will not be able to meet its current and future cash flow and collateral needs, both expected and unexpected, without materially affecting its daily operations or overall financial condition.

7.1.3 Interest Rate Risk Shocks

Interest rate risk can have both a direct and indirect impact on the bank's balance sheets. Direct interest rate risk is the risk incurred by a bank when its interest-rate-sensitive assets and liabilities maturities are not matched. In contrast, a bank is exposed to indirect interest rate risk through the impact of interest rate changes on the borrower's creditworthiness and ability to repay. Direct interest rate calculates the changes in interest income and interest expenses resulting from the gap between the flow of interest on the holdings of assets and liabilities in each bucket. The gap in each time bucket provides a relative magnitude of the impact of the shock on the net interest income (NII) given a change in interest rate. Interest income is the most important source of revenue for banks and an indicator of profitability. The test run by CBL assumed shocks in the form of an equal change in all rates (parallel yield curve shift). The shocks are calibrated using historical changes in policy rates. Figure 24 shows the transmission of interest rate shocks.

7.1.4 Foreign Exchange Rate Risk

Foreign exchange risk is the risk that a bank's balance sheet may fluctuate because of changes in the value of a local currency relative to the currency with which the bank's assets are denominated as shown in Figure 25. For instance, if a bank has foreign currency (FX) denominated assets and liabilities, its balance sheet will be prone to fluctuations in currency markets. The bank's balance sheet is more sensitive to currency market swings when it has a larger exposure to foreign exchange assets and liabilities. Foreign exchange stress-test scenarios assumed shocks of 20, 25, and 30 percent depreciation of local currency for low, moderate, and severe scenarios, respectively.

Figure 24 **Interest Rate Risk Shock Transmission Channel**

Source: Central Bank of Lesotho

Interest rate risk is the risk to income and capital of a bank brought about movements in markets interest rates.

Figure 25 Foreign Exchange Risk Shock Transmission Channel

Source: Central Bank of Lesotho

Foreign exchange risk is the risk to a bank's balance sheet due to fluctuations in the value of the local currency relative to the currency in which the bank's assets and liabilities are denominated.

7.2 Stress-test Results

7.2.1 Credit Risk

Credit risk stress-test results revealed that all banks would have been sufficiently capitalised to absorb losses as a result of the assumed sector-wide increase in NPLs in both June and December 2023. According to Table 7, in the case of Group I shocks, all banks would have maintained their CAR above the minimum requirement of eight percent, which means that they would have remained solvent. Therefore, given the assumptions and types of shocks accounted for, the credit risk stemming from a rise in non-performing loans (NPLs) can be deemed low, as all banks would possess sufficient capital to withstand losses arising from elevated NPL levels.

Table 7 Credit Risk Stress Test Results

Risks		Number of banks below 8.0% CAR	Assets share of banks< 8.0% CAR	Number of Insolvent Banks	Capital Deficiency Relative to CAR	Capital Deficiency Relative to Minimum Capital
June 2023						
Group I: System level credit risk						
Shock I:	NPLs increase by 60%	0	0	0	0	0
Shock II:	NPLs increase by 120%	0	0	0	0	0
Shock III:	NPLs increase by 180%	0	0	0	0	0
Group II: Concentration Risk						
Shock I:	Largest 1 Borrower Defaults	1	13.2	0	69 816	9 983
Shock II:	Top 3 Borrowers Default	1	13.2	1	188 260	128 427
Shock III:	Top 5 Borrowers Default	1	13.2	1	258 260	198 427
December 2023						
Group I: System level credit risk						
Shock I:	NPLs increase by 60%	0	0	0	0	0
Shock II:	NPLs increase by 120%	0	0	0	0	0
Shock III:	NPLs increase by 180%	0	0	0	0	0
Group II: Concentration Risk						
Shock I:	Largest 1 Borrower Defaults	1	14.1	0	50 634	0
Shock II:	Top 3 Borrowers Default	1	14.1	1	195 970	104 817
Shock III:	Top 5 Borrowers Default	1	14.1	1	275 888	184 735

Source: *Central Bank of Lesotho*

Concentration risk in banks' loan books was stress-tested to assess the resilience of banks to their large exposures. One bank failed the test in the scenarios where its largest, top three, and top five borrowers defaulted in both June and December 2023. This indicates that the bank's capital would have not been sufficient to absorb the incurred losses, falling below the eight percent CAR threshold and the minimum unimpaired capital. Additionally, this bank would have gone insolvent under Shock II and III scenarios. This shows that concentration risk in large exposures is high and significant. However, this can be mitigated by ensuring that banks hold sufficient and high-quality collateral against their top five borrowers.

Table 8 presents the test results regarding the banking industry's risk exposure to two economic sectors: households and business sector (corporates). The stress test focused on mortgage and personal loan portfolios within the household sector, based on the assumptions outlined in Section 7.1. For mortgages, the impact was minimal, with all banks maintaining a post-shock capital adequacy ratio (CAR) above the minimum requirement, thus obviating the need for recapitalisation in both June and December 2023. However, in the personal loan portfolio, one bank failed the test in both periods, necessitating recapitalisation of M302.8 million and M355.2 million relative to CAR in June and December 2023, respectively.

Secondly, stress tests were conducted on business lines, which represent more than half of the total loans to the business sector. For the first period, June 2023, if the shock assumed for the construction industry were to occur, two banks, holding a combined assets market share of 32.6 percent, would have fallen below both regulatory and unimpaired capital requirements, resulting in insolvency. This would necessitate a collective recapitalisation of approximately M462.5 million relative to capital adequacy ratio (CAR). For December 2023 period, three banks, with a combined assets market share of 91.1 percent, would have breached regulatory capital requirements, requiring a combined recapitalisation of about M876.9 million and M99.2 million relative to CAR and unimpaired capital, respectively. but only one banks would have faced insolvency. Lastly, in the scenario involving a surge in non-performing loans (NPLs) in the mining, quarrying, and manufacturing sectors, all banks passed the test, and would have maintained adequate post-shock capital levels above the prudential CAR requirements in both periods.

Table 8 Sectoral Credit Risk Stress-Test Results

Risks	Number of banks below 8.0% CAR	Assets share of banks< 8.0% CAR	Number of Insolvent Banks	Capital Deficiency Relative to CAR	Capital Deficiency Relative to Minimum Capital
June 2023					
Group III: Sectoral level credit risk (20 percent increase in NPLs)					
HOUSEHOLD SECTOR					
Mortgages	0	0	0	0	0
Personal loans	1	58.7	0	302 777	0
BUSINESS SECTOR					
Manufacturing	0	0	0	0	0
Construction	2	32.6	2	462 528	320 676
Mining & quarrying	0	0	0	0	0
December 2023					
Group III: Sectoral level credit risk (20 percent increase in NPLs)					
HOUSEHOLD SECTOR					
Mortgages	0	0	0	0	0
Personal loans	1	55.4	0	355 160	0
BUSINESS SECTOR					
Manufacturing	0	0	0	0	0
Construction	3	91.1	1	876 895	99 237
Mining & quarrying	0	0	0	53 033	0

Source: *Central Bank of Lesotho*

7.2.2 Liquidity Risk

The liquidity stress-tests results revealed that all banks would have maintained adequate liquidity levels even after five days of continuous deposit withdrawals. Initially, each bank would have needed to conduct one round of liquidation on the first day of the run, generating sufficient cash to cover customer withdrawals for the remaining five days. This underscores the adequacy of both the quantity and quality of liquidity assets held by the banks to absorb the assumed shock in this test. Similarly, in Scenario II, all banks would have endured the five-day bank run, although multiple rounds of liquidation would have been necessary by the fifth day. Nonetheless, all banks would have remained liquid throughout the assumed duration of the run in this test.

In the June stress test, scenario I would have resulted in about M7.49 billion withdrawn from banks' deposits of M17.81 billion causing the banking industry balance sheet to shrink by 34.7 percent. Moreover, M8.0 billion would have been withdrawn against deposits of M19.2 billion that banks were holding as at December 2023, causing the balance sheet to shrink by 32.8 percent. On the other hand, in scenario II, the June 2023 results show that shocks assumed would have led to withdrawals of M12.1 billion of M17.81 billion worth of deposits causing the banking industry balance sheet to shrink by 53.9 percent. Similarly, M13.0 billion of M19.2 billion worth of deposits held by banks would have been withdrawn as at December 2023 causing the banking industry balance sheet to shrink by 50.7 percent. These results are largely similar, implying that the resilience of the banking system has not significantly changed in 2023 based on the results of both test periods.

Therefore, liquidity risk could also be regarded as minimal since banks would have sustained a bank-run type event for a period of five days under both scenarios, allowing the banks and the CBL a window of five days to one week to work on a solution that would restore confidence in the industry.

Table 9 Daily Withdrawals

	June 2023				December 2023			
	Scenario I		Scenario II		Scenario I		Scenario II	
	Daily Withdrawals (%)	No. of illiquid Banks (out of 4)	Daily Withdrawals (%)	No. of illiquid Banks (out of 4)	Daily Withdrawals (%)	No. of illiquid Banks (out of 4)	Daily Withdrawals (%)	No. of illiquid Banks (out of 4)
1st day	5	0	5	0	5	0	5	0
2nd day	5	0	10	0	5	0	10	0
3rd day	5	0	15	0	5	0	15	0
4th day	10	0	20	0	10	0	20	0
5th day	10	0	25	0	10	0	25	0

***Source**: Central Bank of Lesotho*

The large depositors' bank runs stress-test results[17] revealed that if the largest depositor(s) of each bank had simultaneously withdrawn their deposits, none of the banks would have exhausted their liquidity. However, one bank would have breached the 25.0 percent minimum liquid assets requirement in the severe scenario where the top five depositors simultaneously withdrew their deposits in June 2023. On the other hand, in December 2023, one bank would have breached

[17] See Appendix III for detailed assumptions for this shock.

the minimum liquid assets requirements in both the moderate (top three depositors simultaneously withdraw their deposits) and severe scenarios. As the results show, the liquidity position appears to have remained more or less the same in June and December 2023. On the positive side, the results showed a high level of resilience since none of the banks would have exhausted their liquidity even in the severe scenario involving the top-five depositors' run.

of 11.2 pps from the baseline, while the liquid assets to total assets ratio would have declined to 46.5 percent, representing a decrease of 12.4 pps.

Examining the December 2023 liquidity stress test outcomes, withdrawal of deposits by the largest depositors would have led to a decrease of 2.6 pps in the ratio of liquid assets to short-term liabilities compared to the baseline. Similarly, the ratio of liquid assets to total assets would have declined by 3 pps. Moreover, in scenarios where the top five depositors withdrew their deposits, the ratio of liquid assets to short-term liabilities would have decreased to 61.1 percent, indicating an 8.8 pps decline from the baseline, while the ratio of liquid assets to total assets would have dropped to 47.9 percent, reflecting a decrease of 9.8 pps. In summary, the banking industry would have maintained resilience across all scenarios, with no bank experiencing depleted liquidity.

Table 10 Large Depositor Run

		2023	
		June	December
Baseline	Liquid Assets/Short-term Liabilities	70.8	69.9
	Liquid Asset Ratio/Deposit	78.7	82.8
	Liquid Asset Ratio	58.9	57.7
	Shocks		
	Largest Depositor withdrawals		
Shock I	Liquid Assets/Short-term Liabilities	66.6	67.3
	Liquid Asset Ratio	54.1	54.7
	Liquid Asset Ratio less Hurdle Rate	29.1	29.7
	Banks with exhausted liquidity	0	0
	Top 3 Depositors' withdrawals		
Shock II	Liquid Assets/Short-term Liabilities	62.5	64.0
	Liquid Asset Ratio	49.6	51.,0
	Liquid Asset Ratio less Hurdle Rate	24.6	26.0
	Banks with exhausted liquidity	0	0
	Top 5 Depositors withdrawals		
Shock III	Liquid Assets/Short-term Liabilities	59.6	61.1
	Liquid Asset Ratio	46.5	47.9
	Liquid Asset Ratio less Hurdle Rate	21.5	22.9
	Banks with exhausted liquidity	0	0

***Source**: Central Bank of Lesotho*

Table 10 illustrates the baseline liquidity ratios for the June and December 2023 stress test results, along with the changes in these ratios following significant depositor withdrawal shocks. Specifically, in June 2023, if the largest depositors had withdrawn their deposits, the liquidity assets to short-term liabilities ratio would have decreased by 4.2 percentage points (pps), and the liquid assets to total assets ratio would have declined by 4.8 pps. Additionally, in scenarios where the top five depositors withdrew their deposits, the liquid assets to short-term liabilities ratio would have decreased to 59.6 percent, marking a decline

7.2.3 Interest Rate Risk

Table 11 Upward yield curve shift

		2023					
		June			December		
Period	Baseline	Upward Yield Curve Shift					
		Repricing Gap, thousand maloti					
		+150 bps	+200 bps	+250 bps	+150 bps	+200 bps	+250 bps
0 – 3 months	(8 584 319)	(128 765)	(171 686)	(214 608)	(151 197)	(201 596)	(251 995)
3 – 6 months	1 451 255	21 769	29 025	36 281	12 552	16 736	20 919
6 – 9 months	-	-	-	-	-	-	-
9 – 12 months	3 161 456	47 422	63 229	79 036	57 763	77 017	96 271
> 12 months	7 996 178	119 943	159 924	199 904	139 106	185 474	231 843
Total Repricing Gap	4 024 570	60 369	80 491	100 614	58 223	77 630	97 038
Impact on Prudential Requirements							
Tier 1 Capital / RWA	23.8	24.2	24.3	24.5	20.9	21.0	21.1
Regulatory Capital / RWA	22.7	23.2	23.3	23.4	20.3	20.5	20.6
Banks below 8% ratio	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Assets of banks below 8% ratio	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Insolvent Banks	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recapitalization relative to CAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recapitalization relative to MUC	0.0	0.0	0.0	0.0	0.0	0.0	0.0

***Source**: Central Bank of Lesotho*

In both the June and December 2023 stress test outcomes, minimal alterations in prudential ratios would have occurred in response to increased interest rates. The findings indicated that the banking sector's capital adequacy ratios would not have dropped below eight percent following the induced shocks. Additionally, no bank would have necessitated recapitalisation relative to capital adequacy ratio (CAR) and minimum unimpaired capital requirements. Consequently, the banking sector would have maintained solvency even after enduring severe shocks.

7.2.4 Foreign Exchange Rate Risk

Table 12 Currency depreciation

	2023					
	June			December		
FX Rate Risk Analysis Baseline	All Banks	Large Banks	Small Banks	All Banks	Large Banks	Small Banks
Relative Bank Size (%)	**100.0**	**58.7**	**41.3**	**100.0**	**55.4**	**44.6**
Tier I Capital / RWA	23.8	22.1	26.0	20.5	19.6	21.8
Regulatory Capital / RWA	22.7	19.8	26.7	20.0	17.8	22.7
Net open position ('000s)	32 611	30 655	1 956	-2 710	-3 907	1 197
Shock I - Currency Depreciation of 20 percent						
Total Valuation Gains/Losses	**6 522**	**6 131**	**391**	**-542**	**-781**	**239**
Post Shock Tier I / RWA	23.8	22.2	26.0	20.5	19.5	21.8
Post Shock Regulatory Capital / RWA	22.8	19.9	26.7	20.0	17.8	22.7
Net open position	39 133	36 786	2 347	-3 252	-4 688	1 436
Banks below 8% ratio	0	0	0	0	0	0
Shock II - Currency Depreciation of 25 percent						
Total Valuation Gains/Losses	**8 153**	**7 664**	**489**	**-678**	**-977**	**299**
Post Shock Tier I / RWA	23.8	22.2	26.0	20.5	19.5	21.8
Post Shock Regulatory Capital / RWA	22.8	19.9	26.7	20.0	17.8	22.7
Net open position	40 764	38 319	2 445	-3 388	-4 884	1 496
Banks below 8% ratio	0	0	0	0	0	0
Shock III - Currency Depreciation of 30 percent						
Total Valuation Gains/Losses	**9 783**	**9 197**	**587**	**-813**	**-1 172**	**359**
Post Shock Tier I / RWA	23.8	22.2	26.0	20.5	19.5	21.8
Post Shock Regulatory Capital / RWA	22.8	19.9	26.7	20.0	17.8	22.7
Net open position	42 394	39 852	2 543	-3 523	-50 79.1	1 556
Banks below 8% ratio	0	0	0	0	0	0

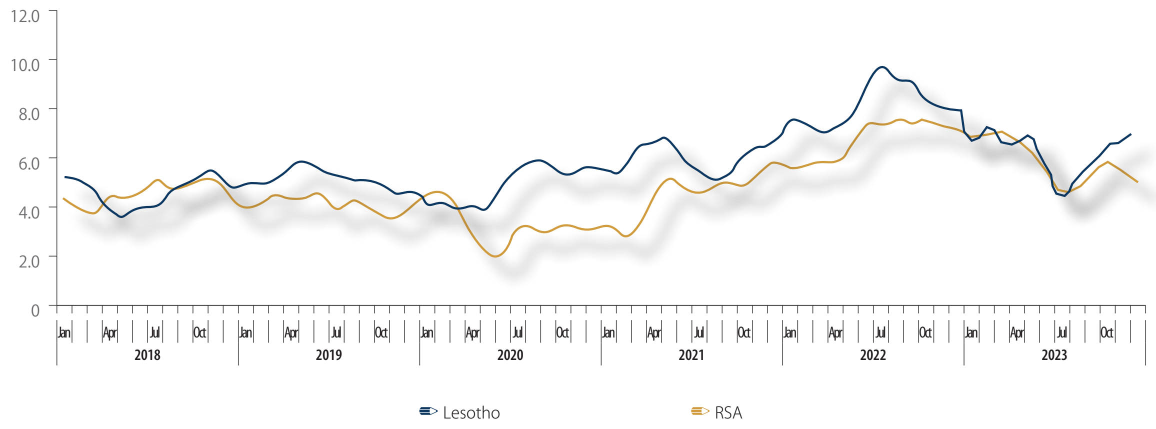
Source: *Central Bank of Lesotho*

The findings indicate that the depreciation of the loti would have had an insignificant impact on the prudential ratios. Even when subjected to severe scenarios, the banking sector's capital adequacy ratios would not have fallen below the minimum 8 percent threshold. In June 2023, stress test results showed that the banking sector would have maintained a positive net open position under all scenarios. However, by December 2023, the banking sector would have experienced a negative net open position across all scenarios. This negative position was due to a 19.5 percent decline in foreign currency assets from June 2023, coupled with a 15.8 percent increase in foreign currency liabilities. The negative net open position suggests that the banking sector would have faced more international settlements than gains in foreign assets, potentially leading to reduced profitability and capital

APPENDICES

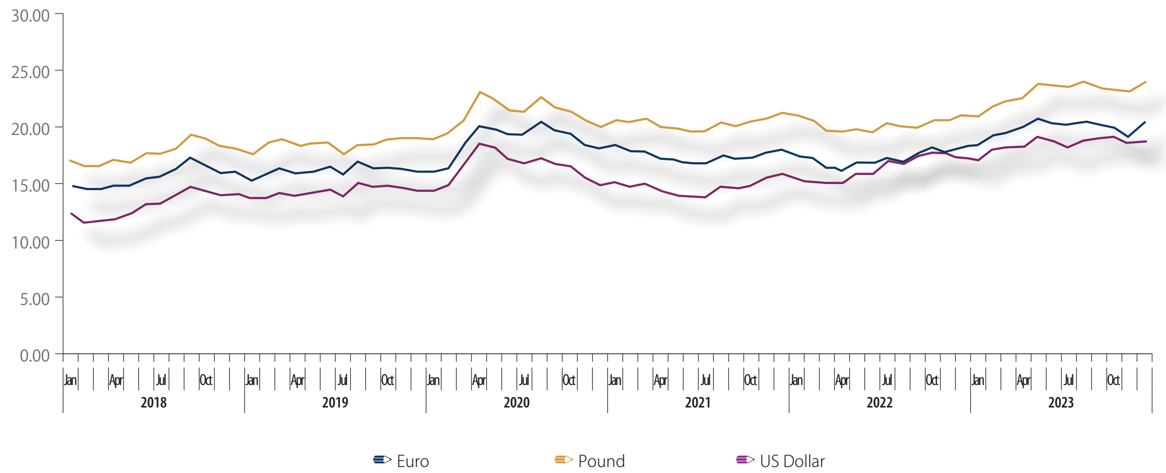
Appendix I: Graphs

Appendix A | Lesotho and RSA Inflation (%)



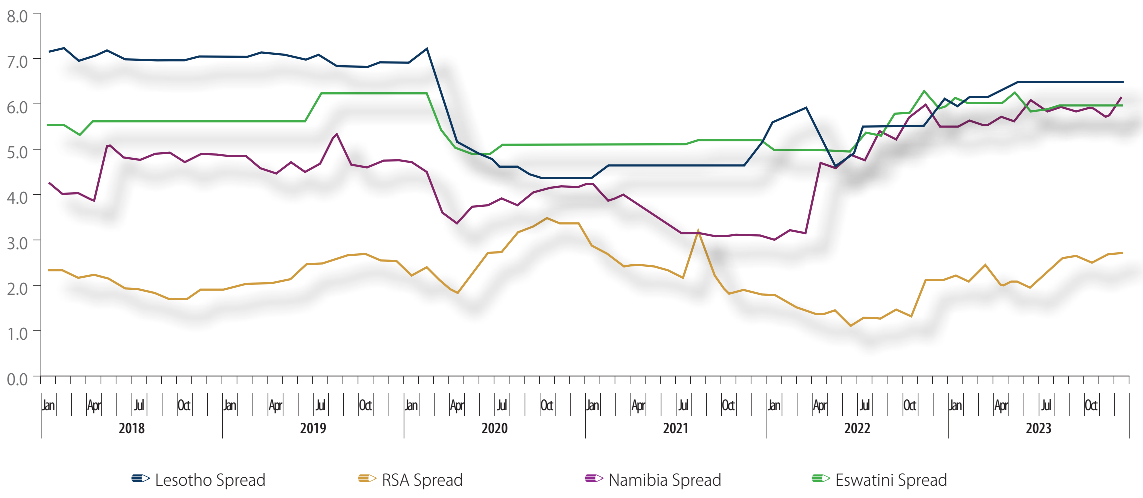
Source: Central Bank of Lesotho

Appendix B | Loti Exchange Rate to the Euro, Pound, and US Dollar



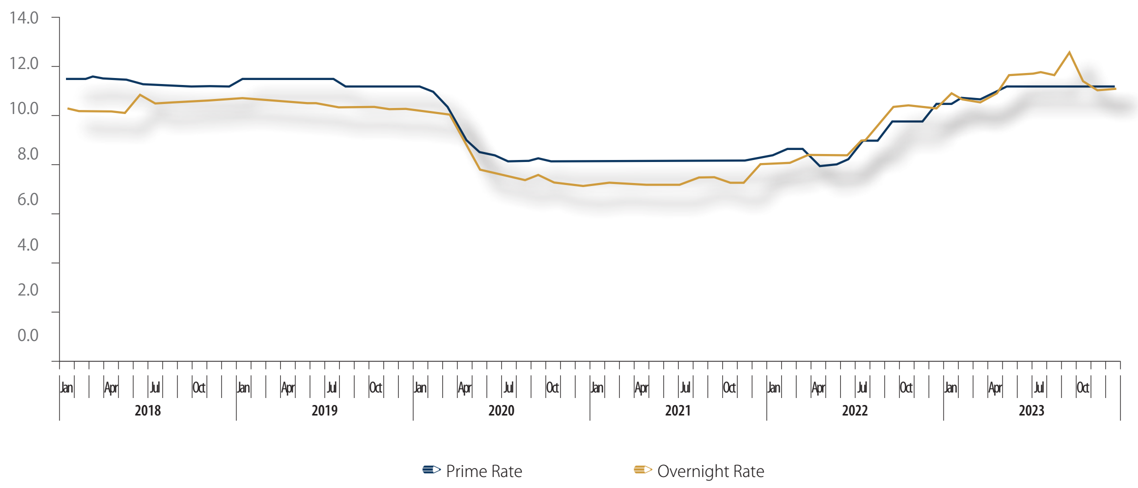
Source: Central Bank of Lesotho

Appendix C Intermediation Spread (%)



Source: CBL, BON, CBS

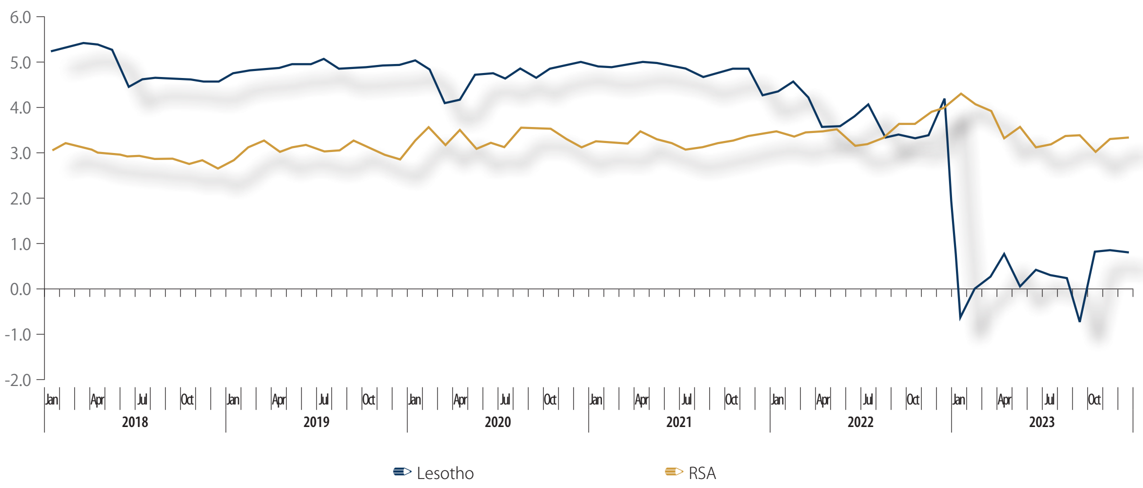
Appendix D Money Market Spread (%)



Source: Central Bank of Lesotho

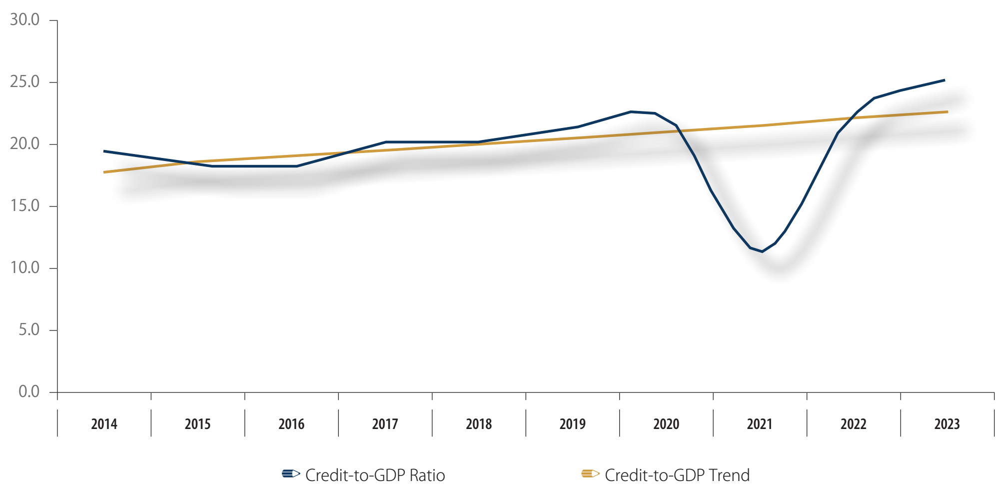
APPENDICES

Appendix E Lesotho and RSA Risk Premium (%)



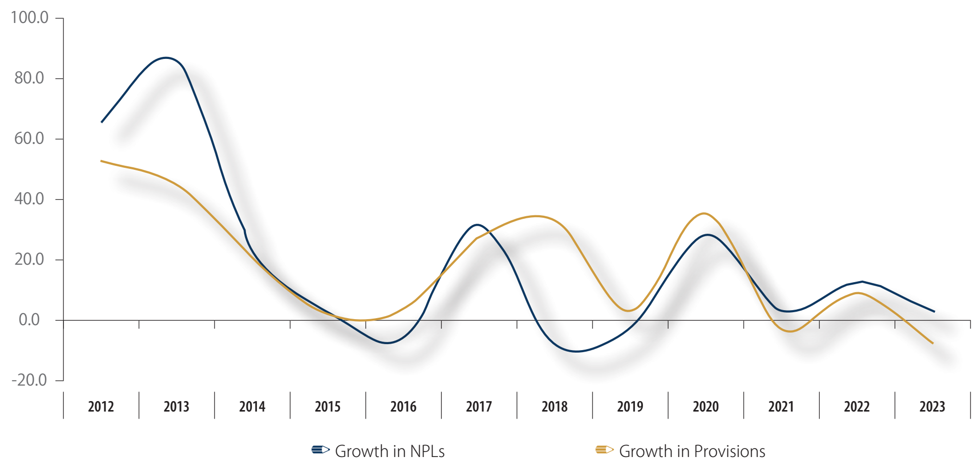
Source: Central Bank of Lesotho

Appendix F Credit-to-GDP Ratio and its Trend



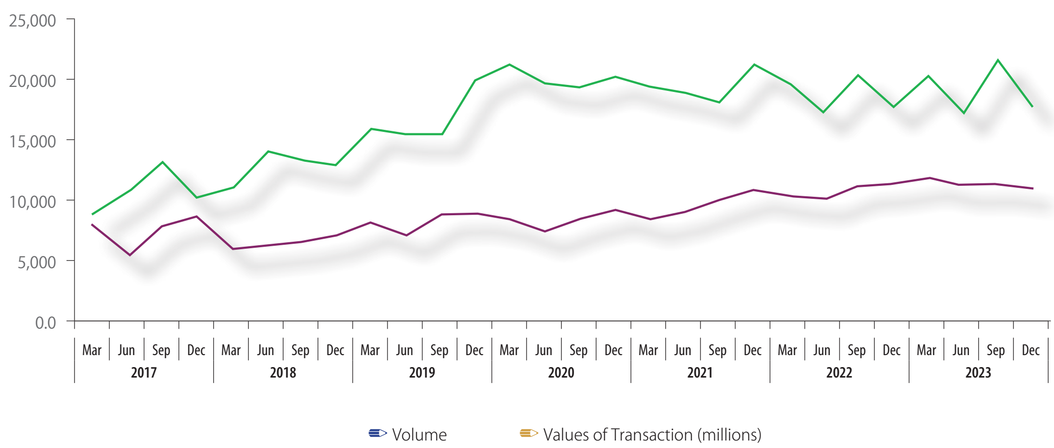
Source: Central Bank of Lesotho

Appendix G Growth in NPLs and Provisions



Source: Central Bank of Lesotho

Appendix H LSW Transactions and Values



Source: Central Bank of Lesotho

APPENDICES

Appendix II: Tables

Appendix II	Financial Soundness Indicators									
Description (Percentage Ratio)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
1. Banking Sector										
Capital Adequacy										
Total Regulatory Capital to RWA	14.56	15.42	18.89	17.81	17.92	19.38	22.95	22.44	23.99	17.16
Regulatory Tier 1 to RWA	13.67	13.79	17.19	20.87	20.18	21.72	24.89	24.38	25.60	17.64
Tier 1 Capital to Assets	**6.66**	**7.08**	**9.06**	**9.69**	**10.28**	**10.40**	**11.35**	**10.91**	**12.47**	**9.54**
NPLs Net of provisions to Capital	9.19	7.73	7.01	8.79	7.48	6.41	5.44	6.81	5.98	6.61
Earnings & Profitability										
Return on Equity	29.54	30.36	27.67	18.17	23.58	23.35	12.34	12.70	12.51	19.00
Return on Assets	4.28	4.50	4.44	3.24	3.76	4.17	2.29	2.49	2.54	3.36
Net Interest Margin to Gross Income	58.33	57.62	58.03	59.60	60.42	58.48	56.05	54.15	56.29	56.28
Noninterest Expenses to Gross Income	52.30	52.23	54.66	62.20	60.69	57.98	65.57	66.81	69.16	64.12
Asset Quality										
NPLs to Total Gross Loans	4.23	4.04	3.69	4.42	3.66	3.30	4.20	4.07	4.31	3.84
Provisions to NPLs	61.05	61.36	55.38	55.07	51.91	55.63	63.14	53.48	61.21	54.24
Loan Concentration by Economic Activity	60.98	62..46	60.64	52.65	61.34	61.08	60.44	61.31	66.17	59.18
Liquidity										
Liquid Assets to Total Assets	43.07	41.60	33.21	40.16	37.41	26.65	29.99	30.82	20.60	30.49
Liquid Assets to Short-Term Liabilities	57.46	58.25	48.49	57.27	53.90	39.35	43.68	44.78	30.31	42.60
Market Sensitivity										
Net Open Position in FX to Capital	388.9	334.9	225.3	345.2	323.8	258.0	311.4	309.5	222.0	368.0
2. Other Financial Corporations (OFCs)										
OFCs' Assets to GDP: Insurance	-	-	-	-	-	-	22.84	25.42	25.11	28.07
Insurance Combined Ratio (Nonlife)	-	-	-	-	-	-	63.66	75.29	78.08	116.94
Insurance Return on Assets (Life)	-	-	-	-	-	-	-	5.27	4.67	1.61
Insurance Return on Equity (Life & Nonlife)	-	-	-	-	-	-	-	32.35	28.10	9.78
Insurance Shareholder Equity to total invested assets (Life & Nonlife)	-	-	-	-	-	-	15.88	13.90	14.71	14.88
3. Household										
Household Debt to GDP	**12.2**	**11.0**	**11.6**	**13.2**	**13.6**	**14.7**	**15.7**	**16.2**	**16.1**	**17.8**

***Source**: Central Bank of Lesotho*

Appendix II	Macro-Financial Indicators					
	2018	2019	2020	2021	2022	2023
GDP Growth rate (%)	3.3	0.0	-2.0	2.4	-1.0	2.8
Inflation rate (%)	4.9	4.8	5.7	6.8	8.0	7.2
Current account deficit (million maloti)	-357.1	-405.4	-412.3	-712.9	-1582.2	-350.1
Total debt (million maloti)	45.8	49.4	55.1	56.8	59.6	59.8
External debt-to-total debt	79.5	76.3	73.2	73.6	72.4	77.2
Concessional debt-to-external debt	81.4	80.7	77.7	77.9	74.6	75.2
External debt service-to-revenue	8.1	7.0	10.7	6.3	5.4	6.2
External debt service-to-exports	7.5	7.3	12.7	8.1	7.2	8.0
Government deficit (million maloti)	512.4	-429.5	1 660	-694.6	842.1	258.31
Employment (# of persons)	116 132	19.9	26.7	20.0	17.8	22.7
Prime lending rate (%)	11.3	114 093	26.7	20.0	17.8	22.7
Source*: Central Bank of Lesotho*						

APPENDICES

The Bank Health Index

The Bank Health Index (BHI) is a straightforward indicator of the stability of the banking system that makes it easier to conduct initial comparisons between different financial institutions. If proper mitigation measures are implemented, the BHI is a valuable instrument for the first-pass assessment of bank soundness conditions and facilitates the early identification of vulnerabilities in the banking system, which may assist in preventing extensive spillovers from any realization of tail risks.

To develop the BHI, banks' financial data are used and simple CAMELS-type ratings for each institution in the defined sample are calculated to get a rough and ready measure of individual banks' health. A BHI is subsequently derived from the ratings and a heat map is generated to provide an effective visual snapshot of a particular bank or banking system using a series of steps. ***First***, the following five categories of financial ratios are calculated: (i) Capital Adequacy, (ii) Asset Quality, (iii) Earnings, (iv) Liquidity, (v) Leverage, and Sensitivity to market risk. ***Second***, each financial ratio is then normalized to facilitate comparability using z-scores,

$$Z_{i,t} = \frac{x_{i,t} - \mu}{\sigma}$$

Where $Z_{i,t}$ is the normalized (or z-score for the) financial ratio of bank i at time t; $x_{i,t}$ is the (raw) financial ratio of bank i at time t; μ is the system mean of a particular financial ratio over nine periods to time t; σ is the system standard deviation of a particular financial ratio over nine periods to time t.

The z-score indicates a bank's performance in particular areas relative to its peers and relative to historical patterns. In essence, the z-score communicates the number of standard deviations of a financial ratio from its nine-period average. A negative z-score is the number of standard deviations below the average while a positive z-score quantifies the number of standard deviations above the average. It is important to realise that some financial ratios and their z-scores are inversely related to financial stability like the asset quality measure (NPL ratio) and sensitivity to market risk (net open position in FX to capital ratio) wherein, a large positive z-score implies that the financial ratio of a particular bank is worse than the corresponding average across its peer group over a certain time. ***Last***, an overall relative health score for each bank at a particular point in time is estimated by summing up the z-scores for each of the five categories of financial ratios.

Table 3 (in text, section 4) shows the heat map calculated using the average of nine quarters and *z-scores* of CAMELS indicators calculated using biannual (or nine-quarter) averages. Percentiles of the distribution of z-scores are used to assign colours between green and red to specific *z-scores* wherein, anything below the 10th percentile is red, anything above the 90th percentile is green and lighter shades of amber (combinations of the RGB[20] colours) for z-scores in between[21].

[18] Red Green Blue (RGB) colours.

[19] $z_i = \frac{x_i - \mu_x}{\sigma_x}$, is the z-score for each time point, where the mean and standard deviations are calculated over nine quarters.

Appendix III: Tables

Appendix III	Assumptions and Shocks		
Index	Description	Shock	Description
1. General Credit Risk			
Shock 1.1	Uniform NPL increase	60%	Indicates an increase in NPLs of 60 percent across the credit spectrum.
Shock 1.2	Uniform NPL increase	120%	Indicates an increase in NPLs of 120 percent across the credit spectrum.
Shock 1.3	Uniform NPL increase	180%	Indicates an increase in NPLs of 180 percent across the credit spectrum.
2. Sectoral Credit Risk			
Shock 2.1	Mortgages	20%	Indicates the percentage increase in NPLs across the Mortgages sector.
Shock 2.2	Resident household (personal loans)	20%	Indicates percentage increase in NPLs across the Resident household (personal loans) sector.
Shock 2.3	Non-bank (Non-depository) financial institutions	20%	Indicates the percentage increase in NPLs across the Non-bank (Non-depository) financial institutions sector.
3. Credit risk Exposure by Lines of Business			
Shock 2.4	Manufacturing	20%	Indicates the percentage increase in NPLs across the Manufacturing sector
Shock 2.5	Construction	20%	Indicates the percentage increase in NPLs across the construction sector
Shock 2.6	Mining and Quarrying	20%	Indicates the percentage increase in NPLs across the Mining and Quarrying sector.
Shock 2.7	Community, Social, and Personal services	20%	Indicates the percentage increase in NPLs across the Community, Social, and Personal services sector.
Shock 2.8	Real Estate and Business Services	20%	Indicates the percentage increase in NPLs across the Real Estate and Business Services sector.
4. Concentration Risk			
Shock 3.1	Largest Borrower Defaults	1	Indicates a default of the largest borrower.
Shock 3.2	Top Three Borrowers Default	3	Indicates a default of the largest three borrowers.
Shock 3.3	Top Five Borrowers Default	5	Indicates a default of the largest five borrowers.
Detail 1	Assumed provisioning rate	20%	To calculate provisioning expenses for large borrower default.
5. Reverse Stress Testing			
Shock 4.1	Reverse Testing - Deterioration of performing loans	7.9%	Deterioration of performing loans which causes capital to go below 8 percent
6. Interest Rate Risk			
Shock 5.1	Interest shock	150 bps	Indicates an increase in market-wide interest rates of 150 basis points.
Shock 5.2	Interest shock	200 bps	Indicates an increase in market-wide interest rates of 200 basis points.
Shock 5.3	Interest shock	250 bps	Indicates an increase in market-wide interest rates of 250 basis points.
Shock 5.4	Interest shock	-150 bps	Indicates a decrease in market-wide interest rates of -150 basis points.
Shock 5.5	Interest shock	-200 bps	Indicates a decrease in market-wide interest rates of -200 basis points.
Shock 5.6	Interest shock	-250 bps	Indicates a decrease in market-wide interest rates of -250 basis points.
7. Foreign-Exchange Risk			
Shock 6.1	Depreciation of LSL	20%	Indicates a depreciation of the LSL of 20 percent.
Shock 6.2	Depreciation of LSL	25%	Indicates a depreciation of the LSL of 25 percent.
Shock 6.3	Depreciation of LSL	30%	Indicates a depreciation of the LSL of 30 percent.
Shock 7.1	Standard FX Loans Default	20%	Indicates the percentage increase in NPS of 20 percent due to FX changes.
Detail 1	Assumed provision rate	50%	Indicates the percentage increase in NPS of 50 percent due to FX changes.

***Source**: Central Bank of Lesotho*

Appendix III	Assumptions and Shocks (continued)		
Index	Description	Shock	Description
8. Multi-Factor Risk Scenarios			
Shock 8.1	Aggregate NPLs Increase	60%	Indicates a simultaneous increase in NPLs of 60 percent, a depreciation of the LSL by 20 percent, and an increase in market-wide interest rates of 150 basis points.
	Depreciation of LSL	20%	
	Interest rate shock	150 bps	
Shock 8.2	Aggregate NPLs Increase	120%	Indicates a simultaneous increase in NPLs of 120 percent, a depreciation of the LSL by 25 percent, and an increase in market-wide interest rates of 200 basis points.
	Depreciation of LSL	25%	
	Interest rate shock	200 bps	
Shock 8.3	Aggregate NPLs Increase	180%	Indicates a simultaneous increase in NPLs of 180 percent, a depreciation of the LSL by 30 percent, and an increase in market-wide interest rates of 250 basis points.
	Depreciation of LSL	30%	
	Interest rate shock	250 bps	
9. General Liquidity Risk			
Shock 9.1	Withdrawal of deposits: 1st day by	5%	An outflow of deposits is assumed. Liquidity is generated through the fire sale of assets. Haircuts are assumed for all assets. Liquid assets generate the most liquidity, while non-liquid assets are assumed to generate not more than 1 percent liquidity after a fire sale. It is also assumed that after 5 days, there is a cooling-off period to allow banks and the central bank to restore confidence.
	Withdrawal of deposits: 2nd day by	10%	
	Withdrawal of deposits: 3rd day by	15%	
	Withdrawal of deposits: 4th day by	20%	
	Withdrawal of deposits: 5th day by	25%	
Detail 1	Fire sale volume assumption: liquid assets	80%	The assumption is that 80 percent liquidity can be generated through a fire sale.
Detail 2	Fire sale pricing haircut: liquid assets	75%	The assumption is that 75 percent liquidity can be generated through a fire sale.
Detail 3	Fire sale volume assumption: non-liquid assets	1%	The assumption is that 1 percent liquidity can be generated through a fire sale.
Detail 4	Fire sale pricing haircut: non-liquid assets	100%	
10. Liquidity Concentration Risk – large-depositor bank run			
Shock 9.2	Withdrawal of deposits by large depositor	1	This affects liquidity ratios. Withdrawals are deducted from liquid assets, short term assets and total assets before the new ratio is calculated.
	Withdrawal of deposits by large depositors	3	
	Withdrawal of deposits by large depositors	5	
Detail 5	Assumed liquidity ratio hurdle rate	25%	The minimum liquidity ratio rate.

***Source**: Central Bank of Lesotho*

NOTES

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