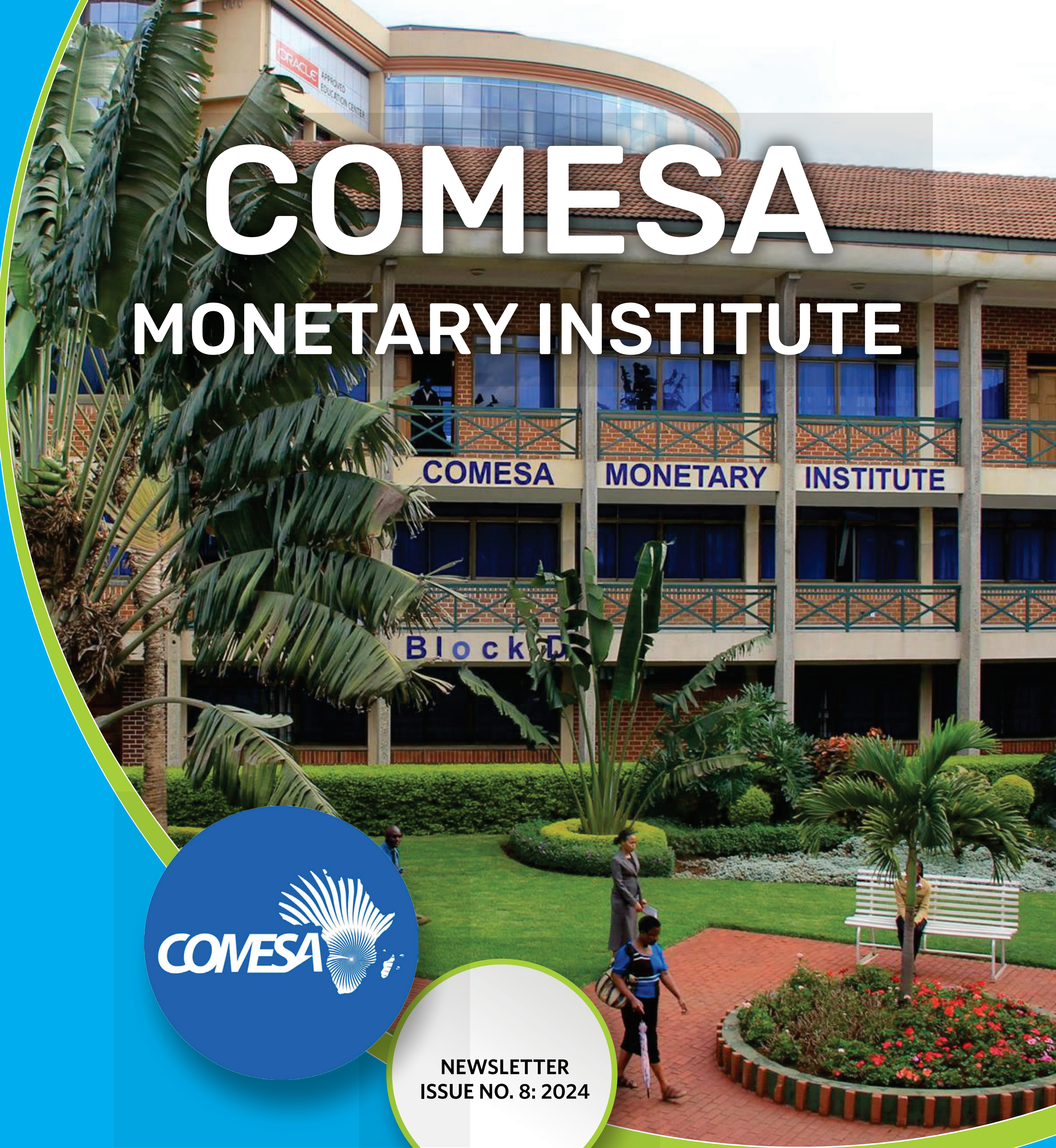
COMESA
MONETARY INSTITUTE



NEWSLETTER
ISSUE NO. 8: 2024

Facilitating the Region's Sustained Development Through Monetary and Financial Integration

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COMESA MONETARY INTEGRATION PROGRAMME AND THE ROLE OF COMESA MONETARY INSTITUTE (CMI)

The mandate to set up a monetary union is derived from Article 4(4) of the COMESA Treaty signed in Kampala, Uganda in 1993, which states that "the COMESA Member States shall in the field of monetary affairs and finance, cooperate in monetary and financial matters and gradually establish convertibility of their currencies and a payments union as a basis for the eventual establishment of a monetary union".

This mandate was further reinforced in Articles 76-78 of the Treaty, which respectively deal with COMESA Monetary and Fiscal Policy Harmonization, establishment of currency convertibility and formation of an exchange rate union. Based on the above mandate, the COMESA Committee of Governors of Central Banks set up a COMESA Monetary Institute (CMI). The CMI's objective is to undertake all the technical, policy, statistical, institutional and legal preparatory work that will lead to creation of the common central bank and the introduction of a common currency in COMESA region, with the ultimate objective of achieving monetary union. The Institute became operational in March 2011 and is based in Nairobi, at the Kenya School of Monetary Studies (KSMS), an institution of the Central Bank of Kenya (CBK).

VISION

To make COMESA region a zone of macroeconomic and financial stability with the ultimate goal of achieving monetary union. The Monetary Union will make the region more globally competitive and attractive to cross border and foreign investment.

MISSION

To provide excellent technical services to member countries in order to facilitate the region's sustained development through monetary and financial integration.

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Director's Note

Dear readers, 2024 has been yet another eventful year in our pursuit of Monetary and Financial Integration agenda. As you may be aware, the agenda of pursuing deeper monetary and financial integration requires establishing macroeconomic stability, financial system soundness, introduction of compliance with various international standards and practices in the financial sector to ensure regional harmonization and to achieve Regional Monetary and Financial Integration (RFI). The role of central banks in this process cannot be overemphasized, especially in enhancing monetary cooperation which involves macroeconomic convergence and financial system development and stability.

In line with this agenda, CMI, in 2024, continued its activities, accomplishing among others the assessments of Macroeconomic Convergence and Financial Systems Development and Stability in member countries, and continued effort in capacity building programs and research on macroeconomic management and policy. These capacity building and research activities are contributing to member central banks skills toolkit capabilities for better macroeconomic management and assessment of financial stability and to enhancing the successful achievements of agreed targets of the COMESA Macroeconomic Convergence Criteria. They have also contributed to knowledge sharing and networking among COMESA member central banks.

This year, I am also glad to note that a number of countries made great strides towards the achievement of Macroeconomic Convergence and implementation of the COMESA Countries Financial Stability framework. Finally, Governors approved the publication of the 3rd edition of the Financial Stability Report (FSR) for 2023, which continues to be an important flagship publication of the Institute.

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Dr. Lucas Njoroge,
Director CMI

The main activities in line with the workplan of the CMI in 2024 were the following:

A. Capacity Building Activities

The CMI undertook the following trainings:

i. Macroeconomic Linkages and Economic Policy Analysis;
ii. Climate Change Statistics and application to Monetary Policy;
iii. Implementation of Basel III Standards 2017 Post Crisis Reforms & Application of IFRS 9;
iv. Econometric Modelling of the impact of Climate change on Monetary policy;
v. Monetary Policy formulation and implementation in an era of IT regime;
vi. Nowcasting and Near-Term Forecasting of GDP;
vii. The application of Data Science for Financial Stability Analysis;
viii. Developing of Macroprudential Policy frameworks;
ix. Financial Crisis Management and Resolution Framework for Banks and NBFIs;
x. Impact of Cyber, Climate, FinTech risks on Financial Stability; and
xi. Applications of Big Data Analysis and Artificial Intelligence to Central Banking, offered in collaboration with Central Bank of Egypt.

B. Research Activities

I. **The CMI undertook and validated country specific research studies, using staff from member Central Banks, on the following:**

i. Macroeconomic Impact of Climate Change and the role of Central Banks; and
ii. Impact of the Sovereign-Bank nexus on Financial Stability.

II. **Published the following:**

1. CMI Working Papers after a full cycle of the peer-review process:

i. Real Effective Exchange Rate Misalignment and Monetary Policy in Developing Countries: The Case of Uganda;
ii. Equilibrium Real Effective Exchange Rate and Monetary Policy Implementation in Rwanda;
iii. Equilibrium Real Effective Exchange Rate and Monetary Policy Implementation in Zambia;
iv. Impact of Financial Systems Development on Macroeconomic Stability in Zimbabwe;
v. Impact of Financial Systems Development on Macroeconomic Stability in Sudan;
vi. Impact of Financial Systems Development on Macroeconomic Stability in Rwanda;
vii. Impact of Financial Sector Development on Macroeconomic Stability in Mauritius;
viii. Impact of Financial Systems Development on Macroeconomic Stability: A Case of Eswatini;
ix. Impact of Financial System Development on Macroeconomic Stability in Kenya;
x. Implications of Fintech on Financial Stability: Evidence from Zambia; and
xi. Implication of FinTech on Financial Stability in Rwanda

2. Special Reports which are available in COMESA and CMI Websites

i. Role of Artificial Intelligence (AI) in Central Banks: Implications for COMESA Member Central Banks;
ii. The Role of the Interbank Market in Inflation Targeting Regimes: Lessons for COMESA

Central Banks;

iii. Exchange Rate Regimes in the COMESA region: Implications for Macroeconomic and External Stability; and

iv. The Role of Central Banks in the era of Climate Change: Lessons for COMESA member Central Banks

3. Other reports which are available on CMI Website

i. Macroeconomic Developments in the COMESA Region in 2023, which is published in COMESA Annual Reports; and

ii. COMESA wide Financial Stability Report for 2023.

III. In collaboration with experts from the member Central Banks, commenced the peer-review process of the papers on:

i. Exchange Rate Pass-Through to Domestic Prices in member countries; and

ii. Impact of Climate Change on Financial Stability in member countries.

C. Sub-committees and Committees Meetings

During the year under review, CMI successfully organized the following face-to-face meetings:

i. Extra Ordinary Meeting of the Bureau of the COMESA Committee of Governors of Central Banks, held virtually on 26 August, 2024;

ii. Extra Ordinary Meeting of the COMESA Committee of Governors of Central Banks on the sidelines of the 46th Annual Meeting of Governors of the Association of African Central Banks (AACB) on 4 September, 2024;

iii. The 21st Meeting of the Monetary and Exchange Rates Policies Sub-Committee from 21-22 September, 2024, in Nairobi, Kenya;

iv. The 18th Meeting of the COMESA Financial System Development and Stability Sub-Committee, from 2-3 October, 2024, in Nairobi, Kenya;

v. Meeting of the task force to finalize the 2023 COMESA-wide Financial Stability Report (FSR), from 4-5 October, 2024;

vi. vi. The Meeting of Experts of the 44th Meeting of the Bureau of the COMESA Committee of Governors of Central Banks, from 2-3 November, 2024, in Ezulwini, Eswatini;

vii. The 28th Meeting of the COMESA Committee on Finance and Monetary Affairs, from 4-5 November 2024, in Ezulwini, Eswatini;

viii. The 44th Meeting of the Bureau of the COMESA Committee of Governors of Central Banks, on 6 November 2024, in Ezulwini, Eswatini; and

ix. ix. The 28th Meeting of the COMESA Committee of Governors of Central Banks, from 7-8 November 2024, in Ezulwini, Eswatini.

I am grateful to COMESA Member Central Banks for their relentless support and contributions to the CMI activities which are enhancing our efforts in making the region a zone of Macroeconomic and Financial Stability. I am also especially grateful to the CMI team for their dedicated service delivery during the year.

Lucas Njoroge (PhD)
Director

Training on Macroeconomic Linkages and Economic Policy Analysis

Based on the 2024 Work plan for CMI, which was approved by the 27th meeting of the COMESA Committee of Governors of Central Banks in November 2023, CMI held a training on the *"Macroeconomic Linkages and Economic Policy Analysis"*, from 5th -9th February 2024, in Nairobi Kenya.

The training was aimed at providing the participants with a better understanding of the main macroeconomic accounts; and how the accounts link with each other, including policy implications of the changes in parameters from each account. The training provided exposition to the four main macroeconomic accounts of the economy—real, fiscal, external, and monetary sectors, their linkages, scenarios analysis, policy shocks to the scenarios, analysis of alternative policy mix and projections/ forecasts thereof for the economy. The training therefore enabled participants to evaluate economic consequences of policy actions, make a comparison between the current economic situation with various policy alternatives and forecast the main macroeconomic variables in order to make evidence-based decision.

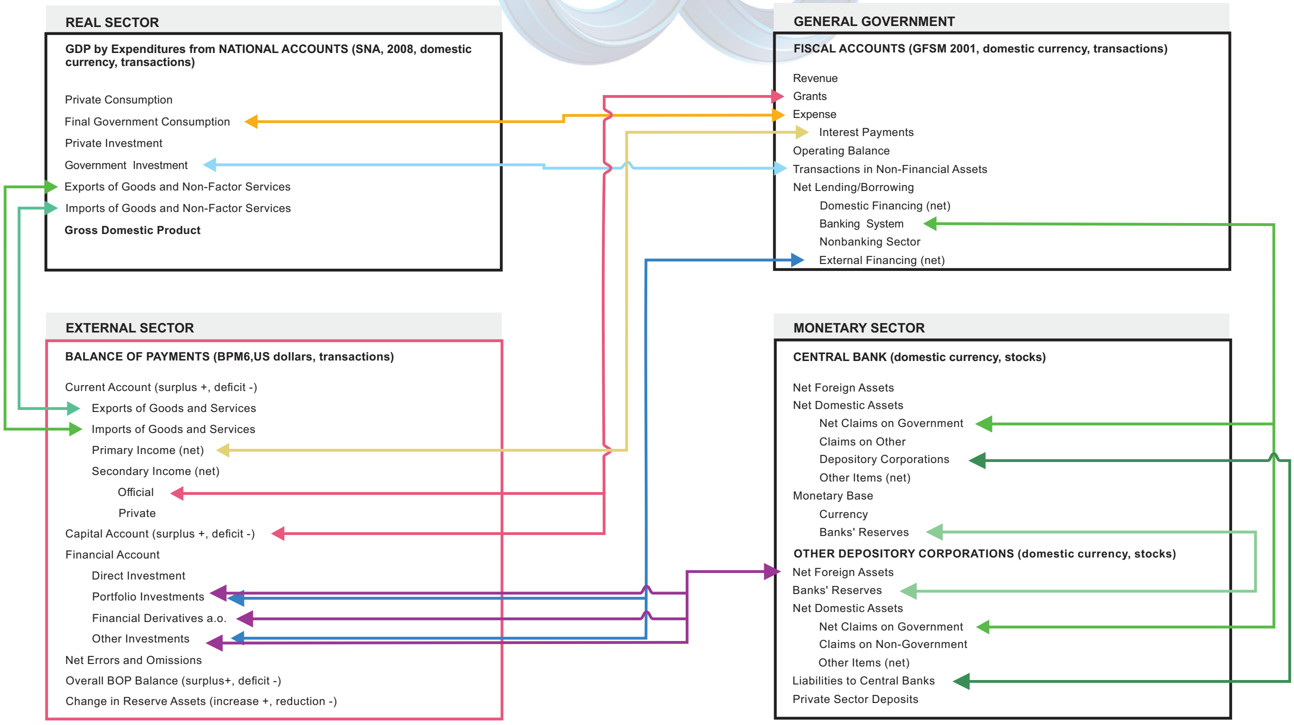
At the end of the five-days, delegates from eight Central Banks of COMESA Member States namely: Burundi, Egypt, Eswatini, Ethiopia, Kenya, Somalia, Zambia and Zimbabwe who attended the training attested that they had been:

i. Equipped them with skills to understand macroeconomic accounting principles and how to link the various accounts;

ii. Enabled their capabilities with interpretations of the behavioral relationships between the macroeconomic accounts; and

iii. Provided them with a forum to share knowledge and experience on macroeconomic policy analysis.

Summary of Accounting Linkages



Training on Climate Change Statistics and its Application to Monetary Policy

The COMESA Monetary Institute (CMI), in line with her 2024 Work plan as approved by the 27th Meeting of the COMESA Committee of Governors of Central Banks in November 2023, conducted a virtual training on "*Climate Change Statistics and application to Monetary Policy*", from 19th to 23rd February 2024.

The underlying motivation for the training was the need for central banks to have an in depth understanding of the dynamics of climate change, the existing statistics on climate change indicators and the need to further reinforce their analytical toolkits and macroeconomic models to incorporate climate change risks. The training was attended by over 50 delegates from nine central banks of COMESA Member States namely: Burundi, Egypt, Eswatini, Ethiopia, Madagascar, Malawi, Mauritius, Rwanda and Somalia.

The objective of the training was to understand climate change statistics and its approach to monetary policy. Climate change caused by global warming poses a major challenge to sustainability of the global development agenda. The 2015 Paris Agreement is aimed to strengthen the global response to the threat of climate change by keeping global temperature rise well below 2°C and limit global greenhouse gas emissions to net zero by 2050. Moreover, rising temperatures and extreme weather events such as floods, drought, and landslides have ravaged agriculture productivity—the mainstay of many households in the COMESA region, and has disrupted energy production, both of which have implications for output and inflation. Similarly, climate-related financial risks arising from abrupt and disorderly transition to net zero emissions may cause asset stranding, affecting firm and bank balance sheets. Thus, while governments remain the primary actors, central banks and financial intermediaries have an important role to play in managing the impact of climate change. As such, central banks, as the financial regulators, are taking keen interest in the implications that climate change have for monetary policy and financial stability.

Green House Gases

At the end of the training, participants noted that they had gained a deeper understanding of climate change statistics and its application to monetary policy. They attested, in particular, that the training had:

i. Equipped them with the understanding of basic concepts and frameworks on climate change;

ii. Identified existing statistics on climate change-related indicators using national and international data sources;

iii. Identified the basic data needs for macroeconomics research on climate change and the application to monetary policy in the COMESA countries; and,

iv. Provided them with an excellent opportunity to share knowledge and country experiences on Nationally Determined Contributions (NDC's), including carbon reduction commitments, targeted priority sectors, adaptation measures and financing commitments to transitioning to green economy.

Training on Implementation of Basel III Standards 2017 Post Crisis Reforms & Application of IFRS 9

The COMESA Monetary Institute (CMI), in line with her 2024 Work plan as approved by the 27th Meeting of the COMESA Committee of Governors of Central Banks in November 2023, conducted a training on *"Implementation of Basel III Standards 2017 Post Crisis Reforms & Application of IFRS 9"*, from 4th to 8th March 2024 in Nairobi, Kenya.

While addressing the delegates at the commencement of the training, the CMI's Director, Dr. Lucas Njoroge, underscored that there has been a slow adoption of Basel III standards in the COMESA region. He noted that currently, most of the jurisdictions in the region are on Basel II with partial application of Basel III Standards. Thus, he noted that the training would strengthen the knowledge on Basel III Standards including 2017 Basel III Post-Crisis reforms and how those standards can be used to enhance supervisory policies and ensure financial system stability and hopefully encourage adaptation of the standards in the COMESA region.

At the end of the workshop, 19 analysts from eight Central Banks of COMESA Member States namely: Burundi, DR Congo, Egypt, Kenya, Madagascar, Uganda, Zambia and Zimbabwe attested to have:

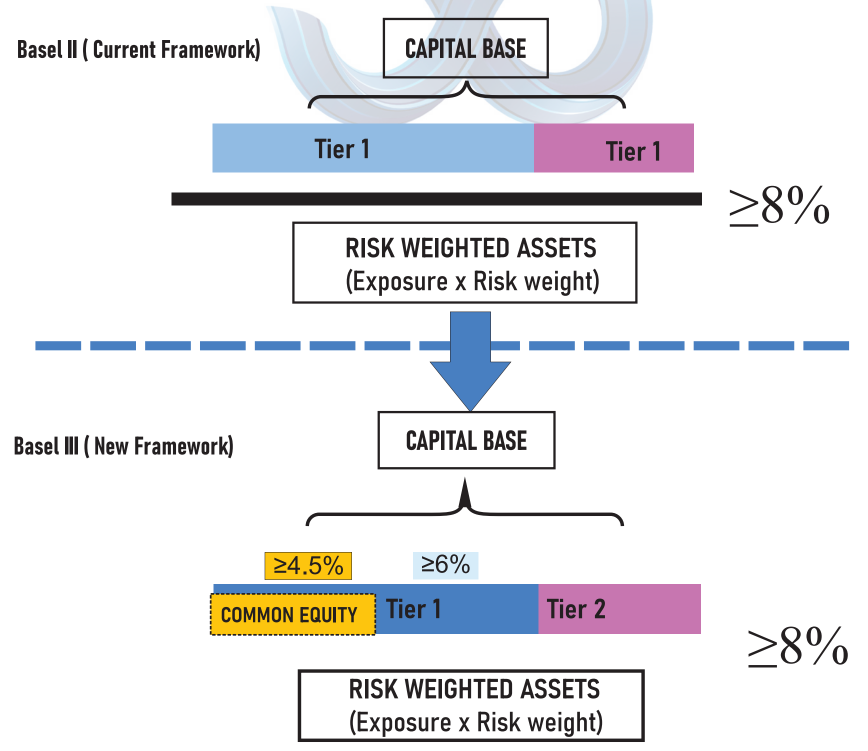
i. Gained adequate knowledge on Basel III standards;

ii. Learned how to incorporate Basel III Post Crisis reforms in the calculation of the various Basel III's Capital and Liquidity ratios;

iii. Familiarized themselves with the road map on how to implement Basel III in their jurisdictions;

iv. Learned how those standards can be used to enhance supervisory policies and ensure financial stability at individual institution and entire financial system; and

v. An excellent opportunity to share knowledge and country experiences on the implementation of Basel standards.



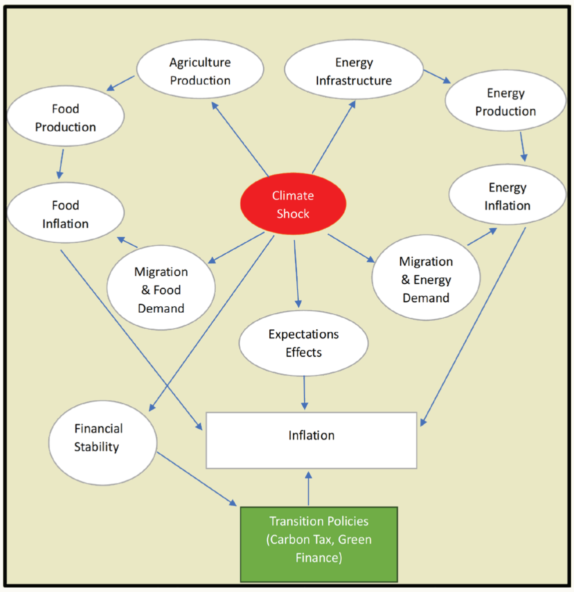
Capital Requirement Under Basel III

Training on Econometric Modelling of the impact of Climate change on Monetary policy

The COMESA Monetary Institute (CMI), in line with her 2024 Work plan as approved by the 27th Meeting of the COMESA Committee of Governors of Central Banks in November 2023, conducted a virtual training on *"Econometric Modelling of the impact of Climate change on Monetary policy"*, from 18th to 22nd March 2024.

The training was attended by 40 participants from 13 Central Banks of COMESA Member States namely: Burundi, Djibouti, DR Congo, Egypt, Ethiopia, Eswatini, Madagascar, Malawi, Mauritius, Sudan, Tunisia, Zambia and Zimbabwe.

While addressing the delegates at the commencement of the workshop, the CMI's Director, Dr. Lucas Njoroge, observed that consensus has built among policy makers and scholars to the extent that climate change has major implications on monetary policy. He noted that the impact of climate change in form of physical and transition risks on financial and price stability are the cause of concern for most central banks. He echoed that the mitigation measures such as carbon pricing against the physical and transition risks have a direct impact on inflation dynamics and output, and that the effects of climate change might impair the transmission of central banks' monetary policy through changing the balance sheets of banks and the flow of credit to the real economy. Given this, he noted that the main objective of the training was to examine approaches of incorporating climate change effects in the econometric modelling of monetary policy transmission especially as applicable to COMESA member Central Banks.



Effects of Climate Change on Inflation

At the end of the training, participants noted that they had:

i. Gained adequate knowledge in the compilation and measurement of key indicators of climate change risks and transition to green economies;

ii. Learned how to assess and illustrate how climate change risks and policies interact with countries' macroeconomic frameworks;

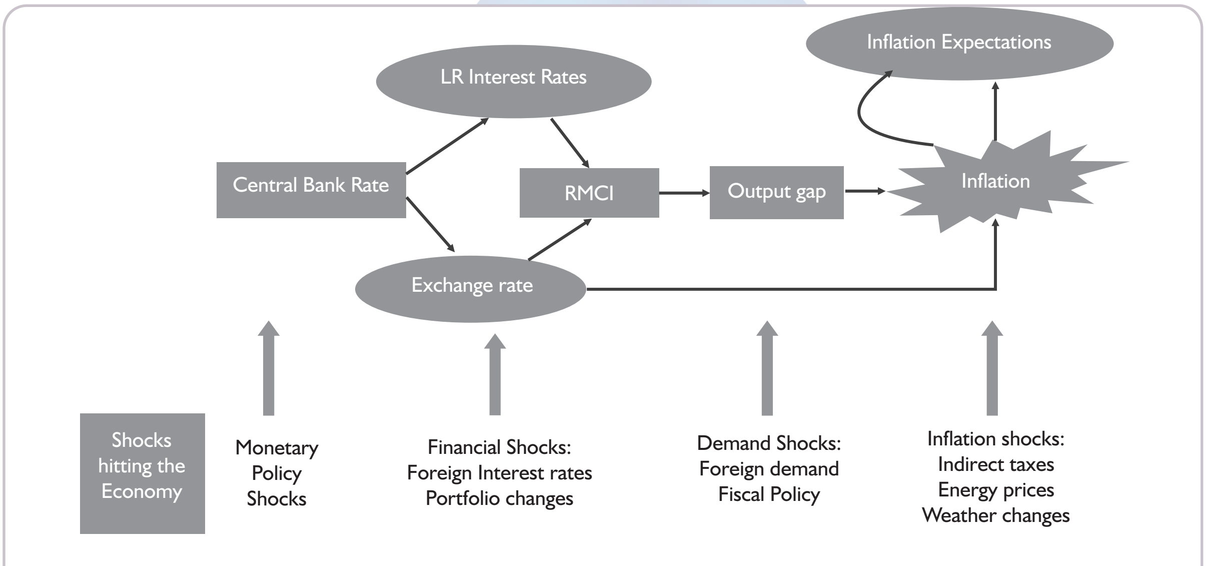
iii. Familiarized themselves with the modelling aspects of incorporating climate change risks and mitigation indicators in monetary policy frameworks; and

iv. An excellent opportunity to share knowledge and country experiences on the changing country dynamics due to climate change.

Training on Monetary Policy formulation and implementation in an era of Inflation Targeting (IT) monetary policy regime

The COMESA Monetary Institute (CMI) conducted a training on *"Monetary Policy formulation and implementation in an era of IT regime"*, from 22nd to 27th April 2024, in Mombasa, Kenya. The workshop was based on the 2024 Work plan for CMI, which was approved by the 27th Meeting of the COMESA Committee of Governors of Central Banks in November 2023.

The motivation of the training was the increasingly important role inflation targeting (IT) is playing in anchoring inflation expectations in the region. IT has increasingly become a monetary policy framework of choice globally, including in emerging and developing countries—notwithstanding the relatively weak institutions and less developed financial markets. The adoption of IT can be the source of strengthening of financial institutions and the development of financial markets rather than a precondition. IT also solves the time inconsistency problem, reduces inflation variability, and can stabilize output. He noted that Inflation Targeting also anchors expectations, reducing the inflationary impact of macroeconomic shocks. As a result of this, coupled with the rapid financial innovations and integration of financial markets, many countries, including those in the COMESA region, have transitioned or are in the process to transition to the IT framework.



Monetary Policy Transmission: The Gap Model

At the end of the training, delegates from 11 COMESA member countries' Central Banks, namely Burundi, Djibouti, Egypt, Ethiopia, Eswatini, Kenya, Madagascar, Tunisia, Uganda, Zambia and Zimbabwe, who per took of the training noted that they had enhanced their knowledge on:

i. How Inflation targeting differs from other monetary policy frameworks, including monetary targeting frameworks;

ii. The transition and implementation issues on inflation targeting monetary policy framework;

iii. The Forecasting and Policy Analysis System (FPAS);

iv. Management of shocks and implementation challenges under the inflation targeting framework; and

v. Also shared knowledge and experiences on each country's journey in transitioning to and implementation of inflation targeting monetary policy framework.

Training on Nowcasting and Near-Term Forecasting of GDP

The COMESA Monetary Institute (CMI), in line with her 2024 Work plan as approved by the 27th Meeting of the COMESA Committee of Governors of Central Banks in November 2023, conducted a training on *"Nowcasting and Near-Term Forecasting of GDP"*, from 1st to 5th July 2024, in Nairobi, Kenya. Economists from Central Banks of COMESA Member States of Burundi, Ethiopia, Kenya, Libya, Madagascar, Malawi, Uganda, Zambia and Zimbabwe attended the training.

Most member states do not compile high-frequency measures of Gross Domestic Product (GDP) or if they do, the estimates come with a considerable lag, yet policy decisions need to be made often, especially when major shocks such as COVID-19 pandemic or climate-related shocks have occurred. Data publication delays may cause missing values at the end of the sample, which complicates forward-looking policymaking. In such context, making use of a range of leading and coincident variables to forecast in real-time the missing values of GDP has become a standard practice in the analysis of economic outlook, in what is referred to as nowcasting, which aims at bridging the gap between the time lag in data releases and policymaking.

Interpolation of int_residuals, comparison with original series

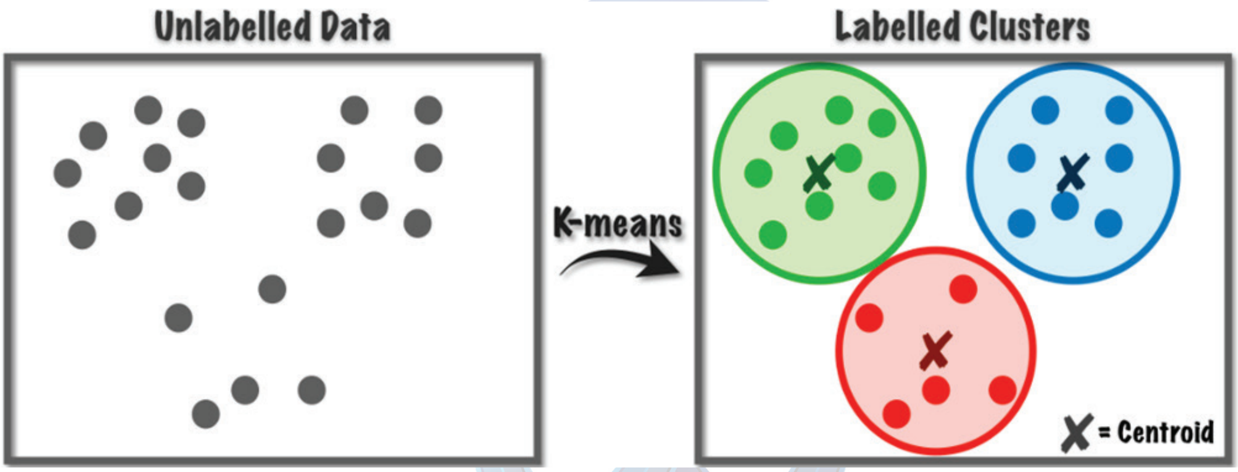
The objective of the training was therefore to engage central bank staff involved in policy analysis to appreciate nowcasting and acquaint them with the standard nowcasting methods of GDP.

At the end of the training, participants noted that they had been equipped with scientific tools to overcome numerous data challenges confronted by most COMESA member countries including but not limited to, missing data, lack of high frequency data, considerable data lags and publication delays. They appreciated the skills they had acquired including the various methods for now casting and near-term forecasting of GDP, which they were eager to start applying to improve their forecasting methods. Participants also shared knowledge and experience of various aspects of forecasting.

Training on the application of Data Science for Financial Stability Analysis

The COMESA Monetary Institute (CMI) organized a training on the *"applications of data science for analysis of Financial Stability"*, from 27th – 31st May 2024, in Nairobi Kenya. The training was based on the 2024 Work Plan for CMI approved by the 27th meeting of the COMESA Committee of Governors of Central Banks in November 2023

While addressing the delegates at the commencement of the workshop, the Director of CMI, Dr. Lucas Njoroge, observed that the use of Data science tools will benefit COMESA central banks in extracting value from various data sets to improve their data handling, modelling, forecasting and interpretation particularly in assessing vulnerabilities to financial stability and their evolution over time. The techniques can also support other tasks that are relevant from a financial stability perspective, including, for example, payment systems analysis, consumer risk analysis, and financial inclusion and anti-money laundering monitoring. He observed that the broad objective of the training is to introduce to the regional central banks' analysts the applications of data science for typical analytical challenges such as data handling, modelling, and interpretation.



Centroid-based Non-Hierarchical Clustering Approach

At the end of the training, participants noted that they had been:

i. Equipped with skills to leverage on data science techniques to enhance the effectiveness of financial stability analysis and complemented methodologies such as stress testing;

ii. Introduced to the use cases that are relevant to the region and on the interpretability of the results obtained in relation to informing macroprudential policy; and

iii. Provided with hands-on exercises in the R programming language applicable to data science analysis.

Participants also shared knowledge and experiences on each country's experiences on the milestones in the applications of data science in analyzing financial stability. The training was attended by delegates from 12 COMESA member countries' Central Banks, namely Burundi, Congo DR, Djibouti, Egypt, Eswatini, Kenya, Libya, Malawi, Rwanda, Uganda, Zambia and Zimbabwe. The Executive Secretary of the COMESA Clearing House (CCH) also attended the training.

Training on Developing of Macroprudential Policy frameworks

The COMESA Monetary Institute (CMI) organized a virtual training on *"Developing Macroprudential Policy Frameworks",* from 10th – 14th June 2024. The training was based on the 2024 Work Plan for CMI, approved by the 27th meeting of the COMESA Committee of Governors of Central Banks in November 2023.

Since the 2007-2009 global financial crisis, systemic risk analysis has gained prominence in many jurisdictions including in the COMESA region, especially by highlighting the limitations of micro-prudential regulation in ensuring the robustness of the entire financial system. The crisis led to a significant shift towards macroprudential policies, instruments designed for systemic risk mitigation. The underlying theory of financial stability suggests that significant disruptions in credit and other essential financial services can adversely impact stable economic growth, further emphasizing the importance of these policies. The training, therefore, was designed with emphasize on practical aspects, including governance of macroprudential agencies, data and infrastructure requirements for systemic risk monitoring, and experiences with MaP policies, highlighting the importance of coordinating micro- and MaP activities.

Illustrating transmission of systemic risk to the real economy

At the end of the training, participants noted that they had:

i. Enhanced their understanding of systemic risk and the policies designed to contain it;

ii. Been equipped with the knowledge and tools necessary to design and implement effective macroprudential policies in their respective countries; and

iii. Had an excellent opportunity to share knowledge and country experiences on the milestones in the development and application of macroprudential policy frameworks.

The training was attended by over 40 delegates from 10 COMESA member countries' Central Banks, namely Burundi, Congo DR, Egypt, Eswatini, Ethiopia, Kenya, Malawi, Rwanda, Zambia and Zimbabwe. The COMESA Clearing House (CCH) also attended the training.

Training on Financial Crisis Management and Resolution Framework for Banks and NBFIs

In line with the 2024 Work plan approved by the 27th Meeting of the COMESA Committee of Governors of Central Banks in November 2023, the COMESA Monetary Institute (CMI) organized a virtual training on *"Financial Crisis Management and Resolution Framework for Banks and NBFIs",* from 8th – 12th July 2024. The training was attended by over 40 delegates from seven COMESA member countries' Central Banks, namely Burundi, Egypt, Eswatini, Ethiopia, Malawi, Zambia and Zimbabwe.

Macroeconomic and financial stress associated with shocks such as the COVID-19 pandemic highlighted the complexities of managing a financial crisis, the necessity of adjusting universally applicable good practices to prevent financial crises, and the urgent need to improve crisis management tools to mitigate the negative impact of financial crises particularly in low-income countries in general, including those in the COMESA region. Financial crises lead to job losses, reduced access to credit, large fiscal deficits, significantly enhanced sovereign debt levels, and decreased economic growth, among others. Consequently, the training was designed to provide participants with the knowledge and skills to identify, prevent, and manage financial crises in countries characterized by underdeveloped financial markets and weaknesses in legal and institutional arrangements required to facilitate bank resolution. Since most countries in the COMESA region share similar characteristics, the training equipped the participants with the necessary tools and strategies to effectively manage banking or financial crises in their respective economies.

At the end of the training, participants attested to the facts that:

i. The training equipped them with the necessary tools and strategies to effectively manage banking or financial crises in their jurisdictions;

ii. The knowledge acquired was not only crucial but also directly applicable to their roles; and

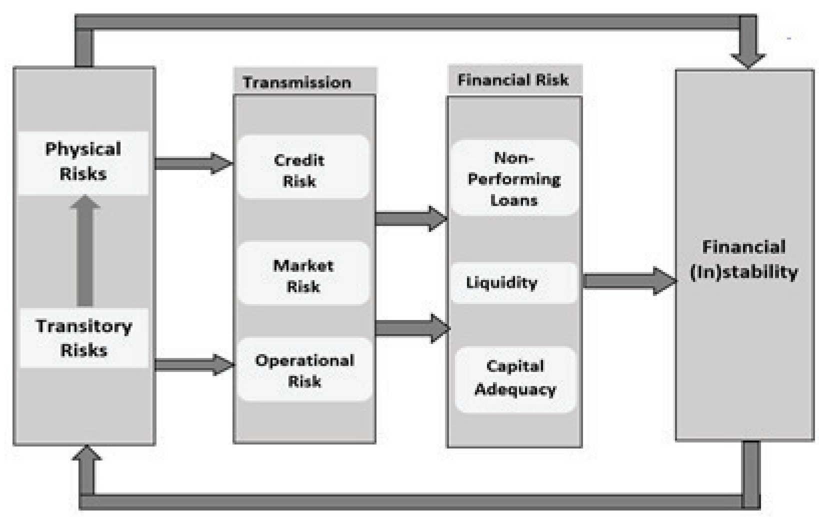
iii. That this would enable them to make informed decisions and take proactive measures.

iv. They had an excellent opportunity to share knowledge and country experiences on crisis management and resolution framework

Training on Impact of Cyber, Climate, FinTech risks on Financial Stability

As part of its Work plan for 2024 approved by the 27th Meeting of the COMESA Committee of Governors of Central Banks in November 2024, the COMESA Monetary Institute (CMI) organized a training on the *"Impact of Fintech, Cyber and Climate Change Risks on Financial Stability"*, from 29th July –02nd August 2024. The training was attended by over 80 delegates from 10 COMESA member countries' Central Banks, namely Burundi, Comoros, Egypt, Eswatini, Ethiopia, Kenya, Malawi, Somalia, Zambia and Zimbabwe. COMESA Clearing House (CCH) also attended the training.

In his address to the delegates, the CMI's Director, Dr. Lucas Njoroge, observed that financial sector has leveraged on technological innovations to provide financial services efficiently and to the hitherto financially excluded. However, he noted that the accompanying gains in financial inclusion have predisposed financial services providers to fraud and cyber-attacks, and increasingly exposed consumers of financial services to fraud and predatory services, undermining their income growth and ability to meet their financial obligations. Moreover, he noted that the entry of non-financial firms in the financial space is increasing competition in the financial sector, reducing market share of financial institutions and is introducing viability risks. He noted further that changes in climate is making the financial sector more stressful, increasing physical and transition costs, while at the same time, financial institution are increasingly being held accountable for the consequences of their financial intermediation activities on the environment. As a result, he observed that regulators have issued guidelines to supervise financial institutions to incorporate climate change risks in their risks management frameworks. Thus, he emphasized that the vulnerability of the financial sector to cyber, fintech and climate change requires formulation of financial sector policies to mitigate the risks and enhance the resilience of financial institutions to shocks, noting that this is the motivation behind the training.



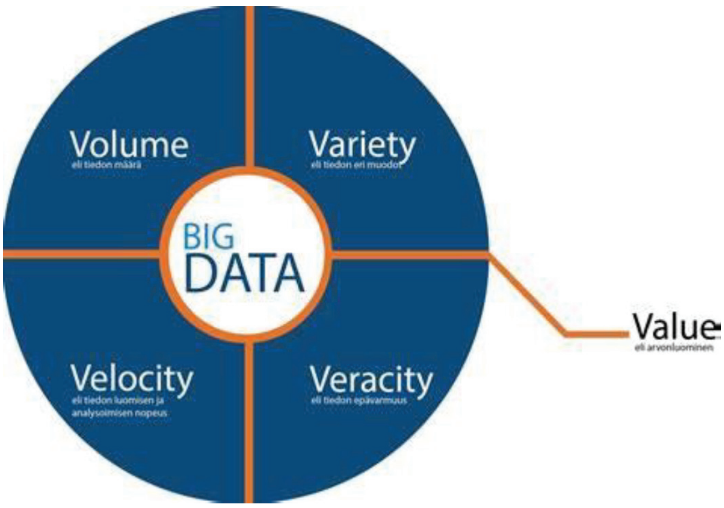
Conceptual Framework for climate change risks

The training equipped participants with the necessary tools and skills to assess the impact that Fintech, Cyber and Climate Change Risks have on financial systems stability. It also enhanced their capacities to undertake stress tests on financial systems stability due to these risks to inform mitigation measures that could dampen the effect these risks would pause to the financial system.

Training on the Applications of Big Data Analysis and Artificial Intelligence to Central Banking

As part of the CMI Work plan for 2024 approved by the 27th Meeting of the COMESA Committee of Governors of Central Banks in November 2023, the CMI, in collaboration with the Central Bank of Egypt (CBE), conducted a training on the *"Applications of Big Data Analytics and Artificial Intelligence (AI) to central banking"*, from 18th to 22nd August 2024, in Cairo Egypt.

While addressing the delegates at the commencement of the training, Dr. Naglaa Nozahie, Governor's Advisor for Africa Affairs, Central Bank of Egypt stated that the training, in collaboration with CMI, is in recognition of the era of new private sector financial products and services (including digital wallets, mobile payment apps, and new digital assets such as cryptocurrencies and stable coins) that the interaction of technological advances, demographic shifts and changing consumer behaviour is fast ushering in. She observed that these technological advances are largely being driven by Big data analytics and artificial intelligence. She further noted the training takes a step-by-step approach starting by the need, evolution and the surrounding ecosystem, aimed at giving the participants a deeper understanding of the application of Big data analytics and AI to central banking. She noted that the massive data generated and AI's ability to expertly work with such big data analytics make the two, AI and big data now seemingly inseparable. She further noted that the broad objective of the training was to lay out an overview on Big data technology adoption and AI, and relevant Use cases in the Financial and Banking Sector, especially in Central Banks.

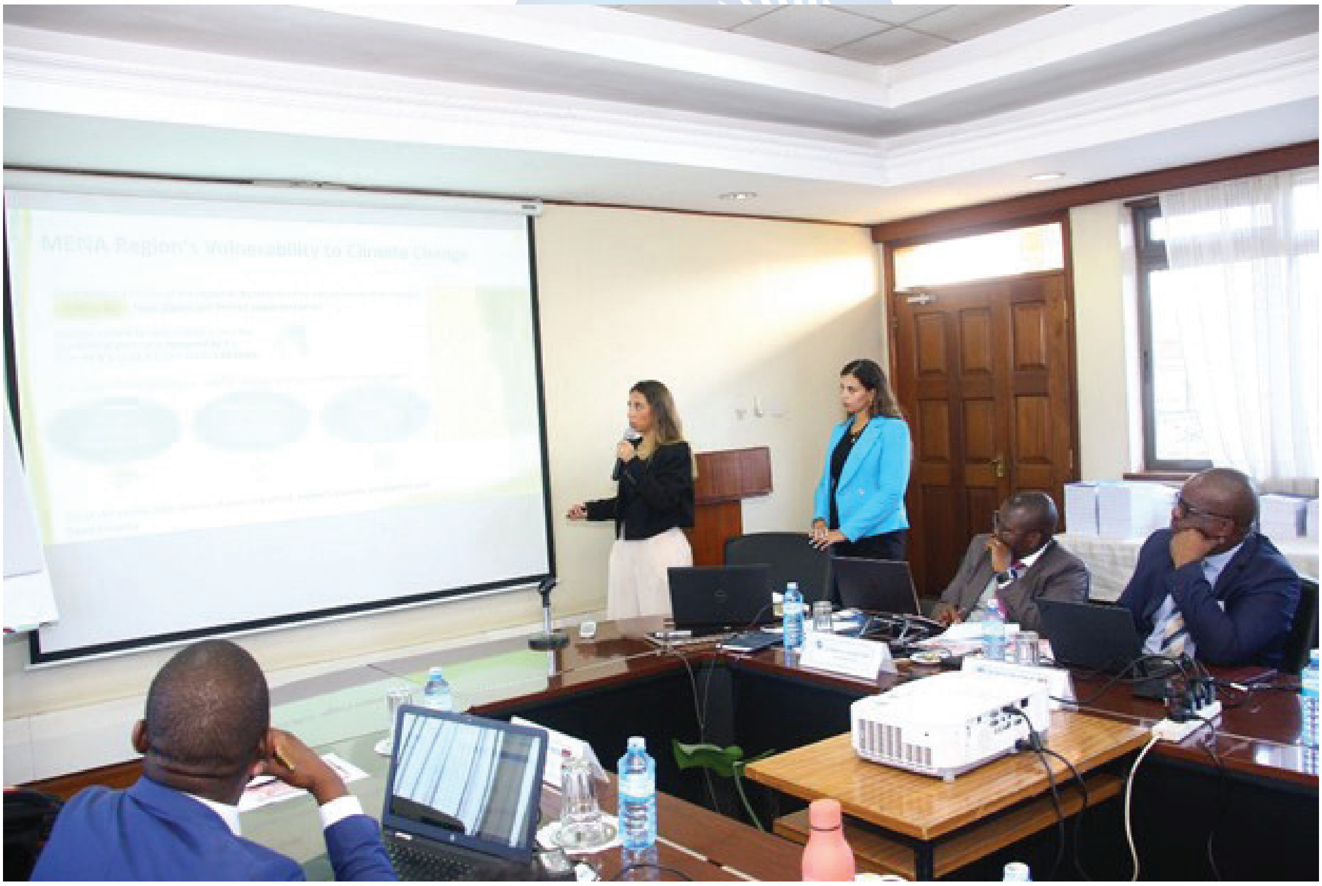


At the end of the workshop, the over 50 delegates who attended the training, from 11 COMESA member Central Banks of Burundi, Congo DR, Djibouti, Egypt, Kenya, Libya, Malawi, Rwanda, Tunisia, Zambia and Zimbabwe were equipped with knowledge on Big data, its roots, characteristics, value and how to obtain it and implementation challenges they anticipate to encounter. The training examined an overview about AI and Machine Learning (ML) and how this can be of benefit to financial and banking sector, especially central banks. The participants also shared knowledge and experience on the subjected and committed to devote effort that shall see central banks in their respective jurisdictions adopt the applications of Big data analytics, AI and ML in their day-to-day operations.

The 21st Meeting of the Monetary and Exchange Rates Policies (MERP) Sub-Committee

The COMESA Monetary Institute (CMI) held the 21st meeting of the COMESA Monetary and Exchange Rate Policies (MERP) Sub-Committee in Nairobi, Kenya from 21st to 22nd September, 2024 to review activities that were undertaken by the CMI under the MERP sub-Committee in 2024 and to prepare a work plan for 2025. The MERP meeting was preceded by a validation workshop for the country studies conducted by staff from COMESA Member Central Bank, in 2024 on the *"Macroeconomic Impact of Climate Change and the role of Central Banks",* held at the same venue from 19th to 20th September 2024.

The workshop and meeting were attended by delegates from twelve (12) COMESA member Central Banks, namely, the Central Bank of Burundi, DRC, Djibouti, Egypt, Eswatini, Malawi, Mauritius, Rwanda, Sudan, Uganda, Zambia and Zimbabwe. Green House Emissions (GHE) have caused rising global temperatures and induced extreme weather events since the past half century—the severity of which is evident in the persistent occurrences of natural disasters, increasing temperatures and unpredictable weather patterns—has affected the macro-economy through reduced crop yield, consumption, investment, and output.



The 21st MERP Sub-Committee meeting in session

Global temperature has increased by more than 1.1 0C compared with the preindustrial average and is projected to increase by as much as 4 0C over the next century, which will escalate the frequency and severity of weather-related natural disasters. Given this, the global risk landscape is increasingly dominated with concerns over climate change given the long-term threat that it poses to the global economy, with the effect falling more disproportionately on developing countries where mitigation and coping strategies remain limited due to differential climate-risk profiles and outcomes arising from geographical heterogeneity, sectoral peculiarities, and different mitigants.

The banking sector is exposed to climate-related risks regardless of size, complexity or business model of the bank, either directly, through balance sheet of households and climate sensitive sectors or indirectly, through the effects of climate change on the wider economy and financial system. As a result, consensus has since built about the macroeconomic and financial impact of climate change shocks (Kahn, et al., 2019). In particular, climate related supply and demand shocks may pull inflation and output in opposite directions and generate a trade-off for central banks between stabilizing inflation and stabilizing output fluctuations. Additionally, the effects of climate change might impair the transmission of Central banks' monetary policy through changing the balance sheets of banks and the flow of credit to the real economy. Similarly, climate change can affect financial stability: physical and transitional and the mitigation and adaptation measures—including renewable energy solutions and pursuing of well-coordinated and ambitious climate policies.

Given the severity of climate-related risks and borrowing from the role of central banks during the 2007-08 Global financial crisis, there is growing social pressures on central banks to substitute for most of government interventions and engage in “green quantitative easing” to “solve” complex socioeconomic problems related to a low-carbon transition. Thus, all policymakers, including central banks must contribute towards mitigating global warming. Already, the Network for Greening the Financial System (NGFS), a global association of central banks and supervisory authorities advocating for a more sustainable financial system established with eight members in 2017, now has more than 95 members and 15 observers, including all major central banks. Central banks, including those in the COMESA region, are also incorporating climate-change-related risks into the supervisory and regulatory frameworks, macro prudential approaches and stress testing models, and in some jurisdictions, are working closely with the banking sector in the implementation of sustainability standards under the Sustainability Standards and Certification Initiative which is driven by the European Organization for Sustainable Development. Given this background, the studies were motivated by the need to understand the macroeconomic impact of climate change and whether there is a role for central banks.

Country studies on *Macroeconomic Impact of Climate Change and the role of Central Banks* broadly establish that climate change shocks stimulate inflationary pressures, hurts growth, and distorts banks' balance sheets through rises in non-performing loans (NPLs). These findings, intuitively, point to the following common policy considerations, including the need for central banks to: integrate climate shocks into their monetary policy frameworks; proactively introduce green financial policies and regulations (such as green lending, greening the central bank portfolio, interest subsidies for green loan-supported projects); intensify banking and prudential supervision and to consider support measures for financial actors facing challenges related to climate shocks; and the need for the government to integrate climate change and nationally determined contributions (NDCs) in public finance management, development planning and budgetary cycles, among others. The meeting commended member countries for continued resilience and progress in achieving the macroeconomic convergence criteria in 2023.

The 18th Meeting of the COMESA Financial System Development and Stability Sub-Committee

The 18th FSDS Sub-Committee meeting in session

The CMI held the 18th meeting of the COMESA Financial System Development and Stability (FSDS) Sub-Committee from 2nd to 3rd October 2024, to review the activities undertaken by CMI in 2024 which are related with FSDS Sub-Committee and to prepare a work plan for 2025. The meeting was preceded by a validation workshop for the country studies conducted by staff from COMESA Member Central Bank, in 2024 on the *"Impact of the Sovereign Bank Nexus on Financial System Stability"*, held at the same venue from 30th September to 1st October 2024.

The delegates from thirteen (13) COMESA member Central Banks, namely, the Central Bank of Burundi, DRC, Egypt, Eswatini, Kenya, Libya, Malawi, Mauritius, Sudan, Rwanda, Uganda, Zambia and Zimbabwe, who attended the meeting noted the presentation made by CMI and by the task force working on the 2023 COMESA region Financial Stability Report (FSR). The interconnectedness between the financial health of the Sovereign (Government) and the banking system—the Sovereign-Bank Nexus raises concerns that stress in the one sector may create and/or amplify stress in the other. With public debt at historically high levels and the sovereign credit outlook deteriorating in many emerging markets, a deeper nexus poses risks of an adverse feedback loop that could threaten macro and financial stability.

An increase in sovereign risk could adversely affect banks' balance sheets and lending appetite, especially in countries with less well capitalized banking systems and higher fiscal vulnerabilities through three main channels: 1) the sovereign-exposure channel (banks hold large amounts of sovereign debt); 2) the safety net channel (banks are protected by government guarantees), and 3) the macroeconomic channel (the health of banks and governments affect and is affected by economic activity). These could also work in reverse, i.e., stress in the banking sector could lead to sovereign stress – for instance, by disrupting the government bond market, activating fiscal backstops, or dampening economic activity. Moreover, there is also a feedback mechanism as financial conditions tighten, hence transmitting and amplifying shocks from one sector to the other, weakening balance sheets and creating a mutually reinforcing vicious doom loop. Another possible source of interconnections between sovereigns, banks and firms is the role played by domestic nonbank financial institutions in many emerging and developing economies.

The sovereign-bank nexus, notably, has intensified in emerging markets and in some developing economies, as banks' exposures to domestic sovereign debt has increased to all-time highs. With public debt also historically high – and with the sovereign credit outlook deteriorating– it is increasingly likely that a negative shock to the sovereign balance sheet may trigger an adverse feedback loop between sovereigns and banks that could threaten macro-financial stability. Given this, increasing resilience entails reducing the likelihood of severe stress in each sector, as well as lowering the potency of the nexus (as the nexus can only be weakened but not completely severed). However, designing effective reforms calls for understanding the interaction between and the magnitude of the different channels that give rise to the nexus, and the impact of these on financial system stability, hence the theme of the country studies *"Impact of the Sovereign Bank Nexus on Financial System Stability"*.

Country studies broadly reveal mixed results for sovereign–bank exposure. Whilst it is impotent in some countries, it manifests in others but is heterogeneous across banks. Crowding-out effect—where banks' preference for government securities potentially limits credit availability to the private sector—is evident. In this context, central banks have to consider enhancing prudential policies by specifically having to establish a prudential ratio which makes it possible to monitor the intensity of the link between the State or government and the banks, with a view to limiting the high exposure of banks to sovereign risk; impose higher capital requirements to make it less attractive for banks to hold large amounts of government securities; adjust the risk weights assigned to sovereign debt in capital adequacy calculations; and set limits beyond which surcharges should be applied to encourage diversification of bank balance sheets and hence minimize sovereign exposure risk. Central banks should consider also introducing dynamic risk rating of securities as opposed to classifying sovereigns as risk free to enable regulators to control the direction of sovereign exposure for attainment of sound and resilient financial systems; and the need to conduct regular stress tests that include scenarios of sovereign default or significant devaluation of sovereign debt to flag risks of overconcentration and encourage banks to diversify cannot be over emphasized, while fiscal authorities should ensure the viability of public finances through a budgetary policy which adjusts (limits) the country's external and internal debt to its repayment capacity (taking particularly into account export revenues and economic growth).

The meeting commended member countries on the progress they had made in complying with the implementation of the COMESA countries revised Financial Stability assessment Framework and applauded the FSR task force on the progress in the preparation of the 2023 FSR.

Meeting of the Task Force to finalize the 2023 COMESA-wide Financial Stability Report

Task Force meeting in session in the CMI boardroom

The CMI, acting on the instructions of the 27th Meeting of the COMESA Committee of Governors of Central Banks held in November 2023, convened the last of a series of meeting of the task force constituted to prepare the 2023 COMESA wide Financial Stability Report (FSR) from October 4th – 5th 2024 in Nairobi, Kenya.

The meeting, attended by taskforce members from the Central Banks of Burundi, Egypt, Eswatini, Sudan, Mauritius, Rwanda, Uganda and Zambia, and CMI, was chaired by Dr. Ahmed Sahloul, Assistant Sub-Governor for Macro Prudential Sector, Central Bank of Egypt. The Director of CMI, Dr. Lucas Njoroge, in his opening remarks, noted that the key objective of the meeting was to review progress and finalize the draft 2023 Financial Stability Report (FSR) for the COMESA region. He noted that the FSR provides an in-depth review of developments in the financial sector; identify key risks, vulnerabilities and challenges that faced the financial systems of COMESA member countries in 2023. He observed that beside providing the key policy responses, the 2023 FSR is a key ingredient for enhancing the implementation of the COMESA Financial System Development and Stability Plan.

The meeting noted that the experts had several engagements on this 3rd edition of the FSR, starting with revising and agreeing to the revised questionnaire and data requirements. They noted that draft report compilation commenced upon data submission by member countries and that the progress was so far at about 80%. Based on this, they made a thorough revision of the draft FSR, chapter on chapter basis, providing comments for the respective chapter authors that they have to incorporate, and agreed on the timelines for the submission of the final report in readiness for the Monetary Cooperation meetings of Governors, in November 2024.

The 28th Annual Meeting of the COMESA Committee of Governors of Central Banks

Hon. Chileshe Mpundu Kapwepwe, the Secretary General (SG) of COMESA addressing the 2024 Annual Meeting of the COMESA Committee of Governors of Central Banks during one of the sessions.

The 28th Meeting of the COMESA Committee of Governors of Central Banks was hosted by H.E. Dr. Phil, Governor of the Central Bank of Eswatini and Chair of the COMESA Committee of Governors of Central Banks on 8th November 2024 in Ezulwini, Eswatini.

The meeting was attended by the Governors, Deputy Governors and delegates of twelve (12) COMESA member Central Banks—Burundi, D.R Congo, Djibouti, Egypt, Eswatini, Kenya, Libya, Malawi, Sudan, Uganda, Zambia and Zimbabwe. Hon. Chileshe Mpundu Kapwepwe, the SG of COMESA, representatives from COMESA Secretariat, COMESA Monetary Institute and COMESA Clearing House (CCH) were also in attendance.

The meeting was preceded by the Governors Symposium on 7th November 2024 and meetings of the 44th Bureau of the COMESA Committee of Governors of Central Banks on 6th November 2024, following the meetings of the technical committees of experts from 2nd to 5th November 2024, at the same venue.

The annual meetings deliberated on activities for enhancing monetary cooperation in the region undertaken in 2024 by the COMESA Monetary Institute (CMI) and COMESA Clearing House (CCH). The CMI accomplished a number of capacity development activities under the Monetary and Exchange Rates Policies and the Financial System Development and Stability sub-committees to improve macroeconomic management and the assessment of financial stability in member countries. The CCH continued to facilitate payments among member states through its Regional Payment and Settlement System (REPSS) to improve intra-regional trade.

In his opening speech, H.E. Dr. Phil, Governor of the Central Bank of Eswatini welcomed Governors, Deputy Governors and distinguished delegates, noting that their presence was a clear indication of their commitment to COMESA integration agenda. He observed that the meeting was taking place, once again at a time, when the region was contending with considerable macroeconomic policy challenges, including the funding squeeze driven by limited access to external financing on account of the challenging external financing conditions; escalating geo-political tensions; increasing vulnerabilities to global external shocks; and frequent climate change events, among others. These, he observed, are resulting in dwindling of reserves, a large build of external debt and debt servicing costs, sharp rise in import of goods and services, a sustained drop in capital flows and significant pressures on the exchange rate and inflation, while at the same time, depressing output levels. As a result, he noted, their role in striking a balance between containing the ongoing inflationary pressures and supporting the still-fragile recovery, while at the same time safe guard debt sustainability and managing exchange rate volatilities in response to tightening global financial conditions, remains key.

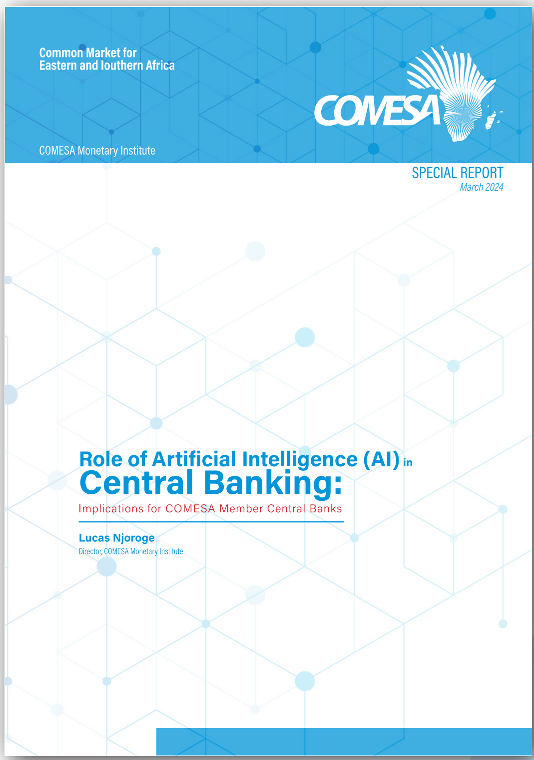
The Chairman also noted that the Governors Symposium which had just been concluded covered two pertinent and topical topics on the "Digital Banking and the impact of Cyber-Security and other emerging risks to central banks in the COMESA region"; and "The era of using Big Data and Machine Learning (ML) in Central banks and Financial Institutions: Implications for Monetary Policy", themes which resonate very well with the current reality faced by member central banks. He observed that the symposium had pointed out some of the measures to keep everyone cyber-safe, and strategies to leverage on Bigdata and Machine Learning in central banking had been discussed, pointing that these are an addition to their efforts in accelerating and safe guarding the region's hard-earned gains in the Monetary and Financial Integration Agenda.

The SG of COMESA, Hon. Chileshe Mpundu Kapwepwe, thanked Governors for their continued efforts towards deeper monetary and financial integration of the region, noting that COMESA has made significant strides in regional integration and trade facilitation, but substantial potential for further integration and trade enhancement within the member states remain. The SG further noted that COMESA has been actively working on trade facilitation instruments to overcome barriers and accelerate intra-regional trade and investments and continues to support negotiations in key service sectors, including business, financial, transport, communications, tourism, construction, and energy services - efforts that are part of COMESA's broader strategy to enhance economic integration and inclusivity in the region. The SG applauded Governors for their continued efforts towards deeper monetary and financial integration of the COMESA region.

At the end of the meeting, the following Bureau of the COMESA Committee of Governors of Central Banks for the year 2025 was elected:

Chairperson	*The Bank of Uganda*
First Vice Chair	*The Central Bank of Eswatini*
Second Vice Chair	*the Reserve Bank of Malawi*
First Rapporteur	*The Central Bank of Burundi*
Second Rapporteur	*The Bank of Zambia*

CMI Publications



Artificial intelligence (AI) uses computing to create intelligence artificially and is described as the ability of machines to imitate human intelligence. It entails a collection of tools that learn with given data and understand patterns and interactions between series and values. AI solutions depend on existing physical digital infrastructure from massive data bases on servers, to fiber optic cables and cell towers, to mobile phones in peoples' hands (Lin, 2019). AI has been around for some time in its basic form, which could study data, learn from it, and make autonomous decisions, that hopefully, continuously got better and accurate. However, its predictive power remained weak and could not predict unforeseen events like credit crisis. AI has evolved to what is being referred to as "generative AI", which is more powerful, can absorb massive data, learn from it, make its own decisions, with capabilities to study the data and develop its own computer codes.

For detailed reading: *chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.comesa.int/wp-content/uploads/2020/09/Special-Report-AI-and-Big-Data-Implication-for-Central-Banking-in-COMESA-region.pdf*

The interbank market exists to enable banks to address (insure against) unanticipated liquidity shocks to be able to honour their labilities as they fall due, but also invest in relatively illiquid assets with potentially higher returns and improve risk management within the banking system. At a macro level, the interbank provides the location via which inflation targeting central banks manage aggregate liquidity to achieve their monetary policy operating target of aligning the short-term risk-free interbank interest rate with their policy interest rate—the Central Bank Rate (CBR). Changes in the interbank rates, in turn, are expected to anchor the term structure of other interest rates in the economy—thereby contributing considerably to the effectiveness of the transmission of monetary policy signals to the real economy.

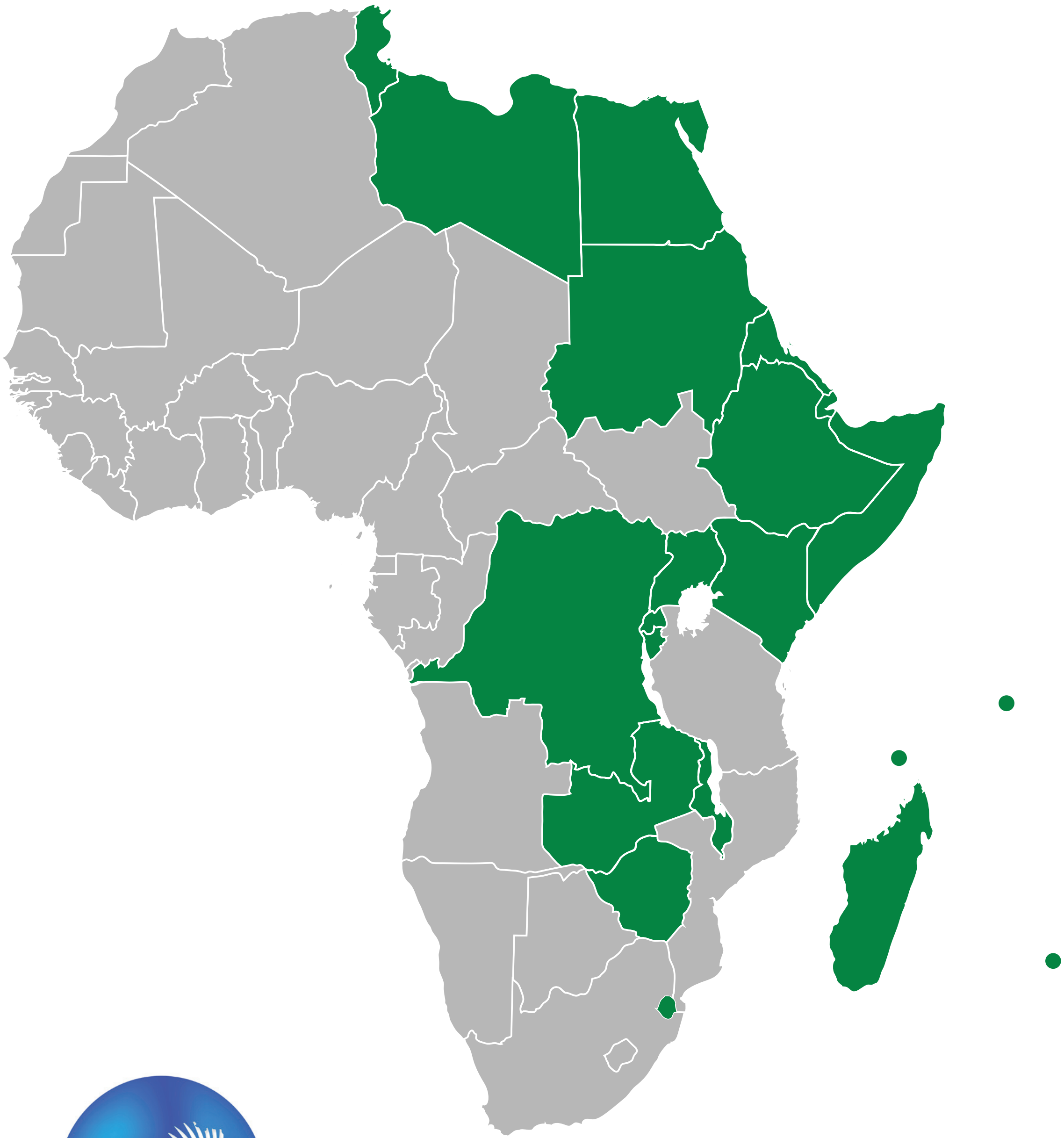
For detailed reading: *chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.comesa.int/wp-content/uploads/2024/05/The-Role-of-the-Interbank-Market-in-Inflation. pdf*

Climate change impact is being manifested through increased frequency and severity of acute weather events like floods, droughts, extreme temperatures, windstorms, etc. leaving behind a trail of significant destruction. Central banks are especially concerned, when the adverse effects of climate change (in form of physical and transition risks), are transmitted to the financial system and/or to the economy through inflation, and or when climate change affect financial stability, resulting into huge damage, causing financial distress through significant financial liability costs and losses.

For detailed reading: *chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.comesa.int/wp-content/uploads/2020/09/Role-of-Central-Banks-in-the-Era-of-Climate-Change.pdf*

The choice of exchange rate regimes in the COMESA block has varied across space and time among the member countries, but the credibility of each regime in ensuring macroeconomic and external stability remains contentious. This report analyzes the performance of various exchange rate regimes in force in the region in the context of the stability of the currency and ultimately price stability—the key primary objective of any one exchange rate regime.

For detailed reading: *chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.comesa.int/wp-content/uploads/2024/08/Exchange-Rate-Regimes-in-the-COMESA-Region-Implications-for-Macroeconomic-and-External-Stability.pdf*



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