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FINANCIAL STABILITY BULLETIN



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Foreword

Pursuant to Law No. 1/92, of January 3, the Banco de Moçambique (BM) has the mission of preserving the value of the national currency and promoting a robust and inclusive domestic financial sector.

In light of its mission, the BM implements macroprudential policy with the aim of ensuring that the financial system, particularly the banking sector, maintains adequate solvency and liquidity levels that enable it to contribute to crisis resolution and management, thus lowering global systemic risk and ensuring the preservation of financial stability.

The BM defines financial stability as the maintenance of a robust and efficient system that is resilient to shocks and financial instabilities, and ensures the preservation of confidence of economic agents and contributes towards the mitigation of systemic risk.

In order to assess systemic risk, the BM relies on a quantitative matrix that presents the dynamics of domestic financial system risk, so as to measure its resilience and allow for timely decision-making.

The BM drafts the Financial Stability Bulletin in order to enhance communication regarding financial stability between the central bank and the general public. This edition highlights the main vulnerabilities and risks from a domestic macrofinancial standpoint, as well as the performance of the Mozambican financial system in the first half of 2023.

The Governor

Rogério Lucas Zandamela

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Acronyms and abbreviations

BM	Banco de Moçambique
Bp	Basis points
CIs	Credit institutions
D-SIBs	Systemically important domestic banks
DTI	Debt-to-income
GDP	Gross domestic product
HHI	Herfindahl-Hirschman Index
ISSM	Mozambique Insurance Supervision Institute
LTV	Loan-to-value
MEF	Ministry of Economy and Finance
MVM	Securities Market
NPL	Non-performing loan
pp	Percentage points
ROA	Return on assets
ROE	Return on equity
USA	United States of America

Executive summary

The consolidation of economic growth recovery in the first half of 2023, driven by the ongoing improvement in external demand, coupled with the implementation of energy projects, contributed to the maintenance of moderate systemic risk, amid a domestic and international environment marked by vulnerabilities and risks. The military instability in the north of Cabo Delgado, extreme weather events and the level of domestic public indebtedness influenced the performance of the financial system and hindered financial inclusion, in addition to limiting the ability of households and companies to fulfill their obligations.

The banking sector remained strong and resilient, as results grew and capitalization and liquidity remained suitable, driving the prevalence of moderate systemic risk. Nevertheless, the sector continued to face risks arising from the increase in public debt and the NPL ratio.

The **insurance sector** was also resilient against the domestic economic environment, as evidenced by the increase in the sector's overall output, underpinned by developments in life and non-life premiums.

In the **securities market**, market capitalization grew due to the performance of treasury bonds.

In order to contain risks and mitigate vulnerabilities in the domestic financial system, the BM decided to keep all macroprudential policy instruments. In the period under review, the capital conservation buffers for systemically and quasi-systemically important domestic banks remained at 2.0% and 1.0%, respectively. The macroprudential lending requirements for credit institutions (CIs), namely loan-to-value (LTV) and debt-to-income (DTI), remained capped at 100%.

I. INTERNATIONAL MACROFINANCIAL ENVIRONMENT

Risks to global financial stability worsened amidst the tightening of monetary policy and recent stress events in the international banking sector.

In the first half of 2023, the international macrofinancial environment was marked by the (i) protracted Russia-Ukraine conflict and its escalation, (ii) high policy rates and (iii) increased challenges arising from the banking stress in the US and Switzerland, which set off additional disruption in international financial markets.

The shutdown of Silicon Valley Bank and Signature Bank of New York in the US and the acquisition of Credit Suisse¹ by UBS raised concerns regarding the financial stability of advanced economies and increased the contagion risk.

In addition, this backdrop fueled global risk aversion, driving the transfer of the portfolio of riskier financial assets to safer ones.

¹ A systemically important global bank in Europe.

Such disruptions in the international financial market raised volatility and systemic stress, affecting the valuation of securities of financial institutions most exposed to interest rate risk, with the potential to trigger liquidity shortfalls in the system and spread to non-financial activities.

In the U.S., in order to restore the confidence of depositors in the banking sector, deposits in banks affected by the stress were fully guaranteed. The Federal Reserve² contributed by providing the system with liquidity through rediscount loans and creating the extraordinary liquidity instrument (Bank Term Funding Program).

In the United Kingdom, the domestic branch of one of the shutdown American banks was acquired by a global systemically important bank (G-SIB), without government support.

On the other hand, in Switzerland, government and central bank support as guarantees, loans and liquidity lines was relevant in merging Credit Suisse into UBS.

² U.S. central bank.

Despite efforts by regulators to restore confidence in financial systems and prevent contagion to other institutions and jurisdictions, in advanced economies, uncertainties remain regarding the impacts of the recent events that affected the banking sector.

institutions to keep suitable capital and liquidity to offset the impact of shocks.

These economies continue to report that their financial systems remain resilient, well capitalized and have instruments in place to tackle threats to financial stability, so as to convey signs of confidence to other financial systems, reluctant amid the risk of contagion.

In South Africa, the semester was characterized by increased systemic risk, due to the tightening of monetary policy and high inflation, impacting the financial system.

Moreover, domestic idiosyncratic factors contributed to the increase in systemic risk in the period under review.

The South African financial system continued to function, despite the increasingly challenging operating environment.

The banking sector remained resilient, as measured by the aggregate ability of

II. VULNERABILITIES AND RISKS OF THE MOZAMBICAN FINANCIAL SYSTEM

The first half of 2023 was marked by the consolidation of economic growth recovery, driven by the ongoing improvement in external demand, coupled with the implementation of energy projects.

Such economic performance contributed to the prevalence of moderate systemic risk, against a domestic and international backdrop marked with vulnerabilities and risks.

2.1. Financial system vulnerabilities

The developments in the domestic economic environment supported the positive performance of the financial system, albeit vulnerabilities capable of hampering financial stability remain, namely the military instability in the North of Cabo Delgado, extreme weather events and the level of public sector indebtedness.

- **Military instability in the North of Cabo Delgado** prevailed in the first half of 2023, with insecurity hotspots in some parts of the province.

In the period concerned, progress was reported in restoring security in areas plagued by terrorism, but not enough to drive the lifting of the suspension of onshore development of the Mozambique LNG – TotalEnergies project.

Military instability in the north of Cabo Delgado hampers access to financial services, slows financial inclusion and compromises the ability of affected economic agents to meet their commitments with the banking sector, resulting in increased credit and systemic risk.

- **Extreme weather events** continue to hinder the performance of economic activity, particularly cyclone Freddy, which struck the provinces of Zambézia, Nampula, Manica and Sofala in March 2023.

On account of the cyclone, several real estate properties underwent accelerated devaluation due to risk exposure, which influenced the portfolio of assets of banks, insurance companies and other financial institutions operating in those provinces.

These events resulted in the slump in the country's production levels, as a result of the destruction of infrastructures, inputs, and means of production, among others, hampering the ability of households and companies to meet their commitments with the banking sector, thus increasing credit risk.

- Public sector pressure on the financial system continued in the first half of 2023, driving an increase in **domestic public debt** (Table 1).

Table 1. Public debt stock (billion meticaes)

Description	Dec-21	Dec-22	Jun-23
External debt	663.30	645.30	634.04
Domestic debt	226.40	281.55	309.94
Total debt	889.70	926.85	943.98

Source: MEF

Cumulatively, domestic public debt increased by about 28 billion in the first half of the year, mainly due to the increase in funding by treasury bonds (T-Bond) and issuance of treasury bills (T-Bill).

Domestic state funding, which absorbs a significant part of the banking sector's resources, has the potential to increase sovereign risk and, thus, systemic risk, against the backdrop of subscription of public bonds at high-interest rates.

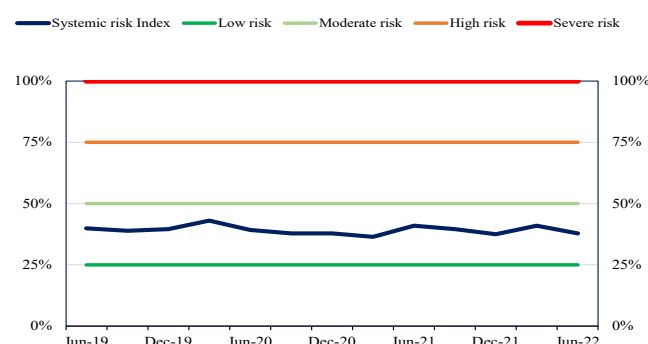
2.2. Systemic risk assessment

In June 2023, banking sector stability prevails, with systemic risk remaining moderate at 37.85%³, despite the increase in public debt and the NPL ratio.

The prevalence of moderate systemic risk throughout the semester was driven by the slowdown in the inflation rate and the stability of other risk indicators.

Charts 1 and 2 show the developments of the systemic risk index and the sub-indexes of the categories that compose it.

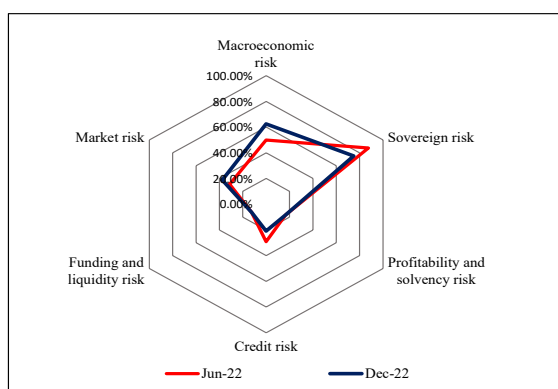
Chart 1. Systemic risk index developments



Source: BM

³ Following 37.50% in December 2022.

Chart 2. Developments in systemic risk category sub-indexes (%)



Source: BM

The analysis by risk category allows for ascertaining the following:

2.2.1. Macroeconomic risk

In the first half of 2023, macroeconomic risk remained high⁴, albeit it stands at the lower threshold of this tier.

Indeed, the risk sub-index of the category has reduced considerably and approached moderate risk as a result of the slowdown in inflation, from severe risk at 10.91% in December 2022 to high risk at 6.81% in June 2023.

In addition, the GDP recovery trend over recent quarters continued, with a year-on-year growth rate of 4.67% in June 2023, following 4.17% in December 2022.

⁴ The sub-index of the macroeconomic risk category was set at 50.00% in June 2023, following 62.50% in December and June 2022.

Compared to June 2022, the macroeconomic risk indicator developments mirrored the semester under review, and macroeconomic risk also remained moderate.

2.2.2. Sovereign risk

In June 2023, sovereign risk remained severe⁵ due to the ongoing high indebtedness of the State.

When analyzing the sub-indexes that make up this risk category, we found that:

The ratio of government credit to total credit stood at 38.87% in June 2023, following 44.11% in December 2022, and remained at severe risk.

In year-on-year terms, the ratio of government credit to total credit also remained at severe risk, despite the 6.51 pp decline in the period.

The public debt-to-GDP ratio worsened from high risk in December 2022 to severe risk in June 2023.

This change was driven by the increase in total debt by about 2%, specifically in the

⁵ In June 2023, the sub-index of the sovereign risk category was set at 87.50%, following 75.00% and 87.50%, in December and June 2022, respectively.

domestic component, which grew by about 10%, albeit the external component declined by approximately 2%.

In year-on-year terms, the ratio of public debt to GDP remained at the severe risk.

2.2.3. Profitability and solvency risk

Profitability and solvency risk remained low⁶, signaling that the system remains profitable, financially robust and resilient to the negative effects of recent bottlenecks.

Regarding profitability, indicators support the positive financial performance of the banking sector in the first quarter of 2023, with return on assets (ROA) at 4.64% and return on equity (ROE) at 18.38% in June 2023.

The good performance of the banking sector over the semester contributed to maintaining system resilience, highlighting the basic solvency ratio that stood at about 26% and remained well above the minimum percentage of 10% provided by law.

⁶ In June 2023, the sub-index of the profitability and solvency risk category stood at 16.67%, the same as in December and June 2022, respectively.

2.2.4. Credit risk

In June 2023, credit risk remained moderate⁷, despite the NPL increase in the semester, going from moderate risk in December 2022 to high risk in the period under review.

The maintenance of moderate credit risk was driven by the prevalence of the negative gap in the credit to the economy/GDP ratio, supporting that this ratio remains below its long-term trend, and by the weak growth of credit to the economy, which stood at 7.83% in June 2023, i.e., low risk.

2.2.5. Funding and liquidity risk

Funding and liquidity risk remained low⁸, reflecting the weak growth in credit to the economy.

The short-term liquidity coverage ratio remained low, standing at 42.07% in June 2023, following 69.79% and 68.81% in December and June 2022, respectively.

The loan-to-deposit ratio stood at 49.35% in June 2023, following 47.09% in

⁷ In June 2023, the sub-index of the credit risk category stood at 29.17%, following 20.83% and 29.17%, in December and June 2022, respectively.

⁸ In June 2023, the sub-index of the funding and liquidity risk category stood at 12.50%, the same percentage as in December and June 2023, respectively.

December 2023, remaining at low risk. In year-on-year terms, the indicator remained at low risk.

2.2.6. Market risk

In June 2023, the sub-index of market risk remained moderate⁹, despite the hike of the financial system prime rate over the semester.

Market risk remained at this level due to the foreign exchange stability during the period.

It should be noted that the ratio of foreign currency deposits/total deposits indicator slowed, dropping from moderate risk in December 2022 to low risk in June 2023.

The other category's indicators, namely, foreign currency loans/total deposits and foreign exchange volatility, remained at low risk.

⁹ The sub-index of the market risk category settled at 31.25%, following 37.50% in December and June 2022.

III. FINANCIAL SYSTEM PERFORMANCE

3.1. Banking sector

In the period concerned, the banking sector remained solid and resilient, given the growth in income and adequate capitalization and liquidity. Meanwhile, on the asset quality front, the credit default ratio stood at about 10%, above the 5.0% conventional benchmark.

3.1.1. Banking sector concentration

As of June 2023, the Herfindahl-Hirschman Index (HHI)¹⁰ for assets, deposits, and credit of the banking sector stood at 1,434, 1,605 and 1,286 points, respectively, while market concentration remained moderate.

Jointly, the three domestic systemically important credit institutions (D-SIBs),

¹⁰ Method of assessing the degree of concentration in a market, widely used by national and international entities to measure competitiveness between institutions. It is calculated by summing the squares of the market shares of the institutions operating in a market, ranging from 0 to 10,000 points. Figures between 0 and 1,000 points mean that market concentration is low; between 1,000 and 1,800 points is moderate, and above 1,800 points is high.

namely BCI, BIM and Standard Bank, accounted for 60.99%, 64.97% and 54.07%, respectively, of the assets, deposits and credit of the banking sector in the period under review (Table 2).

Table 2. Banking sector concentration - Herfindahl-Hirschman Index

	Jun-22	Dec-22	Jun-23
HHI - Assets	1.503	1.533	1.434
Three major banks (D-SIBs)	63.67%	64.45%	60.99%
Six major banks	81.73%	81.50%	80.10%
HHI - Deposits	1.719	1.707	1.605
Three major banks (D-SIBs)	68.45%	68.01%	64.97%
Six major banks	85.95%	85.96%	84.13%
HHI - Credits	1.342	1.294	1.286
Three major banks (D-SIBs)	55.53%	54.23%	54.07%
Six major banks	78.32%	78.14%	77.84%

Source: BM

3.1.2. Balance sheet structure

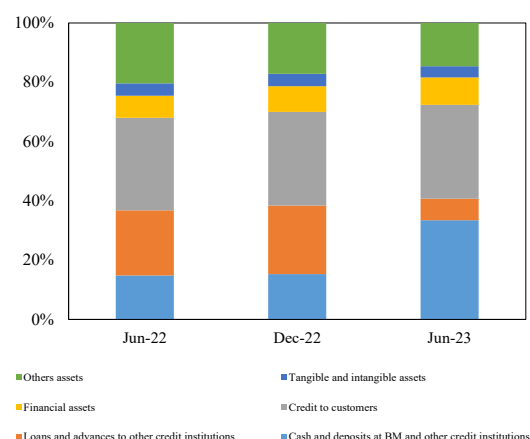
3.1.2.1. Assets

At the end of the first half of 2023, total assets amounted to 887 billion meticaís, a growth of 3.67% and 4.77% compared to December and June 2022, respectively.

This positive change, compared to the same period in 2022, was mainly driven by the growth in cash and cash equivalents by 136.56% and financial assets by 29.54%, weakened by the slump in investments in credit institutions and other assets and 65.47% and 24.86%, respectively.

In terms of asset composition, the banking sector continued to favor investment in highly liquid and profitable assets.

Chart 3. Assets



Source: BM

Assets considered more liquid and lower risk, consisting of cash, investments in credit institutions and financial assets, accounted for 49.96% of total assets (47.09% in December 2022 and 44.30% in June 2022).

Net impaired credit continues to account for a substantial portion of the banking sector's balance sheet, with a weight of 31.68% (31.59% in December and 31.19% in June 2022).

The items "other assets" and "tangible and intangible assets" represent 14.60% (17.17% in December 2022 and 20.36% in June 2022) and 3.77% (4.14% in December 2022 and 4.16% in June 2022) of assets, respectively.

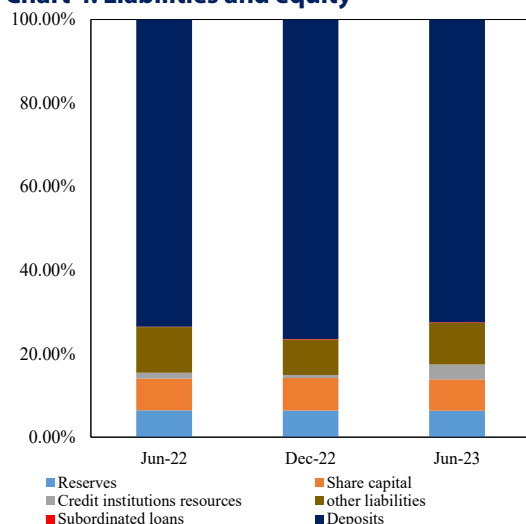
3.1.2.2. Liabilities and equity

In the period under review, the total liabilities of the banking sector amounted to 731 billion meticaís, an expansion of 28.8 billion meticaís (4.10%) compared to the figures for the same period in 2022. This change mainly resulted from the increase in resources in credit institutions by 19.2 billion meticaís compared to the same period last year.

Deposits, amounting to 615.5 billion meticaís, 76.12% in national currency and the rest in foreign currency, make up the largest source of fundraising by credit institutions and represent about 84.25% of total liabilities.

Banking sector equity amounted to 155 billion meticaís, an increase of 8% compared to the same period of the previous year. The year-on-year change in this item was mainly due to the 9% increase in net income for the year by 1.2 billion meticaís (Chart 4).

Chart 4. Liabilities and equity



Source: BM

3.1.3. Financial soundness indicators

3.1.3.1. Capital adequacy

The capital adequacy of the banking sector, amid the exposure to economic and financial risks, remained solid during the first half of 2023.

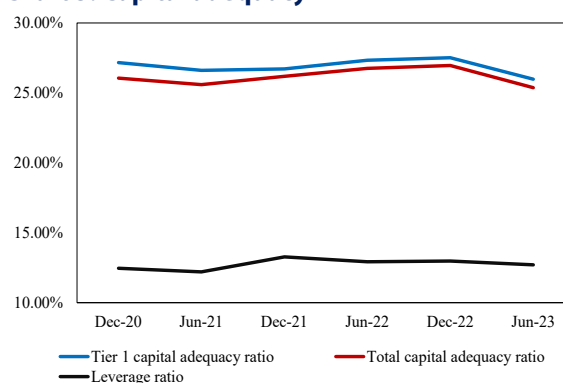
Against this backdrop, the solvency ratio stood at 23.33% (26.95% in December and 26.76% in June 2022), well above the regulatory minimum (12.0%). Compared to the same period last year, this change is underpinned by the increase in risk-weighted assets by 7.51% and equity by 1.25%.

The Tier 1/risk-weighted asset ratio stood at 26.02% (27.52% in December and 27.33% in June 2022) above the regulatory minimum (10.0%), driven by a

lower growth of Tier 1 against risk-weighted assets. This change translates into lower coverage of higher-quality capital over risk-weighted assets (Chart 5).

The leverage ratio, another indicator of capital adequacy that provides an indication of the extent to which assets are financed by equity, was set at 12.72% (12.97% in December and 12.92% in June 2022) (see Chart 5).

Chart 5. Capital adequacy



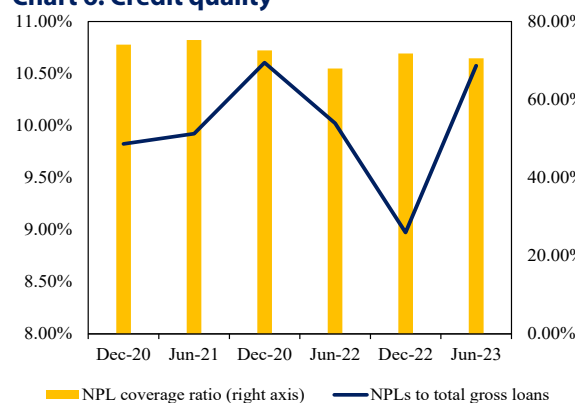
Source: BM

3.1.3.2. Asset quality

As measured by the NPL to total credit ratio, asset quality remained relatively unchanged over the period under review. The NPL ratio stood at 10.58% (8.97% in December and 10.02% in June 2022), above the 5% conventional benchmark conventional.

NPL coverage by specific provisions increased from 67.99% in June 2022 to 70.61% in June 2023, following 71.84% in December 2022 (Chart 6).

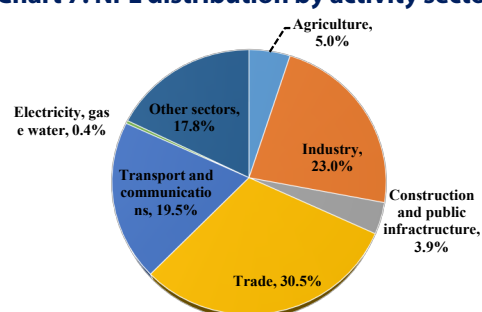
Chart 6. Credit quality



Source: BM

At the sectoral level, trade registered the largest share in total NPL last June with 30.50% (28.76% in December 2022), followed by industry with 23.01% (21.53% in December 2022) and transport and communications with 19.46% (20.38% in December 2022), see Chart 7.

Chart 7. NPL distribution by activity sectors



Source: BM

3.1.3.3. Profitability

In the period under review, the banking sector continued to record profits, as net results for the year increased by 1.2 billion meticaís settling at 14.6 billion meticaís in June 2023.

This change is mainly justified by the increase in the net interest income by 4.4 billion meticaís.

In general, the main profitability indicators recorded higher values compared to the same period year-on-year (Table 3).

Table 3. Key profitability indicators

Description	Jun-22	Dec-22	Jun-23
ROA	4.46%	4.69%	4.64%
ROE	18.19%	19.13%	18.38%
Net interest income ratio	67.10%	68.50%	69.03%
Cost-to-income ratio	53.34%	53.87%	54.42%

Source: BM

Return on assets (ROA) stood at 4.64% and return on equity (ROE) at 18.38%.

The net interest income ratio shows that around 69% of the banking product comes partly from the financial intermediation activity (raising savings and granting credit).

Cost-to-income stood at 54.42%, an increase of 1.09 percentage points compared to the same period last year,

indicating a slight reduction in banking efficiency.

3.1.3.4. Liquidity and fund management

In June 2023, the main liquidity indicators remained high, compared to the same period in 2022, making it possible to ensure the continuity of banking sector funding operations (Table 4).

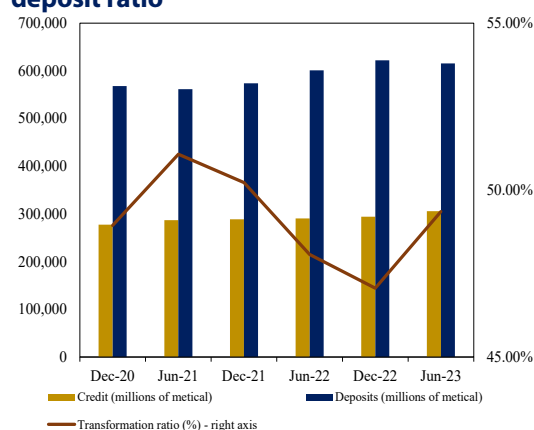
Table 4. Key liquidity indicators (%)

Description	Jun-22	Dec-22	Jun-23
Net assets/total deposits ratio	68.22	69.15	44.03
Net assets/total assets ratio	48.65	50.50	30.72
Short-term liquidity ratio	68.81	69.79	42.07
Loan-to-deposit ratio	48.07	47.06	49.35

Source: BM

The conversion ratio of deposits to credit stood at 49.35%, due to the increase in credit by 5.24%, which exceeded the 2.40% growth rate of deposits (Chart 8).

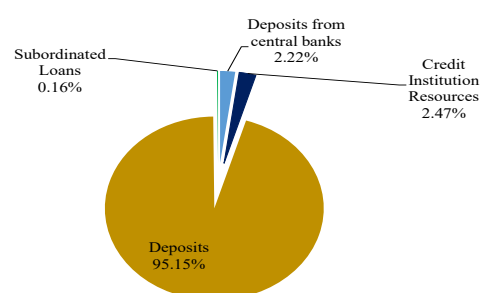
Chart 8. Credit, deposits, and credit-to-deposit ratio



Source: BM

Meanwhile, deposits remain the main source of financing for the banking sector, accounting for over 95.15% (98.76% in December and 98.02% in June 2022) of the total, while the remaining sources of funds maintained a residual weight (Chart 9).

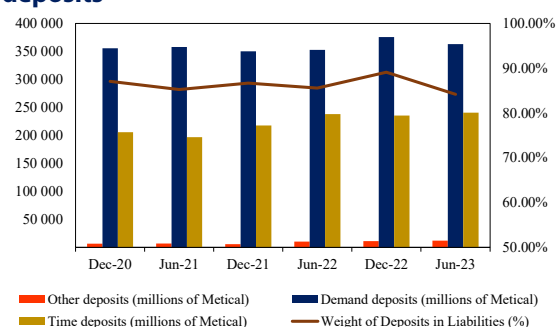
Chart 9. Funding sources of the banking sector



Source: BM

Regarding the structure, 58.95% accounts for demand deposits, 39.08% for term deposits and 1.97% for other deposits. Both current and term deposits increased by 3% and 1%, respectively, compared to the same period in 2022, thus contributing to the ongoing strengthening of funding flows from the banking sector (Chart 10).

Chart 10. Evolution and composition of deposits



Source: BM

Box 1. Financial and business cycles in Mozambique

The financial cycle is defined as the deviation of financial variables (usually the ratio of credit to the economy to GDP) from their long-term trend. This cycle is characterized by periods of expansion followed by contraction of financial activity.

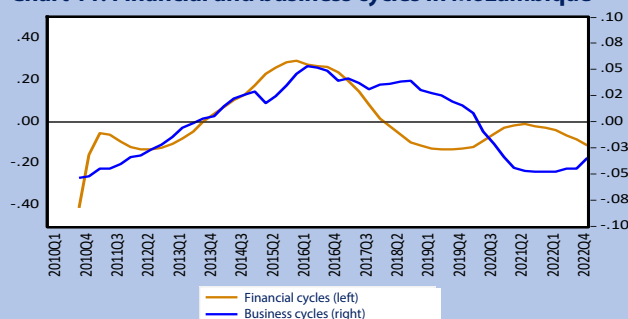
In turn, business cycles refer to the deviation of real economic activity from its long-term trend, characterized by periods of expansion followed by economic activity recession. In essence, the business cycle indicates the position of the economy as to its balance and likely impacts on inflation developments.

The chart below shows the developments in the business and financial cycles in Mozambique¹¹ between 2010Q1 and 2022Q4, indicating that, at the end of the period under review, both the financial cycle and the business cycle are below potential and deviating from their long-term trend, a backdrop that implies the contraction of economic activity.

The factors supporting this performance are associated with the ongoing deterioration of the investment environment by the military instability in the North of Cabo Delgado, extreme weather events, the increase in public sector indebtedness and global market confidence in the country. Financial cycles longer than business cycles require more forward-looking monetary policy, in order to strike the right balance between maintaining macroeconomic stability and financial stability, given the differences in

cycle durations¹². On the macroprudential side, the joint identification of the financial and business cycles, historically and in real time, complemented with the analysis of systemic risk in the country and other financial variables, will allow for the proper¹³ policy measures to be chosen in order to mitigate impacts on monetary and financial stability.

Chart 11. Financial and business cycles in Mozambique



Source: INE and BM

¹¹Cycles were determined using the Hodrick-Prescott filter (HP filter), a method recommended by the Basel III Committee as suitable for the purpose.

¹² For example, in periods when the financial cycle expands considerably or reaches a high level during a business cycle contraction, easing monetary policy in order to stimulate the economy can lead to a greater accumulation of risks to financial stability because lower borrowing costs encourage further credit expansion and higher asset prices.

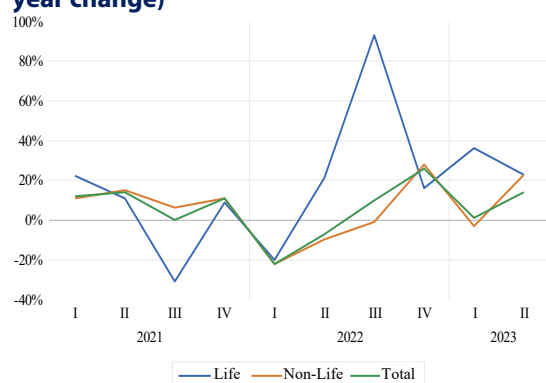
¹³ Such measures may include the requirement of larger countercyclical buffers and using stricter loan-to-value (LTV) ratios in circumstances, for example, of rapid housing price growth and credit (rather than just credit), since recessions associated with large changes in the two financial variables are longer and deeper. They may also include the use of capital or liquidity buffers, which would have to be larger for cases where markets tend to suffer deeper recessions with more severe financial downturns, which, at least until the 2007-2009 global financial crisis, happened more frequently in emerging markets.

3.2. Insurance sector

The insurance sector proved resilient amidst the domestic and international economic environment, affected by risks and uncertainties arising from the military instability in the north of the country and extreme weather events, as well as the Russia-Ukraine geopolitical conflict.

In the first half of 2023, the overall output of the insurance sector in Mozambique grew by 14%, from around 4.6 billion meticaïs (June 2022) to 5.2 billion meticaïs (June 2023), driven by the evolution in gross premiums written in the life and non-life segments, by 23% and 12%, respectively (Chart 12).

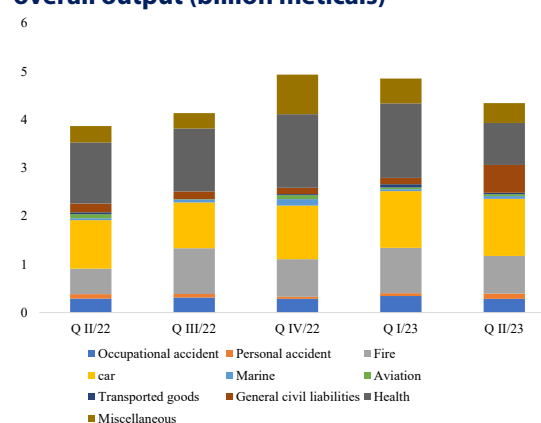
Chart 12. Overall insurance output (year-on-year change)



Source: ISSM

This performance of insurers was underpinned by the growing demand for health, motor, fire and occupational accident insurance (Chart 13).

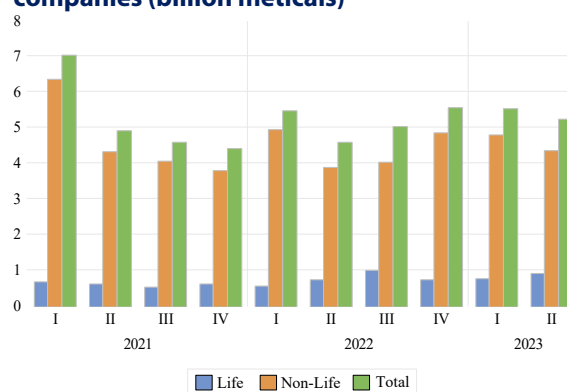
Chart 13. Contribution of the non-life sectors to overall output (billion meticaïs)



Source: ISSM

In absolute terms, in the semester concerned, total production decreased by 0.3 billion meticaïs, reflecting the fall in non-life sector production by 0.4 billion meticaïs (Chart 14).

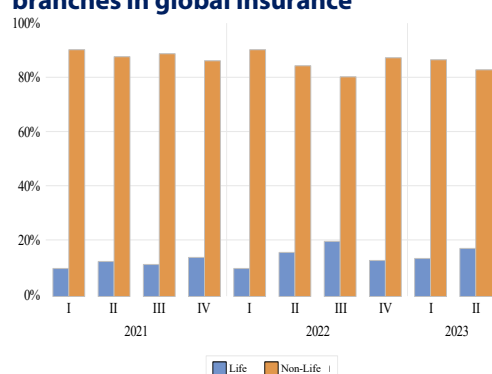
Chart 14. Overall output of insurance companies (billion meticaïs)



Source: ISSM

Regarding the overall structure of the insurance sector, the non-life sector continues to account for the largest share of the insurance market at 83% (chart 15).

Chart 15. Weight of non-life and life branches in global insurance



Source: ISSM

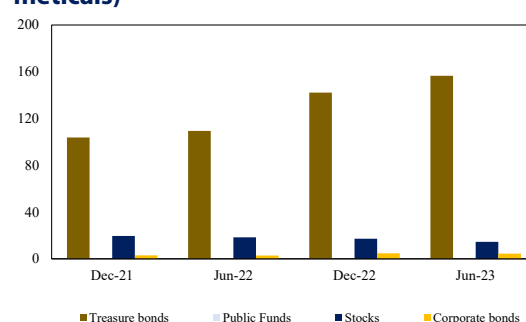
The developments in the non-life branch's weight in the overall structure of the insurance activity in the country were driven by the gross premiums issued for general civil liability insurance (341%), and personal accident insurance (165%), which saw greater demand over the semester.

3.3. Securities Market

In June 2023, market capitalization stood at 175 billion meticaïs, an increase of about 7% compared to December 2022 (164 billion meticaïs) and 35% compared to the same period in 2022 (130 billion meticaïs).

This increase remains driven by the performance of treasury bonds, amid an increasing trend (Chart 16).

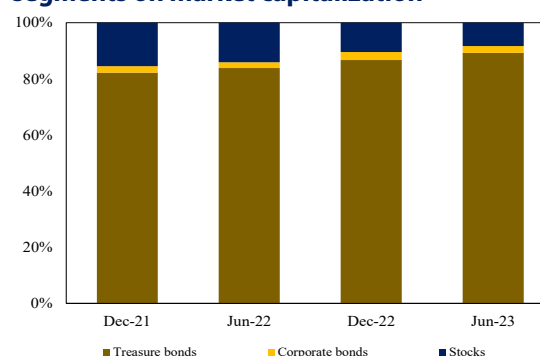
Chart 16. Market capitalization (billion meticaïs)



Source: BVM

Regarding the structure of securities traded on the Mozambique Stock Exchange (BVM), in the period concerned, treasury bonds accounted for 89% of the market capitalization (87% in December 2022 and 84% in June 2021), signaling the increasingly significant weight of the state in the securities segment (Chart 17).

Chart 17. Weight of the various MVM segments on market capitalization



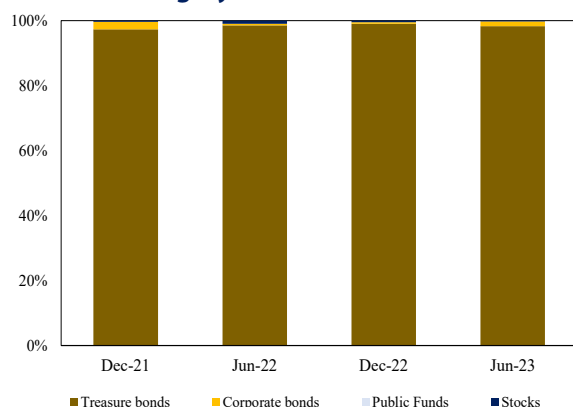
Source: BVM

The increase in the weight of treasury bonds in market capitalization could exacerbate the sovereign risk for the holders of such securities, particularly

banking and insurance sector players, and also influence overall systemic risk and financial stability.

Similarly, regarding the volume of transactions by category of securities, treasury bonds retain the largest weight, with about 98% of the total in the period under review, with corporate bonds and shares accounting for the rest (Chart 18).

Chart 18. Transaction volume weight by securities category



Source: BVM

Private corporate financing remains low in the capital market, as evidenced by the low volume of transactions in the corporate shares and bonds in the semester concerned.

Regarding issues listed on the stock exchange (Table 5), treasury bonds also account for the largest weight, i.e., 60% of the total, followed by stocks and corporate bonds with 20% each.

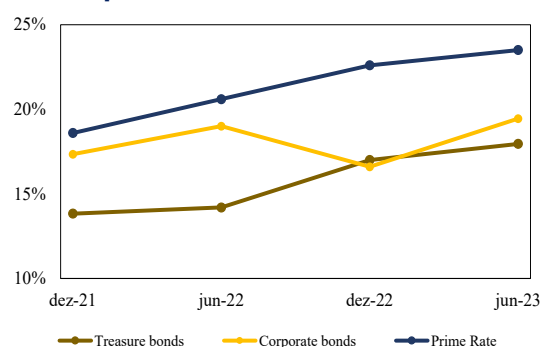
Table 5. BVM-listed issues

	Dec-21	Jun-22	Dec-22	Jun-23
Treasure bonds	33	34	39	40
Corporate bonds	9	9	13	13
Public Funds	0	0	0	0
Stocks	12	11	12	13
Commercial paper	0	0	1	0
Total	54	54	65	66

Source: BVM

Interest rates on corporate bonds are below the prime rate of the Mozambican financial system (Chart 19) since December 2021, due to the increase in the policy rate by 200 bp in March 2022 and 200 bp in September 2022.

Chart 19. Interest rates of BVM-listed bonds and the prime rate



Source: BVM

Should this backdrop persist, MVM financing can be a less costly alternative compared to banking sector financing.

IV. MACROPRUDENTIAL POLICY DECISIONS

The BM defines and implements macroprudential policy at the banking sector level, and regularly evaluates the financial system in order to identify current and future vulnerabilities and risks, against the backdrop of the most likely and adverse scenarios. That is, it identifies, monitors and assesses systemic risks.

The objective of macroprudential policy is to make the financial system resilient to risk absorption by ensuring adequate levels of financial intermediation and contributing to sustainable economic growth.

In the first half of 2023, the BM decided to maintain the macroprudential policy measures already established to mitigate systemic risk, namely:

- Limit of 100.0% in the LTV ratio for granting of credit to customers of credit institutions;
- 100% limit on the DTI ratio on loans to customers by credit institutions.
- D-SIB capital conservation buffer set at a minimum of 2.0%;
- Quasi D-SIB capital conservation buffer set at 1.0%;

Box 2. Macroprudential solvency stress test

The macroprudential solvency stress test (STMaP) is one of the monitoring tools that macroprudential authorities use to assess the resilience of the banking sector to risks and disruptions affecting the financial system and the economy. In contrast to the microprudential stress test, used specifically for individual institutions, which is based on its own assumptions, the macroprudential approach considers the banking sector as a whole and all institutions involved in the process use homogeneous assumptions for their simulation exercises.

The solvency stress test is carried out in all financial years and covers systemically important financial institutions and may include other banking institutions, without disregarding the cost-benefit assessment of this insertion, in an environment where systemic institutions hold a significant percentage of the banking sector's assets.

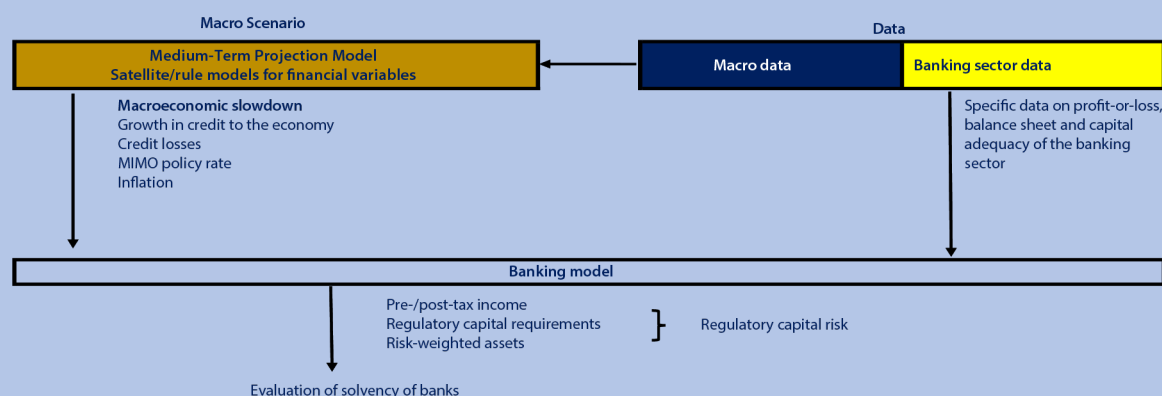
Stress test exercises estimate potential losses and capital shortfalls in the banking sector, arising from severe and plausible scenarios over a horizon of at least three years. Indeed, this exercise seeks to assess the effects of specific risk factors that may adversely affect the solvency position or liquidity profile of a financial institution.

The STMaP can be used for multiple purposes, particularly general financial system resilience tests, while incorporating the feedback of the financial sector in simulations, and as an empirical tool for assessing the appropriate level of the countercyclical capital buffer (CCyB).

Table of the macroprudential stress test exercise of the domestic financial system

The macroprudential solvency stress test exercise consists of a set of macrofinancial models, namely a macro model and a banking model, supplemented with other simple satellite and rules models (Figure 1).

Figure 1. BM solvency STMaP framework



Model structure

The structure of the model presents:

- A macro dataset with time series on key macro variables, financial variables and vulnerability indicators;
- A set of financial information, containing each bank's income statement, balance sheet and capital adequacy data;
- A macro model to evaluate the interaction of the main macro variables and construct coherent paths for the macro variables reported in the adverse scenario;
- Simple satellite and rule models for predicting variables that are not part of the macro model;
- Credit loss calculation tools for stressed financial years;
- A cross-check of the severity of the proposed scenario for the shock so as to maintain a coherent and plausible narrative;
- A banking model for projecting the income statement, balance sheet and capital adequacy of banks.

Calibration of a severe and plausible shock scenario

This step involves at least two procedures, namely:

- The selection of negative shocks to the economy based on the assessment of risks and vulnerabilities;
- Generating a consistent macroscenario by introducing the negative shocks in the macromodel; and
- Revisiting the key macroeconomic variables and assessing the severity of the stress scenario compared to the baseline scenario.

Macroprudential solvency stress test –Mozambique

The BM has initiated a macroprudential solvency stress test exercise for the banking sector, given that it is a useful tool for measuring the resilience of banks in an adverse macroeconomic environment.

In the aforementioned exercise, covering the period 2023-2027, the following adverse shocks were imposed on the Mozambican economy: severe weather events, military instability, political instability and high public debt.

As a result of this severe scenario, it was found that the banking sector's **profitability** deteriorated slightly over the first two years (2023 and 2024) of the analyzed period, remaining, however, profitable, and having, in the subsequent years of the period (2025 to 2027), resumed the historically observed levels of profitability.

Regarding the capital adequacy requirement, the result of the imposed stress test in the same assessment period shows that the domestic banking sector complies with a large margin and that the sector is robust from a capitalization standpoint.

Glossary

Risk-weighted assets – the result of weighting each asset by a risk coefficient for calculating the solvency ratio. It is determined in compliance with the requirements provided by Notice No. 09/GBM/2017, of June 5.

Cost-to-income – indicator calculated by the ratio of operating costs to banking income, which measures the efficiency of the organization.

Equity – concept used in banking supervision as a fundamental reference for applying various ratios and various prudential standards.

Impairments – the book value in financial statements to account for expected asset-related losses. This amount shall be deducted from the value of the respective asset in order to correct its value, considering the risk of associated losses.

NPL – non-performing loans represent non-productive credits, that is, credits that do not generate positive flows and profitability to banks.

Banking income – set of operating income receivable by a financial institution, arising from commissions, interest, trading, interbank operations.

Regulatory provisions – amounts recognized to meet losses related to the activities of financial institutions. They shall be constituted in accordance with the prudential regime determined by the supervisory authorities.

Solvency ratio – ratio of own funds to risk-weighted assets.

Risks – factors associated with uncertainties and, should they materialize, have an impact on capital and profit-or-loss.

ROA – the profitability of the asset obtained by dividing net income by total assets and measures the profit generated by each monetary unit of assets.

ROE – the return on equity obtained by dividing net income by equity.

TIER I – core capital (Level 1), which includes the best quality capital (share capital, reserves and retained earnings) and responds primarily to the liabilities incurred by the institution.

Vulnerabilities – set of characteristics that highlight the weaknesses of a particular system.

Annex 1. Key financial soundness indicators

Description	Jun-21	Dec-21	Jun-22	Dec-22	Jun-23
Capital adequacy					
Aggregate solvency ratio	25,59%	26.20%	26.76%	26.96%	23.33%
Tier I/ risk-weighted assets ratio	26.61%	26.72%	27.33%	27.52%	26.02%
Leverage ratio	12.20%	13.27%	12.92%	12.97%	12.72%
Asset quality					
NPL ratio	9.92%	10.18%	10.02%	8.97%	10.58%
NPL coverage ratio (right axis)	75.26%	68,48%	67.99%	71.84%	70.61%
Profitability					
ROA	3.84%	3.93%	4.46%	4.69%	4.64%
ROE	16,49%	17.52%	18.19%	19.13%	18.38%
Net interest income ratio	64.88%	64.08%	67.10%	68.50%	69.03%
Cost-to-income ratio	57.08%	53,75%	53.34%	53.87%	54.42%
Liquidity and fund management					
Net assets/total deposits ratio	58.52%	67.98%	68.22%	69.15%	44.03%
Net assets/total assets ratio	41.17%	47.89%	48.65%	50.49%	30.72%
Short-term liquidity coverage ratio	56.90%	68.30%	68.81%	69.79%	42.07%
Credit-to-deposit ratio	51.07%	50.22%	48.07%	47.09%	49.35%

