Kenya Financial Sector Stability Report

September 2023

ABOUT THE FINANCIAL STABILITY REPORT

The Kenya Financial Stability Reports contain the financial sector stability assessments by the Financial Sector Regulators in compliance with the Central Bank of Kenya Act, Section 4(2) and the Financial Sector Regulators Memorandum of Understanding (MOU) of 2009 (Revised in 2013). Maintaining and safeguarding financial sector stability is vital in fostering the development of a vibrant, sound and stable inclusive financial sector, which enables Kenya meet her national development aspirations in a sustainable manner.

The Financial Sector Regulators Forum (FSRF) established vide the MOU provides a mechanism for collaboration and cooperation in information sharing, prudential supervision, financial stability and financial inclusion issues, among other areas of mutual interests. The Forum's members are; the Capital Markets Authority (CMA), Central Bank of Kenya (CBK), Insurance Regulatory Authority (IRA), Retirement Benefits Authority (RBA) and Sacco Societies Regulatory Authority (SASRA). The National Treasury and Planning, Department of Cooperative Development, Kenya Deposit Insurance Corporation (KDIC) and Insurance Policyholders Compensation Fund (IPHCF) have associate membership status in the Forum.

The information contained in this annual publication may be reproduced without restrictions provided due acknowledgement is made of the source. Any enquiries concerning the Kenya Financial Stability Reports should be addressed to: –

www.cma.or.ke

The Director,
Regulatory Policy Strategy,
Capital Markets Authority
Embankment Plaza, Longonot Road, off Kilimanjaro Avenue, Upper hill
P.O Box 74800 - 00200
NAIROBI, KENYA

Tel: +254 20 2264000/ 2264900 / 2221869
Cell: +254 722 207767

E-mail: corporate@cma.or.ke

www.centralbank.go.ke

The Director,
Research Department,
Central Bank of Kenya
Haile Selassie Avenue
P.O Box 60000 – 00200
NAIROBI, KENYA

Tel: +254 20 286 1000, +254 20 286 3000, +254 709 081 000, +254 709 083 000

E-mail: researchstat@centralbank.go.ke

www.ira.go.ke

Director,
Directorate of Research, Innovation, Policy & Strategy
Insurance Regulatory Authority
Zep-Re Place, Longonot Road
P.O. Box 43505-0100
NAIROBI, KENYA

Tel: +254 20-4996000/
Toll Free No: 0800724499

E-mail: commins@ira.go.ke

www.rba.go.ke

Director,
Research and Strategy Department,
Retirement Benefits Authority
Rahimtulla Tower,
Upper Hill Road
P.O. Box 57733 - 00200
NAIROBI, KENYA

Tel: +254 20 2809000
Toll Free No: 0800720300

E-mail: info@rba.go.ke

www.sasra.go.ke

Chief Manager,
Research & Policy Department,
Sacco Societies Regulatory Authority
UAP Old Mutual Tower,
Upper Hill Road,
Upper Hill.
P.O. Box 25089-00100,
NAIROBI, KENYA

Tel: +254 20 2935101

E-mail: info@sasra.go.ke

Published by the Financial Sector Regulators, September 2023, Issue No. 14

TABLE OF CONTENTS

EXECUTIVE SUMMARY..1

1. ECONOMIC AND FINANCIAL CONDITIONS..3

1.1 Global Conditions and Risks.. 3

1.2. Domestic Economic Conditions and Risks...9

2. FINANCIAL SECTOR DEVELOPMENTS AND RISKS...17

2.1 Banking Sector 18

2.1.1 Commercial Banks and Mortgage Finance Companies.................................18

2.1.2 Microfinance Banks 25

2.1.3 Banking Sector Safety Net and Resolution 26

2.1.4. Risks Assessment and Outlook...27

2.2 Insurance Sector 43

2.3 Capital Markets...45

2.4 Pensions Sector...49

2.5 Sacco Sector...51

3. THE NATIONAL PAYMENTS SYSTEM DEVELOPMENTS AND RISKS...............................55

3.1 Payments Developments 55

3.2 Risks Assessment and Outlook 58

4. FINANCIAL STABILITY ASSESSMENT AND OUTLOOK..59

REFERENCES 62

ANNEXES.. 63

EXECUTIVE SUMMARY

The 2022 Financial Stability Report discusses key developments and risks in Kenya's economy and financial sector in 2022 and first half of 2023. Globally, the period under review was characterised by elevated inflationary pressures in advanced countries triggering strong monetary policy responses. This came on the backdrop of a reversal from a long period of very low interest rates, low volatility, and ample liquidity, associated with persistent expansionary monetary policy in the advanced economies. Emergence of inflationary risks in advanced economies triggered monetary policy tightening, which increased interest rates. This resulted in unexpected and unintended impact on financial institutions, especially banks, that had large exposures in bonds and relied on debt and money market for liquidity. Accumulation of bonds and reliance on market funding exposes these institutions to liquidity, duration, and credit risks.

Climate change risks to the financial sector and overall economy have increased. Several countries are now experiencing longer and severe droughts, floods and mudslides, and severe storms including typhoons and hurricanes. These have come with significant physical, transition and/or liability risks to the financial sector. With limited fiscal space to mitigate the effects and/or adaptation, vulnerabilities in these countries have increased.

Kenya's economy was resilient in 2022 to multiple shocks domestic and global sources. It expanded by 4.8 percent in 2022, compared to 7.6 percent in 2021. The expansion was supported by robust growth of service sectors, mainly transport and storage, financial and insurance, information and communication, and accommodation and food services. However, agriculture sector contracted further by 1.6 percent in 2022 due to drought. The economy is projected to grow by 5.7 percent in 2023 on rebound in agriculture and other key sectors. The real Estate and building and construction sectors, however, remain subdued on changing consumer behaviour, especially for commercial real estate. The narrow fiscal space, high debt level, tightening monetary policy and liquidity conditions in the international market, unpredictable weather patterns and political risks, could impact growth in 2023. Additionally, tightening lending standards by banks may slowdown credit uptake, thus growth and financial sector stability.

Kenya's financial sector was stable and resilient to multiple shocks in 2022. Banking sector was sound and stable supported by strong capital and liquidity buffers. There is however elevated credit, interest rate and operational risks as indicated by the 2023 Banking Sector Stress Test report. The microfinance banks remain weak, thinly capitalised, and loss making, diminishing their credit intermediation role. Capital markets face flight to safety by investors, characterised by excess volatility, reduced liquidity and high concentration risk. Corporate bonds segment recorded some actvity in the primary market, while there were no new issuances in the market and equities market segments are yet to record new issuances.

The capital, return on investment and gross premium increased. However, insurance industry paid more claims then premiums received, while fraud incidents increased.

The insurance sector recorde positive growth across all key indicators including gross premiums, assets, capital and return on investments. However, technology related incidences incidences such as fraud increased during the period. In addition, the sector paid more claims than premium received, imply risks mispricing. Pension sector face low returns on investment due to decline in equity and bond prices and member contributions. The asset quality and profitability of Saccos improved in 2022 despite slow economic growth and high cost of living experienced by members.

Overall, a careful policy balancing between stemming inflation through monetary tightening, undertaking fiscal consolidation to enhance public debt sustainability and deploying fiscal and financial policies to support vulnerable firms and households is needed for sustained economic recovery and macro-financial stability. The Central banks also need to deploy appropriate tools to address financial stability concerns separate from those targeting monetary policy objectives,

with clear communication on the intended objectives. Regulators also need to enhance risk assessment, corporate governance and risk management commensurate with risk profile of the subsectors, to mitigate risks and inform building capital and liquidity buffers.

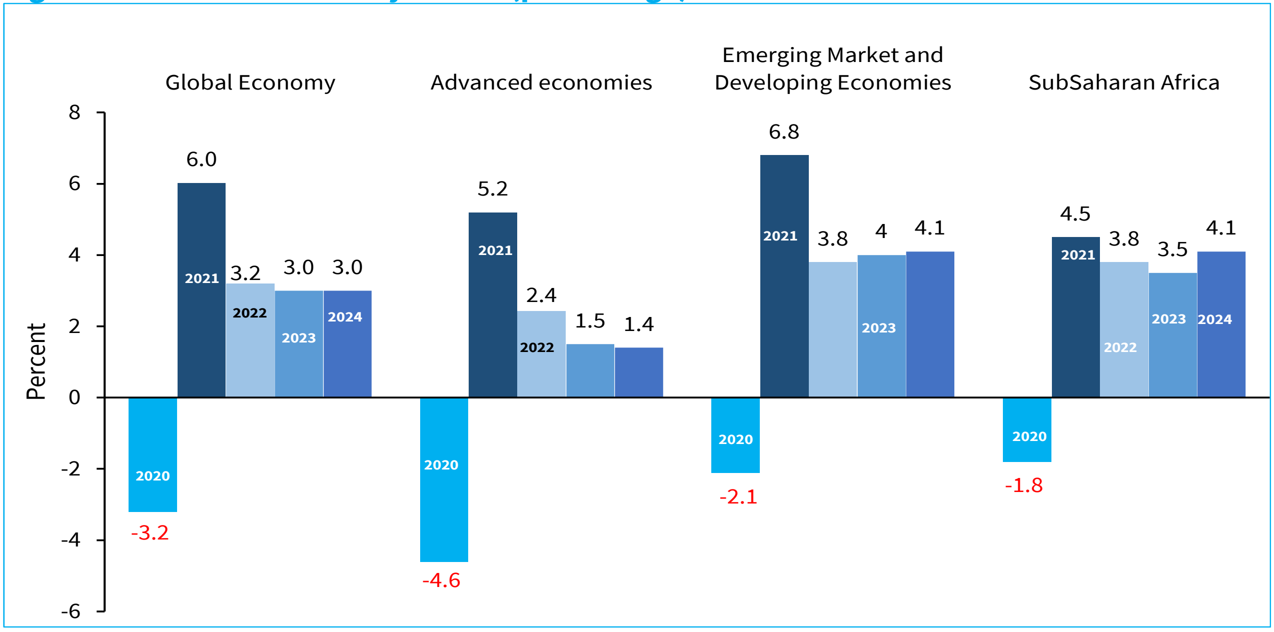
Kenya's financial sector is expected to remain sound and stable in 2023, supported by with adequate capital and liquidity buffers, well-coordinated policy reforms and a robust regulatory oversight. The Central Bank of Kenya (Amendment) Act No 10 of 2021 that brought previously unregulated digital lenders under CBK's regulatory armpit and operationalisation of non-withdrawable deposit taking SACCO regulations are expected to enhance stability and growth of digital credit providers and SACCOs. The upgrade of the CSD system to Dhow CSD is expected to increase efficiency in bidding and trading in Government securities, access to bonds market in Kenya and the diaspora, improve liquidity in the interbank market and also distribution of liquidity in the banking sector. The monetary and financial policy measures are also expected to strengthen the economy and enhance the resilience of households, firms and the financial sector to shocks.

1. ECONOMIC AND FINANCIAL CONDITIONS

1.1 Global Conditions and Risks

The global economic recovery remains uncertain in the wake of legacy and shocks *(April 2023 IMF WEO, Mid-2023 UN, World Economic Situation and Prospects, and June 2023 WB Global Economic Prospects).* The April 2023 IMF WEO projects global growth to decelerate to 3.0 percent in 2023 from 3.2 percent in 2022 **(Figure 1),** while the UN WESP- Mid-2023 projects global growth to slow from 3.1 percent in 2022 to 2.3 percent in 2023. The World Bank's Global Economic Prospects (June 2023) projects the world economy to remain frail and at risk of a deeper downturn, with slowdown from 3.1 percent in 2022 to 2.1 percent in 2023, and 2.4 percent in 2024.

Figure 1: Global Growth Projections (percentage)

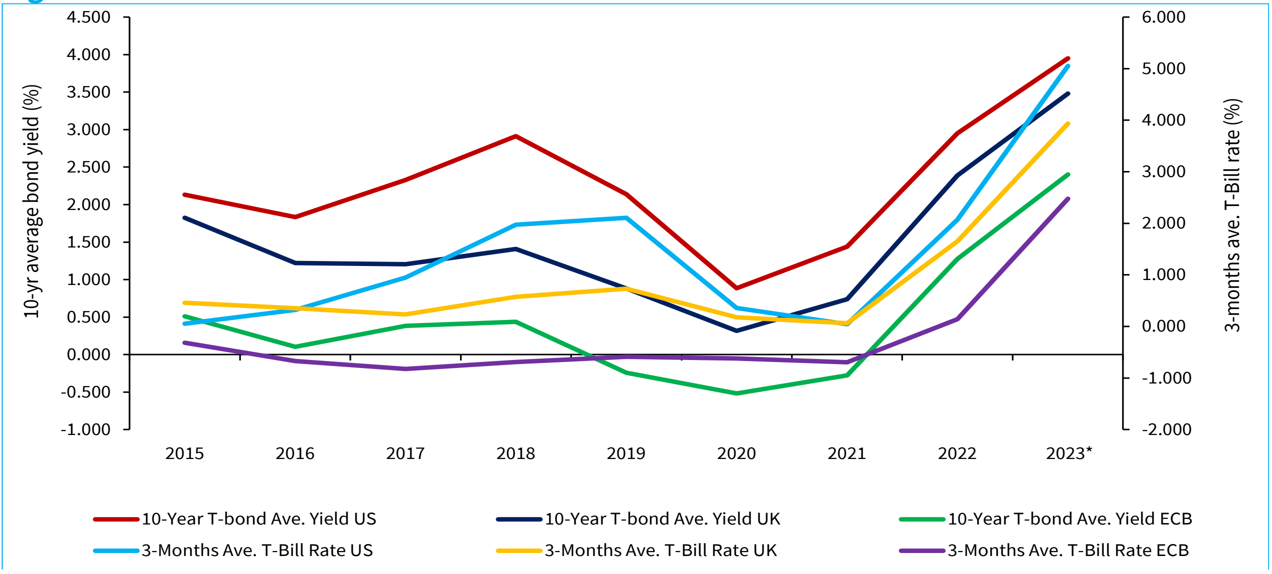


Source: IMF WEO, July 2023

The legacy effects of COVID-19 pandemic, Russia - Ukraine war and geopolitical tensions continue to drag global recovery momentum given their impact on supply disruptions, causing spike in commodity prices, and steep rise in inflationary pressures. Response by central banks to tighten monetary policies at faster pace than anticipated to stem inflation pressures has introduced new round of risks. Rapid increase in interest rates, slowdown in economic activity, supervisory and regulatory gaps, and bank-specific risks, contributed to stresses in parts of the financial system. These have raised financial stability concerns in the first half of 2023, especially for financial institutions that heavily relied on a continuation of very low interest rates. Such institutions came under severe stress, either because they were unprepared or unable to adjust to the fast pace of rate increase.

The reversal from a long period of very low interest rates, depressed volatility, and ample liquidity, attributed to strong and persistent expansionary monetary policy in the advanced economies elevated risks in 2022 and first half of 2023 (April 2023 Global Financial Stability Report). In post-2008 global financial crisis, many market players had been heavily exposed to liquidity, duration, and credit risk. This created a conducive environment for heightened vulnerabilities to the overall financial system. However, emergence of inflationary risks in advanced economies triggered Central banks' monetary policy actions that led to rapid increase in policy rates with pass-through to other interest rates **(Figure 2).**

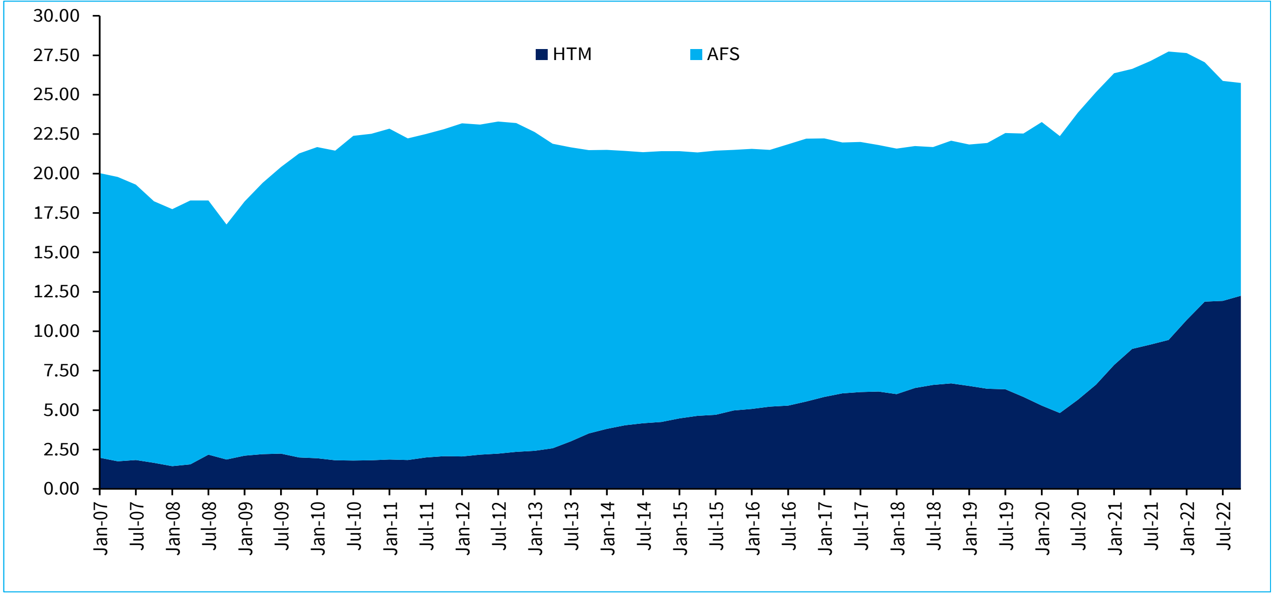
Figure 2: Interest Rates Trends in Select Advanced Countries



Source: Staff compilation from respective country websites

While monetary policy tightening continue to yield desired outcomes of stemming inflationary pressures, it accentuated liquidity shock in banks that invested in Government securities and relied on the market to finance their liquidity needs especially in the USA and Europe. In the USA, banks accumulated securities in Held to maturity (HTM) and Available for Sale (AFS) Securities after 2020 **(Figure 3)**. However, elevated interest rate and subsequent tightening of financial conditions compelled banks to liquidate their securities, resulting to a realisation of mark to market losses.

Figure 3: Held to maturity (HTM) and Available for Sale (AFS) Securities for US Banks (Percent of total assets)



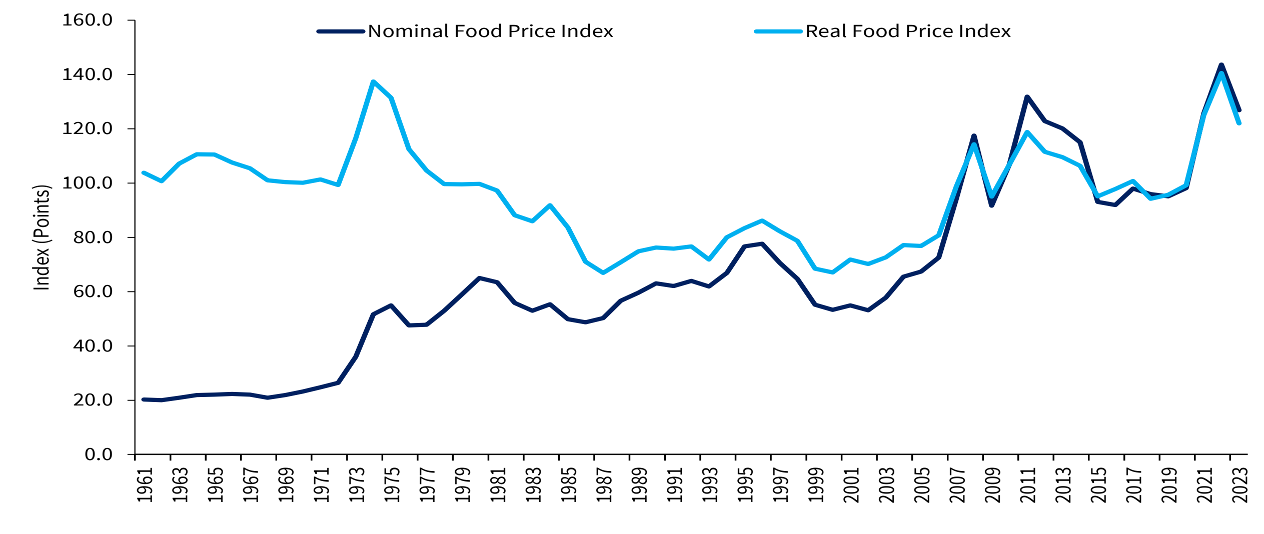
Source: 2023 April IMF GFSR

The use of new technologies and the consequent rapid spread of information through social media made it difficult to manage risks spill overs. The instabilities in the banking sector in Europe and USA, tightened financial conditions and elevated volatility in the emerging markets and developing economies. The assets sell-off and tight financial conditions led to decline in bond and equity prices, while capital outflows as well as tightening of monetary policies in advance countries exacerbated depreciation of national currencies in emerging and developing economies.

Despite authorities deploying monetary and financial sector policies to address inflation and financial sector instabilities, vulnerabilities still linger. For instance, investors' fears about losses on interest rate–sensitive assets led to the banking sell-off, especially for banks with concentrated deposit bases and large mark-to-market losses. Market access economies facing tight fiscal constraints, as a result of scarring effect of COVID-19 are not able to access international financial markets to borrow and mitigate the impact of asset price shocks to vulnerable segment of the economy and support growth. Sovereign debt distress could also spread and become more systemic especially among developing economies, with which Kenya has strong trade linkages.

In addition climate change and macroeconomic structural challenges remain unaddressed, which imped adjustment of food production to food prices. Despite the FAO Food Price Index[1] (FFPI) declining to 126.85 points and 125.22 points in June 2023 from 143.65 points and 140.55 points, respectively in 2022, it is still above the pre-COVID-19 levels **(Figure 4).** The overall decline could partly be on account of the UN-brokered deal with Russia that allowed passage of Ukraine grain through the Black Sea, increase in seasonal supplies of maize and wheat from USA, Argentina and Brazil.

Figure 4: FAO Food Price Index (2014-2016 = 100)

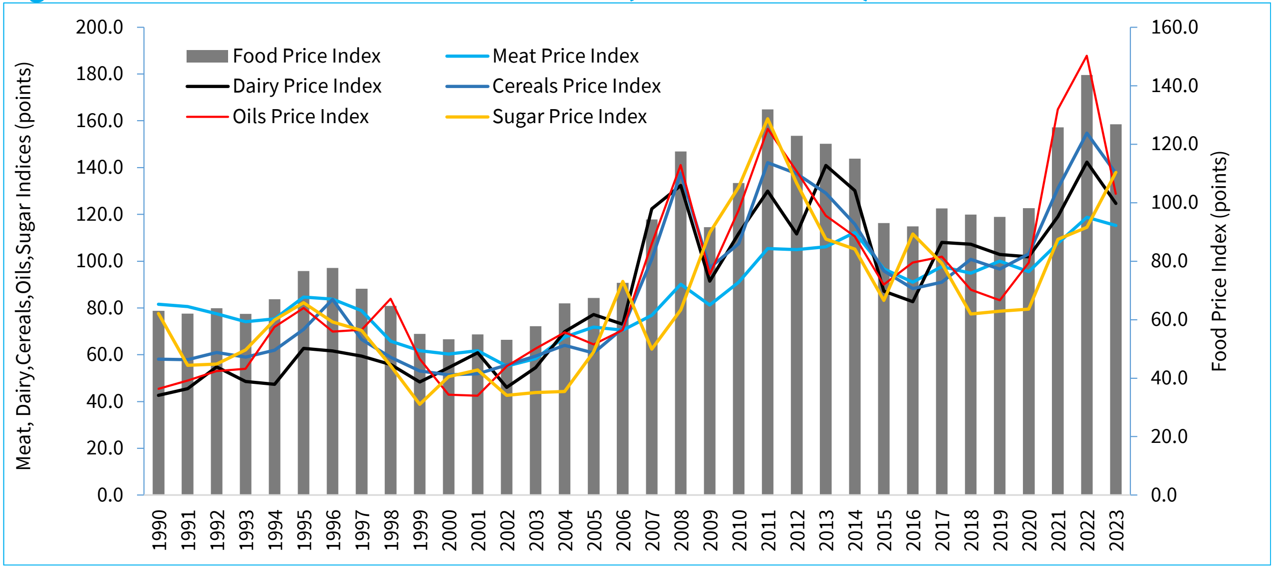


Source: https://www.fao.org/worldfoodsituation/foodpricesindex/en/
Notes: Nominal price of a good is its value in terms of money, such as dollars, French francs, or yen. The relative or real price is its value in terms of some other good, service, or bundle of goods.

[1] FAO Food Price Index (FFPI) is a measure of the monthly change in international prices of a basket of food commodities. It consists of the average of five commodity group price indices weighted by the average export shares of each of the groups over 2014-2016.

The FAO Vegetable Oil Price Index recorded the largest decline in 2023, reaching the lowest level since November 2020 due to subdued global import demand, while the. The FAO Sugar Price Index increased by 0.3 points in real terms and 23.5 points in nominal terms in the first six months of 2023. The 2023/24 sugarcane harvest in Brazil and a sluggish global import demand, particularly from China, could ease the international sugar prices. In addition, impact of El Niño phenomenon along with the strengthening of the Brazilian Real against the United States dollar, could offset price fall **(Figure 5).**

Figure 5: Annual Nominal Food Price Indices (2014-2016 = 100)



Source: https://www.fao.org/worldfoodsituation/foodpricesindex/en/

Overall, growth in the world trade is expected to decline from 5.1 percent in 2022 to 2.4 percent in 2023, due to slowdown in global demand and more focus on domestic services. Rising trade barriers and the lagged effects of US dollar appreciation in 2022, which made traded products more costly for numerous economies given the dollar's dominant role in invoicing, are also expected to weigh on trade growth in 2023. Overall, the outlook is for weaker trade growth than during the two pre-pandemic decades (2000–19), when it averaged 4.9 percent. Fragmentation into geopolitical blocs has the scope to generate large output losses, including through its effects on foreign direct investment as trade disputes and resultant restrictions hinder free movement of goods and services as well as capital.

Risks to the Outlook and Policy Measures

Recession concerns have gained prominence, while worries about stubbornly high inflation persist. There is a significant risk that the recent banking system turbulence will result in a sharper and more persistent tightening of global financial conditions than anticipated in the baseline and plausible alternative scenarios, which would further deteriorate business and consumer confidence. Additionally, sharper contractionary effects than expected from the synchronous central bank rate hikes amid historically high private and public debt levels. Combination of higher borrowing costs and lower growth could cause systemic debt distress in emerging market and developing economies. In addition, inflation may prove stickier than expected, prompting further monetary tightening than currently anticipated. Other adverse risks include a faltering in China's post–COVID-19 recovery, escalation of the war in Ukraine, and geoeconomic fragmentation. With debt levels, inflation, and financial market volatility elevated, policymakers have limited space to offset new negative shocks, especially in low-income countries.

Upside risks to global growth include policies expected to enhance macrofinancial stability, reducing inflation and ensuring that expectations are anchored through steady but ready monetary policy supported by clear communication; careful monitoring of risks to safe financial stability, managing market strains, and strengthening oversight to identify and manage vulnerabilities at earliest opportunity; managing market strains through targeted liquidity support; strengthening oversight to address any supervisory gaps to ensure sufficient capital and liquidity, especially in the face of exposures to interest rate risk and overall banks' risks; normalizing fiscal policy to bring deficits and debts below the pre-pandemic levels and align it to support monetary policy; and restoring debt sustainability.

Sub-Saharan Africa

The SSA region faces funding constraints attributed to a mix of high global interest rates and exchange rate depreciations for their local currencies. The legacy problems of the COVID-19 pandemic and the cost-of-living crisis still persist, making the 2023 growth projection suboptimal, at just 3.6 percent.

The region's financing options have deteriorated significantly, with high interest rates that have raised borrowing costs, both on domestic and globally. Sovereign spreads for the region rose three times the emerging market average since the start of the global tightening cycle. In addition, the US dollar effective exchange rate rose to a 20-year high in 2022, increasing the value of dollar denominated debt and dollar-denominated interest payments. These factors further created more upward pressure to the region's external borrowing costs. Higher uncertainty amid the pandemic and the war in Ukraine has also led to risk repricing, disproportionately affecting sub-Saharan African countries because of lower credit ratings, and cutting off all frontier markets from international market access since spring 2022. More specifically, Eurobond issuances for the region declined significantly in 2022. Inflation remains elevated and volatile.

Public debt as a share of GDP is relatively high, averaging 56 percent of GDP in 2022, the levels last seen in the early 2000s. The rising debt continue to widen fiscal deficits on account of multiple crises, slower growth, and exchange rate depreciations. There are concerns about debt sustainability in the region, with 19 of the region's 35 low-income countries already in debt distress or facing high risk of debt distress in 2022 (April 2023 Regional Economic Outlook: Sub-Saharan Africa).

The region's national currencies, mostly depreciated against the US dollar in 2022. This has adversely affected net importers given that a significant share of imports is invoiced in dollars. Currency depreciations also contributed to higher general government debt. The region's financial sector was resilient, with non-performing loans improving to 7.5 percent in 2022 from about 9.0 percent of total loans in 2021. Bank profitability rebounded in 2022 but capital adequacy of banks has dipped relative to its pre-pandemic peak in 2019.

Further deterioration of business and consumer confidence in key advanced economies could reduce demand for imports and lower commodity prices for the region. Additionally, any increase in global risk aversion could heighten the funding squeeze. There is also a risk of capital outflow from emerging market and developing economies, putting most on national currencies under exchange rate pressure and in turn, dollar-denominated external debt induced vulnerabilities. Rigidly high inflation could further delay monetary policy easing, lowering net financial inflows into the region with repercussions on the balance of payment pressures. Delayed resolution to the war in Ukraine, could heighten the elevated global uncertainty and raise food and energy prices. Geopolitical realignments and geoeconomic fragmentation could negatively impact the region in terms of rising trade barriers and higher food prices. The cost-of-living crisis remains a major concern for the region given the high incidence of poverty. Climate change is also emerging as key to the region amid limited fiscal space for interventions. For instance, cyclone Freddy battered vulnerable families and communities in Mozambique, but has limited means for climate adaptation. The region faces limited climate funding despite the huge needs, estimated at about $22 billion in 2020.

Policy options to the SSA region should focus on consolidating public finances through a credible and transparent medium-term fiscal policy framework to improve fiscal sustainability and lower debt risks. Additionally, central banks in the region need to adjust the pace of monetary policy tightening to both the level and trajectory of inflation, in close coordination with fiscal policy. The region can put in measures to access the IMF's new Resilience and Sustainability Facility to address longer-term structural challenges, including those posed by climate change.

The East African Community (EAC) economies grew slower in 2022 by an average of 2.4 percent from an average growth of 6.9 percent in 2021. The moderation is on account of depressed agricultural output, constrained fiscal space on account of rising public debt and lower revenues, inflationary risks, and monetary policy tightening to curb rising prices. The region's growth is projected at an average of 5.1 percent in 2023, supported by rebound in Agriculture, global economic recovery, easing inflationary pressures, and improved financial conditions. Downside risks to the projected growth include elevated food and energy prices, thus maintaining inflation high, and in turn delaying the Partner States Central Banks to ease their respective monetary policies stance. The regional national currencies also remain under pressure against international currencies, thus impacting households and firms negatively. This is through high import bill, inflation passthrough, capital outflows and high interest rates translating into rising debt risks and high borrowing costs. Holders of government bonds subject to mark-to-market valuation under IFRS requirement also face unrealized losses than can easily crystalize in the event of liquidity stress.

The banking sector in the EAC region remains resilient to credit and interest rate shocks due to sufficient capital and liquidity buffers-built overtime through retained earnings. In addition, regulators have implemented a wide range of regulatory measures to ensure the sector is well prepared to weather emerging risks. However, strains to households income as a result of high inflation due to supply disruptions of energy, food and fertilizer attributed to the Russia – Ukraine War, continue to weigh in on credit risk for banks. The NPLs ratios for Rwanda, Uganda, Kenya and Burundi and South Sudan have risen significantly. A further increase in interest rates if monetary policy tightening is sustained, could worsen financial conditions, intensify financial markets volatility and reduce access to liquidity by banks and even NBFIs. There is also the risk of assets concentration in the banking sector, as households, manufacturing, trade and real estate sectors, account for the largest share of credit. A major shock to any of these sectors, could have material impact on the regional banking sector.

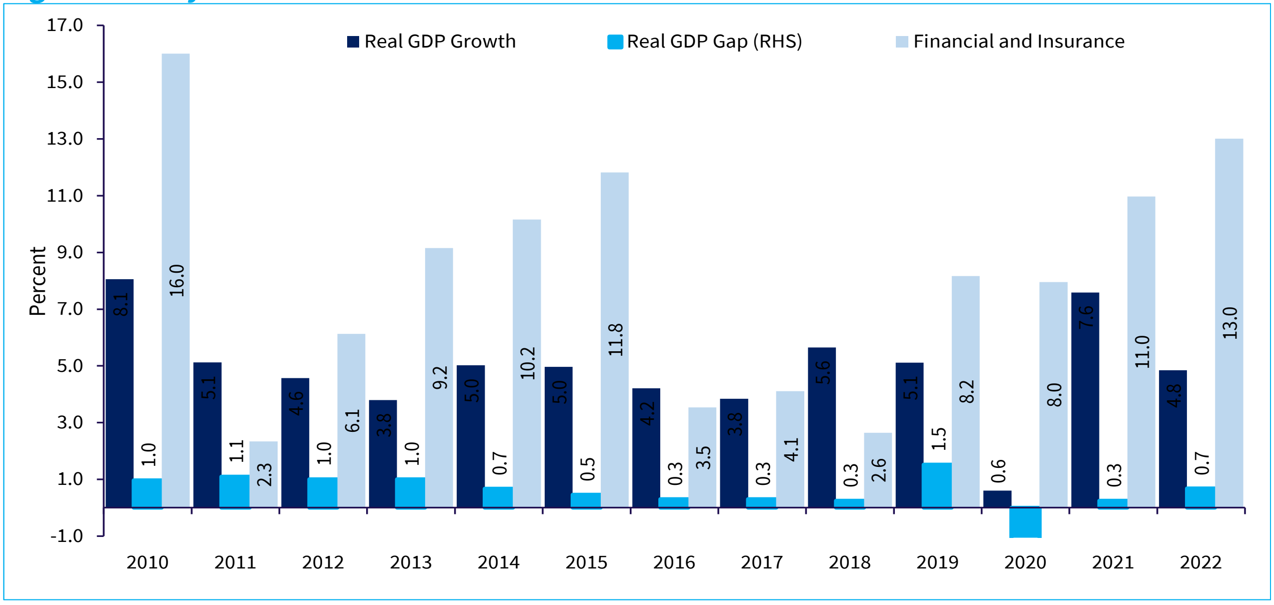
Downside risks to the banking sector stability in 2023-24 include persistent high inflation due to further increase in food and energy prices that in turn make central banks to tighten monetary policy even further; limited fiscal space to support the economy and mitigate the impact of high cost of living on vulnerable households; rising debt distress among governments and corporate sector; further depreciation of national currencies leading to more capital outflows, financial markets volatility and constrained market funding; increase in interest rates that pushes borrowing costs even higher, slowing credit uptake for households and firms. High food and energy prices on account of escalation of Russia-Ukraine War that disrupts supply chains of key commodities, drought episodes in agriculturally rich areas, and global geopolitical tensions that lead to geoeconomic fragmentation. The region is an overall net importer of key final and intermediate commodities for trade and other key sectors. Therefore, EAC Partner States should be ready to deploy fiscal, financial, and monetary policy measures to mitigate risks in the medium term if these shocks crystalize. This would enhance growth momentum for economic recovery and enhance stability of the financial sector.

Overall, a careful policy balancing between stemming inflation through tightening policy rates and maintaining accommodative monetary policy is needed for sustained economic recovery and financial stability. Emerging markets remain vulnerable to a disorderly tightening of global financial conditions. Many central banks have already significantly tightened policy. However, further rate increases, should continue but consider country-specific inflation and economic outlook. In addition, fiscal prudence is required, especially in economies with high inflation, high debt level and tightening financial condition. However, fiscal support is needed for segments of the population and firms affected severely by the higher commodity prices and in the sectors where recovery was already weaker. Therefore, striking a balance between containing vulnerabilities and avoiding procyclicality is important given the uncertainties on economic prospects.

1.2 Domestic Economic Conditions and Risks

The Kenyan economy was resilient in 2022 to price, drought and elections shocks mainly supported by industry and services. The economy expanded by 4.8 percent, compared to 7.6 percent in 2021. The positive performance was supported by robust growth of service sectors, mainly transport and storage, financial and insurance, information and communication, and accommodation and food services. However, agriculture sector contracted further by 1.6 percent compared to 0.4 percent in 2022 due to adverse weather conditions The economy is projected to grow by 5.7 percent in 2023 **(Figure 6).**

Figure 6: Kenya's Economic Performance

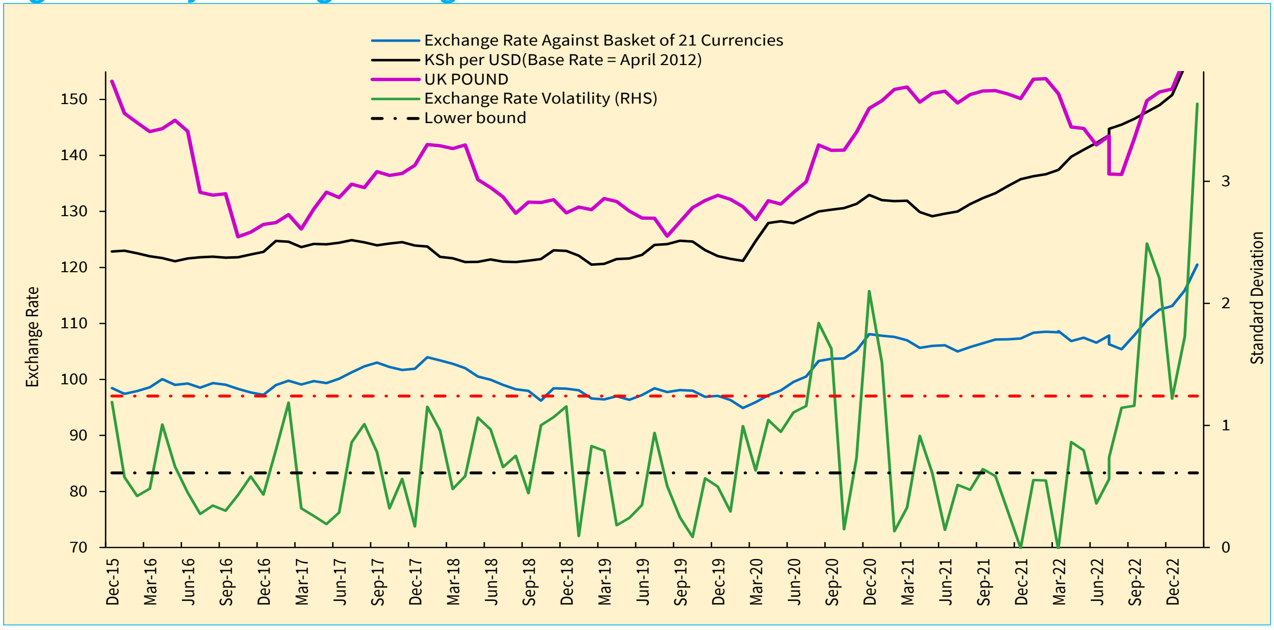


Source: CBK

Domestic and global downside risks to the 2023-24 growth projection remain. Sticky inflation, tight monetary, fiscal consolidation, slow credit uptake, and/or banks tightening lending standards; tight cashflow and loan default by corporates are expected drag growth. Faster than anticipated monetary policy tightening to stem elevated inflation and scarring effect of price shocks are expected to increase interest rate and accentuate exchange rate depreciation. Increase in interest rate will tighten liquidity in the international and domestic markets and increase the cost of borrowing and capital outflows, which reduces investment in the economy. Further escalation to Russia-Ukraine war in 2023-24 will constrain supply of cereals, fertiliser, metals, and oil. Shortages of cereals are expected to persist to due impediment to shipping lines and unavailability of fertiliser during planting. Prices of other commodities such as oils, clinker and base metals used in the manufacture of cement, steel, and iron sheets or for construction sector have also increased. Increase prices of construction materials lead to cost overrun and delay completion of projects, which reduce the ability of real estate and construction sector to meet their loan obligation.

Kenya's national currency came under pressure since first quarter of 2022, having weathered the COVID-19 pandemic storm in 2020/2021. However, the local currency has depreciated overtime against major international and regional currencies, into the first half of 2023. The Kenya shilling, like other regional currencies, depreciated in the year to June 2023 as spillovers from rapid monetary policy tightening in advanced economies that pushed global interest rates sky-high, triggering flight to quality tendencies by portfolio investors. This led to significant decline in new portfolio flows targeting equities or fixed income securities markets as well complete sell-off from frontier markets, including Kenya (Figure 7). Recovery in exports, resolution of Russian-Ukraine war, pausing of global monetary policy tightening, diaspora remittances, prudent monetary policy and stable import bill are expected to support the local currency to regain stability.

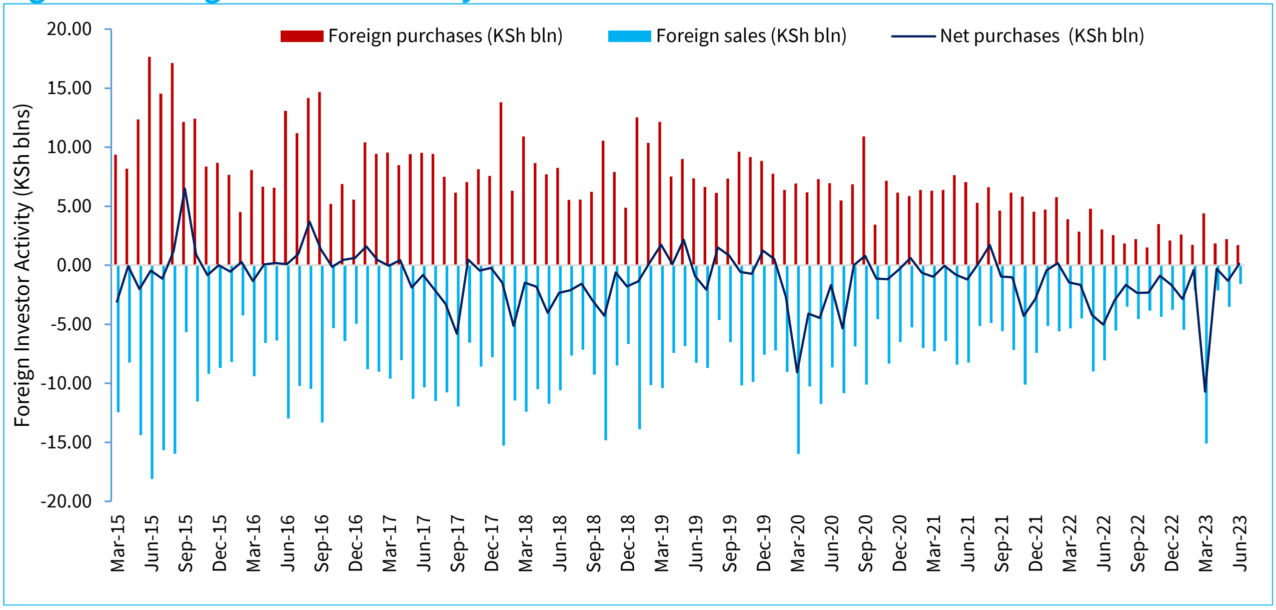
Figure 7: Kenya Shilling Exchange Rate



Source: Staff computations

Foreign investors at the Nairobi Securities Exchange (NSE) continued to offload their portfolio holding 2022 into first half of 2023. More sales than purchases have persisted since March 2020, albeit slight net inflows in September 2020, and September 2021. Overall, the market remained on net outflow in 2022 and first half of 2023, highlighting the impact of rising global interest rates as advanced economies tighten monetary policy, domestic business environment and firm-specific challenges **(Figure 8).**

Figure 8: Foreign Investor Activity at the NSE

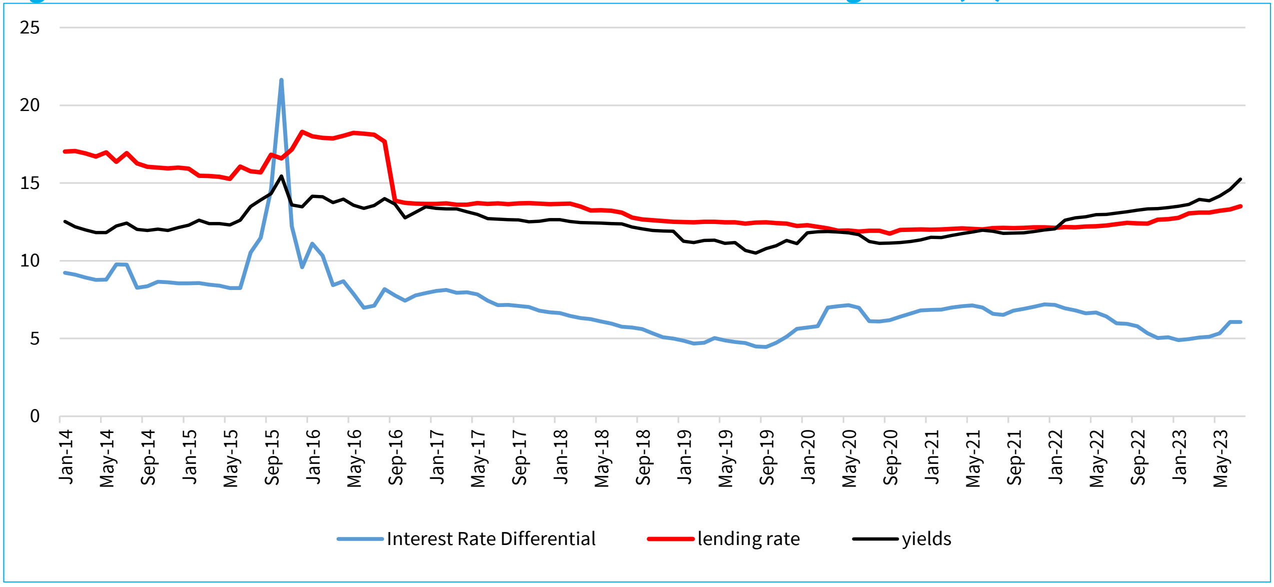


Source: Staff computation from NSE data

While this trend may be reflective of company-specific economic prospects, it may also be as a result of domestic economy in 2022, including the legacy risks from COVID-19 pandemic, worse than expected drought episode in 2021 and competition from imported goods.

The sell-off at the NSE could also be attributed to the tightening financial conditions in international markets as central banks in advanced economies tightened their monetary policy stance to stem the rising inflation risks. As a result, US interest rates have risen sharply, leading to significant decline in interest rate differential between Kenya and the US interest rates **(Figure 9).** Investors are therefore not well incentivised to invest in high-risk markets, given the low-risk premium, hence more capital outflows than inflows. This has contributed to intense volatility in equities markets and exchange rate depreciations for frontier market economies, including Kenya.

Figure 9: Interest Rate Differential and Real Effective Exchange Rate (%)



Source: Staff computations

Note: *Interest rate differential (3_month Kenya T-bill rate minus 3_month US T-bill rate)*

Private sector credit moderated to an annual growth of 12.2 percent in June 2023 from 13.2 percent in May 2023 and 12.5 percent in December 2022, on account of economic recovery (Table 1). Other drivers to the strong growth in credit include full adoption of credit risk pricing models by banks, supportive monetary and financial policy environment, strong growth in deposits base and slow down lending to the public sector. Fastest growth in lending targeted manufacturing, trade, transport & communications, and agriculture sectors. Real Estate, Building & Construction, and Business activities sectors recorded the slowest growth in credit. This could reflect slow uptake in real estate and challenging business environment during the period.

Trade, Manufacturing, Private households (personal) and Real Estate accounted for 59.3 percent of total credit to the private sector as of June 2023, signalling potential sectoral concentration. A severe shock to any of these sectors could impact the economy and credit market significantly.

Table 1: Credit to Private Sector Annual Growth Rate

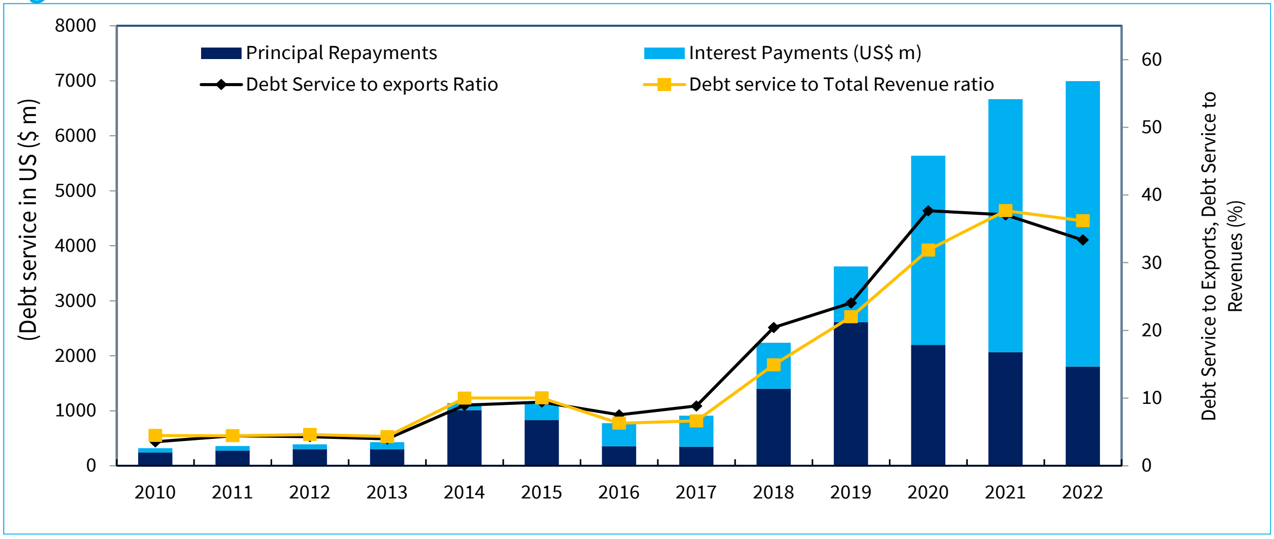
Sectors	%Share of Total Credit in June-23	12-month growth in Private Sector Credit (%)									
		Mar-22	Jun-22	Sep-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
Agriculture	**3.3**	7.7	12.5	17.0	22.3	20.7	18.0	14.9	16.9	18.3	18.6
Manufacturing	**16.0**	9.9	15.2	14.2	13.8	13.8	15.2	15.8	21.7	19.3	18.0
Trade	**17.2**	10.4	11.6	16.4	11.4	11.1	11.8	11.9	13.7	15.4	12.5
o/w domestic trade	**15.1**	9.6	12.8	16.7	10.6	10.4	11.2	11.1	12.7	14.2	9.5
Building & construction	**3.8**	6.4	13.9	12.5	8.2	5.8	3.0	5.8	4.2	5.1	4.8
Transport & communication	**9.0**	25.0	22.2	21.6	23.5	16.6	16.5	17.4	18.0	22.0	19.9
Finance and insurance	**4.0**	3.6	6.5	0.2	7.6	6.7	21.1	28.4	32.3	32.7	29.8
Real estate	**11.7**	0.5	0.5	0.1	3.2	3.3	2.9	2.3	2.4	1.9	3.7
Mining & quarrying	**0.6**	(4.9)	28.5	57.4	31.3	54.2	97.7	83.2	55.6	41.3	24.0
Private households	**14.4**	7.5	6.1	7.8	8.2	7.8	7.8	7.2	5.0	7.0	8.4
Consumer durables	**11.0**	15.6	14.7	14.4	12.9	12.5	12.4	12.7	13.3	11.9	11.8
Business services	**5.4**	14.7	15.2	12.5	13.7	13.7	13.5	9.3	12.5	13.5	5.5
Other activities	**3.6**	60.5	57.2	53.8	41.8	33.3	15.3	11.9	20.6	6.8	8.9
Total Private Sector Credit	**100.0**	**10.9**	**12.3**	**12.9**	**12.5**	**11.5**	**11.7**	**11.6**	**13.2**	**13.2**	**12.2**

Source: CBK

Public debt sustainability remained an area of focus in 2022-23. The fiscal deficit as ratio of GDP moderated to 5.8 percent in the FY 2022/2021 from 8.8 percent in the FY 2021/2022. Public debt as a ratio of GDP declined to 67.0 percent from 68.4 percent in line with fiscal consolidation. The decline in fiscal deficit is due to unwinding of fiscal support to firms, removal of subsidies on some commodities, increase in taxes and widening of the tax base. This is accordance with fiscal consolidation efforts and implementation of medium-term debt strategy, which endeavours to reduce fiscal deficit as a ratio of GDP to less than 3.5 percent. However, Present Value of Public debt stock was 60. 2 percent of GDP as of September 2022, breaching the threshold of 55 percent. In nominal terms, total public debt stock rose by 11.7 percent, from KSh 8.3 trillion in December 2021 to KSh 9.4 trillion in March 2023.

The fiscal space improved in 2022 on account of increase in revenue and exports. The ratio of debt service to exports and debt service to total revenue declined to 33.4 percent and 36.2 percent in FY 2022/2023 from to 47.9 percent and 39.9 percent in FY 2021/2022. The large interest payments and decline in principal amounts in FY 2022/2023 reflect suspension of the principal payments under the Debt service suspension initiative (DSSI) **(Figure 10).** The programme eased fiscal pressures, giving the government space to cushion the vulnerable households from drought and other shocks in 2022. It also incentivised Kenya to improve transparency in debt management.

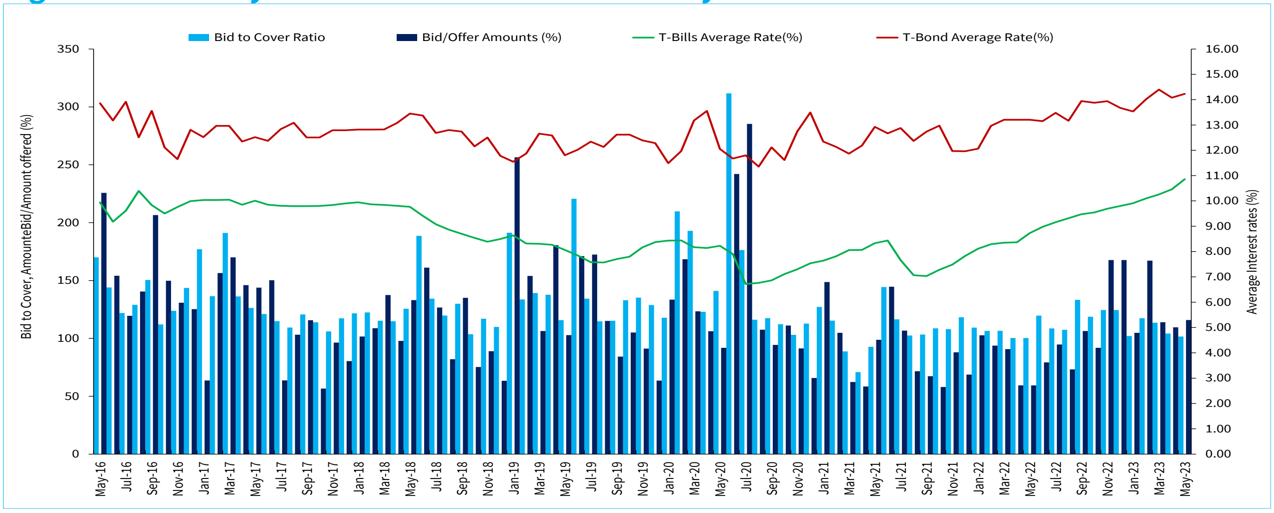
Figure 10: Public Debt Service



Sources: CBK, Budget Outturn

Overall, interest rates on government securities increased in 2022 and the first quarter of 2023 (Figure 11). For instance, Treasury bill rates for all the maturities, averaged 9.0 percent in 2022 compared with an average of 7.7 percent in 2021. The weighted average interest rates for both T-bonds and bills rose to 11.1 percent in 2022 compared from 10.1 percent in 2021.

Figure 11: Monthly Government Securities Primary Market Trends



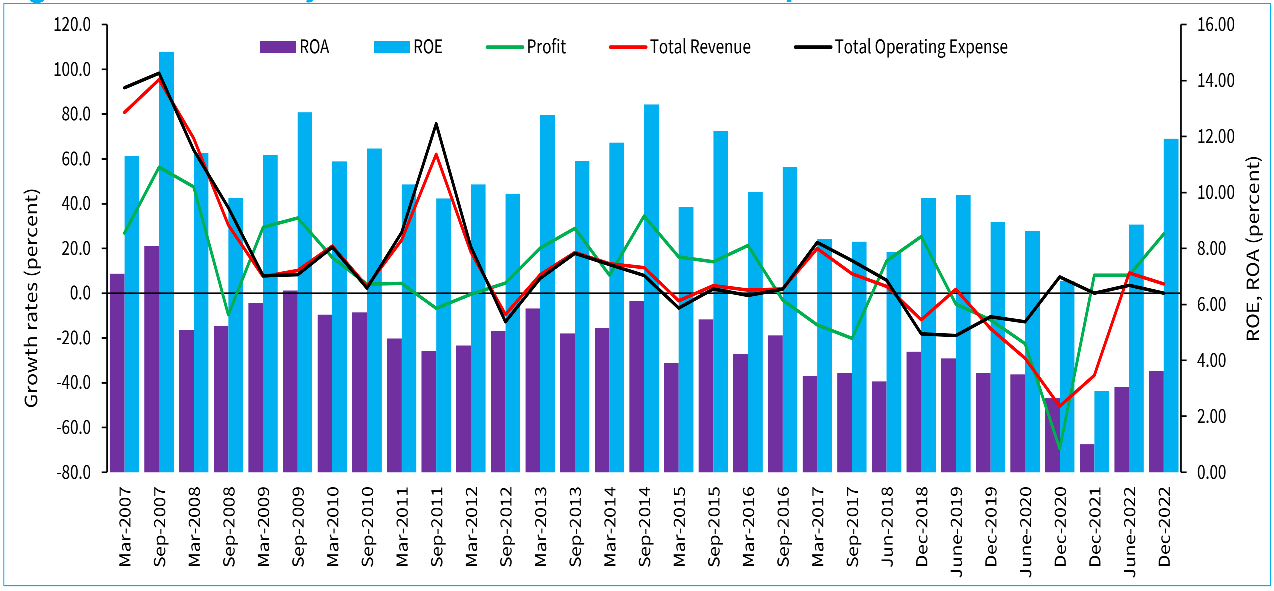
Source: CBK

Auction subscriptions rate of Government securities in the primary market averaged 113.1 percent in 2022 from 134.6 percent in 2021 while bids-to-cover ratio (accepted bids to offer amount) was 0.99 in 2022 from 1.4 in 2021. This indicates low appetite for government securities and high cost of borrowing in the domestic market. The coupon rate and yields in the domestic secondary market for bonds and Kenya Government Eurobonds increased in the first of 2023. This reflects reduced liquidity and tight financial conditions. Investors, especially banks are also shifting to lending to private sector due to elevated repricing risks on government bonds. The first half of 2023 recorded more undersubscriptions, with four of the six months fall below target, while yield curve shifted upward, implying higher domestic borrowing cost **(Annexes II & III).**

Increased issuance of long-dated bonds to take advantage of ample market liquidity, led to extension of domestic debt maturity profile in 2022, thus reducing refinancing risk. The average time to maturity for government bonds increased to 8.9 years in December 2022 from 8.2 years in 2021 while the ratio of T-bills to bonds was 24:76 in December 2022 and 31:69 in December 2020. While the shifting of domestic debt to longer maturity is a noble debt management strategy to address refinancing risks, it must take into consideration the cost implication of long-term debt. Long term bonds bear higher coupon rates payable for a long time. Therefore, issuing a substantial amount of long dated bonds in periods of high interest rates, shifts the entire yield curve outward, with significant implication on cost of servicing domestic debt. In addition, it leads to significant bond repricing with implications on mark to market losses for banks. This could in turn discourage banks investing long term and therefore negative implication on overall debt market development on account of market distortion.

Economic recovery continued in 2022, improving profitability for listed non-financial corporates in 2022 (Figure 12). Profitability of the non-financial corporates listed on the NSE increased by 6 percent in 2022 compared with 2021. Revenues grew faster than the operating expenses in 2022 and first half of 2023. However, 13 companies issued profit warnings in 20 Improved profitability is also reflected in the fewer number of listed firms on the NSE that issued profits warnings in 2022. Only one listed firm issued profit warning in 2022 compared with 7 firms in 2021. The year with highest number of listed companies issuing profit warnings was 2015, where a total of 18 companies reported their annual profits falling by at least 25 percent from the previous year. Declining revenues, liquidity, and profitability of increase indebtedness of firms, which not only reduces their ability to service debt, but also to obtain affordable loans cost from financial institutions.

Figure 12: Profitability of NSE Listed Non-Financial Companies



Source: CBK Staff Computation

The real estate remained subdued in 2022, partly reflecting low demand in post-COVID-19 pandemic as some organizations moved to virtual offices. The sales, purchases, rental, and occupancy rates of residential, office, retail, and hospitality real estate slowed in 2022 and in first half of 2023 compared to 2021. Prices for residential and office property for hotel & restaurants and meetings, slowed down due to decline in demand and increasing shift of from office to working from home. Despite slowing rental prices, shifting of retail businesses from shops and malls to online and from office to online and homes, has reduced footfall in the domestic chain stores and demand for office space. Furthermore, slow growth income compelled households to rent more apartments than detached and semidetached. The decline in demand for property is elevating credit risk due to investors and borrowing facing difficulties loans repayments.

Despite slowdown in the real estate, building and construction sector grew by 4.1 in 2022 but slower than 6.7 percent growth in 2021. It grew by 2.2 percent in the first quarter of 2023. The cost of construction as reflected by the construction price index increased by 0.5 percent in the year to June 2023, underpinned by increase in the cost of fuel. Despite increase in the cost of construction, the supply of apartments increased to match demand however supply for commercial space, office space, detached and semidetached houses exceeded demand, which moderated their prices in 2022 and first half of 2023. The low demand of commercial, detached, and semidetached houses is reducing ability of the real estate and construction sectors to repay their loans. As a result, lenders slowed financing construction projects to mitigate underlying risks.

Overall, the economy is projected to perform better in 2023 than 2022, despite downside global and domestic risks. The narrow fiscal space, high debt levels, tightening monetary policy and liquidity on the international market, less than optimum rain and lack of consensus on political issues arising from 2022 elections and on financing public spending may slowdown growth in the second half of 2023. Additionally, tightening of lending standards by banks slowdown lending, thus impacting financial sector stability.

2. FINANCIAL SECTOR DEVELOPMENTS AND RISKS

This Chapter analyses the financial sector developments and risks across banking, capital markets, insurance, pensions and Savings and Credit Cooperatives (Sacco) sectors, which are regulated and supervised by the CBK, CMA, IRA, RBA and SASRA, respectively. The policy measures taken by Government and regulators remain supportive to the sector resilience and financial stability.

Overall, Kenya's financial sector has grown significantly by assets size, capital base, and profitability. However, capital markets have recorded significant decline in the foreign investors participation as reflected in all the key indicators. The Microfinance banks remain vulnerable to shocks, with the sector yet to record meaningful profits in the five-year period under review **(Table 2).**

Table 2: Select Indicators for the Financial Sector

Sectors	Indicator	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22
Banking	Total Assets (KSh Mln)	4,446,104.23	4,832,348.42	5,420,084.21	6,008,010.05	6,537,434.56
	Profits Before Tax (KSh Mln)	152,338.84	159,879.17	112,787.36	195,362.12	240,384.45
	Non-Performing Loans (Mln)	308,761.55	333,392.77	424,085.42	426,832.38	503,241.79
	Core capital (Mln)	603,575.98	639,066.96	692,518.78	757,349.43	809,061.47
SACCOs	Total Assets(KSh mln)	497,275.83	555,916.61	630,883.64	700,258.04	764,171.11
	Gross Income(KSh Mln)	69,305.98	80,154.98	84,463.92	96,491.05	105,557.65
	Non-Performing Loans (KSh Mln)	22,881.22	25,925.91	32,900.98	35,389.38	48,401.83
	Core Capital (KSh mln)	78,266.55	95,127.74	100,380.69	119,557.01	142,325.10
Insurance	Total Assets (KSh Mln)	637,409.64	705,843.54	761,340.58	845,834.75	943,733.96
	Profit Before Tax (Mlns)	9,767.77	16,051.15	12,834.49	8,801.21	14,155.09
	Total Equity (KSh Mlns)	154,654.94	163,933.00	169,154.34	173,102.04	186,629.34
Pension	Total Assets(KSh Mlns)	1,166,340.00	1,298,190.00	1,398,950.00	1,547,430.00	1,576,220.00
	Overall Risk Score (points)	3.07	3.10	3.15	2.98	2.96
Microfinance Banks	Total Assets (KSh Mln)	71,604.43	77,171.09	75,430.11	75,138.13	70,427.02
	Profits Before Tax (KSh Mln)	(1,416.22)	(241.17)	(2,875.81)	(721.79)	(979.86)
	Non-Performing Loans(KSh Mlns)	9,718.12	10,041.84	13,426.91	12,894.85	12,501.72
	Core Capital (KSh mln)	9,605.32	9,038.44	5,821.16	6,528.94	6,478.60
Capital Markets	NASI Points (End Period)	140.4	166.4	152.1	166.5	127.5
	NSE 20 Points (End Period)	2,833.8	2,654.4	1,868.4	1,902.6	1,676.1
	Market Capitalization (KSh Bns)	2,102.02	2,539.98	2,336.70	2,592.92	1,986.08
	Equity Turnover (KSh Mlns)	175,657.4	153,816.1	148,680.4	137,409.6	94,291.5
	Ave. Foreign Investor Trades to Equity Turnover (%)	48.5	53.7	41.1	36.6	19.7
	Bonds Turnover (KSh Mlns)	557,739.4	654,940.0	691,758.1	956,973.6	741,849.6

Source: CBK, CMA, IRA, RBA, and SASRA

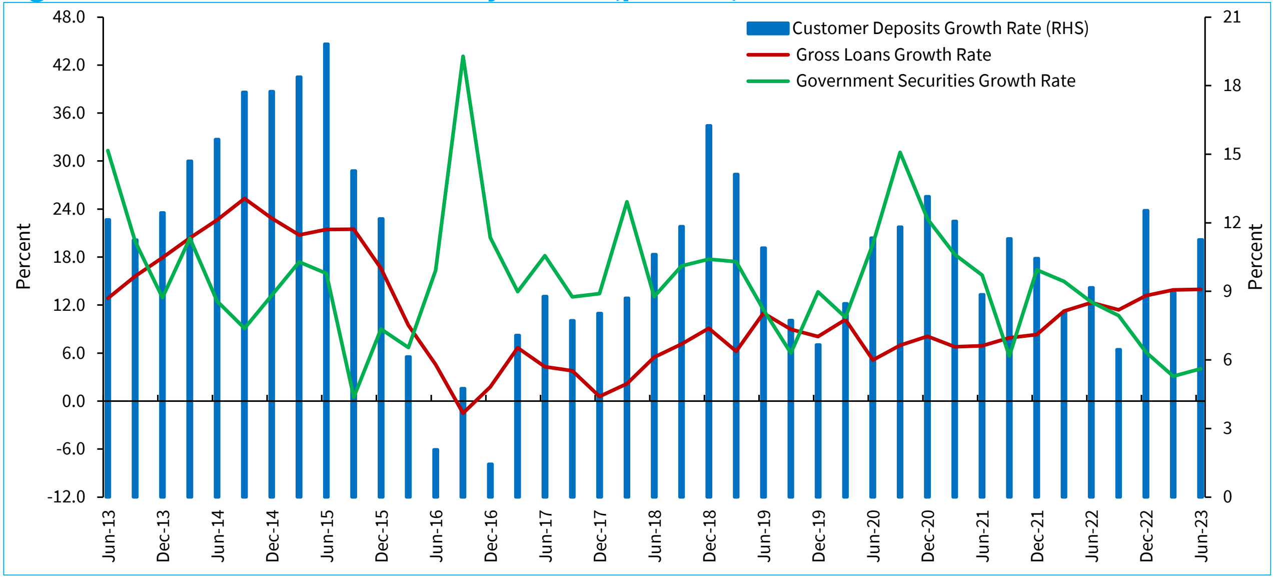
2.1 Banking Sector

Kenya's banking sector comprised of thirty-eight (38) commercial banks, one (1) mortgage finance company and fourteen (14) deposit taking microfinance banks (MFBs), all under the Central Bank's regulatory ambit. However, digital credit providers and credit reference bureaus licensed, regulated and supervised by the CBK, are not covered in this report due to their limited significance to this Financial Stability Report foreign exchange bureaus, money remittance providers, mortgage refinance companies and representative offices of foreign banks. Overall, the sector remained stable and resilient in 2022 to emerging and legacy shocks, in particular, drought, interest rate, residual effects of COVID-19 pandemic and institutional specific risks. The sector we generally well capitalized, had strong liquidity buffers and recorded strong growth in profits, crucial for further build up in capital. There were however downside risks to the sector's stability, including elevated credit risks, interest rates risk due to monetary policy tightening, cybercrime related risks and climate change risks.

2.1.1 Commercial Banks and Mortgage Finance Companies

Total net assets of banks grew by 9.4 percent while gross loans and advances rose by 11.5 percent in 2022 compared to 2021. Total net assets increased to KSh 6,589.8 billion in December 2022 from KSh 6,022.1 billion in December 2021. While gross loans and advances continue to recover steadily since 2020, the sector has been reducing exposure to government securities overtime **(Figure 13).** Growth in loans and advances outpaced the growth in Government securities for the first time since the fourth quarter of 2015, perhaps reflecting increased lending on economic recovery, fiscal consolidation, increase in interest rate because of monetary policy tightening and implementation of risk-based credit pricing models by banks. Rising interest rates negatively affect government securities Held for Trading and Available For Sale, leading to revaluation losses under mark-to-market repricing of securities as required under IFSR 9.

Figure 13: Balance Sheet Growth Dynamics (percent)

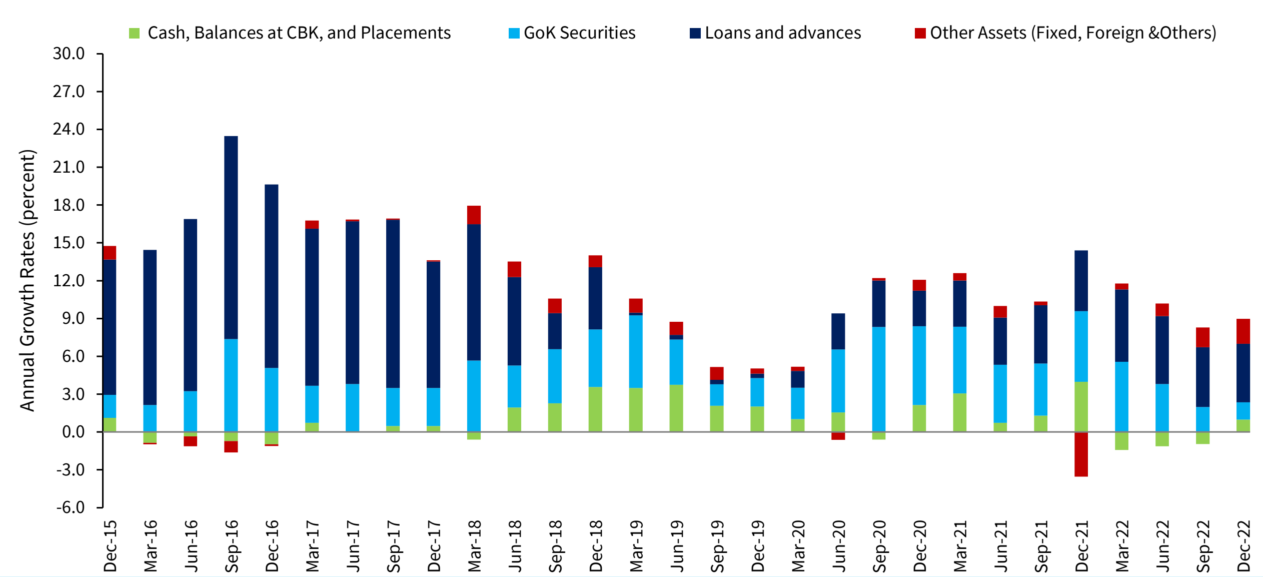


Source: CBK

Customer deposits grew by 9.6 percent, to KSh 4,998.7 billion in December 2022 from KSh 4,561.6 billion in December 2021. This strong growth could be attributed to customers' intent to preserve liquidity, continued economic recovery and banks' adoption of digital solutions to enhance deposit mobilization. Increased deposits is critical for enhanced liquidity buffers and strong funding base for bank assets.

Composition of banks assets has changed significantly from the second quarter of 2022, with the growth rate in uptake of government securities being substituted by growth in loans and advances. Interest rates capping law (repealed in November 2019) and COVID-19 pandemic impacted lending to private sector as banks invested more in government securities. However, with dissipation of COVID-19 pandemic, implementation of risk-based credit pricing formula and rising interest rates, banks have reduced their uptake of government securities. The notable uptick in other assets in 2022 is mainly on account of increased holding of foreign currency denominated assets **(Figure 14).**

Figure 14: Assets Decomposition by Growth Rates (percent)

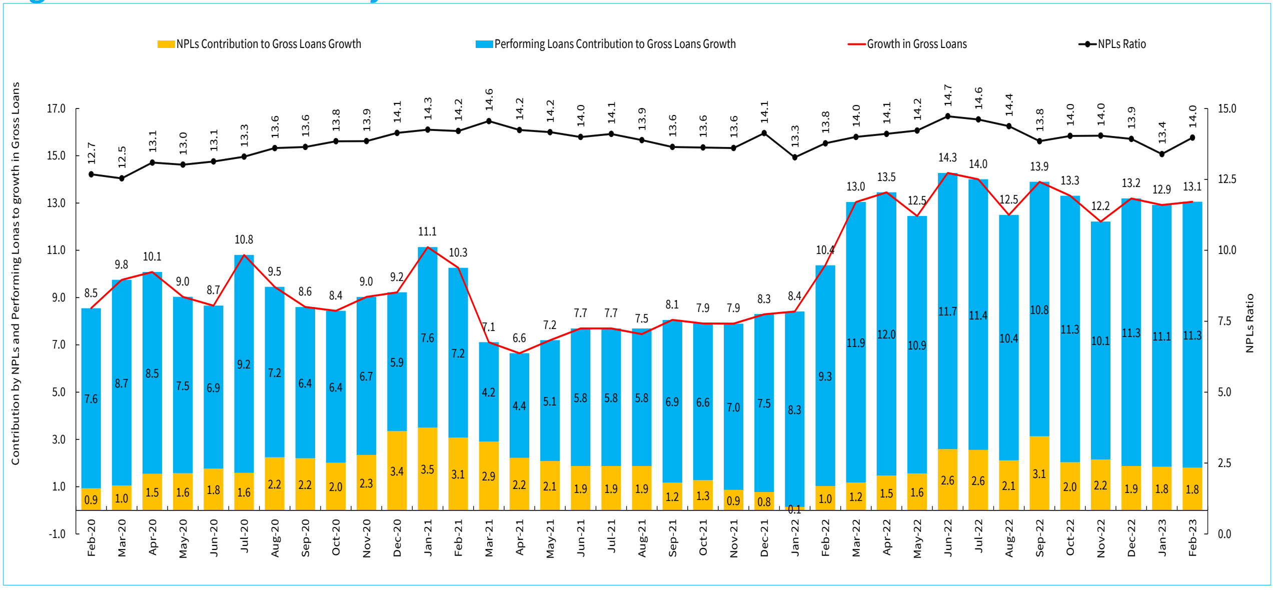


Source: Staff Computations

The sector remained stable and resilient to price shock on account of strong capital and liquidity buffers. Overall, the sector's core and total capital increased to KSh. 822.3 billion and KSh. 968.2 billion in December 2022, from KSh. 750.5 billion and KSh. 883.4 billion, respectively, in December 2021. The growth is mainly on account of increase in retained earnings. Core Capital and Total Capital to Total Risk Weighted Assets (TRWA) ratios stood at 16.1 percent and 19.0 percent in December 2022, from 16.6 percent and 19.5 percent in December 2021. These were above the minimum statutory core and total capital requirement of 10.5 percent and 14.5 percent, respectively. Large and medium peer group banks recorded highest growth in capital on strong growth in profitability.

The banks' asset quality improved in December 2022, despite increase in prices, slow growth and tightening financial conditions (Figure 15). The ratio of non-performing loans to gross loans (NPLs) declined to 13.9 percent in December 2022 from 14.1 percent in December 2021. Performing loans relative to NPLs, grew faster by, 11.3 percent, resulting to a decline in NPLs ratio. Among the reasons explaining the higher growth in performing loans include implementation of policy measures such as credit repair framework and the risk-based pricing of credit. These were supported by post-COVID-19 economic recovery that led to higher lending to the private sector.

Figure 15: Loans Growth by Contributions



Source: CBK 2023 Banking Sector Credit Risk Stress Test

Overall, gross loans have grown at a slower rate over the last 10 years compared with growth rate in NPLs. The period prior to and during banking sector instability in 2015 – 2018 and interest rate capping law period, recorded the highest increase in NPLs and slowest growth in gross loans. The NPLs grew much faster compared to growth in new lending since 2013. On average, gross NPLs increased by 22.2 percent between December 2013 and June 2023 more than double the 9.7 percent growth rate in gross loans during the 10-year period under review. The upsurge in NPLs growth rate in the first six months of 2023, could be attributed to rising interest rates in response to monetary policy tightening to stem inflationary pressures **(Table 3).**

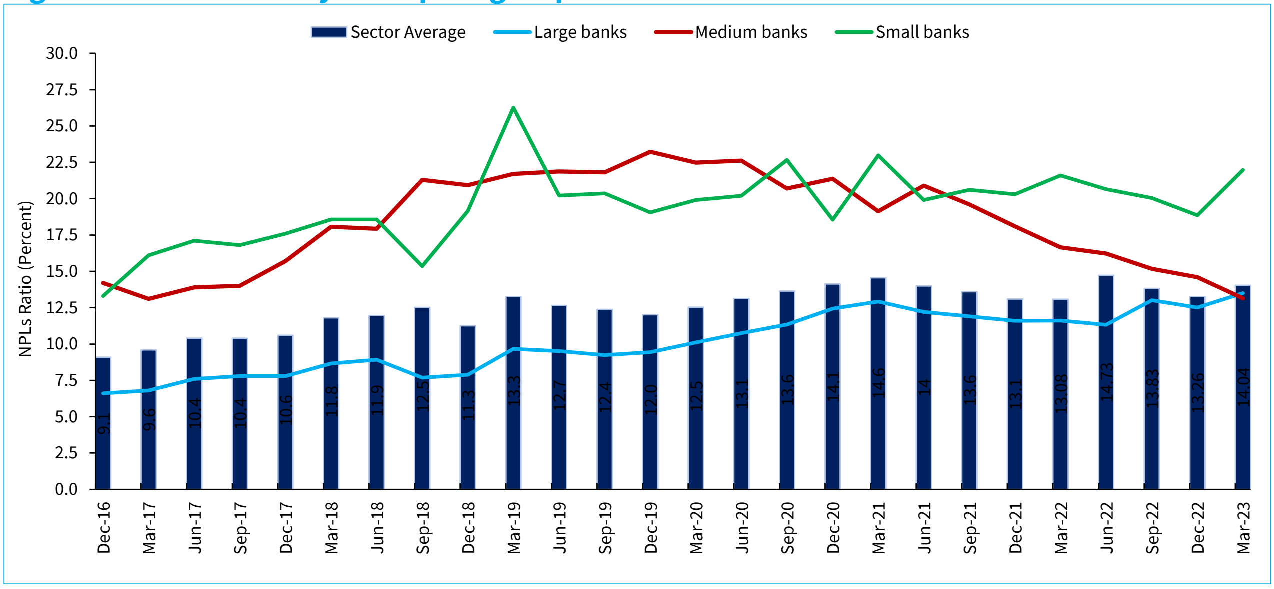
Table 3: Bank Assets Quality Dynamics

INDICATOR	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Jun-23
Gross Goans (KSh Mln)	1,589,652.44	1,940,781.00	2,165,329.00	2,286,525.00	2,413,851.00	2,488,117.00	2,690,910.00	3,006,104.00	3,255,428.96	3,630,250.85	3,980,517.34
Gross NPLs (KSh Mln)	81,856.83	108,300.00	147,331.00	211,231.00	264,617.00	316,712.00	336,588.00	436,067.00	460,008.47	503,241.79	576,114.50
Gross loans Growth (%)	N/A	22.09	11.57	5.60	5.57	3.08	8.15	11.71	8.29	11.51	9.65
Gross NPLs Growth (%)	N/A	32.30	36.04	43.37	25.27	19.69	6.28	29.56	5.49	9.40	14.48
NPLs Ratio (%)	5.15	5.58	6.80	9.24	10.96	12.73	12.51	14.51	14.13	13.86	14.47

Source: CBK

The assets quality varies across the banking sector, with medium tier banks registering an improvement since 2021 (Figure 16). As of December 2022, banks in the large peer group had the lowest NPLs ratio while those in small peer group saw their NPLs ratio exceed the sector average. NPLs ratio for banks in medium peer group recorded a decline from 15.9 percent in December 2021 to 13.1 percent in December 2022. The NPLs ratio for banks in large peer group increased to 12.5 percent in December 2022 from 11.6 percent in December 2021. The ratio of specific provisioning to NPLs (coverage ratio) for banks in large and medium peer group declined to 38.6 percent and 28.2 percent in December 2022, from 51.8 percent and 30.5 percent in December 2021. However, the coverage ratio of small banks increased 27.6 percent to 31.9 percent. Banks in large and medium peer groups are not matching the rate of growth in provisioning compared with rate of growth in assets impairment. This could reflect quality of collateral held by banks in these groups.

Figure 16: NPLs ratio by bank peer groups



Source: CBK staff computation

Profitability of the banking sector in 2022 reflects economic recovery as banks increased lending (Table 4). The annual audited PBT grew by 22 percent in 2022 to KSh 240.3 billion, from KSh. 197.0 billion in December 2021. Consequently, Return on Assets (ROA) and Return on Equity (ROE) increased to 2.7 percent and 26.3 percent, in December 2022, from 3.3 percent and 22.0 percent, respectively, in December 2021. The nine (9) banks in the large peer group accounted for 86.6 percent of total profits before tax while banks in small peer group recorded the highest growth in PBT at 74.8 percent in December 2022. Banks in the large peer group remain the most efficient in the use of shareholders' capital to generate profits given their highest growth in ROE of 4.9 percentage points in 2022. Stronger profitability is a strong indication of strong build up in capital base and in turn, enhanced financial sector stability.

Table 4: Heterogeneity Banks' Profitability

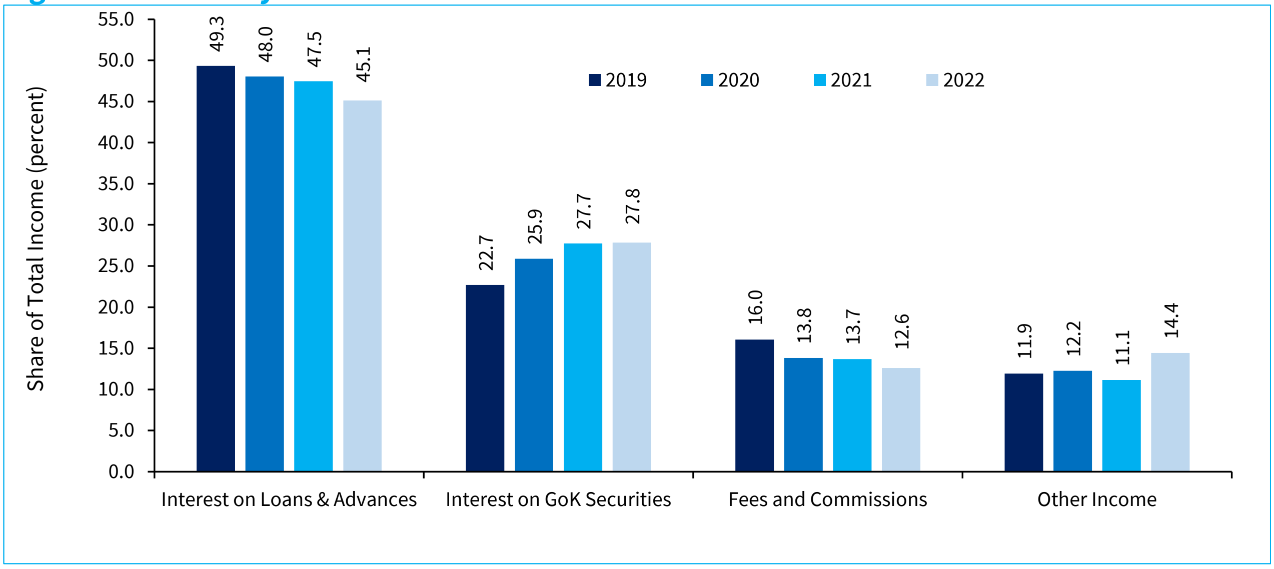
CATEGORY	2019			2020			2021			2022			Percentage Change		
	PBT (Ksh.Bn)	ROA (%)	ROE (%)	PBT (Ksh.Bn)	ROA (%)	ROE (%)	PBT (Ksh.Bn)	ROA (%)	ROE (%)	PBT (Ksh.Bn)	ROA (%)	ROE (%)	PBT	ROA*	ROE*
All Banks (39)	159,071.6	2.5	21.2	112,145.4	2.1	13.9	197,036.0	3.3	22.0	240,384.5	3.7	26.3	22.00	0.4	4.2
Large Banks(9)	142,854.6	4.0	26.5	97,495.0	2.4	16.3	171,127.0	3.8	25.7	208,330.9	4.2	30.6	21.74	0.4	4.9
Medium Banks (9)	18,298.7	2.3	14.1	16,470.7	1.7	11.3	24,248.4	2.5	16.5	29,150.5	2.8	19.6	20.22	0.3	3.1
Small Banks (21)	-2,080.59	-0.52		(1,820.8)	(0.4)	(2.9)	1,660.6	0.3	2.1	2,903.1	0.5	3.4	74.8	0.2	1.4

**pp refers to percentage points*

Source: CBK

Banks' profitability is mainly attributed to strong growth in interest on loans and advances, and on government securities **(Figure 17).** The two sources accounted for 72.9 percent of total income in 2022. These are key to stable earnings base and therefore enhanced ability for banks to build more capital through retained earnings. Interest income from loans and advances has however been declining steadily since 2019 but has increased for government securities. The notable increase in other income is attributed to earnings from foreign denominated assets.

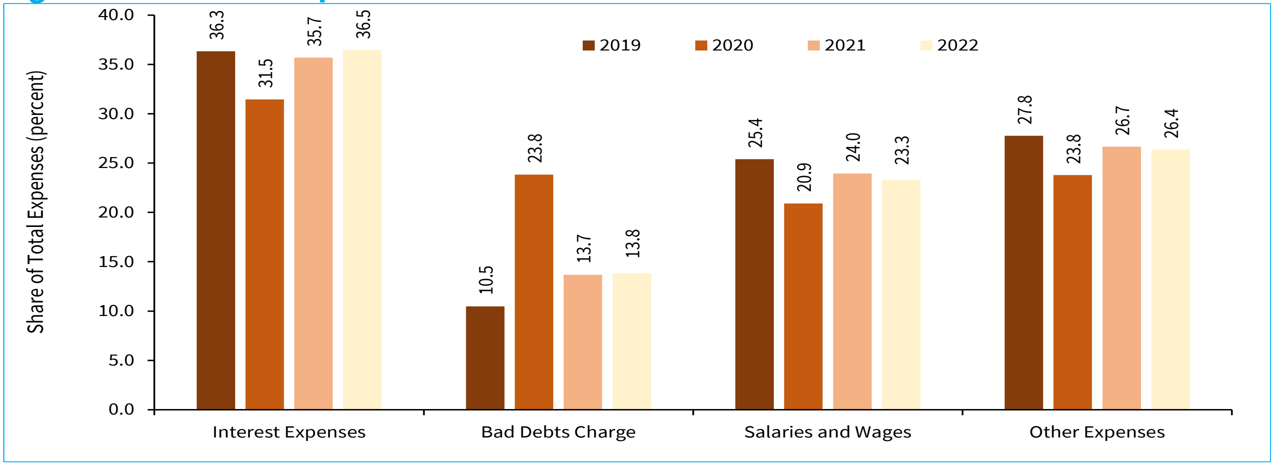
Figure 17: Diversity of Income Sources



Source: CBK

Interest expenses, staff emoluments and bad debt charge accounted for 73.6 percent of total expenses **(Figure 18).** Expenses grew slowly, with slight increase for interest expenses and bad debt charge and decrease for emoluments (salaries and wages) and other expenses.

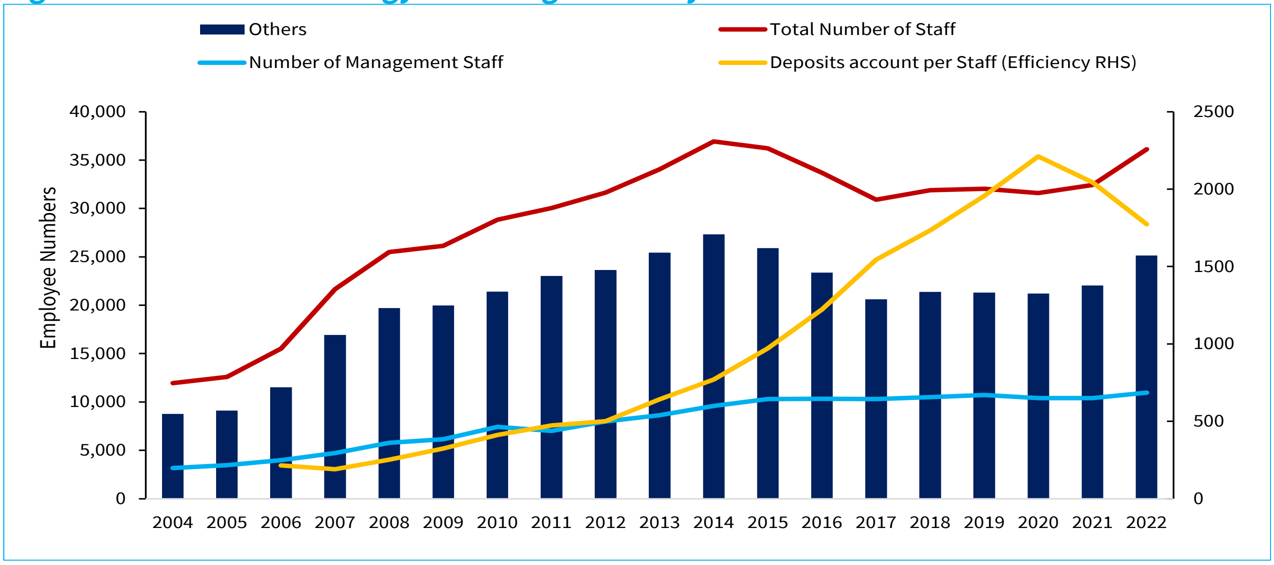
Figure 18: Trends in Expenses



Source: CBK

Most banks have embraced technology to enhance efficiency in service delivery and manage operational costs (Figure 19). The use of digital finance and mobile money continue to flatten employment curve in the sector. Employees in supervisory, clerical and support levels grew at the slowest pace since 2009 but rose highest for management level since 2004. This may indicate higher demand for talent and enhanced efficiency in the sector.

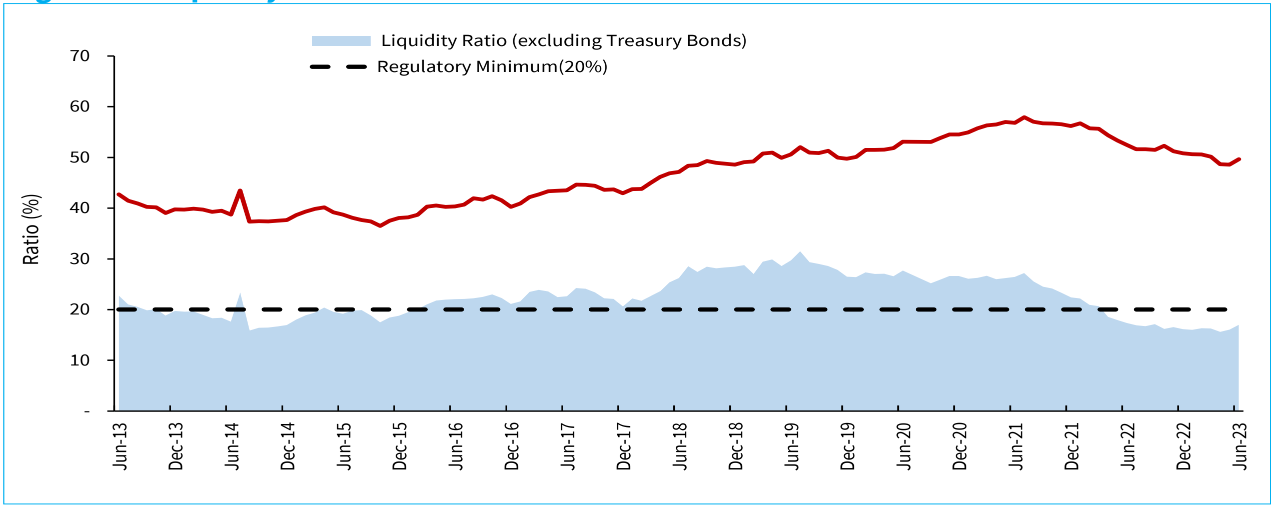
Figure 19: Role of Technology in Driving Efficiency



Source: CBK

An important metric for assessing banking sector soundness and stability is the ability of banks to settle their maturing obligations without difficulties (liquidity ratio) as measured against the 20 percent minimum regulatory requirement. Overall, liquidity ratio for the sector averaged 50.8 percent in December 2022. Banks in the medium peer group had highest liquidity ratios compared with those in large and small peer groups as of December 2022. Liquid assets grew by 25.8 percent to KSh 2,680.6 billion in December 2022, mainly on account of 31.4 percent increase in Treasury Bonds. Liquidity ratio is still above the 20 percent minimum threshold even after excluding treasury bonds from liquid assets, indicating that banks have adequate liquidity buffers **(Figure 20).**

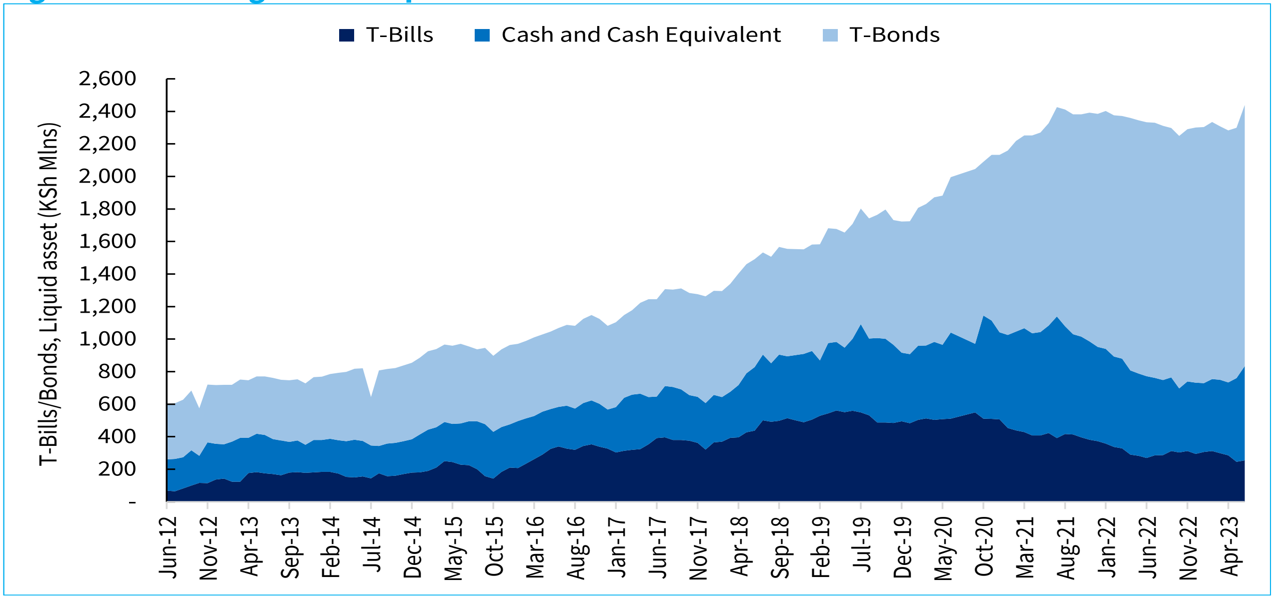
Figure 20: Liquidity Ratios



Source: CBK

Holding of tradable treasury bonds and bills by banks accounted for 76.0 percent of liquid assets in June 2023, down from 79.1 percent in 2022 and 81.0 percent in December 2021 **(Figure 21).** This was driven by reduction in holding of treasury bonds and increase in yields, which reduce market valuation. The holding of treasury bills declined by 5.4 percent while treasury bonds increased by 2.9 percent in June 2023. The decline in holding treasury bill and bonds as liquid assets can be attributed to increase in domestic interest rate and tightening of liquidity.

Figure 21: Banking Sector Liquid Assets



Source: CBK

Balances held by local banks with foreign financial institutions contracted by 23.9 percent in 2022 compared with an increase of 106.1 percent in 2020. This is due to improvement in sentiments about Kenyan economy, after a peaceful election and subsequent orderly change in government. However, elevated credit risk compelled banks to accumulate bonds, considered safer than loans and advances.

2.1.2 Microfinance Banks

The microfinance banks (MFBs) subsector continued to recover 2022 as compared to its performance in 2021(Table 5). The subsector, however, remains weak and vulnerable to even most mild shock given its low level of key indicators. Total assets declined by 4.8 percent, to KSh.70.4 billion in December 2022, mainly on a 3.1 percent decline in gross loans and advances.

Table 5: Select Indicators for MFBs Overtime

VARIABLE	2015	2016	2017	2018	2019	2020	2021	2022	Annual Change(%)
Total Assets (KSh Mn)	69,465	72,510	67,597	70,754	76,353	74,879	73,964	70,427	-4.78
Net Advances/Loans (KSh Mn)	45,749	47,047	42,847	44,179	46,651	44,179	40,115	39,334	-1.95
Gross NPLs (KSh mn)	4,264	7,288	9,300	9,891	9,817	12,980	12,895	12,502	-3.05
Total Deposits (KSh Mn)	40,589	40,198	38,916	40,961	43,941	49,356	50,413	46,492	-7.78
Borrowings (KSh Mn)	13,220	16,435	13,413	14,607	14,934	11,340	9,082	9,328	2.71
Capital & Shareholders Funds (KSh Mn)	11,633	11,622	11,301	10,443	11,177	8,113	9,235	8,752	-5.23
Profits Before Tax (KSh Mn)	592	-377.0	-622.0	-1437.0	-339.0	-2240.0	(722)	(980)	35.77
ROAs (percent)	1.0	-0.5	-0.9	-5.5	-0.4	-3.8	-0.96	-1.39	-0.43*
ROEs (percent)	5.0	-3.2	-5.5	-13.8	-3.0	-36.3	-7.75	-11.20	-3.45*

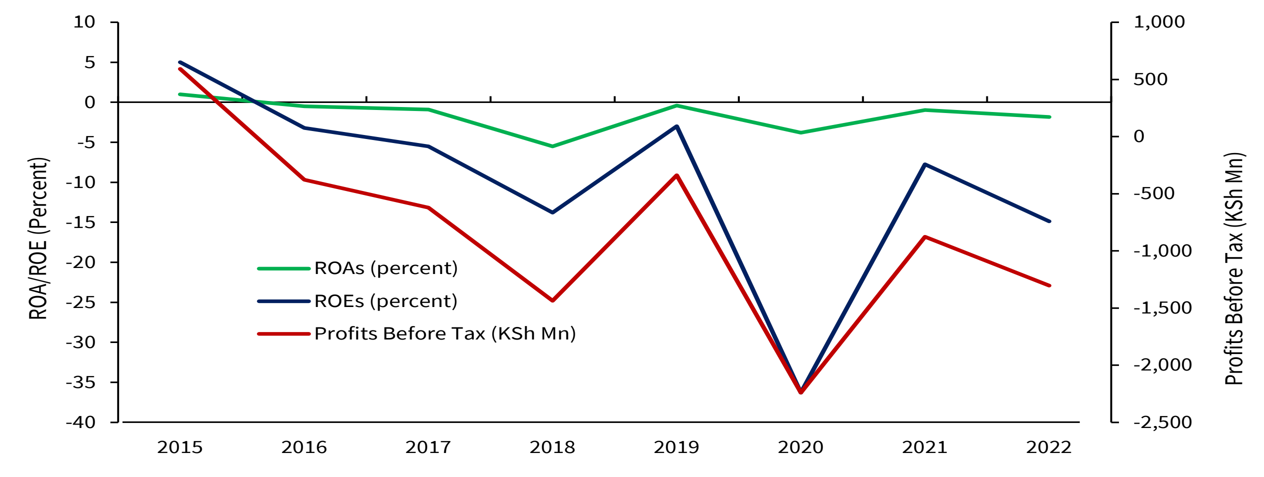
Source: CBK

**percentage points*

Total deposits shrunk by 7.8 percent to KSh. 46.5 billion in December 2022, impacting negatively on the funding base. The funding base was however given a boost by 2.7 percent increase in borrowing. Narrowing funding base has significant impact on the subsector’s ability to grow assets, which, in turn raises stability concerns.

The subsector seem to have not gained from the economic recovery in 2022 as lending declined further, with PBT, ROA and ROE recording bigger losses (Figure 22). Total Loss Before Tax for all MFBs improved to KSh.877 million in December 2021from KSh.2.2 billion in December 2020.

Figure 22: Profitability for MFBs

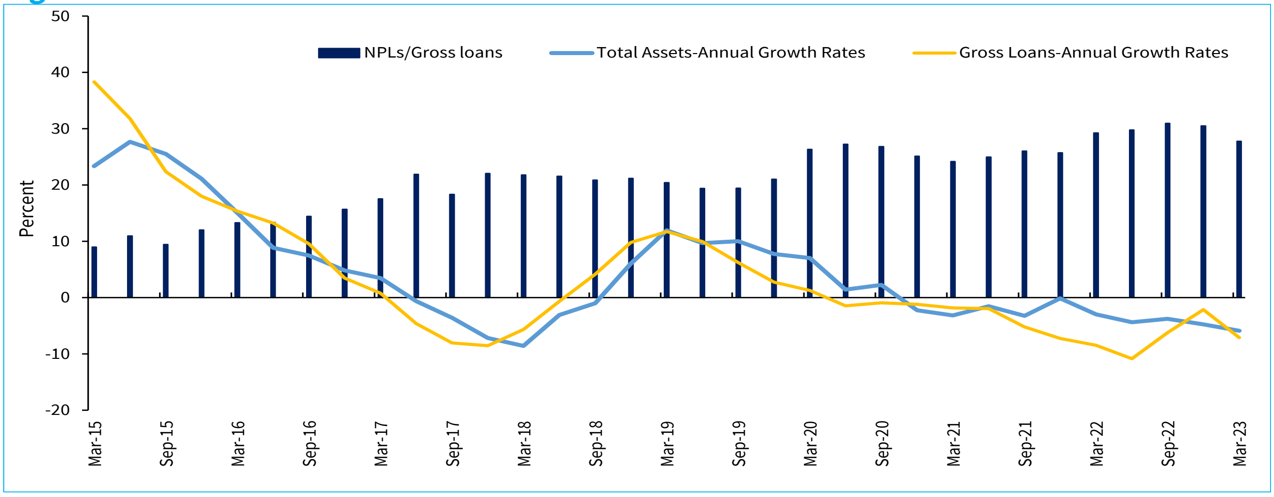


Source: CBK

Note that only four (4) of the total MFBs recorded profits. Two (2) recorded profits of KSh 17 million each, one (1) has KSh 36 million in profits and one (1) had KSh 131 million in profits. The remainder ten (10) MFBs recorded losses ranging from KSh 8 million to KSh 522 million. The Return on Assets and Return on Equity improved but remain in negative territory. Slow growth in loans and profitability raises viability issues of MFBs, especially with new players to targeting low end of the market, especially digital credit providers as well as funding challenges that limit their capacity to lend.

Credit risk remain elevated for MFBs, with gross NPLs rising by 3.1 percent, to KSh 12.5 billion in December 2022 (Figure 23). The subsector Annual growth in gross loans contracted further by 7.3 percent in December 2021 from negative growth of 1.2 percent in December 2020, indicating low uptake of loans/disbursements

Figure 23: Loans Growth Rate for MFBs



Source: CBK

Capital and liquidity levels for MFBs declined in 2022 compared to 2021. Four (4) of the fourteen MFBs did not meet capital requirements while two (2) MFBs did not meet minimum liquidity ratios. The total risk weighted asset also declined by 4.7 percent in 2022 due to slow growth in loans and increase in the NPLs. The Core CAR for MFB increased to 13.0 percent in 2022 from 11.0 percent in 2021, while total capital to total risk weighted assets increased to 16.2 percent in 2022 from 15.7 percent in 2021. These were above minimum regulatory ratios of 10.0 percent and 12.0 percent, respectively. However, three (3) of the fourteen MFBs did not meet capital requirements. Liquidity ratio increased from 78 percent to 81 percent in 2022, which is above the minimum liquidity of 20 percent. However, one (1) MFB failed to meet the statutory minimum liquidity ratio of 20 percent, as it faced liquidity challenges. In addition, the liquidity assets of MFB declined by 13.4 percent.

2.1.3 Banking Sector Safety Net and Resolution

The Kenya Deposit Insurance Corporation (KDIC), an independent State Agency, is mandated by law to implement deposit insurance scheme for customers of member institutions, incentives for sound risk management and prompt resolution of failed institutions. The KDIC as a 'risk minimizer' provides a safety net to deposits, which fosters public confidence and trust in deposit taking institutions. The Deposit Insurance Fund (DIF) or 'Fund', managed by KDIC increased by 16 percent, per cent from KES 154 billion in December 2021 to KES 179 billion as of December 2022, to cover up to KSh 500, 000 per depositor in case of a bank failure. This is consistent with its prudent fund management strategies.

Banks held KSh 4.8 trillion deposits as of December 2022 with the Fund insuring KSh 750 billion or 15 percent coverage. The effective cover of the deposit, (the extent to which the Fund covers the insured deposits) increased by 10 percent in 2022, to 23 percent due to bank customers increasing transactionary activities in their bank accounts and maintaining low bank balances, which increased the insured amount relative to deposit liabilities. The deposit cover of 15 percent is below the recommended minimum of 20 percent as the best practice by International Association of Deposit Insurance (IADI). However, the 66.4 million bank accounts in December 2022, accounting for 99 percent of the number of accounts in banking system were fully covered **(Table 6).**

Table 6: Select Key Fund Indicators for KDIC

INDICATOR/YEAR ENDING DECEMBER	2014	2015	2016	2017	2018	2019	2020	2021	2022	% Change in (2022 - 2021)
Total Deposits (KSh Billion)	2384.72	2673.95	2783.72	3075.82	3385.20	3605.53	4151.79	4472.00	4777.50	6.83
Total Insured (KSh Billion)	224.87	244.65	255.54	272.08	269.74	285.12	694.04	715.00	750.55	4.97
Protection Level (Row2/ Row1) (%)	9.43	9.15	9.18	8.85	7.97	7.91	16.72	15.99	15.71	-0.28
Fund Balance (KSh Million)	52.17	61.66	73.25	86.08	100.15	115.05	126.00	154.00	179.80	16.75
Effective Cover (Row4/ Row2) (%)	23.20	25.20	28.66	31.64	37.13	40.35	18.15	21.67	23.96	2.29
Total no. of accounts (KSh 000)	30.70	37.35	43.25	49.94	57.32	64.72	72.66	68.90	67.00	-2.76
Accounts fully covered (KSh Million)	29.55	36.10	41.83	48.37	55.85	63.14	72.03	68.20	66.40	-2.64
Protected accounts (Row7/Row6) (%)	96.25	96.65	96.72	96.86	97.44	97.56	99.13	99.05	99.10	0.05
Exposure Level (100% - Row 5) (%)	76.80	74.80	71.34	68.36	62.87	59.65	81.85	78.33	76.04	-2.29
Target Fund (%)	2.31	2.31	2.63	2.80	2.96	3.19	3.03	3.44	3.76	0.32

Source: KDIC

The risk exposure level to the Fund decreased from 78 percent in December 2021, to 76 percent in December 2022 with implementation of the risk based premium model. The model rewards member banks for proactively investing in and implementing effective risk management frameworks. KDIC continues to implement appropriate resolution frameworks to ensure that in case of a failure of an institution, the process of resolution is effective and timely in collaboration with CBK and Ministry of National Treasury and Economic Planning.

2.1.4. Risks Assessment and Outlook

The banking sector remained stable and resilient in 2022, on the backdrop of slow economic growth and monetary policy tightening and fiscal consolidation While the sector is projected to remain stable in 2022, there are downside risks, arising from local and global developments. These include but not limited to:

- **Credit risk remaining elevated as** interest rates rise further with monetary policy tightening, challenging business environment making it difficult for households and firms to service their loans or take up new loans, taxation and other levies, high inflation impacting disposable incomes and slowdown in real estate.

- **Operational and governance risks expected to rise as banks become more interconnected with sectoral and cross–border operations coupled with rapid technological innovations.** This risk is accentuated by increased use of financial technology and innovations to deliver financial products and services. The incidences of frauds, data privacy concerns, cyber-attacks, and cybersecurity threats increased in 2022. The authorities are alive to these risks and are therefore taking more prudent and stringent remedial controls and risk management measures to address them. Among the major policy developments to address this risk to financial stability was the publications of the Digital Credit Providers regulations following amendments to the Central Bank of Kenya (Amendment) Act No 10 of 2021, and that became effective on December 23, 2021, thus mandating the CBK to bring the previously unregulated digital lenders under its regulatory armpit. CBK have received over 400 DCP applications, 32 have been licensed while others are in various stages of the liscensing process.

- **Interest rates risk remains elevated and is causing flight to safety concerns as banks and investors seek safe assets with positive return and preservation of value.** While COVID–19 pandemic saw banks invest heavily in long–term Treasury bonds, for safety and quality in 2020-2021, the Russia-Ukraine war and tightening external financial conditions because of advanced economies raising policy rates to curb inflation, has introduced new rounds of flight to safety in 2022. If the situation normalizes, banks may quickly sell bonds to fund increased credit demand. The resultant increase in interest rates would lead to bonds repricing, affecting mostly those available–for–sale. These could result in mark–to–market valuations losses that in turn reduces profitability and limits further build up in capital.

- **Climate change risks are also real and could impact financial sector stability.** Climate change has physical, transition and liability risks to the financial sector. **Kenya's financial sector faces more of physical risks arising from** frequent drought episodes and occasional floods in some parts of the country. This has direct impact to bank assets and indirect impact through banks asset quality and other financial institutions in recognition of this risk, the government and financial sector have initiated measures to address this risk while at the same time tap into its underlying opportunities as summarized in **Box II.**

Box I: Initiatives Towards Greening the Financial Sector for Climate Financing

Kenya's long-term development blueprint, Vision 2030 aims to transform Kenya into a globally competitive, middle-income country through substantially higher growth rates and more balanced development. The social pillar (environmental management), provide strategies for Kenya to have a clean, secure and sustainable environment by 2030, through various climate change risk mitigation and adaptation mechanisms. Failure to address climate change risk poses threats to agriculture, industry, energy, water, trade and tourism. As a signatory to Paris Agreement and as part of its Nationally Determined Contributions (NDCs) Kenya targets to enhance climate resilience and adaptability. According to NDCs, Kenya has experienced climate change related social economic losses estimated at 3-5 percent of the Gross Domestic Product (GDP) annually, over the last decade. The country lost 8 percent of GDP in the past 5 years (2017-2021) due to drought; and about 2.8% annually due to floods. Financial sector plays significant role in unlocking climate finance to support climate mitigation and adoption mechanisms such as infrastructure development.

Africa Development Bank estimate that Africa needs between about $1.3 trillion and $1.6 trillion, over 2020–30 to implement its climate action commitments and NDCs **(Figure 1a).** East Africa has the highest estimated adaptation cost due to its higher vulnerability to climate change and lower resilience and readiness. It also requires the largest contribution from international resources ($58.2–$91.5 billion) to meet its adaptation needs **(Figure 1b).** Delivering NDCs for Kenya greenhouse gas emissions reduction and adapting to climate change requires funding 10 times greater than the US $8 billion a year it has committed over the next 10 years. The continent has only attracted 3 percent of all global climate finance finding. The challenge is how to create a conducive environment to unlock that investment through putting green finance policy and regulatory framework to encourage both international and domestic investors in green investment. Insufficient climate finance means that most African countries will not meet their conditional NDCs targets, notably considering climate finance commitments should not replace existing commitments to finance other SDGs.

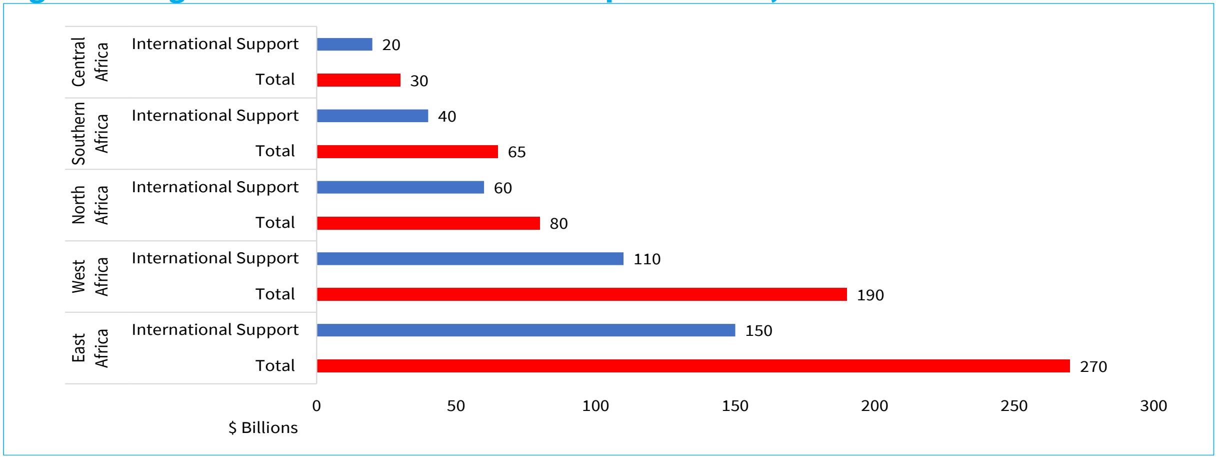
Figure i: Africa's Estimated Climate Financing needs in 2020-30

Type of Finance needs	Amount or description
Adaption	$259-$407 billion
Mitigation	$715 billion
Technical and technological needs	$1.38 billion
Loss and damage needs	$289.2-$440.5 billion
Monitoring, reporting, and verification	• $258 mln for report preparation • $46.5 - $93 mln for monitoring, reporting and verification capacity building
Other needs (not estimated)	
Climate finance environment needs	To provide attractive financing environment, diversity financing sources, mobilize the private sector, introduce risk-sharing mechanisms, and launch new financial instruments
Capacity-building needs	NDCs projects require capacity building from design to implementation, whose cost are not often estimated

Source: Africa Development Bank, (2022).

The global climate finance architecture is complex and rapidly evolving, given multiple sources, instruments, and channels. Complexity increases financing options, innovation, and decentralization of sources, creating room for complementarity. It however comes with coordination challenges, with overlapping mandates and initiatives, often leading to inefficient outcomes.

Figure ii: Regional estimates of climate adaption needs, 2020-30



Source: Africa Development Bank, (2022).

Globally, high inflation and the ongoing global monetary policy tightening have exacerbated structural headwinds for climate financing in Emerging Markets and Developing Economies (EMDEs). Global financial conditions have tightened sharply, raising sizable portfolio outflows from EMDEs while upward price pressures remain elevated in advanced economies (AEs). Therefore, debt remain by far the main source of funding for climate adaptation and mitigation in EMDEs. However, sustainable debt issuance in these countries is limited due the following factors;

- **Underdeveloped financial and capital markets** that struggle to attract the growing pool of climate finance, such as green bonds. This makes Africa lag behind other emerging markets on issuance.
- **Macroeconomic shocks** common across many African economies in terms of exchange rate depreciation, commodity price shocks, debt problems, climate and natural disasters are causing more disruptions resulting in higher financing costs.
- **High debt levels** in many countries, especially high level of foreign currency denominated debt, has exposed them to currency exchange risks, coupled with narrowing fiscal headroom.

Above challenges can be addressed through the following possible solutions:

- **Scaling green and climate finance in Africa** through initiatives such as green bonds, sustainability bonds and sustainability-linked bonds and loans offers a good opportunity for leveraging green finance in Africa. However, barriers such as currency risk, poor regulatory environment, lack of green investment project pipelines, and weak understanding of climate risks are hampering the expansion of green finance. To address these challenges, Africa Green Finance Coalition (AGFC) was launched at UN Climate Change Conference (COP26) in 2021 to spur trillions of dollars in green investment needed to transform Africa's economy. The aim is to accelerate green finance policy and regulatory reforms.
- **Blended Finance** as a tool for scaling up the financing for decarbonisation efforts. It allows investors to choose different risk tolerances while all participating in the same project and provides an effective way to get capital to critical, but hard-to-fund projects.

Kenya has prioritized resource mobilisation measures to secure alternative green/sustainable funding sources by instituting various policy initiatives. In particular, CBK has undertaken the following:

i. **Bank Capitalization to Manage Climate Risk.** In 2013, the Central Bank of Kenya (CBK) introduced the Internal Capital Adequacy Assessment Process (ICAAP) for the banking sector. Through ICAAP, banks are required to maintain sufficient capital that is commensurate to all material risks they are exposed to including climate risk and if assessed risk is material, capital should be allocated.

ii. **Sustainability Finance Initiative.** In 2015, the Kenya Bankers Association (KBA) launched the Sustainability Finance Initiative (SFI) to create awareness on environmental, social and governance risks and financing within the Kenyan banking sector. KBA set-up a comprehensive online training to enable financiers to create long-term value for the economy, society, and the environment. Over 36,000 banks employees have been trained from 44 financial institutions.

iii. **Support Green Bond Initiatives** such as Kenya Sovereign Green Bond Framework and the Kenya Green Bonds Programme target financial sector innovation by deepening the domestic green bond market. Green Bonds offer attractive mechanism for Kenya to tap into institutional investors and allocate capital to finance green, low carbon and climate-resilient investment projects for green and inclusive growth. The first Kenya green bond issued by private sector (Acorn Group) in 2019 raised $ 45 million to fund students' accommodation. The bond was admitted on the International Securities Market (ISM) segment at the London Stock Exchange (LSE) in January 2020.

iv. **Kenya Banking Sector Charter issued in** 2019 by CBK has four pillars – customer centricity, risk-based credit pricing, transparency, and ethical banking. Ethical banking pillar requires banks to entrench a culture of doing the right thing as they offer their products and services. This includes embracing sustainable finance principles as their intermediation processes.

v. In November 2020, KCB Bank Kenya Limited (KCB Bank), Kenya's largest bank was accredited by the United Nations Green Climate Fund (GCF) as the first financial intermediary to implement green financing in East Africa. The GCF supports developing countries raise and realize their NDCs ambitions towards low-emissions, climate-resilient pathways. KCB Bank is also a member of UN Net-Zero Banking Alliance where 130 banks collectively holding $ 47 trillion in assets or one third of the global banking sector commit to strategically align their business with the Goals of the Paris Agreement on Climate Change and the SDGs.

vi. **Guidance Note on Climate-Related Risk Management** published by CBK in 2021 provides guidelines to commercial banks and mortgage finance company. It required banks to integrate climate-related risks into their *governance, strategy, risk management* and *disclosure* frameworks and to submitted monitoring reports to CBK through submission of board approved Climate-Related Risk Management implementation plans by banks

vii. CBK joined the Network for Greening the Financial System in 2022, which brings together Central Banks, Supervisors, and international organizations. Members willingly contribute to the analysis and management of climate and environment-related risks in the financial sector and mobilize mainstream finance to support the transition toward a sustainable economy through developing analytical work on green finance.

viii. Supervisory and macroprudential toolkits. CBK is actively assessing the prudential risks and set supervisory expectations to enhance financial risk management including climate-related risks as source of financial risk. CBK working on analytical and supervisory toolkits, including those based on forward looking scenario analysis and stress tests. Its macro-stress test has climate change risk scenarios based on drought events.

Conclusion

Climate change risks are real and financial sector is not exempted from the negative impact. The limited fiscal policy space and high debt levels facing many African countries limits intervention measures for climate adaptation and mitigation. Hence the need for countries to create conducive environment to attract a broad range of private investors. These include carbon pricing and subsidies, public investment, favourable lending policies, improved climate information architecture (data, taxonomies/classifications, and disclosures), legal and institutional frameworks, and financial regulations.

Greening financial sector through financing to support transition to low-carbon, climate-resilient global economy will require a concerted and collaborative effort by policymakers, the private sector globally and the financial system to overcome several obstacles. These obstacles include key market failures including externalities linked to greenhouse gas emissions and market failures related to information availability, technology spillovers, and incentives in capital markets—as well as uncertainties about future climate policies and rapidly evolving technology.

Box II: Abridged Version of the 2023 Banking Sector Stress Test Report

1. Background

The CBK conducted the 2023 Banking sector stress test using the balance sheet approach that focused on credit and interest rate risks. It utilized the aggregate bank data for December 2022 for credit risk stress test and June 2023 data for interest rate risk.

The credit risk stress test was conducted to assess resilience of the banking sector to plausible but realistic shock scenarios based on prevailing macrofinancial conditions. The impact of the risk was estimated under the baseline, moderate and severe scenarios. The scenarios were designed to reflect shocks emanating from domestic and global developments that posed downside risks to economic recovery, and in turn vulnerabilities to the banking sector.

The 2023 stress test also assessed the direct and indirect impact of drought on agriculture to assess the resilience of the banking sector to climate change risk. The results of both the macrofinancial -based stress and drought shock stress tests (collectively known as “event-based stress tests”) are assessed against Baseline stress test. Its shocks were estimated at 8.59 percent, 13.08 percent, and 25.78 percent increase in NPLs under the baseline, moderate and severe scenarios. The size of shocks reflects lending standards, sectoral loans exposures, impact of elections on the economy, historical trends in NPLs, and global developments.

This stress test also incorporated interest rates shock that used the June 2023 bank data. This follows monetary policy tightening in advanced economies and in Kenya to stem inflation but led to negative impact stability of some banks. The stress test was therefore conducted to assess the resilience of Kenya’s banking sector to interest rate shock transmitted through assets quality impairment reflected in the increase in NPLs, and through valuation losses arising from repricing of bonds held under Available for Sale (AFS) and Held for Trading (HFT).

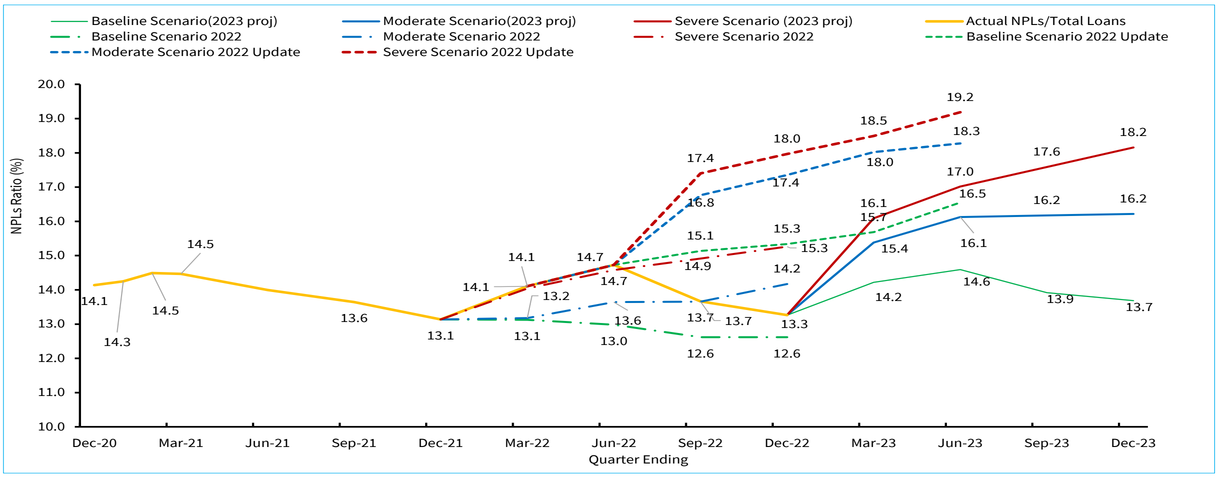
2. Assumptions Underpinning Scenarios

Assumptions underpinning the above scenarios are summarized as follows:

- Economy grows by 4.5 percent in 2023, below the baseline forecast of 5.5 percent on account of legacy and ongoing multi-shocks of high inflation, currency depreciation, unfavourable weather conditions, unfavourable business environment, and uncertainty from geopolitical tensions (Russia- Ukraine war persists) and geoeconomic fragmentation.
- Continued fiscal consolidation affects private sector through weakened household and corporate demand, rising unemployment and challenging business environment reduces household income, delayed payments to suppliers by private and public sector that increases NPLs and reduces new credit uptake.
- Increase in interest rates in the domestic and major financial markets due to monetary policy tightening and bank-specific risk assessment compel banks to tighten lending standards, which reduces uptake of new loans and increase in difficulties to repay existing loans
- Shock in global banking system lingers on into the second half of 2023, thus reducing lending credit to the private sector.
- Given the underlying domestic and global vulnerabilities to the economy and the banking sector, the scenarios used in this stress test assume NPLs increase by between 8.59 percent in the baseline and 38.97 percent under severe scenarios in the event-based stress test.
- Increase in monetary policy rate (CBR) by 1 percentage point to stem inflation, would lead to increase in average bank lending rate and yields by 0.50 percentage point and 0.7 percentage point, with 1.5 standard deviations, respectively.

The projected gross loans (performing and non-performing) were estimated for the three scenarios. Projections indicated that the NPLs ratio is expected to range between 13.7 percent in the baseline scenario and 18.2 percent under severe scenario by December 2023. The actual NPL ratio rose from 13.3 percent in December 2022 to 14.5 percent by end June 2023 and 15.0 percent by end August 2023. Overall, credit risk as reflected by NPLs, is expected to remain elevated up to the end of 2023 **(Figure iii).**

Figure iii: NPLs projections



Source: CBK Staff Computations

Note: Projections based on unaudited aggregate bank data

3. Stress Test Methodology and Results

Before stress test is conducted, five (5) out of the total thirty-nine (39) banks, had their core capital to total risk weighted assets ratio (core CAR) below the minimum regulatory requirement of 10.5 percent. Two (2) of these banks had negative core CAR as of December 2022. The five banks are therefore not included in the stress test. The five (5) excluded banks will require a total capital injection of KSh 5.13 billion to comply with regulatory capital requirement and KSh 11.7 billion when adjustments are made for full provisioning in line with Prudential Guidelines[2]. The capital for the remaining thirty-four (34) banks' is adjusted for full provisioning to assess capital adequacy to absorb losses.

The adjustment for full provisioning for the thirty-four (34) banks under PG04 involves classification of assets according to their riskiness and then charging capital, considering the discounted value of collateral/securities held by banks. As a result of full provisioning for the core CAR capital of seven (7) banks fall below the minimum regulatory core CAR of 10.5 percent. However, all the thirty-four (34) banks were subjected to the stress test.

- **Baseline Stress Test Results:** Under a severe scenario, a 25.78 percent shock increase in overall NPLs erodes core CAR, from the pre-shock Core CAR of 15.92 percent to 15.07 percent post-shock core CAR by December 2023. This is still above the minimum core CAR of 10.5 percent. However, core CAR of eight (8) banks is expected to decline below the minimum regulatory capital requirement of 10.5 percent by December 2023 if the severe shock scenario materialize. These banks will require total capital injection of KSh 11.92 billion to meet the minimum regulatory capital requirement by December 2023 if severe scenario materialize.

Figure iv: Baseline Stress Test Results

Shock	Impact of NPLs increase on Core CAR	May 2022 Stress Test Based on December 2021 Data			May 2023 Stress Test Based on December 2022 Data		
		Baseline Scenario	Moderate Scenario	Severe Scenario	Baseline Scenario	Moderate Scenario	Severe Scenario
Size of the Shock measured by change in NPLs		**5.00**	**7.50**	**15.00**	**8.59**	**13.08**	**25.78**
1. A Shock Increase in Overall NPLs	*Pre-shock Core Capital Ratio (%)*	15.64	15.64	15.64	15.92	15.92	15.92
	Post-shock Core Capital Ratio (%)	**15.48**	**15.40**	**15.16**	**15.64**	**15.49**	**15.07**
	Number of Banks below minimum Core CAR	8	9	9	6	6	8
	Capital required (KSh Mn) by banks to meet the minimum Core CAR of 10.5%	8,674.86	9,222.27	10,864.49	8,693.62	9,147.37	11,919.37
2. A Shock Increase in Sectoral NPLs	*Pre-shock Core Capital Ratio (%)*	15.64	15.64	15.64	15.92	15.92	15.92
	Post-shock Core Capital Ratio (%)	**15.56**	**15.52**	**15.37**	**15.69**	**15.58**	**15.37**
	Number of Banks falling below minimum Core CAR	8	9	9	6	7	9
	Capital required (KSh Mn) by banks to meet the minimum Core CAR of 10.5%	8,585.95	9,012.61	10,363.46	9,810.83	10,752.77	14,004.20

[2] Prudential Guidelines (CBK/PG/04) stipulates the following minimum percentage amounts for provisioning are to be maintained according to assigned classifications: i) 1% for loans classified Normal; 3% for loans classified Watch; 20% for loans classified Substandard and 100% for loans classified Doubtful and Loss. For nonperforming loans categories (substandard, doubtful and loss), the percentages are applied to the net balances after deduction of realizable value of security and interest in suspense.

Event-based Stress Tests

***Stress Event 1:* Lower than potential economic growth and unfavourable financial conditions lead to;**

- A shock increase in overall NPLs, sectoral NPLs; and a default by up to top three borrowers per bank (1, 2 and 3 largest borrowers per bank default under the baseline, moderate and severe scenarios, respectively).
- Under the baseline, moderate and severe scenarios, NPLs are projected to increase by 16.46 percent, 22.95 percent, and 38.97 percent, respectively, by December 2023. These are applied as shocks for overall increase in the NPLs. Sectoral shocks used the highest projected increase in NPLs per sector while default risk considered 1, 2 and 3 top borrowers per bank not paying existing loans falling due, under the baseline, moderate and severe scenarios.
- The results are presented in **Figure 3**:

Figure v: Shock Increase in NPLs due to Unfavourable Macro financial Conditions

Transmission Channel	Impact on Minimum Core CAR due to Increase in NPLs	May 2022 Stress Test Based on December 2021 Data			May 2023 Stress Test Based on December 2022 Data		
		Baseline Scenario	Moderate Scenario	Severe Scenario	Baseline Scenario	Moderate Scenario	Severe Scenario
Size of the Shock Appiled Under Each Scenario		**2.49**	**12.81**	**17.55**	**16.46**	**22.95**	**38.97**
1. A Shock Increase in Overall NPLs	*Pre-shock Core Capital Ratio (%)*	15.64	15.64	15.64	15.92	15.92	15.92
	Post-shock Core Capital Ratio (%)	**15.56**	**15.23**	**15.07**	**15.38**	**15.16**	**14.62**
	Number of Banks below minimum Core CAR	9	9	10	6	9	11
	Capital required (KSh Mn) by banks to meet the minimum Core CAR of 10.5%	8,125.64	10,384.35	11,430.43	9,489.59	14,429.11	26,236.88
2. A Shock Increase in Sectoral NPLs	*Pre-shock Core Capital Ratio (%)*	15.64	15.64	15.64	15.92	15.92	15.92
	Post-shock Core Capital Ratio (%)	**15.62**	**15.47**	**15.36**	**15.64**	**15.19**	**15.01**
	Number of Banks falling minimum Core CAR	9	10	10	6	10	10
	Capital required (KSh Mn) by banks to meet the minimum Core CAR of 10.5%	7,629.28	8,610.34	9,992.13	11,039.23	19,577.44	24,398.65
3. A Shock Default by Large borrowers per bank	**Number of large borrowers that default**	**One (1)**	**Two (2)**	**Three (3)**	**One (1)**	**Two (2)**	**Three (3)**
	Pre-shock Core Capital Ratio (%)	15.64	15.64	15.64	15.92	15.92	15.92
	Post-shock Core Capital Ratio (%)	**13.4**	**10.0**	**10.0**	**13.64**	**11.78**	**10.15**
	Number of Banks below minimum Core CAR	14	17	21	13	15	19
	Capital required (KSh Mn) by banks to meet the minimum Core CAR of 10.5%	17,407.90	39,932.21	63,002.74	26,200.12	62,778.59	109,405.73

Stress test results indicate that:

- Overall, banks held sufficient capital to withstand a severe shock scenario in the 2022 than was the case in the 2021 as shown by the levels of post-shock core CARs against the minimum regulatory capital requirements.
- If a severe scenario for overall NPLs materialize, eleven (11) banks would not meet the minimum regulatory requirement by December 2023. Amount of additional capital required to meet the minimum regulatory requirement is KSh 26.2 billion by December 2023.
- A default by top three borrowers per bank under severe scenario leads to the highest capital reduction. A total of nineteen (19) banks would need KSh 109.4 billion in additional capital to meet the minimum regulatory requirement of 10.5 percent by December 2023 if this shock materialize, reflecting high concentration risk in 2022.
-

Overall, banks have sufficient capital to absorb credit risk and continue lending. However, the most significant shock is a default by up to top three (3) largest borrowers per bank. This is signified by amount of capital injection required and number of banks that fail to meet the minimum capital requirement.

Stress Event 2: Impact of a drought shock to the banking sector assets quality through Agriculture

Drought is one of the most prominent climate change risks affecting Kenya and the large Eastern Africa region. It has devastating impact on food security and higher energy prices, elevating inflationary pressures.

It also impacts assets quality of banks as households and small firms face challenges in servicing their loans or taking up new loans. As of December 31, 2022, Agriculture accounted for 3.5 percent of total gross loans and 5.5 percent of total NPLs. While this figure is small, interconnectedness between Agricultural sector and other sectors of the economy, means potential spillovers of drought to the banking sector and in turn, elevated credit risk.

A drought shock was calibrated from decline in agricultural output during drought. The drought episodes are identified using Climatological data for the period 2008-2022 from the Kenya Meteorological Department and the IGAD Climate Prediction and Application Centre (ICPAC). The agricultural output gap for the period 2008Q1-2022Q4 during drought and non-drought events was computed and used as shock sizes under baseline, moderate and severe scenarios **(Figure v).**

Figure vi: Drought Shock Under the Scenarios

DROUGHT SCENARIO	EXPLANATION
Baseline Scenario	No drought episode in twelve months to December 2023. As a result, Agricultural output grows by 5.6 percent, support GDP growth projection of 5.9 percent in 2023. NPLs are thus projected to contract by -0.5 percent by December 2023 as borrowers repay their loans with less difficulties.
Moderate Drought Scenario	Moderate assumes a mild drought event. It is estimated from an average of agricultural output gap between actual and counterfactual agricultural output during episodes of mild drought for the period 2008-2021. Under this scenario, agricultural output gap ranged between -4.5 percent and -2.0 percent, yielding an average of -3.3 percent. This was applied as a drought shock on elasticities of sectoral NPLs, leading to a shock increase in the NPLs by 0.3 percent.
Extreme Drought Scenario	Extreme drought shock was calibrated from an average of agricultural output gap between actual and counterfactual agricultural output during extreme drought episodes for the period, 2008-2021. Under this scenario, agricultural output gap ranged between -13.3 percent and -5.0 percent, yielding an average of -7.9 percent. Applying this agricultural output shock on elasticities of sectoral NPLs, we estimated the shock to NPLs as 0.5 percent.

Risk transmission from agriculture to banking sector credit risk following a drought shock is estimated through sectoral elasticities to capture the responsiveness of different economic sectors to contraction in agricultural output. The shock sizes are estimated under moderate and Severe Scenarios. The Stress Test Results indicate that:

The Stress Test Results indicate that:

- As compared to the Annual Baseline Stress test, stress test following a drought shock on Agriculture has less impact on banks' credit risk **(Figure vii).**

- The post-shock core CARs are well above the minimum regulatory core CAR of 10.5 percent and amount of additional capital needed to meet the minimum capital requirement is less across the three scenarios under a drought shock. This is the case whether the shock is assessed through the overall increase in NPLs or through sectoral exposures. Under the moderate and severe drought scenarios, if NPLs increase by 0.31 percent and 0.46 percent, banks capital would reduce by 0.02 percentage points and 0.25 percentage points, respectively, from the baseline by December 2023. However, banks hold sufficient capital to absorb a severe drought shock on agriculture, while maintaining lending to the economy, hence the sector is therefore resilient to the drought shock. There are however seven (7) banks whose capital falls below the minimum regulatory capital of 10.5 percent.

Figure vii: Stress test Results from a Drought Shock on Agriculture

Shock	Impact of NPLs increase on Core CAR	May 2022 Stress Test Based on December 2021 Data			May 2023 Stress Test Based on December 2022 Data		
		Baseline Scenario	Moderate Scenario	Severe Scenario	Baseline Scenario	Moderate Scenario	Severe Scenario
Output growth under Drought shock episodes on Agriculture and related sectors		**5.63**	**-3.32**	**-7.92**	**5.88**	**-3.58**	**-5.33**
Size of the Shock on NPLs following Drought Shock on Agriculture and related sectors			**2.84**	**5.58**	**-0.51**	**0.31**	**0.46**
1. A Shock Increase in Overall NPLs	*Pre-shock Core Capital Ratio (%)*	15.64	15.64	15.64	15.92	15.92	15.92
	Post-shock Core Capital Ratio (%)	**15.75**	**15.50**	**15.39**	**15.94**	**15.91**	**15.91**
	Number of Banks below minimum Core CAR	8	10	10	6	6	7
	Capital required (KSh Mn) by banks to meet the minimum Core CAR of 10.5%	7,458.43	8,547.94	9,318.14	7,773.06	7,855.84	12,920.44
2. A Shock Increase in Sectoral NPLs **(Sectoral Shock Sizes in Annex 2)**	*Pre-shock Core Capital Ratio (%)*	15.64	15.64	15.64	15.92	15.92	15.92
	Post-shock Core Capital Ratio (%)	**15.63**	**15.60**	**15.60**	**16.00**	**15.99**	**15.98**
	Number of Banks falling below minimum Core CAR	8	9	9	6	6	7
	Capital required (KSh Mn) by banks to meet the minimum Core CAR of 10.5%	7,789.66	7,822.89	7,869.66	7,136.77	7,215.15	11,437.48

Stress Event 3: Interest Rate Risk Stress Test under Combined Scenario of rising lending rate and revaluation losses from bonds repricing

The rapid increase in interest rates triggered by monetary policy tightening in advanced economies to stem inflationary risks, exacerbated fragility in the banking sector, in the USA (collapse/takeover of four regional banks) and Switzerland (failure of Credit Suisse bank) in the first half of 2023. Domestically, interest rates have also risen significantly during the period, with potential implications for rising NPLs, reduced lending and revaluation losses as a result of repricing of interest rate sensitive assets like government securities held under Available for Sale (AFS) and Held for Trading (HFT) portfolios.

Interest rate risk stress test was therefore conducted based on the June 2023 data to assess the resilience of banks to this shock. The stress test assumed materialization of this risk through two transmission channels:

- High lending rates slows down credit uptake and raises the cost of borrowing as well as the cost of servicing the existing loans. Increased NPLs reduces profits and retained earnings, limiting banks' ability to build more capital buffers.

- Rising interest rates negatively affects bonds values through mark-to-market unrealized valuation losses for bonds held for trading and available for sale. However, realized losses through bonds sale are charged on the bank capital. As of June 30, 2023, government securities accounted for 29.2 percent of total banks assets. In addition, of the average industry liquidity ratio of 49.7 percent for all banks as of June 30, 2023, government securities accounted for 37.9 percent. Therefore, the banking sector is exposed to the government securities in terms of assets and liquidity.

In this stress test, the interest rate risk arises from rapid tightening of monetary policy rate (Central Bank Rate). In response, banks raise their lending rates and reprice their bonds held under available For Sale or Held For Trading in line with IFRS 9 requirements.

Using the data as of June 2023 on weighted average lending rate, interbank rate, CBR, treasury bill rate and NPLs, it is estimated that raising policy rate (CBR) by 1 percentage point increases weighted average lending rate by an average of 0.49 percentage points from the 2nd to the 7th month, with 1.04 standard deviations. Cumulatively 1 percentage point increase in CBR increases weighted average bank lending rate by 2.45 percentage points up to the 7th month following policy rate change. This implies that, a 1 percentage point increase in CBR, leads to 2.45 percentage point cumulative increase weighted average lending rate up to 7th month after policy change in the baseline scenario. With a standard deviation of 1.04, 2 percentage points increase in CBR under moderate and 3 percentage points under severe scenarios, would raise the weighted average lending rate for the entire banking sector by 3.49 percentage points and 6.49 percentage points, respectively. This brings the estimated weighted average lending rate to about 15.67 percent, 16.71 percent and 19.71 percent under the baseline, moderate and severe scenarios by December 2023. Consequently, NPLs ratio is projected at 15.3 percent, 16.34 percent and 17.38 percent under the baseline, moderate and severe scenarios, respectively, by December 2023.

Using VAR model, the changes in the yields are explained by inflation, CBR, interbank rate treasury bill rate and the lending rate. The treasury bill rate and CBR accounts for about 9.0 percent and 0.9 percent of the change in the yields. Increase in policy rate (CBR) by 1 percentage point leads to 0.29 percentage point, 0.36 percentage points and 0.06 percentage point in the second, third and fourth month, with 1.23 standard deviations. Hence, cumulatively, an increase in CBR by 1 percentage increases yields by 0.7 percentage point increase in average bond yields by the 4th month plus 1.23 standard deviations. Therefore, average bond yields are projected to increase by 1.93 percentage points in the baseline scenario. If CBR increases by 2 percentage point under moderate and 3 percentage points under severe scenarios, average yields increase by 2.63 percentage points and 3.67 percentage points under the moderate and severe scenarios from an average of 16.22 percent in June 2023. Therefore, average yields are projected to increase to 16.92 percent, 18.85 percent, and 19.89 percent, under the baseline, moderate and severe scenarios, respectively, if CBR increase by 1 percentage point, 2 percentage point and 3 percentage point from the current level of 10.5 percent, respectively. The estimates are within the spreads between the minimum and maximum monthly average bonds yields for 2-and 20-year bond maturities between 2015 and June 2023.

If the average yields increase 18.85 percent and 19.89 percent, under moderate and severe scenarios, banks will record unrealized valuation losses of KSh 154.8 billion under moderate scenario and KSh 208.7 billion under the severe scenario against the baseline estimates of KSh 96.0 billion. The actual revaluation losses reported by banks as of June 30, 2023, was KSh 102. 7 billion. The interest rate stress test also assessed the resilience of banks to simultaneous shock increase in NPLs and repricing of bonds, because of rising interest rates. The results indicate that the banking sector is generally resilient to interest rate risk transmitted through high NPLs following increase lending rates, and valuation losses on bonds held under AFS/HFT portfolios.

Stresst Test Results for Combined Scenario

Overall, the banking sector is resilient to interest rates risk under combined severe scenario where NPLs increase to 17. 38 percent and average yields on bonds increase to 19.89 percent from the baseline. The overall core CAR for the sector would decline to 11.69 percent in December 2023 from preshock core CAR of 15.92 percent in June 2023. This ratio is still above the minimum regulatory core CAR of 10.50 percent. Tier I banks have the lowest post-shock core CAR of 10.60 percent while tier II banks have the highest core CAR of 18.83 percent.

If the combined severe scenario materialize, ten (10) banks would require a total of KSh 56.5 billion in additional capital to meet the minimum regulatory core CAR of 10.50 percent. The bulk of this amount, KSh 49.4 billion, will be required by tier I banks. The most significant channel through which interest rate risk would impact the banks' capital is from revaluation losses arising from repricing of government bonds held by banks. If policy rate (CBR) increases further, pushing average secondary markets yields to 19.89 percent under severe scenario, a total of seven (7) banks would need additional capital of KSh 46.4 billion to meet the regulatory capital requirement of 10.50 percent. The lending rate channel is less significant, perhaps reflecting the expected boost in earnings from high lending rates that would minimize the overall impact of rising NPLs and slow growth in new credit uptake. The results are summarized in **Figure viii.**

Figure viii: Stress test Results for Combined Scenario

CAPITAL	LARGE BANKS (9)	MEDIUM BANKS (8)	SMALL BANKS (21)	TOTAL
Pre-Shock Capital for all banks (KSh '000s)	648,803,753.13	145,198,582.14	62,127,037.54	856,129,372.80
Pre-Shock Core CAR for all banks (%)	14.85	18.84	15.18	15.43
Pre-Shock Capital for banks in the ST (KSh '000s)	648,803,753.13	132,753,551.14	61,728,365.85	843,285,670.12
Pre-Shock Core CAR for banks in the ST (%)	14.85	23.29	17.29	15.92
1. Capital Levels post-Increase in NPLs following increased Lending Rates in response to raising CBR				
Moderate Scenario				
Core CAR (percent)	14.52	23.01	16.49	15.57
No. of Banks failing ST	0	0	1	1
Change CAR Post-Shock (ppts)	-0.33	-0.27	-0.80	-0.35
Capital needed to meet 10.5% (KSh '000s)	-	-	717,174.89	717,174.89
Severe Scenario				
Core CAR (percent)	14.45	22.95	16.38	15.49
No. of banks failing ST	0	0	2	2
Change CAR Post-Shock (ppts)	-0.40	-0.33	-0.91	-0.43
Capital needed to meet 10.5% (KSh '000s)	-	-	784,256.63	784,256.63
2. Impact of shock Increase in Interest Rates on Bonds Repricing to aggregate banks Capital				
Moderate Scenario				
Core CAR (percent)	11.99	20.24	14.69	13.06
No. of banks failing ST	2	1	3	6
Change CAR Post-Shock (ppts)	-2.85	-3.05	-2.60	-2.86
Capital needed to meet 10.5% (KSh'000s)	23,218,139.30	1,080,720.89	1,544,936.42	25,843,796.61
Severe Scenario				
Core CAR (percent)	11.00	19.16	14.08	12.09
No. of banks failing ST	3	1	3	7
Change in CAR post-Shock (ppts)	-3.84	-4.12	-3.21	-3.83
Capital needed to meet 10.5% (KSh '000s)	41,325,235.27	2,416,073.36	2,649,392.24	46,390,700.88
3. Combo: Interest Rate Risk ST through lending rate to NPLs and Bonds Repricing on bank capital				
Moderate Scenario				
Core CAR (percent)	11.67	19.96	14.25	12.73
No. of banks failing ST	3	2	4	9
Change CAR Post-Shock (ppts)	-3.18	-3.32	-3.04	-3.18
Capital needed to meet 10.5% (KSh'000s)	29,550,007.93	1,541,080.82	2,152,042.14	33,243,130.89
Severe Scenario				
Core CAR (percent)	10.60	18.83	13.54	11.69
No. of banks failing ST	3	2	5	10
Change in CAR post-Shock (ppts)	-4.24	-4.46	-3.75	-4.23
Capital needed to meet 10.5% (KSh '000s)	49,350,966.68	3,497,384.35	3,625,242.75	56,473,593.78

4. Other Considerations in Interest Rates Risk Assessment

Consistent with other countries, raising monetary policy rate has contributed to increase in lending rates, negatively impacting assets quality through credit channel, and eroding the value of interest-sensitive assets such as bonds held for sale/trading. In cases where some banks faced liquidity stress, the unrealized losses through repricing channel became actualized, impacting negatively on the capital levels of these banks.

Locally, the implementation of the risk-based credit pricing (RBCP) models under the Kenya Banking Sector Charter (BSC), continue to influence how banks price their loans. In addition, changes in Treasury bills rates offers opportunity cost of keeping money in the bank against investing in government securities. It also offers the option of lending to risk customers and investing in risk free T-bills. These impact both the deposit rates and lending rates. Depositors can either invest in government securities or hold deposit with their banks depending on the level of return. If treasury bills rates rise even further, depositors may consider shifting a large proportion of their savings to the high yielding securities. If this happens, banks' funding base shrinks and therefore reduced lending. Banks may however be forced to increase the deposit rate to retain the deposits, thus pushing up the cost of funds. This is passed to the borrowers through a higher base lending rate.

There are two main approaches used in the risk-based pricing models - market-based/looking and cost-based. Either of the approaches has element of the impact of changes in Treasury bills (and also short-dated bonds) reflecting fiscal policy effect. The most notable and direct impact of change in treasury bill rate is found in the market-based approach.

In the market-looking approach, effective lending rate consists of the base rate, operating costs, credit risk premium and other fees and commissions. The base lending rate is computed from the average of CBR and 3-months T-Bill average rate over 12-months period. It also includes liquidity premium derived from the spread between average treasury bond yields and 3-months average T-bill rate. This is the channel through which a change in T-bill rate influences the banks' lending rate over and above the change in monetary policy rate (CBR).

The cost-based approach considers two components: base lending rate and credit risk premium. Base lending rate comprises cost of funds (read cost of deposits), operational costs, and the expected shareholders average return. Credit risk premium reflects the perceived riskiness of the customer. The banks average operating cost include average cost of mobilizing deposits from customers (including interest expense), interbank market rate and interest cost paid on other sources of funds. Since depositors have option of purchasing treasury securities instead of keeping their money in banks, significantly higher T-bill rate would influence drawdown of deposits, especially for those banks paying very low deposit rate. Banks are therefore forced to increase the deposits rate to retain their deposits. Part of this cost is thus passed to borrowers, thus leading increase in effective lending rate. This is how change in treasury securities impact on lending rates.

Overall, rising Treasury bill rates and increase in bond yields in response to the monetary and fiscal policy tightening impacts the lending rates through credit, liquidity, and deposits channels. The impact is faster and more visible under the market-looking approach than in the cost-based approach of credit pricing models. This interest rate stress test was limited to the impact of change in CBR on the effective lending rate and did not analysis how change in Treasury bill rates is accounted for in the change in effective lending rate.

5. Summary of Stress Test Results and Recommendations

i. Overall, the banking sector has sufficient capital to absorb credit and interest rate risks arising from macroeconomic shocks, drought shock and interest rate shock. The drought shock has the least negative impact on the banking sector in 2023.

ii. Most banks are vulnerable to upto 3 top borrowers defaulting per bank under severe scenario, highlighting concentration risk to a few clients. Banks therefore need to ensure top borrowers are performing and devise strategies to manage any default before it develops into a systemic problem.

iii. Under moderate and severe scenarios for the combined interest rate shock, ten (10) banks need additional capital to meet the minimum regulatory threshold of 10.5 percent. The impact transmitted through bonds repricing on banks' capital require closer monitoring for appropriate policy interventions. This may also include liquidity support to some of the most vulnerable banks. It could also involve managing the upper end of the yield curve to minimize significant outward shift that negatively impact bond values.

iv. Experience from the failure of some US regional banks requires CBK to enhance supervisory oversight on these banks, with emphasis on build-up of strong capital buffers. In addition, it is becoming more needful to consider financial stability objectives even as central bank take monetary policy actions to stem inflation.

v. Besides the monetary policy actions, lending rates are also impacted by the changes in Treasury bills and bonds rates (reflective of forgone opportunity cost of retaining deposits at the bank instead of investing in treasury securities), bank-specific cost structures, customer risk profile and the expected shareholder returns. This requires continuous surveillance that complements the interest rate stress test as well other risk assessment toolkits.

vi. The stress test team stands ready to revise the 20 percent consideration for the bonds Held to Maturity in line with the Liquidity Coverage Ratio under Basel III to assess the liquidity risk emanating from bond repricing. In a liquidity stress environment and limited market funding, the value of bonds decline irrespective of whether they are held for to maturity, available for sale or held for trading. This impacts the banking sector liquidity, profitability and capital.

vii. Implementation of Basel III Liquidity Coverage Ratio requiring banks to hold High Quality Liquid Assets (HQLA) to meet their liquidity needs for a 30-calendar day liquidity stress scenario would expand the scope of this stress test to include bonds Held to Maturity. This provides a more robust assessment of the sector's resilience to rapid increase in interest rate. Additionally, the banks that do not meet the minimum regulatory capital requirements have provided CBK their capital restoration plans through their Internal Capital Adequacy Assessment Process (ICAAP) documents. CBK to continue monitoring the implementation of the capital plans to ensure full compliance, and where this is not met, appropriate enforcement measures are taken.

2.2 Insurance Sector

The insurance sector comprises general insurance and long-term (life) insurance businesses. There were 56 insurance companies, 1 micro insurance company, 5 reinsurance companies, 210 insurance brokers, 21 bancassurance intermediaries and 13,508 insurance agents as of December 2022. The sector performed better in 2022 across all the key indicators as compared to its performance in 2021 **(Table 7).** The general insurance business accounted for 55.2 percent of total insurance premiums in 2022 and the sector grew by 13.2 percent in gross premiums, to reach KSh 309.1 billion. Penetration of insurance services in the economy as measured by the ratio of gross direct premium to GDP was 2.3 in 2022 from 2.2 percent in 2021, which is significantly below the global average of 7.2 percent.

Table 7: Key Performance Indicators for Insurers

Insurers Performance Indicators							
	2017	2018	2019	2020	2021	2022*	Annual Change (percent)
	KSh '000'	KSh '000'	KSh '000'	KSh '000'	KSh '000'	KSh '000'	
Gross Premium Income	209,001,289	216,261,729	229,499,718	234,775,753	273,710,831	309,769,052	13.17
Net Premium Written	165,852,034	172,322,202	182,658,282	187,853,004	221,133,803	248,907,034	12.56
Claims Incurred (Gen. Business)	56,151,961	56,928,003	58,961,581	58,311,459	69,835,740	77,640,979	11.18
Commissions	12,495,181	11,487,628	10,957,562	11,157,093	13,521,938	13,843,523	2.38
Management Expenses	41,197,262	44,072,857	45,702,207	44,173,611	46,513,554	49,151,118	5.67
Investment Income	51,675,571	44,514,367	66,982,398	50,608,392	63,025,147	64,226,291	1.91
Profit/Loss After Taxation	13,642,971	7,269,263	15,119,928	6,388,955	8,645,622	9,880,363	14.28
Investments	483,799,656	524,237,249	594,028,115	656,460,833	733,461,323	830,951,804	13.29
Assets	590,953,337	635,035,110	709,045,429	765,932,477	850,506,382	943,733,959	10.96
Shareholders' Funds	147,255,007	149,134,602	161,635,278	166,069,303	167,914,107	186,629,340	11.15
Key Performance Ratios for Insurers (Per cent)							
ROA	3.2	1.8	3.0	1.3	1.5	1.5	0.0
ROE	9.7	4.9	9.9	3.9	5.2	5.6	0.4
Combined ratio Gen Business)	101.1	102.8	103.4	102.0	106.2	103.3	-2.9
Insurance Penetration Ratio	2.7	2.4	2.3	2.17	2.2	2.32	0.1

**Unaudited data*

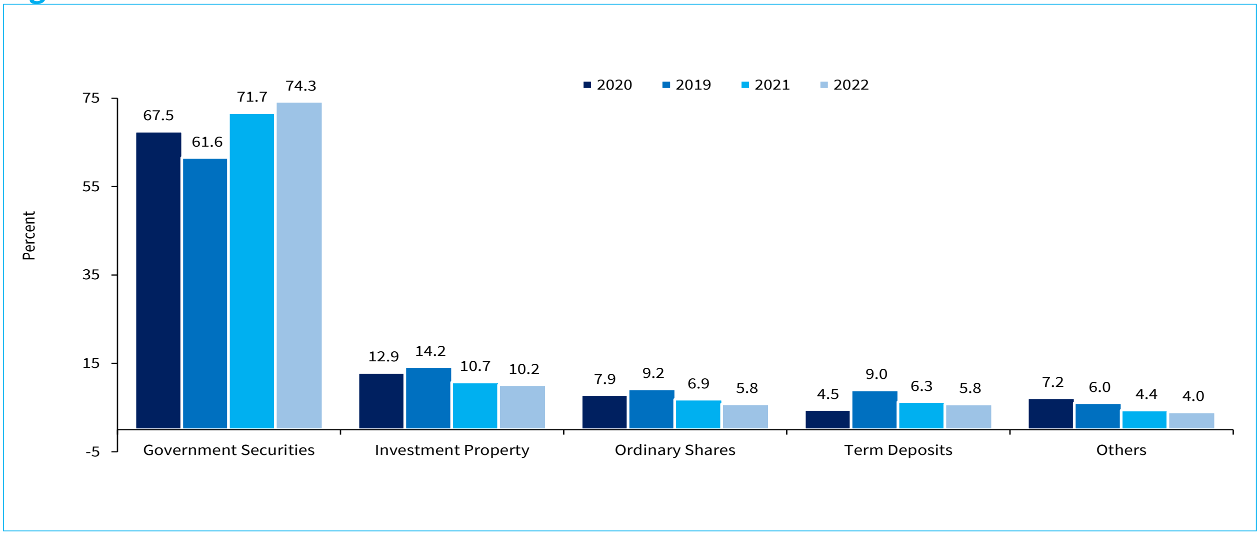
Source: IRA

Total assets grew by 11 percent to KSh 943.7 billion as of December 2022, mainly on account of strong growth in investments. Investment in long-term (life) was the highest, at KSh 605.2 billion or 79.5 percent while general business accounted for 21.5 percent or KSh 156.3 billion in earning assets. Investment in government securities accounted for 74.3 percent of total assets, followed by property at 10.2 percent and ordinary shares at 5.8 percent.

Growth in investment income to KSh 64.2 billion in 2022 from KSh 63.0 billion in 2021 may be on account of high interest rates on government securities. This however introduces market risk as interest rates rise further with implication on revaluation losses on bond repricing. The 14.3 percent growth in profits before tax in 2022 is on account of higher interest income. The increase in the uptake of insurance services, adoption of digital methods in the payment of premiums and verification of insurance covers and claims also contributed to increased profitability.

The COVID -19 pandemic and challenging local and domestic economic environment significantly impacted assets allocation by insurance sector **(Figure 24).** The increase in the share of government securities to 74.3 percent in 2022 from 61.6 percent of total assets in 2021 may indicate flight to quality and safety by insurers following slump in property market during COVID-19 pandemic and extended bearish equities market. This however introduces sovereign risk exposure, especially with rising interest rates risk. There was also an increase in investment in subsidiaries by 13.2 percent, reflecting cross sector and cross border business diversification for growth. The term deposits also remained steady at 5.8 percent in 2022, from a low of 4.5 percent in 2020. However, the 3.0 percentage points decline in the share of property investment and 3.4 percentage points decline in ordinary shares reflects slow recovery following the COVID–19 pandemic aftershocks on the real estate and construction sectors, and difficult economic conditions facing listed companies in the face of elevated market risk.

Figure 24: Insurance Sector Assets Class



Source: IRA

Risks Assessment and Outlook

The sector is faced with both/or either increasing risks in magnitude and/or new ones are emerging, with implication on sector stability. Specifically:

- ***Insurance risk*** arising from the nature of insurance contracts to receive premiums and offer protection against loss. Insurance risk measured by combined ratio moderated to 103.3 percent in 2022 from 106.2 percent in 2021, implying that although claims and benefits still exceed insurance liabilities, the risk is easing. This is partly due to improved insurance product design, pricing, underwriting, reinsurance arrangements, reserving, and claims management.
- ***Market risk*** arises from adverse fluctuations in market interest rates or asset prices resulting in overstating of assets /or understating of liabilities. Insurance companies are exposed to equity securities price volatility. In 2022, the equities declined by 0.1 percentage points, and this has further worsened in the first half of 2023. Both global risks arising from monetary policy tightening in advanced economies and challenging economic conditions locally are expected to drive equity prices even lower and push interest rates higher, leading to large mark to market losses.

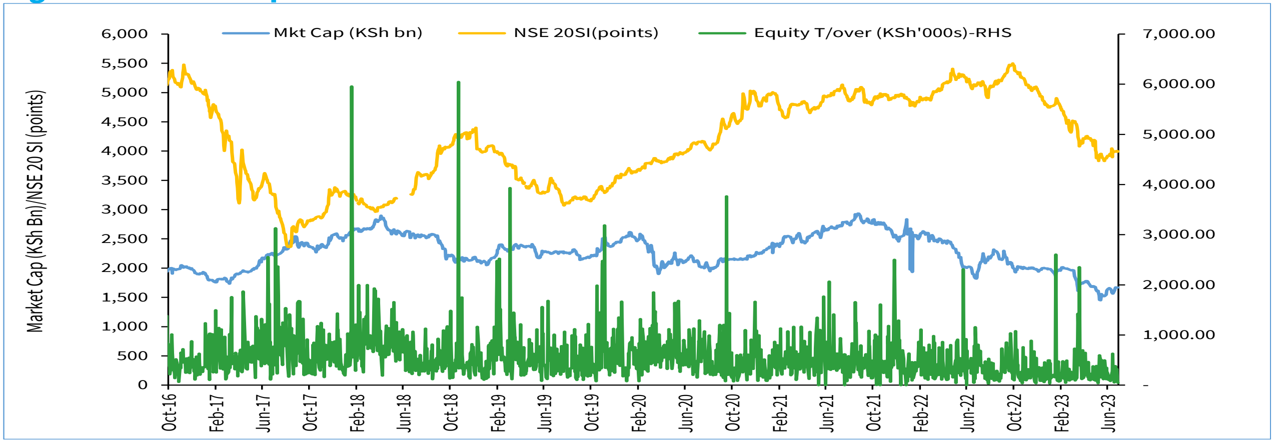
- ***Credit risk*** arises when a counterparty fails to repay loans on due date. It includes amounts due from reinsurers in respect of claims already paid, amounts due from insurance intermediaries, amounts due from corporate bond issuers, cash, and deposits held in banks, reinsurer's share of insurance liabilities and reserves, retrocession assets for reinsurers and loans and mortgages advanced to varies counterparties. The credit exposure from outstanding premiums and reinsurance recoveries increased by 8.1 percent, to KSh 43.4 billion in 2022. Insurers and reinsurers are required to constantly monitor risk profile of their creditors and make sufficient provisions and write-offs to ensure adequate valuation of debtors.
- ***Cybersecurity threats* and insurance frauds have increased** on growing use of digital channels and internet-enabled devices, systems, and processes. Paying insurance premiums and processing of claims digitally brings efficiency gains to the sector but has come with increased exposure to cyber frauds. Underwriting insurance digitally may lead to risk-premium mismatch, exposing insurers to losses. Cyber security risks remain elevated in the sector following working from home during COVID-19 pandemic due to limited security in home set-ups.
- ***Ukraine War*** impacted supply chain negatively, leading to increased energy and food prices. This reduced disposable incomes of households and affordability of insurance services. The was also increased insurance and freight costs for marine and air cargo businesses. The risk was even higher for companies highly exposed to Russian or Ukrainian companies.
- ***Political risk* remains despite conclusion of 2022 general elections.** The industry faces frequent episodes of riots and/or civil unrest, causing a disruption in business. Companies could scale down business as a mitigation to the risk thus reducing insurance business. Investment returns for the industry are also expected to reduce on low business activity.
- ***Climate Change risk*** manifested in severe drought or floods raises insurance claims by the insured as compensation for underwriting those risks, thus reducing underwriting performance. Some insurance companies are beginning to reprice their portfolios to factor long-term exposure to climate changes.

Despite the myriad risks, the sector outlook remains positive in terms of growth, stability, and resilience. The IRA has enhanced surveillance and taken measures to address existing challenges to improve the sector's performance. Adoption of technology and digital platforms, and other innovative distribution channels continue to support efficiency and growth of the sector. As the economy recovers, insurers see opportunities to innovate and come up with value-based products meeting consumer needs.

2.3 Capital Markets

The performance of the Nairobi Securities Exchange was reflective of price shocks, interest rate risks and increased market volatility in 2022 (Figure 25). While investors deployed hedging strategies including single stocks and index futures to mitigate market risk in 2022, the NASI, NSE 20 and market capitalisation declined by 11.9 percent, 23.4 percent, and 23.4 percent, respectively as of December 2022 compared to December 2021.

Figure 25: Select Equities Market Performance Indicators

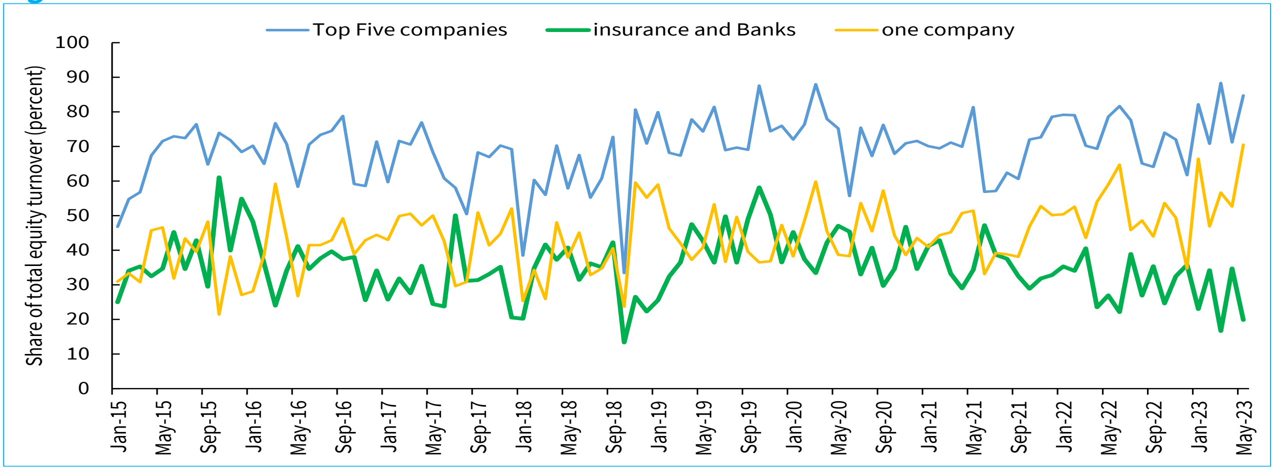


Source: NSE

By end of June 2023, NASI, NSE 20 and market capitalisation have further declined by 6.0 percent, 16.1 percent, and 16.1 percent, respectively, from their December 2022 level. The NSE therefore continue to experience bear market as global risks spillovers remain elevated. Consistent with other market indicators, total equity turnover and total shares traded, declined by 31.7 percent and 23.9 percent, respectively in 2022 compared with 2021 as investors kept off the market.

The liquidity of the equities (sum of equities turnover divided by end year market capitalisation) declined in 2022 to 4.8 percent from 5.9 percent in 2021 and 6.4 percent in 2020, reflecting continued less demand from investors. This is despite implementation of securities lending reforms enabling market participants to buy and sell securities, thereby enhancing liquidity. It may also reflect lack on initial public offerings as well as other innovative products. Market concentration risk remains high, with top five listed firms accounting for an average of 72.7 percent of total equity turnover in 2022 compared to 68.5 percent in 2021 **(Figure 26).**

Figure 26: Market Concentration Risk remains

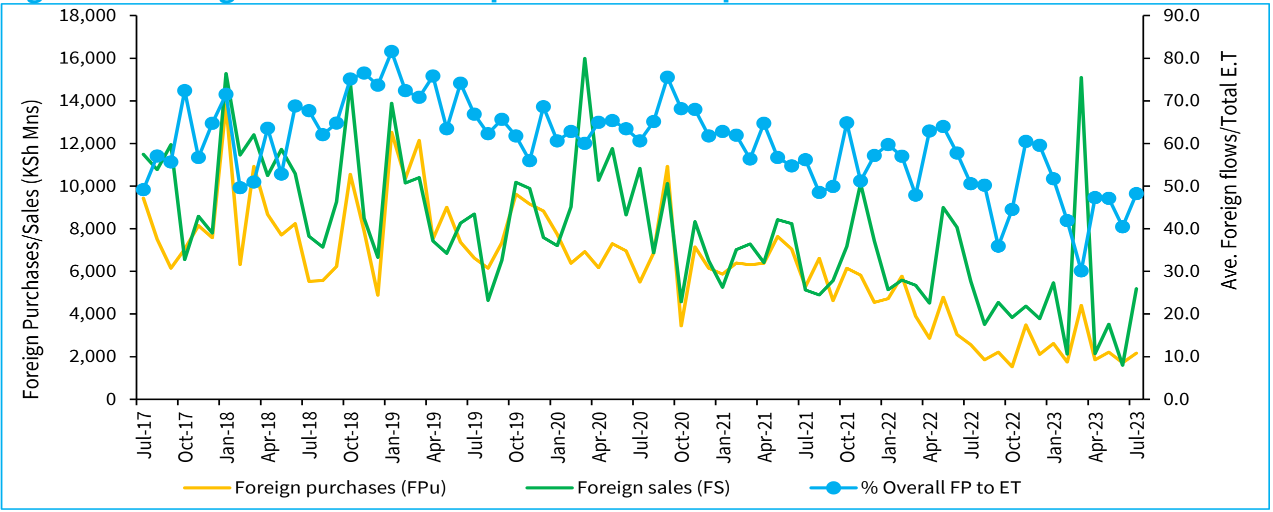


Source: NSE

The financials (insurance &banks) accounted for 31.4 percent while Telecommunications (Safaricom only) accounted for 50.0 percent of total equity turnover in 2022. The primary market for equities remained subdued in 2022, with no new listing of shares through Initial Public Offering (IPO), Rights Issues or share splits.

Foreign investors maintained the sale side, contributing to further decline in market activity in 2022 and into the first half of 2023 (Figure 27). Multiple shocks including rising global interest rates following monetary policy tightening in advanced countries, inflation risks abroad and locally, taxation and exchange rate risks have delayed the recovery of the market on the purchase side. Foreign investors only recorded a slight net inflow (where purchases exceed sales) in June 2023 from March 2022. In 2020, foreign investors sold (outflow) shares valued at KSh 63.2 billion against KSh 38.8 billion purchases (inflow) in 2022, leading to a net outflow of KSh 24.4 billion. This partly explains the exchange rate depreciations as foreign investors continue to exit or stay away from the NSE, thus weakening it further. This trend has continued into the first half of 2023.

Figure 27: Foreign Investors Participation in local Equities Market



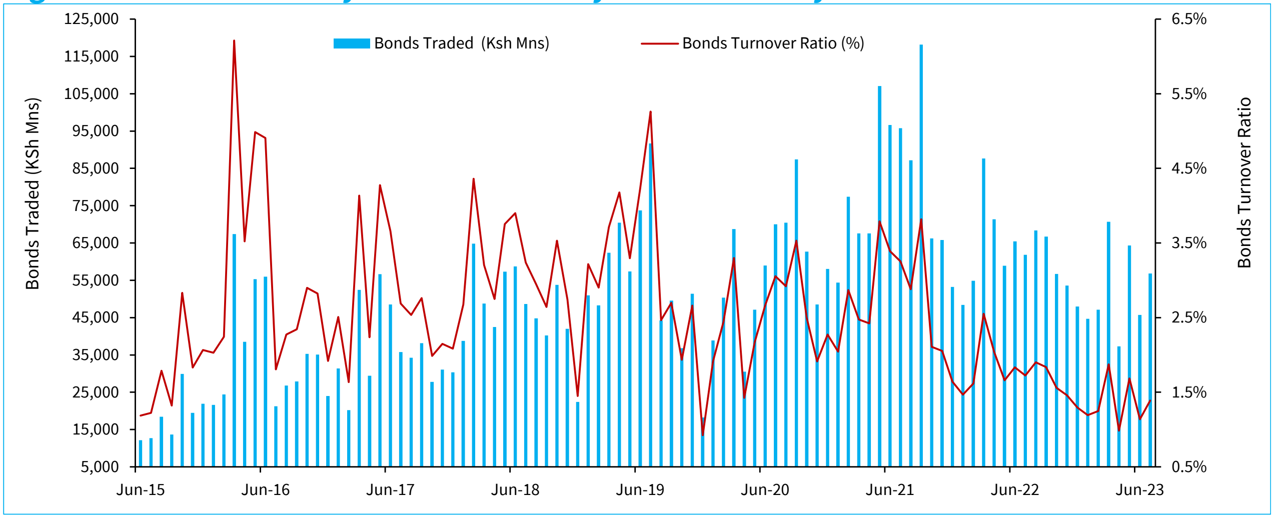
Source: NSE

The average (sum of purchases and sales divide by 2) foreign investor participation to total equity turnover (sum of buy and sale sides divide by 2) declined from annual average of 57.1 percent in 2021 to an annual average of 54.4 percent in December 2022. This has further declined to average of 43.1 percent in the first half of 2023 compared to 58.2 percent average for a similar period in 2022. The net selloffs continue to weigh in one the exchange rate and causes further volatility and low appetite for local equities market as capital outflows from emerging markets and developing economies continue.

The fixed income segment of the capital market remained subdued in 2022, albeit some positive developments. The corporate bond market for instance, Acorn Holdings, an issuer in the Real Estate sector issued KSh 1.22 billion, as part of the approved KSh 5.7 billion. The period also saw the East Africa Breweries issue 5-year corporate bond worth KSh. 11 billion bond programme, which received 345 percent subscription. The year ended with a KSh 1.4 billion Kenya Mortgage Refinance Corporation (KMRC) bond issue that was subscribed at 478.6 percent. This followed CMA's approval of a secured KSh.3.9 billion Medium Term Note program for Urban Housing Renewal Development Limited; a senior unsecured medium-term program of up to KShs.10.5 billion by the Kenya Mortgage Refinance Company (KMRC) to support Kenya's affordable housing agenda.

The bear equities market however spilled over to the fixed income market segment. It was also subdued by heavy undersubscriptions in the primary market and increase in holding more bonds under Held to Maturity. This contributed to a decline of bonds trading in the secondary market by 22.5 percent to KSh 741.8 billion in 2022 from KSh 957 billion in 2021. Most investors held bonds to maturity as indicated by low bonds turnover ratio (value of bonds traded against outstanding tradable bonds), exacerbating liquidity problems in the secondary bond market and dislocation of the yield curve **(Figure 28).**

Figure 28: Local Currency Bonds Secondary Market Activity



Source: NSE

A similar weak investor appetite for bonds in the secondary market was recorded in the primary market, where most bonds offered were oversubscribed in 2022. Low demand amid rising interest rates, pushed the Government Securities Yield Curve outward, signalling higher domestic debt cost **(Annex III).**

Risks Assessment and Outlook

- **Technology related risks** associated with increased adoption of digital platforms, innovations, and automation of processes are emerging. The CMA introduced Regulatory sandbox to allow testing of these new innovations at limited scale prior to their roll–out at commercial scale.

- **A mix of global and domestic economic and financial system challenges continues to impact capital markets negatively.** Further tightening of monetary policy in advanced economies, elevated inflationary pressures, and escalation in Russia-Ukraine war are expected to heighten risks and intensify volatility in 2022. Recovery in investor appetite and overall market performance remains slow and is expected to remain bearish in 2023. However, strong economic recovery and stability, are expected to shape the capital markets performance in 2023.

2.4 Pensions Sector

The pensions sector has grown significantly by assets since 2016 **(Table 7)**. The pensions assets under management increased by 72.7 percent, mainly driven by more than 100 percent growth in government securities, guaranteed funds and offshore assets. Investment in the listed corporate bonds and REITS however declined during the seven-year period.

The overall sector assets grew marginally by 1.9 percent to KSh. 1,576.22 billion in December 2022. This growth is on account of increased investment in Government Securities, Guaranteed Funds, Listed Corporate Bonds, Fixed Deposits, Cash, Unquoted Equities and Private Equity. The increment was however counterbalanced by significant decline in Quoted Equities, Immovable Property, Offshore and REITs. The slow recovery in real estate is attributed to the adverse effects of the COVID-19 pandemic as well as other new local and global risks. The decline in quoted equities reflects the bear run market at the NSE, with most shares having fallen in prices significantly. This is attributed to effects of monetary policy tightening in advanced countries that has reduced portfolio inflows, led to more foreign investor outflows, and drove investors to more to safe assets, mainly government securities. The investment under any other assets was mainly investment in the Acorn Student Accommodation Development REIT.

Table 8: Pension Sector Assets Allocation

Asset Class	2018		2019		2020		2021		2022	
	Amount (KSh Bn)	Share(%)	Amount (KSh Bn)	Share(%)	Amount (KSh Bn)	Share(%)	Amount (KSh Bn)	Share(%)	Amount (KSh Bn)	Share(%)
Government Securities	459.7	39.4	545.3	42.0	625.7	44.7	707.0	45.7	722.0	45.8
Quoted Equities	201.5	17.3	228.1	17.6	218.1	15.6	254.6	16.5	215.2	13.7
Immovable Property	229.9	19.7	239.7	18.5	251.3	18.0	254.5	16.4	248.4	15.8
Guaranteed Funds	167.5	14.4	201.5	15.5	230.6	16.5	259.8	16.8	298.0	18.9
Listed Corporate Bonds	40.3	3.5	17.8	1.4	5.3	0.4	6.8	0.4	7.8	0.5
Fixed Deposits	36.4	3.1	39.4	3.0	39.0	2.8	27.8	1.8	42.2	2.7
Offshore	13.1	1.1	6.3	0.5	11.4	0.8	19.4	1.3	14.1	0.9
Cash	12.7	1.1	15.0	1.2	12.2	0.9	9.5	0.6	16.8	1.1
Unquoted Equities	3.8	0.3	3.6	0.3	3.4	0.2	3.5	0.2	5.0	0.3
Private Equity	0.9	0.1	1.0	0.1	1.7	0.1	3.0	0.2	3.6	0.2
REITs	0.7	0.1	0.5	0.0	0.3	0.0	0.4	0.0	0.3	0.0
Commercial paper, non- listed bonds & Others	0.1	0.0	0.2	0.0	0.0	0.0	1.1	0.1	2.7	0.2
TOTAL	**1,166.49**	**100.00**	**1,298.29**	**100.00**	**1,398.96**	**100.00**	**1,547.43**	**100.00**	**1,576.21**	**100.00**
Overall Risk Score		**3.07**		**3.10**		**3.15**		**2.98**		**2.96**

Source: RBA

Risks, Mitigation and Outlook

The pension sector still faces the challenge of pension adequacy as millions of Kenyans cannot afford a decent lifestyle in retirement. Instead, most rely on dependants to meet their needs in retirement. Among the reasons for the inadequacy of benefits include low contributions, short contribution period and leakages due to early withdrawals. Longevity risk remains a challenge because of rising life expectancy after retirement that exposes retirees to the danger of outliving their retirement savings. Other risks facing the sector include:

1. **Funding Risks to the** schemes as a result of aftereffects of COVID-19 pandemic and other structural and institutional challenges. Most affected schemes are those by government, quasi government institutions and county government schemes. Of the 57 defined benefits schemes under RBA, 32 schemes had funding levels above 100 percent while 25 schemes had funding level below 100 percent, bringing average to of all schemes to 98.5 percent. The unremitted contributions for the public sector schemes increased to KSh. 72.3 billion as of March 2023.

2. **Investment/Market risks** due to volatility in the stock market. Pension sector has been adversely affected by the high interest rates that has led to revaluation losses for interest rate sensitive assets. Prices of equities have on the other hand declined significantly, leading to immense losses.

3. **Legal and Regulatory risks** arising from changes in some laws affecting the pension sector and those which affect the contribution/funding ability of members and sponsors. The sudden and frequent changes in the legal framework may affect the sustainability of the sector.

4. **Operational risks** given that most schemes are small and may not have adequate internal controls, systems, and resources to adequately manage the pension scheme assets.

5. **Agency risks** arising from outsourcing of services including administration, custodial and fund management. The sector faces excessive fees or conflict of interest among the players.

Cognizant of these risks, pension schemes have adopted various mitigation measures to minimise the risks. These include

1. **Diversification of investments** across asset classes, which have been expanded to 15 to cover alternative assets. There are however set limits to reduce over-exposure and concentration risks.

2. **Review of regulatory framework** to capture emerging issues and incorporate new products.

3. **Innovation** in new ideas and products targeting the under covered population in the informal sector. New products include the hustler fund saving component which is a bundled product comprising the credit facility and savings facility for both short term and long-term purposes.

4. **Consumer Protection** guidelines to ensure good governance in schemes and protection of members' and sponsors' interest are being implemented across the sector.

The sector is expected to grow in 2023 on positive economic prospects and other reforms by the government to address some of the risks. The risks to the sector are tilted downside.

2.5 Sacco Sector

Savings and Credit Cooperatives (Sacco) Societies recovered in 2022 following the reopening of the economy (Table 8). Most indicators have grown significantly since 2016, with only external borrowing having increased by less than 50 percent. Of the fifteen (15) indicators analysed, nine (9) have increased by more than 100 percent in the last seven years.

Table 9: Sector Key Indicators for Deposits Taking SACCOs (KSh Million)

INDICATOR	2016	2017	2018	2019	2020	2021	2022	% change 2022/2016	% change 2022/2021
Total Assets	392,755.12	441,835.98	497,275.83	555,916.61	673,305.60	700,258.04	764,171.11	94.6	9.13
Gross Loans	291,368.60	331,290.41	373,195.19	420,549.97	508,861.83	523,017.56	585,963.88	101.1	12.04
Total Deposits	272,407.36	306,987.79	342,295.89	381,081.14	464,216.72	473,301.53	522,440.00	91.8	10.38
Core Capital	58,134.78	66,825.27	78,266.55	95,127.74	113,785.81	119,557.01	142,325.10	144.8	19.04
Institutional Capital	34,028.15	38,840.29	46,280.66	59,284.95	69,294.21	73,558.89	90,556.95	166.1	23.11
External Borrowings	20,213.38	21,769.27	22,161.04	22,115.57	25,816.52	24,764.63	24,325.64	20.3	-1.77
Earning Assets	313,531.35	357,022.74	403,767.59	455,625.91	553,742.16	567,413.10	574,366.98	83.2	1.23
Liquid Assets	40,314.99	47,084.79	55,197.68	67,733.59	96,503.43	105,927.47	108,002.66	167.9	1.96
Non-Performing Loans	14,786.73	19,860.89	22,881.22	25,925.91	37,650.83	35,389.38	48,401.83	227.3	36.77
Provisions for loan losses	8,943.89	11,199.55	14,577.77	18,555.52	26,422.43	26,151.01	37,504.48	319.3	43.42
Gross Income	52,566.58	60,749.48	69,305.98	80,154.98	70,316.10	96,491.05	105,557.65	100.8	9.40
Operating Expenses	18,261.06	20,704.12	23,050.42	25,738.25	22,808.20	31,502.13	36,002.89	97.2	14.29
Net Interest margin	29,043.61	32,994.58	41,740.44	44,117.18	42,285.55	57,972.05	62,799.43	116.2	8.33
Short term Liabilities	79,399.20	86,837.23	100,173.01	133,226.07	125,195.68	138,561.17	147,349.75	85.6	6.34
Net Financial Income	31,411.80	36,141.65	41,673.46	47,495.36	45,063.32	59,354.80	66,447.44	111.5	11.95

Source: SASRA

Compared to 2021 however, total assets grew by 9.1 percent to KSh 764.1 billion in 2022, mainly driven by gross loans. The assets were mainly funded by a 10.4 percent growth in deposits and 1.8 percent increase in external borrowings. The latter, exposes the sector to interest rates risk, which impacts the overall stability. Saccos also experienced elevated credit risk, with gross NPLs rising by 36.8 percent in 2022. This led to 43.4 percent increase in provisions for bad debts, impacting negatively on gross income that moderated to 9.4 percent in 2022 compared to 14.2 percent in 2021. The sector however continues to build strong capital base, both regulatory and institutional, critical for credit risk absorption.

The sector's Financial Soundness Indicators (FSIs) were strong in December 2022 despite elevated credit risk (Table 9). All the capital ratios were above the regulatory minimum in December 2022, indicating sufficient capital buffers for credit related shocks. The NPLs ratio rose 326 basis points above the regulatory minimum of 5 percent as borrowers faced challenges in servicing their loans.

Table 10: Financial Soundness Indicators (FSIs)

CAPITAL ADEQUACY	2017	2018	2019	2020	2021	2022	% Change (2022 - 2021)
Core Capital (KSh Billion)	64,254	74,375	79,204	100,381	119,557,011	142,325,098	19.0
Core Capital/Total Assets (percent)	14.5	15.0	14.2	15.9	17.1	18.6	1.6
Core Capital/Total Deposits (percent)	21.1	21.8	20.8	23.3	25.3	27.2	2.0
Total Capital/Total Assets (percent)	8.2	8.5	10.6	9.5	19.0	11.9	-7.2
ASSET QUALITY							
Gross NPLs/Gross Loans (percent)	6.14	6.3	6.15	6.93	6.77	8.26	1.5
NPL (Net of Provisions)/Core Capital (percent)	9.9	9.3	8.5	9.0	6.9	5.8	-1.0
Earning Assets/Total Assets (percent)	78.5	77.68	76.9	81.95	81.03	75.16	-5.9
EARNINGS							
Return on Assets (ROA)	2.7	2.4	2.6	3.4	3.6	9.1	5.5
Non-Interest Expenses/Gross Income	44.0	62.1	57.7	57.9	38.4	54.2	15.8
Operating Expense/Total Assets Ratio	5.3	4.6	4.8	4.5	4.5	4.9	0.4
LIQUIDITY RATIO							
Liquid Assets/(Savings Deposits+ Short Term liabilities) in percent	54.1	52.7	50.9	70.8	42.1	73.3	31.2
Liquid Assets/Total Deposits (percent)	17.2	17.1	17.0	19.9	0.2	0.2	0.0
External Borrowings/Total Assets	4.8	4.1	3.9	3.7	3.5	3.2	-0.4
Liquid Assets/Total Assets (percent)	11.9	11.8	11.6	13.6	15.1	14.1	-1.0
Total Loans/Total Deposits (percent)	108.5	109.5	110.3	110.1	110.5	112.2	1.7

Source: SASRA

Internally generated reserves as proportion of core capital increased to 63.4 percent, above the regulatory requirement of 50 percent, implying stable funding. In addition, liquidity ratio increased to 73.3 percent in 2022 from 42.1 percent in 2021, indicating enhanced sector soundness to liquidity risks. The strong capital and liquidity buffers signify the sector's ability to absorb ongoing and new risks, and also continue lending to their members. The continued decline in external borrowings to total assets ratio, to 3.2 percent in 2022, signify further reduction in external funding risks for Saccos, especially in the face of rising interest rate risks.

To strengthen the sector further, SASRA operationalised the non-withdrawable deposit taking SACCO regulations 2020, bringing three categories of SACCOs under its regulatory ambit. The three are those SACCOs whose accumulated non-withdrawable deposits exceeded KShs.100million; Saccos that mobilize savings and credit services through virtual platforms; and SACCOs that mobilize membership, savings and provide credit to Kenyans living abroad - Diaspora Saccos. As of 2022, SASRA had processed all the applications and authorized a total of 185 SACCOs to conduct specified deposit taking Sacco business. A total of 361 SACCOs comprising of 176 Deposit-taking and 185 non-withdrawable deposit taking SACCOs were being regulated by SASRA as of December 2022. More SACCOs are expected on board as they grow in deposits, especially through digital platforms. The average NPLs ratio for non-withdrawable deposit taking SACCOs (NWDTS) was slightly higher than the NPLs ratio of DTS SACCOs.

Risks, Mitigations and Outlook

- The sector is highly dominated by large deposit taking SACCOs, with capacity to acquire and implement appropriate core banking software and have adequate liquidity and capital reserves for growth. However, operationalization of regulations 2020 targeting specified deposit taking SACCOs resorted to incorporation of many small SACCOs under prudential supervision. They lack the necessary financial capacity to acquire appropriate core banking software, inadequate liquidity reserves to facilitate inter-lending among others. SASRA spearheaded the Shared Services and Central Liquidity Facility to enhance efficiency in savings mobilizations and credit to members; as well as the Deposit Guarantee Fund to deepen public confidence and trust in investing in the SACCO industry.

- Employer based SACCOs are increasingly opening their common bond targeting wider membership scope. This, however, comes with significant risks from poor credit administration including collection practices. SASRA continues to encourage regulated SACCOs to conduct thorough analysis of the market as they pursue available opportunities from new members.

- SACCOs are increasingly being exposed to environmental risks such as climate change. The Agro-based SACCOs are prone to unconducive climatic conditions, with loans to household spent majorly on health care and education. In addition, the SACCOs business model affects social and a poverty outcome in the society. As a result, there is need to incorporate environmental, social and governance (ESG) best practices in the SACOOs business to reduce exposure to ESG risks. Therefore, sustainable SACCOs business model should incorporate environmental and social impact of mobilising deposit and lending to the society.

- SACCOs face compliance risks emanating from current and new legislations which directly affect their business operations. These include tax laws, unclaimed financial assets, data protection, anti-money laundering among others, that negatively affect their operations.

Overall Financial Sector Outlook

Kenya's financial sector is projected to remain stable and resilient to fiscal consolidation, increase in interest rate as a result of monetary policy tightening to stem inflation, cybersecurity risks, funding risks, credit risks, sovereign exposure risks and climate change risks in 2023.

The sector has sound and stable financial system supported by strong capital and liquidity buffers, and continuous improvement in systems and governance practices to enhance operational practices. Banks face elevated credit risk as lending conditions tighten and interest rates rise further (2023 Banking Sector Credit Risk Stress Test Report). The MFBs remain most vulnerable to shocks given the declining capital and liquidity buffers. In addition, they face stiff competition from other credit providers, including digital credit providers, SACCOs and banks. Capital markets remain under pressure as the bear run continues and volatility elevated at the marketplace. More foreign investors continue to exit and very few are buying shares, leading to net capital outflow as macrofinancial risks remain elevated. Insurance sector face declining returns on investment and gross premiums as well as technology–related risks. Together with Pensions sector, they also face sovereign risk exposure on rising interest rates that have introduced revaluation losses on bonds repricing. Pensions also face additional risk of falling member contributions amid low coverage due to large informal sector of the economy. SACCOs are yet to fully recover from the COVID-19 pandemic, face slowdown in economic activities and elevated credit risk.

Overall, the Russia-Ukraine war, rising global interest rates following monetary policy tightening to stem inflation in advanced countries, capital outflows from emerging and developing economies and domestic vulnerabilities to macroeconomic conditions, and climate change risks, are likely to impact the soundness and stability of financial sector in 2023 and beyond.

3. THE NATIONAL PAYMENTS SYSTEM DEVELOPMENTS AND RISKS

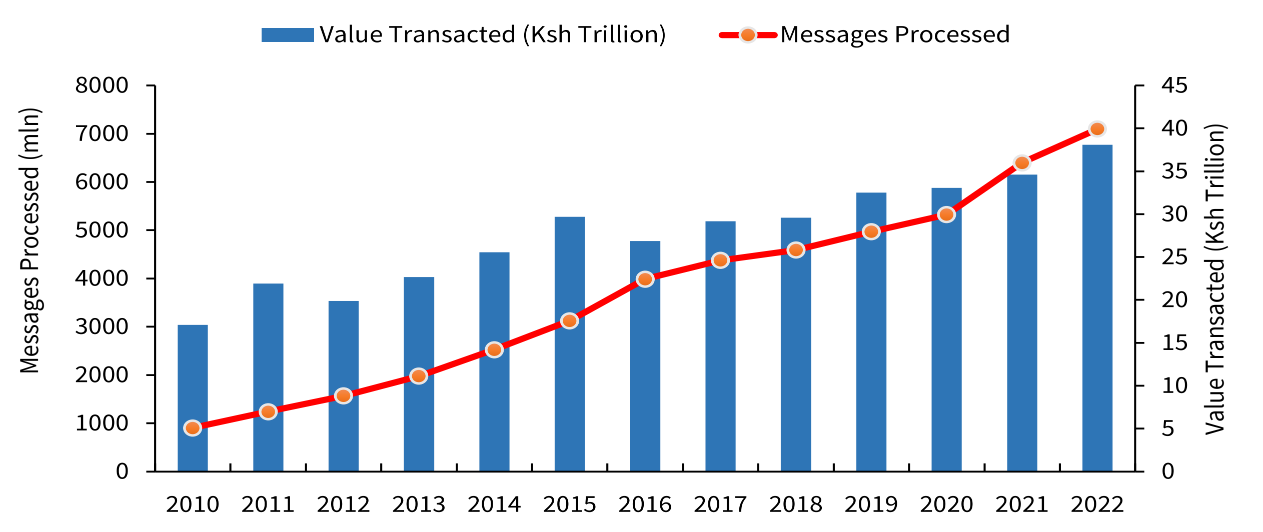
3.1 Payments Developments

The Central Bank of Kenya is mandated by law to formulate and implement such policies as best to promote the establishment, regulation, and supervision of efficient and effective payment, clearing and settlement systems under a National Payment System. Kenya's National Payment System comprises of; large-value payment system or the Real Time Gross Settlement (RTGS) system called KEPSS (Kenya Electronic Payment and Settlement System); low-value (retail) payment system (mobile money, cards, electronic funds transfers (EFT) and cheques); and regional payments system, which clears and settles through the links that EAC and COMESA central bank have established with KEPSS.

Overall, the country's national payment systems remained stable in 2022, building more trust among users and embracing innovations to address consumer needs and changing consumer behaviour. Innovations in digital payments space traverse integrated health, agriculture, education, and transport sectors of the economy. This is what is envisaged under vision 2030 for an efficient and stable digitalised economy.

Kenya's Real Time Gross Settlement (RTGS) system processed 7.1 million transaction messages worth KSh. 38.1 trillion in 2022, up from 6.4 million transaction messages worth KSh. 34.6 trillion processed in 2021(Figure 29). The growth reflects enhanced public confidence as KEPSS guarantees speed, security, and reliability as well as economic recovery in post-COVID – 19 pandemic period.

Figure 29: Volume and Value Transacted Through KEPSS



Source: CBK

Regional Payment Systems continue to play a critical role in cross border payments and settlements of transactions, especially in trade facilitation (Table 10). Transactions settled through the East African Community (EAC) Payment and Settlement System (EAPSS) increased by 53.2 percent and 79 percent in volume (messages) and value (USD Mln) in 2022 compared to 2019. Similarly, the Common Market for Eastern and Southern Africa (COMESA) Regional Electronic Payment and Settlement System (REPSS) recorded 91.1 percent increase in transactions settled in USD and 38.6 percent the value of transactions settled in Euros in 2022 compared with 2019. The steady growth signifies recovering growing cross-border trade within these economic blocs. Stability of these regional payments infrastructure is therefore critical for the regional economies and overall financial system stability.

Table 11: Transactions via Regional Payments Systems

TRANSACTIONS SETTLED VIA REPSS					TRANSACTIONS SETTLED VIA EAPSS						
Year	Value (USD Million)	Number of Messages	Value in Euros	Number of Messages		Number of Messages			Value (USD Millions)		
					Year	Inward	Outward	Total	Inward	Outward	Total
2019	55.73	659	4,538.00	1	2019	9,311	19,444	28,755	242.79	216.94	459.73
2020	76.04	910	401,562.00	4	2020	9,867	18,544	28,411	221.95	234.12	456.07
2021	90.7	1260	480,500.29	23	2021	10,763	23,179	33,942	309.09	298.76	607.85
2022	106.49	1426	628,998.00	18	2022	15,249	28,803	44,052	407.17	415.73	822.90
TOTAL	**328.96**	**4,255**	**406,100.00**	**46**	**TOTAL**	**45,190**	**89,970**	**135,160**	**131.78**	**1,165.55**	**2,346.55**

Source: CBK

Besides EAPSS and REPSS, the African Export and Import Bank (Afreximbank) in 2021 introduced the Pan-African Payment and Settlement System (PAPSS) to complement the COMESA Business Council's (CBC) cross border retail payment scheme. It targeted the MSMEs operating within the COMESA region. The PAPSS is designed as a continental payment system connects all banks, non-banks, switches, and regional systems in Africa to enhance the cross-border payment efficiency across Africa.

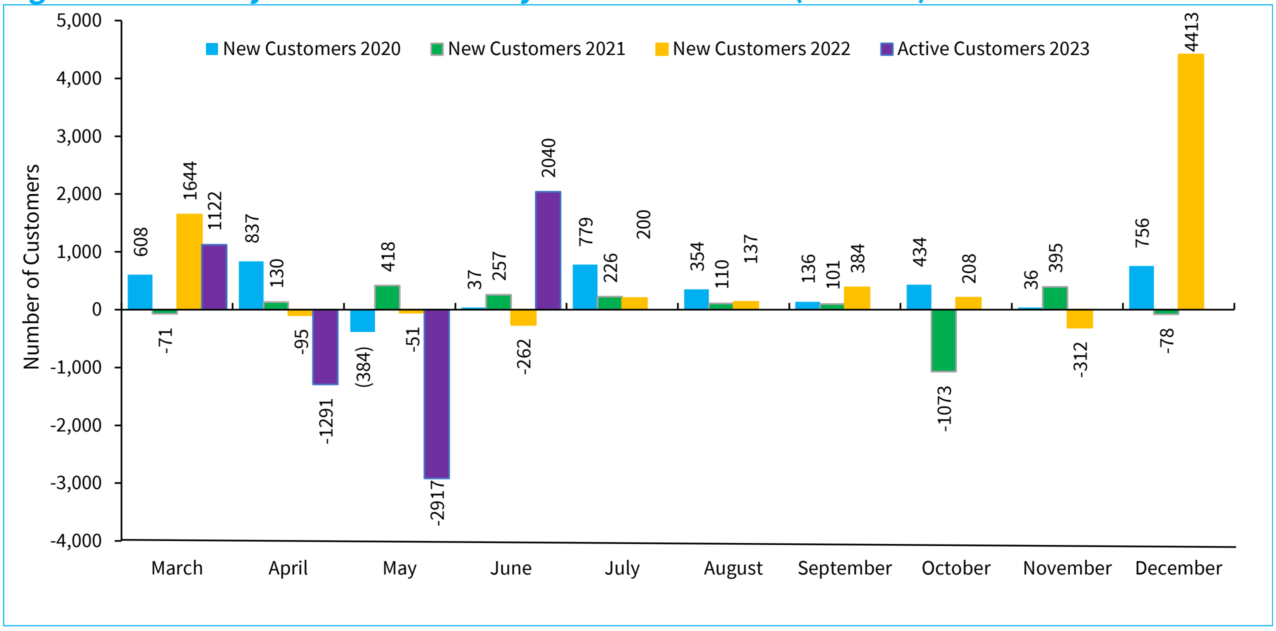
Globally, Society for Worldwide Interbank Financial Telecommunication (SWIFT) system is modernising to increase interoperability, versatility, diversity of payments channels and to meet demands for richer and structured data. Following a successful implementation of awareness phase in 2021 and in quarter one of 2022, the ISO 20022 Kenyan Financial community readiness programme focus shifted to implementation and testing. About 90 percent of institutions have been sensitized on the 2022 migration activities. Financial Institutions are upgraded interfaces to go live on Cross Border Payments by end of 2022. This was achieved in March 2023, when Kenya migrated to ISO 20022 standards for the cross-border and Real Time Gross settlement (RTGS) payments. All Kenyan banks adopted the ISO 20022 messaging standards for the incoming cross border payments while CBK published the standards for its Domestic RTGS payments to the financial sector. The migration improves payment processing efficiency, enhances data quality, and promotes standardization and interoperability. Technical capability and collaboration among stakeholders to address challenges and ensure a smooth transition was key to successful migration.

Cybersecurity has become key financial stability. Consequently, Swift employs robust security measures, including secure messaging, encryption, and digital signatures, to protect the confidentiality and integrity of financial messages. Its Customer Security Program (CSP) provides guidelines, tools, and controls to assist financial institutions in safeguarding their Swift environments against cyber threats. Collaboration among government entities, financial institutions, and Swift is vital to establish cybersecurity frameworks, promote best practices, and conduct regular risk assessments.

Adoption of ISO 20022 standards and implementation of stringent cybersecurity measures has enabled Kenya to strengthen its financial infrastructure, enhance efficiency, and mitigate risks associated with cyber threats. These have implication on overall financial stability and confidence in the Kenyan financial system. The sector achieved 100 percent compliance with the SWIFT Customer Security Program (CSP) in January 2023, raking the top in Africa.

Retail payment system, comprising twelve Payment Service Providers (PSPs) offer; mobile money, Pesalink, cards, cheques, and electronic funds transfers (EFTs) for end-to-end business and households' transactions. Retail Payment Service Providers (PSPs) have the highest number of customers and transactions volume, but low value. As of December 2022, mobile money providers had a total active 30-day customer base of 32.9 million customers, up from 26.9 million in January 2022, or 23 per cent increase in new customers. About 5.9 million new mobile money users registered in twelve months to December 2022, or 1.1 million more new customers registered for similar period in 2021 **(Figure 30).**

Figure 30: Monthly New Mobile Money Active Customers (millions)



Source: CBK

The number of cards and Point of Sale (POS) terminals increased slightly in 2022. However, the number of Automated Teller Machines (ATMs) declined to 2,301 in December 2022 from 2,366 in December 2021, signalling increased uptake of digital payments devices. The ACH, which facilitates the exchange of cheques and electronic funds transfers (EFTs) between banks and their customers was upgraded to International Organization for Standardization (ISO) 20022 to enhance efficiency through Straight-Through-Processing (STP) as well as inclusion of more information in payment transactions. The ACH migrated to the new flexible and data rich ISO 20022 Standards in March 2023 in line with the National Payment Strategy 2022-2025 and global standards. The upgrade, spearheaded by Kenya Bankers Association (KBA) in collaboration with CBK, has improved efficiency, flexibility scalability and availed rich remittances data, which provides insights in payments.

3.2 Risks Assessment and Outlook

Over the last two (2) years, CBK has licensed twenty (20) Payment Service Providers (PSPs) to serve retail customers. The services offered include payment gateway services, money transfer services, wallet provision services and merchant payments, among others. This increase in licensed entities into the payment's ecosystem introduces several risks, including:

Cyber security risks. Cyber risks have increased due to the digitisation of making payments and transfer of money from person to person. The cyber threats remain high in 2022/23, albeit at lower level than the threats reported in 2021/2022 **(Table 12).** System misconfiguration had the highest increase in 202/23 while malware and DDOS recorded the largest decline during the period. The payment system is even more vulnerable due to digitisation of financial services.

Table 12: National Cyber Threats Detection

	Cyber Attack/Threat	20016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
1.	Malware attacks	4,146,435	16,306,547	40,893,141	101,651,143	122,524,531	218,639,597	26,400,530
2.	Web application attacks	2, 656,675	3,743,638	6,109,184	7,662,793	17,668,736	1,231,271	128,514
3.	Botnet/DDOS	952327	3,756,334	4,852,022	1,475,537	16,236,587	120,064,763	7,613,124
4.	System vulnerabilities/ misconfiguration	-	6,158	47,913	108,596	1,974,698	104,120,175	153,615,491
	Total Cyber threats	7, 755, 498	23,815,972	51,903,286	110,898,069	158,404,552	444,055,806	187,757,659

Source: Communications Authority of Kenya

Anti-Money Laundering (AML)/Combating the Financing of Terrorism (CFT) risks arises from potential use of digital products and channels to perpetrate the crime. Some of the cyber-attacks circumvent AML/CFT requirements in such a way that makes it difficult for some PSPs and customers to detect and deter. PSPs therefore need to conduct enhanced monitoring and reporting as guided by law to mitigate the risks. Additionally, the requisite customer due diligence (CDD) processes must be applied and reviewed periodically. PSPs must remain vigilant in monitoring activities of customers, both retail and merchants to avoid promoting unlicensed activities such as online forex trading and processing of transactions associated with digital assets such as crypto.

Geo-political and geoeconomic fragmentations pose risks. The rise in geo-political tensions globally has raised concerns for localization of processing of card transactions and payments. This is slowing down integration of the payments system and accelerating a switch to national system. Risks such as maintaining a robust business continuity framework, updating existing legal frameworks and guidelines to operationalize such initiatives may emerge. Enhanced oversight of the risks identified among other existing ones is paramount. Additionally, the implementation of a risk-based framework will assist in the supervision of the licensed entities, where the approach, mitigation and enforcement measures will reflect the level of risk brought by each entity.

4. FINANCIAL STABILITY ASSESSMENT AND OUTLOOK

Globally, financial stability risks increased rapidly in 2022 and first half of 2023, as the resilience of the global financial system battled the turmoil in the banking sector. As central banks in advanced economies tightened their monetary policies to mitigate inflation risks, this came with undesirable outcomes - the build-up in vulnerabilities in the financial system, the worst since the global financial crisis. Stress in financial markets and collapse of four regional banks in the US as well as takeover of Europe's second largest bank, Credit Suisse, brought to the fore the question of financial dominance. This has made the work of central banks even challenging, especially at a time when inflationary pressures are still persistent. Emerging Markets and Developing Economies have borne the brunt of this risks as reflected in worsening debt sustainability trends, intense volatility in their stock markets with net capital outflows, high cost of living, weakening economies, and significant depreciations of national currencies.

High interest rates have also introduced significant repricing risks for interest rate sensitive assets. This is for government securities, held by banks and Non-Bank Financial Institutions for Sale (AFS) or Trading (HFT). Most holders of such securities have recorded massive unrealized paper losses in line with mark-to-market valuation requirements under the International Reporting Requirements. Where the holders faced liquidity stress and in turn sold-off such securities, the losses were actualized and in turn deducted from capital through provisioning. Liquidity stress even affects securities Held to Maturity as they incur the same losses through market prices.

There is also what is emerging globally as 'hybrid risks' – potential materialization of cybercrime and climate change risks to the financial sector. More adoption of technology and technological innovations in the financial sector have come with risks of cyberattacks, frauds, threats and even actual losses. Adoption of digital currencies and crypto assets brings even complication in the face of unregulated environment. Climate change on the hand, has introduced physical, transition and liability risks. There are more frequent episodes of floods, prolonged drought, and storms that causes heavy losses through physical damage on assets. Transition from carbon fuels to green energy is also exposing financial sector to sectoral risks. Banks and insurance companies to incur heavy losses and faces huge costs if these risks do materialize.

Rising geopolitical tensions among major economies have intensified concerns about global economic and financial fragmentation, with serious implications on global financial stability. Fragmentation induced by geopolitical tensions could affect the cross-border allocation of capital, international payment systems, asset prices as well global trade. This could pose macro-financial stability risks by increasing banks' funding costs, reducing their profitability, lowering the provision of credit to the private sector and making cross-border trade and settlements more difficult. Greater financial fragmentation could also exacerbate capital flow and macro-financial volatility by limiting international risk diversification.

Further monetary policy tightening, rising interest rates and tightening financial conditions have ramifications on global consumer demand, stifling economic growth in 2023. This could further worsen recovery, especially in emerging markets and developing economies, currently battling high cost of living crises, amid constrained fiscal space for intervention measures. In the current environment of high inflation and tighter financial conditions, central banks can face complex and challenging trade-offs during market stress, between addressing financial stability risks and achieving price stability objectives.

The Sub Saharan Africa region was resilient to the recent global banking sector turmoil, recording improved assets quality and stable capital base. It is however facing increased financial markets stress, intense national currency depreciations, further rise in inflation for net importers, accelerated capital outflows as investor adopt flight to quality and safety strategies, elevated debt sustainability stress, and high cost of living crisis. Like countries in the EM&DEs, the region's countries face high borrowing costs, worsening the debt levels and challenges in accessing international capital markets as yields on Eurobonds rise even further.

A careful policy balancing act between stemming inflation (by raising policy rates) and maintaining accommodative monetary policy conditions is needed to ensure economic recovery is sustained and financial stability is maintained, especially for EM&DEs.

Global policymakers need to recognize the emerging financial stability risks associated with increase in geopolitical tensions and assess the transmission to financial institutions for appropriate intervention measures including the need to hold adequate capital and liquidity buffers against rising geopolitical risks.

Proactive policy measures to assess, quantify and institute measures to combat the potential risks of climate change must be put in place quickly. These should be both by public and private sector places. Most vulnerable countries to climate change shock can consider mobilising resources for necessary funding for adaption and mitigation initiatives. Global cooperation and collaboration is also critical in dealing with climate change risks.

Cyber regulation and supervision should be commensurate to the risk exposure and to enhance remedial response and recovery capacity so that operations can quickly resume if an attack occurs. Enhancing information-sharing and incident reporting frameworks and helping emerging market economies build cybersecurity capacity are key to ensuring that all nodes of the network are resilient.

Countries faced with debt sustainability risks need to carefully implement fiscal consolidation measures without compromising provision of essential services to their citizens. Most of these countries already face high cost of living crisis, and therefore could seek concessional borrowing and support from international development partners to address the fiscal needs.

Domestically, Kenya's banking sector remains stable and resilient albeit elevated interest rates and credit risks. Overall, the sector has sufficient capital and liquidity buffers to withstand severe scenarios if these risks materialize. There are however some banks that require to build more capital to deal with these risks. Further increase in interest rates in response to monetary policy tightening is expected to push the cost of borrowing much higher, leading to deterioration in assets quality, and slowdown credit uptake, and increase in revaluation losses on repricing of interest rate sensitive assets, which will erode capital. It is also expected to slowdown new lending, thus impacting assets quality. Rising interest rates is also expected to lead to revaluation losses on repricing of interest rate sensitive assets. There are also elevated operational risks as a result in increased automation and digitalization of financial services and products. Regulators are therefore taking measures to ensure that most vulnerable institutions have sufficient capital and liquidity buffers to absorb any potential losses if these risks materialize. To mitigate operational risks, regulatory authorities have enhanced supervisory activities to ensure the regulated institutions have robust systems in place and have the right skill sets to run them.

Capital markets face flight to safety as investors search for safe assets in the face of intense volatility in equities prices. This is even more pronounced for foreign investors, who face the twin risks of rising interest rates abroad and foreign exchange risks. This has led to even more capital outflow. Insurance sector face declining returns on investment and gross premiums as well as technology–related risks. Pension sector face low returns on equities and declining member contributions. The sector also faces revaluation losses on repricing of government securities in line with International Financial Reporting Standards. The Sacco societies are experiencing elevated NPLs, decline in deposits and membership. The

Overall, the spillovers from monetary policy actions of advanced economies continue to impact domestic economic and financial conditions. Interest rates have risen rapidly, capital outflows have increased, exchange rate remains under pressure, fiscal vulnerabilities remain, cost of living remains high for households' impact negatively on savings and consumption, and inflation is still an area of policy focus. Increased automation and digitalisation have introduced cyber security threats as well as being used as conduits for AML-CFT channels. Climate change risks, manifested mainly through more frequent and longer drought episodes poses macroeconomic risks with passthrough to the financial sector.

In view of these unsettling macrofinancial conditions, policy makers, regulators, authorities, and other players must remain vigilant and take appropriate measures to intervene and mitigate the risks for macrofinancial stability in 2023 and beyond. Collaboration with other stakeholders, locally or abroad would be critical in dealing with these risks.

REFERENCES

Capital Markets Authority (2020): Industry Annual Report, 2022

Central Bank of Kenya (2022): Bank Supervision Annual Report, 2022

Communications Authority of Kenya (2022/23): Quarterly Statistics

International Monetary Fund (2021): World Economic Outlook, October 2022

International Monetary Fund (2022): World Economic Outlook, April 2023

International Monetary Fund (2022): Global Financial Stability Report, October 2022

International Monetary Fund (2022): Global Financial Stability Report, April 2023

International Monetary Fund Article IV Consultation: Country Report for Kenya, December 2022

International Monetary Fund (2021): Fiscal Monitor, April 2023

International Energy Agency (IEA). 2022. “Africa Energy Outlook 2022.” *World Energy Outlook Report.* International Energy Agency, Paris.

Insurance Regulatory Authority (2020): Industry Annual Report, 2022

Global Center on Adaptation (GCA). 2021. *State and Trends in Adaptation Report 2021. How Adaptation Can Make Africa Safer, Greener and More Prosperous in a Warming World.* https://gca.org/wp-content/uploads/2022/08/GCA_STA_2021_Complete_website.pdf

Knight Frank Wealth Report (2022): Property Survey, February 2023

Retirements Benefits Authority (2022): Industry Annual Report, 2022

SACCOs Societies Regulatory Authority (2022): Industry Annual Report, 2022

The Nairobi Securities Exchange Integrated Report &Financial Statements, 2022

ANNEXES

Annex I: List of Companies that Issued a Profit Warning from 2021 to 2023

Type of Finance needs	Type of Finance needs	Type of Finance needs
2021		
1	Centum Investment Co. Plc	24-Mar-21
2	Olympia	18-Oct-21
3	Umeme Limited	22-Mar-21
4	Willamson Tea Kenya	11-Jun-21
5	Wpp Scangroup	17-Oct-21
2022		
1	Bamburi	25-Nov-22
2	Centum Real Estate Limited Kenya	7-Jul-22
3	Crown Paints	14-Dec-22
4	Flame Tree Group Holdings	30-Dec-22
5	Kakuzi Plc	5-Jan-22
6	Liberty Kenya	26-Jan-22
7	Limuru Tea Plc	15-Jan-22
8	Nairobi Securities Exchange	25-Nov-22
9	Sameer Africa Plc	8-Aug-22
10	Sanlam Kenya Plc	20-Jan-22
11	Unga Group Plc	25-Feb-22
2023		
1	Centum Investment Company Plc	24-Jul-23
2	Eveready E.a. Plc	25-Jan-23
3	Express Kenya Ltd	19-May-23
4	Kenya Airways Plc	23-May-23
5	Kenya Power And Lighting Company	26-May-23
6	Longhorn Publishers	9-Jun-23
7	Old Mutual Kenya	30-Mar-23
8	Unga Group Plc	23-Jun-23

Annex II: Government Bonds Primary Market Performance

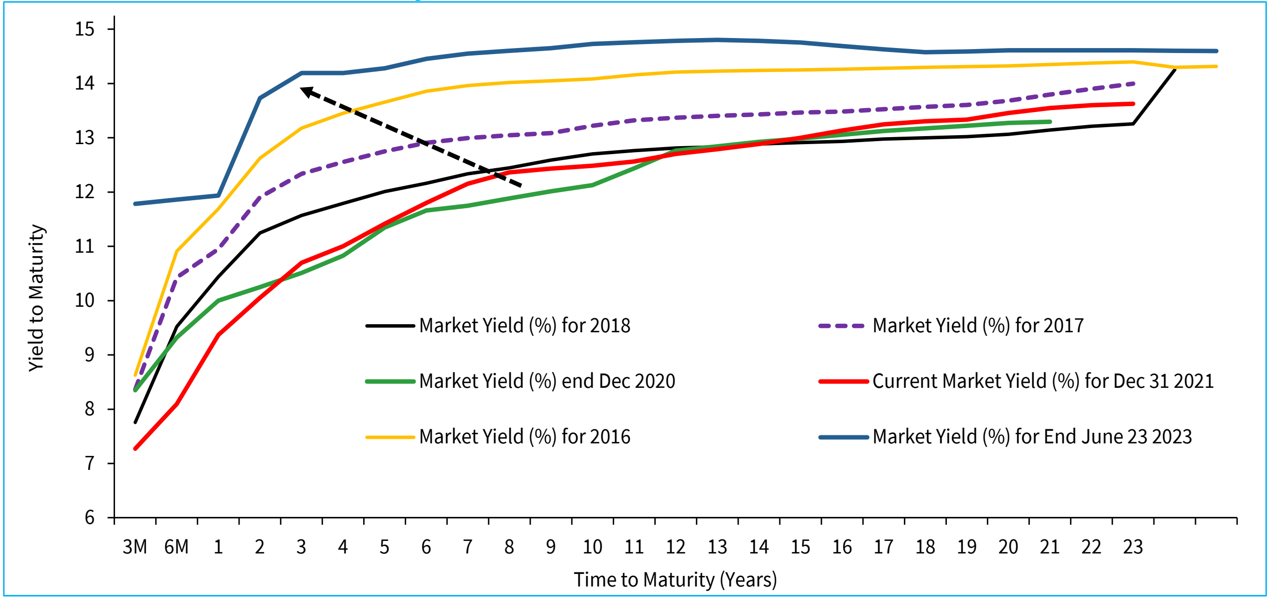
	Offered Amount (KSh Bn)	Bids Received (KSh Bn)	Amount Alloted (KSh Bn)	Subscription Rate (%)	Bid-to- Cover Ratio
Jun-18	40.00	10.13	5.17	25.33	1.96
Jul-18	40.00	13.86	10.51	34.65	1.32
Aug-18	40.00	29.83	19.36	74.56	1.54
Sep-18	40.00	32.47	26.55	81.17	1.22
Oct-18	40.00	27.05	29.12	67.61	0.93
Nov-18	50.00	49.12	36.31	98.24	1.35
Dec-18	40.00	35.48	32.78	88.71	1.08
Jan-19	40.00	168.58	61.93	421.44	2.72
Feb-19	50.00	78.26	53.40	156.52	1.47
Mar-19	50.00	29.38	16.30	58.75	1.80
Apr-19	50.00	85.62	60.35	171.23	1.42
May-19	50.00	70.84	58.53	141.68	1.21
Jun-19	40.00	85.62	38.95	214.04	2.20
Jul-19	40.00	86.67	50.58	216.69	1.71
Aug-19	50.00	67.44	59.69	134.88	1.13
Sep-19	50.00	41.98	41.98	83.97	1.00
Oct-19	60.00	86.95	68.47	144.91	1.27
Nov-19	50.00	46.48	36.46	92.97	1.27
Dec-19	25.00	38.22	28.49	152.88	1.34
Jan-20	50.00	69.94	63.75	139.88	1.10
Feb-20	50.00	42.49	27.87	84.99	1.52
Mar-20	50.00	35.16	22.91	70.31	1.53
Apr-20	60.00	103.80	74.40	173.00	1.40
May-20	50.00	34.53	20.78	69.06	1.66
Jun-20	40.00	105.14	49.32	262.84	2.13
Jul-20	60.00	181.77	80.85	302.95	2.25
Aug-20	110.00	141.73	119.65	128.85	1.18
Sep-20	50.00	81.68	64.18	163.35	1.27
Oct-20	50.00	69.14	60.03	138.27	1.15
Nov-20	60.00	63.94	61.62	106.57	1.04
Dec-20	40.00	24.34	18.26	60.85	1.33
Jan-21	75.00	186.49	136.92	248.65	1.36
Feb-21	50.00	41.86	32.12	83.72	1.30
Mar-21	50.00	48.71	48.31	97.41	1.01
Apr-21	60.00	88.58	81.94	147.63	1.08
May-21	30.00	42.59	20.29	141.95	2.10
Jun-21	64.93	19.70	11.26	30.34	1.75
Jul-21	110.00	155.41	117.36	141.28	1.32
Aug-21	60.00	104.64	80.29	174.40	1.30
Sep-21	75.00	151.26	106.75	201.67	1.42
Oct-21	60.00	55.48	52.05	92.46	1.07
Nov-21	50.00	84.17	69.51	168.34	1.21
Dec-21	40.00	41.18	37.83	102.94	1.09
Jan-22	60.00	66.81	62.33	111.34	1.07
Feb-22	75.00	132.26	98.64	176.34	1.34
Mar-22	50.00	64.81	42.31	129.62	1.53
Apr-22	70.00	66.59	60.77	95.13	1.10

Annex II: Government Bonds Primary Market Performance

	Offered Amount (KSh Bn)	Bids Received (KSh Bn)	Amount Alloted (KSh Bn)	Subscription Rate (%)	Bid-to- Cover Ratio
May-22	60.00	60.09	48.71	100.15	1.23
Jun-22	75.00	76.37	73.77	101.83	1.04
Jul-22	60.00	16.99	15.72	28.31	1.08
Aug-22	50.00	49.13	38.53	98.25	1.28
Sep-22	50.00	46.13	39.03	92.27	1.18
Oct-22	60.00	33.69	28.48	56.16	1.18
Nov-22	60.00	110.98	94.70	184.97	1.17
Dec-22	147.80	94.28	84.26	63.79	1.12
Jan-23	60.00	59.30	49.10	98.83	1.21
Feb-23	50.00	31.75	28.95	63.49	1.10
Mar-23	50.00	72.48	63.59	144.97	1.14
Apr-23	60.00	16.02	10.23	26.69	1.56
May-23	50.00	58.55	58.10	117.10	1.01
Jun-23	75.00	239.08	231.95	318.77	1.03

Source: CBK

Annex III: Government of Kenya Securities Yield Curve



Source: NSE and CBK

Annex IV: Mobile Money Services Statistics

Year	Number of Agents	Number of Customers (Million)	Number of Transactions (Million)*	Transactions in Value (KSh. Billion)**	Value Per Transaction (KSh)
2007	1,582	1.3	6	16.3	2,983.0
2008	6,104	3.1	63	166.6	2,655.0
2009	23,012	8.9	194	473.4	2,447.0
2010	39,449	16.4	311	732.2	2,354.0
2011	50,471	19.2	433	1169.2	2,700.0
2012	76,912	21.1	575	1537.5	2,672.0
2013	113,130	25.3	733	1901.6	2,594.0
2014	123,703	25.2	911	2371.8	2,604.0
2015	143,946	31.6	1114	2816.1	2,528.0
2016	165,908	34.9	1331	3355.1	2,199.0
2017	182,472	37.4	1543	3638.5	2,357.0
2018	223,931	47.7	1740	3984.4	2,290.0
2019	224,108	58.0	1839	4346.0	2,363.0
2020	282,929	65.7	1863	5213.5	2,798.0
2021	298,272	68.0	2166	6868.8	3,171.9
2022	317,983	73.2	2280	7908.8	3,420.4

Source: CBK and CA

** Number of mobile money Cash in cashout transactions*

*** Value of mobile money cashin cashout transactions*

www.cma.or.ke

Embankment Plaza, Longonot Road, off Kilimanjaro Avenue, Upper hill
P.O Box 74800 - 00200
NAIROBI, KENYA

Tel: +254 20 2264000/ 2264900 / 2221869
Cell: +254 722 207767

E-mail: corporate@cma.or.ke

www.centralbank.go.ke

Haile Selassie Avenue
P.O Box 60000 – 00200
NAIROBI, KENYA

Tel: +254 20 286 1000,
+254 20 286 3000, +254 709 081 000, +254 709 083 000

E-mail: researchstat@centralbank.go.ke

www.ira.go.ke

Insurance Regulatory Authority
Zep-Re Place, Longonot Road
P.O. Box 43505-0100,
NAIROBI, KENYA

Tel: 020-4996000/
Toll Free No: 0800724499

E-mail: commins@ira.go.ke

www.rba.go.ke

Retirement Benefits Authority
Rahimtulla Tower, Upper Hill Road
P.O. Box 57733 - 00200
NAIROBI, KENYA

Tel: +254 (20) 2809000
Toll Free No: 0800720300

E-mail: info@rba.go.ke

www.sasra.go.ke

Sacco Societies Regulatory Authority
UAP Old Mutual Tower,
Upper Hill Road, Upper Hill.
P.O. Box 25089-00100,
NAIROBI, KENYA

Tel: +254 (20) 2935101

E-mail: info@sasra.go.ke