MINISTRY OF FINANCE AND ECONOMIC PLANNING

# Rwanda Fiscal Risk Statement FY 2023/24

April 2023

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# I. INTRODUCTION

The Government of Rwanda is publishing its fourth Fiscal Risk Statement (FRS) produced by the Ministry of Finance and Economic Planning (MINECOFIN). This publication is in line with global best practice as well as a fulfilment of Rwanda's commitment with IMF and World Bank and a continuous East African Community Monetary Union requirement.

The publication of the annual Fiscal Risk Statement outlines risks with a fiscal impact stemming from various sources and the Government's mitigating measures to reduce the impact. This demonstrates the Government's commitment to sustain its main policy objectives of promoting economic development and social cohesion whilst maintaining macro-economic stability.

For the purpose of this document, **fiscal risks refer to the possibility of deviations in fiscal variables from what was expected at the time of the budget or other forecasts**. Specifically stated, fiscal risks are events that can cause public finance outcomes to deviate from what was expected at the time of the budget, or in other macroeconomic forecasts.

Such risks include but are not limited to ***climate change, unforeseen spending pressures, revenue shortfalls, terms of trade shocks, exchange rate volatility, natural disasters, and calls on Government guarantees*.**

*Table 1: Fiscal Risk Framework*

| | |
|---|---|
| **Macroeconomic risks** | ▪ Internal and External risks<br>▪ Macroeconomic shock simulation<br>▪ Fiscal analysis: forecast performance |
| **Climate change risks** | ▪ Climate change fiscal risks |
| **Specific risks and contingent liabilities** | ▪ Public Corporations<br>▪ Public debt related risks<br>▪ Government guarantees<br>▪ Public Private Partnerships<br>▪ Pension liabilities<br>▪ Local Government<br>▪ Financial sector<br>▪ Natural disasters |

The overarching objective of this statement is to identify the fiscal risks facing Rwanda, and outline steps to mitigate such risks where appropriate, as sound management of fiscal risks contributes to the macroeconomic stability.

This FRS has been prepared at time when Russia's invasion of Ukraine still disrupts the global economic recovery from the COVID-19 pandemic, which has significantly affected the World economy including Rwanda. It is still observable that Ukraine-Russia's conflict affects the Rwanda's Economic activity in one way or another.

However, in view of the uncertainty related to the evolution of the war in Ukraine which continues to impact global commodity prices; the Government views the combined level of fiscal risks as moderate.

Government finds necessary to use fiscal actions in response to this situation as well as policies to stabilize economy and tame inflationary pressures.

The Statement groups fiscal risks into three categories: **Macroeconomic, Climate change and specific risks.** These risks are discussed in the rest of the document. Government has started to publish the Fiscal Risks Statement annually and particularly; this Fiscal Risk Statement expanded its analysis on detailed contingent liabilities associated with some public-private partnerships by using the Public Fiscal Risk Assessment Model (PFRAM) to have a clear idea on the fiscal impact of the projects assessed.

# II. MACROECONOMIC RISKS

## 1. Primary external risks

The main macroeconomic risks for Rwanda are largely external, arising from global commodity price volatility, climate irregularities, and uncertainty about the level of committed external support disbursement.

Global commodity price volatility creates significant uncertainty. Many raw materials and finished products used in Rwanda are imported from the region or further afield. As Rwanda is landlocked, transport costs are generally high. Coffee, tea, and some minerals are important sources of foreign exchange, but these are also susceptible to global commodity fluctuation.

Climate fluctuations are a source of risk in Rwanda because most food is locally produced**.** **Irregularities in rainfall or drought can significantly reduce agricultural production,** with knock-on effects for employment and income in rural areas while heavy rains with ensuing floods have also been of concern recently.

Unexpected foreign assistance shortfalls can have a significant impact on budget implementation and economic growth in general. Delays in disbursements can create short-term funding gaps, and lead to pauses in development activity.

The Government continues to be committed to its economic recovery plan to return to pre-COVID-19 growth path, improving the resilience of the economy, and maintaining sustainable public finances.

Tax compliance and administration measures will expand and diversify the revenue base in the medium-term supported by revenue mobilization strategies under the Medium-Term Revenue Strategy (MTRS) 2021/22-2023/24.

### Ukraine-Russia Macroeconomic Shock

Rwanda's macroeconomic projections as of April 2023 took into account the remaining scars from COVID-19 pandemic and the new Ukraine-Russia war crisis. The April 2022 projections were compared to October 2021 as a baseline to show the identified channels of the new crisis of Ukraine-Russia war. The shock from highlighted crisis is mostly affecting global commodity prices which is having an impact on country's **inflation (food and energy) – among other causes, current account balance, fiscal deficit** and **output (GDP).** Bellow graphs illustrate the impact of the shock to the baseline through key channels.

*Figure 1: Ukraine-Russia Macroeconomic shock illustration*


*Source: MINECOFIN*

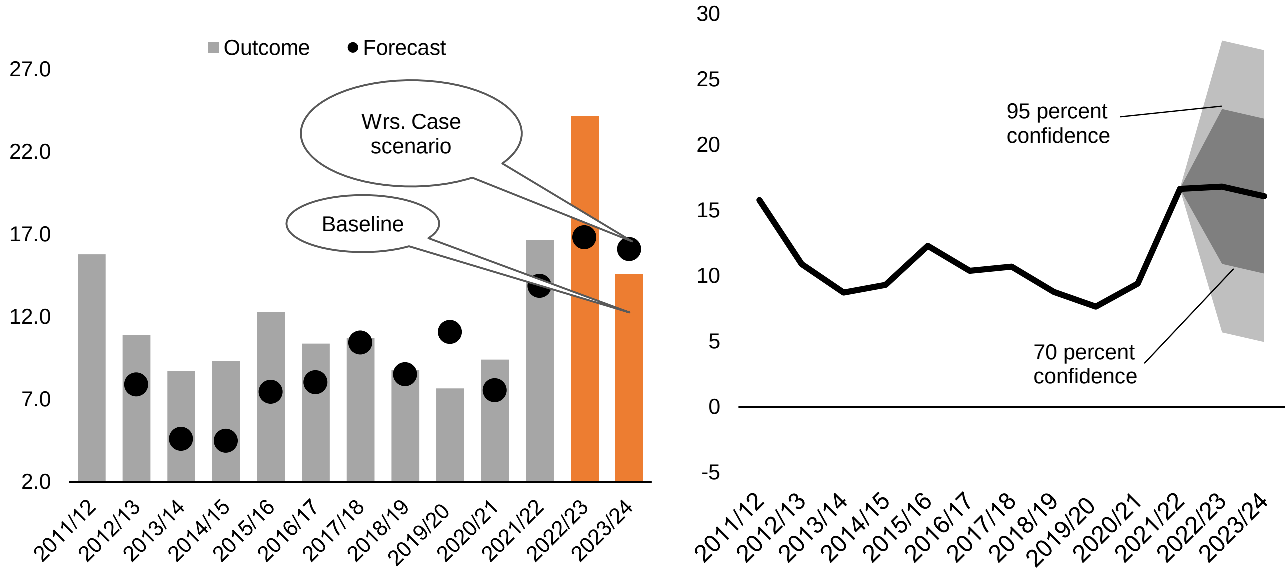
## 2. Forecast performance

Forecast errors can also be a source of fiscal risk. Revenue shortfalls against forecast, or expenditure overruns, can lead to unanticipated debt borrowing. This section reviews the performance of several key fiscal and macroeconomic forecasts errors. In general, forecast performance has been satisfactory over the past several years, with several notable exceptions.

The shock used for the forecast is related to poor performance of agriculture. Where it is anticipated that if this development takes place then it may create risk of food insecurity in the country while also exacerbating inflationary pressures.

The resulting high inflation would affect spending on social protection, goods and services bill, interest payments and probably grants to local government.

*Figure 1: Nominal GDP growth confidence intervals, forecast and outcome (percent)*




*Source: MINECOFIN*

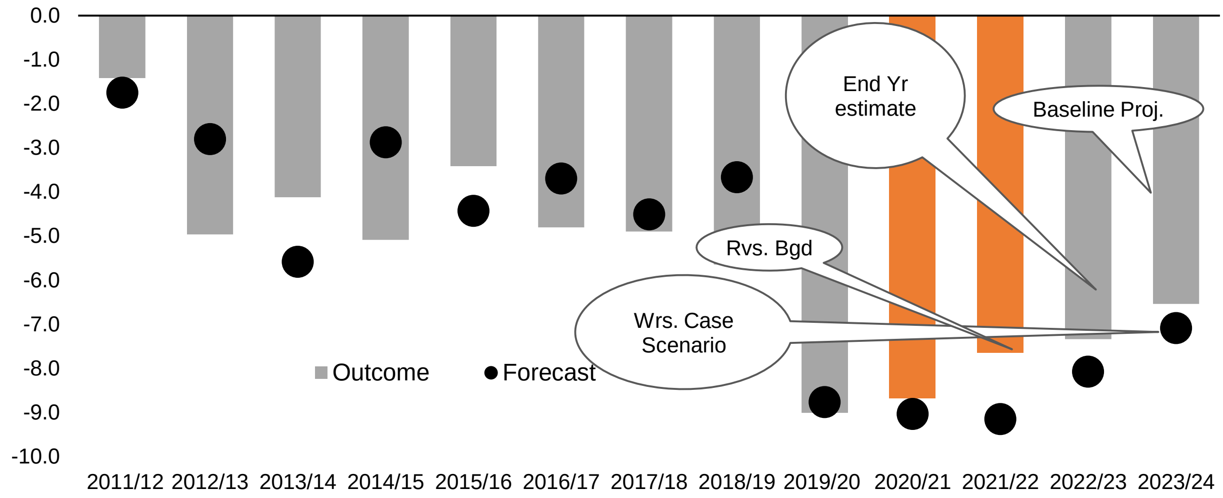
## Nominal GDP

Based on historical forecast errors i.e. the difference between forecast and actual outturn, the nominal GDP growth outcome was mostly higher than projected, and forecasting performance has been improving but in the FY 2019/20 where uncertainty was high due to COVID-19 pandemic actual nominal GDP was lower than forecasted level. Nominal GDP growth forecasts for the end of the FY 2022/23 and coming FY 2023/24 baseline scenario are 24.2 percent and 14.6 percent respectively expecting a mixture of the continued economic recovery from the COVID-19 pandemic scars, ongoing Ukraine-Russia crisis and observed domestic inflation pressures resulted from weather condition irregularities affecting the agriculture production. For the worst case scenario FY2023/24 where the production from agriculture is expected to worsen from the bad rain fall condition, continued global and domestic economic and financial tightening condition suggest that the nominal GDP will grow by 16.1 percent with a 70 percent probability (Figure 2) to be between 10.9 and 22.7 percent in FY 2022/23 and 10.2 and 22.0 percent in the FY 2023/24.

## Overall fiscal balance

The overall fiscal deficit under comparison is based on cash basis between actuals and forecasts. In 2016/17 to 2019/20, the budget deficit was slightly larger than forecast due to increased expenditure on new recruitment in the public service and advance payment for peacekeeping operations in the pre-pandemic period and unexpected COVID-19 pandemic related costs for the government. From 2012/13 to 2014/15, volatility in foreign aid disbursements led to major deviations from the budget forecast.

*Figure 2: Overall balance (cash basis) forecast and outcome (% of GDP)*




*Source: MINECOFIN*

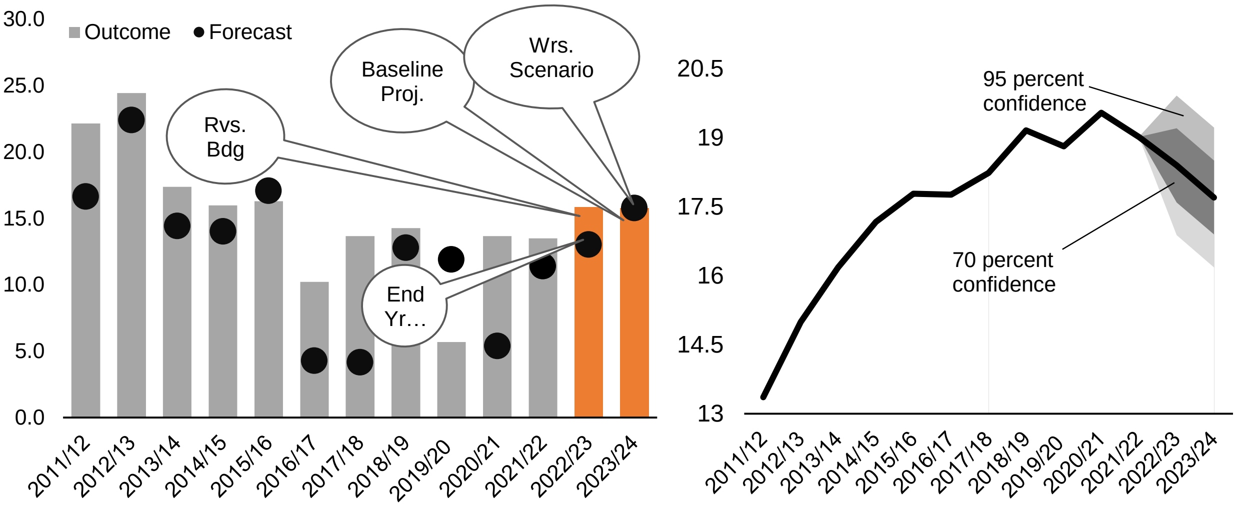
The continued economic recovery from the pandemic is being challenged by the uncertainty global economic conditions and tight financial situation. The tax revenue collection is expected to not follow the pace of high nominal GDP led by high inflation from agriculture sector which doesn't contribute to taxes. Therefore, the end year estimate of the fiscal deficit for the FY 2022/23 was revised down (8.1 Vs 7.3 percent of GDP) as a result from the continued commitment of the government to fiscal consolidation and changes in the external support commitments. The FY 2023/24 deficit is estimated to be 6.5 percent under the baseline scenario and 7.1 percent under the worst case scenario reflecting the impact from inflation which doesn't benefit tax revenue collection.

### *Revenue*

We measure domestic revenue as the sum of tax and non-tax revenue excluding grants. Tax revenues are highly sensitive to macroeconomic changes and effective revenue administration measures by the Rwanda Revenue Authority. MINECOFIN modelling suggests that for every percentage point increase in nominal GDP growth, tax revenue increases by 1.2 percent. This highlights the importance of accurate macroeconomic forecasting in the budget process estimates.

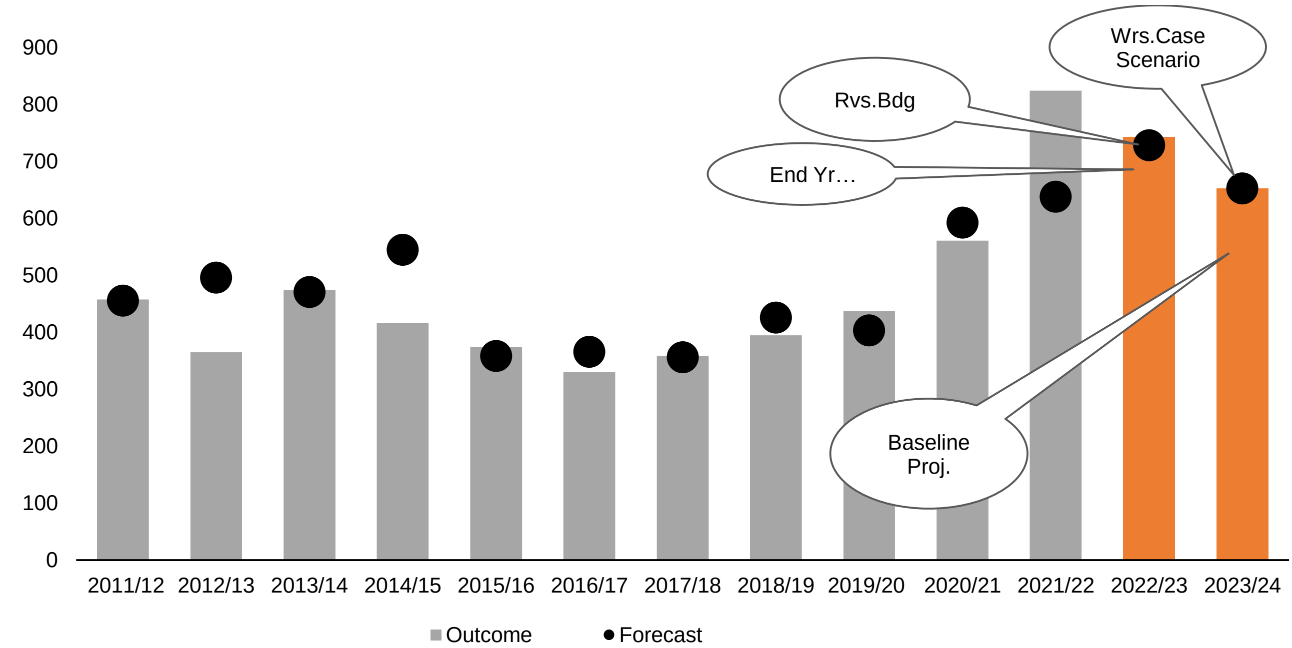
Revenue forecasts, by and large accurate from 2012/13 to 2015/16, have become more pessimistic (Figure 4) since FY 2016/17. The better-than-expected revenue performance over the three years to FY 2018/19 is largely explained by continued administrative measures implemented by Rwanda Revenue Authority, combined with tax policy changes that generated additional revenue. For FY 2019/20 due to the uncertainty of COVID-19 pandemic, forecast revenue growth was below the expected level but the post pandemic the ongoing rapid economic recovery led to better revenue outcome than projection. Reimbursements from Rwanda's participation in United Nations peacekeeping operations have also been consistently on track as expected in the non-tax revenue performance.

*Figure 3: Revenue growth forecast and outcome*




*Source: MINECOFIN*

*Figure 4: Grants forecast and outcome (FRW billions)*




*Source: MINECOFIN*

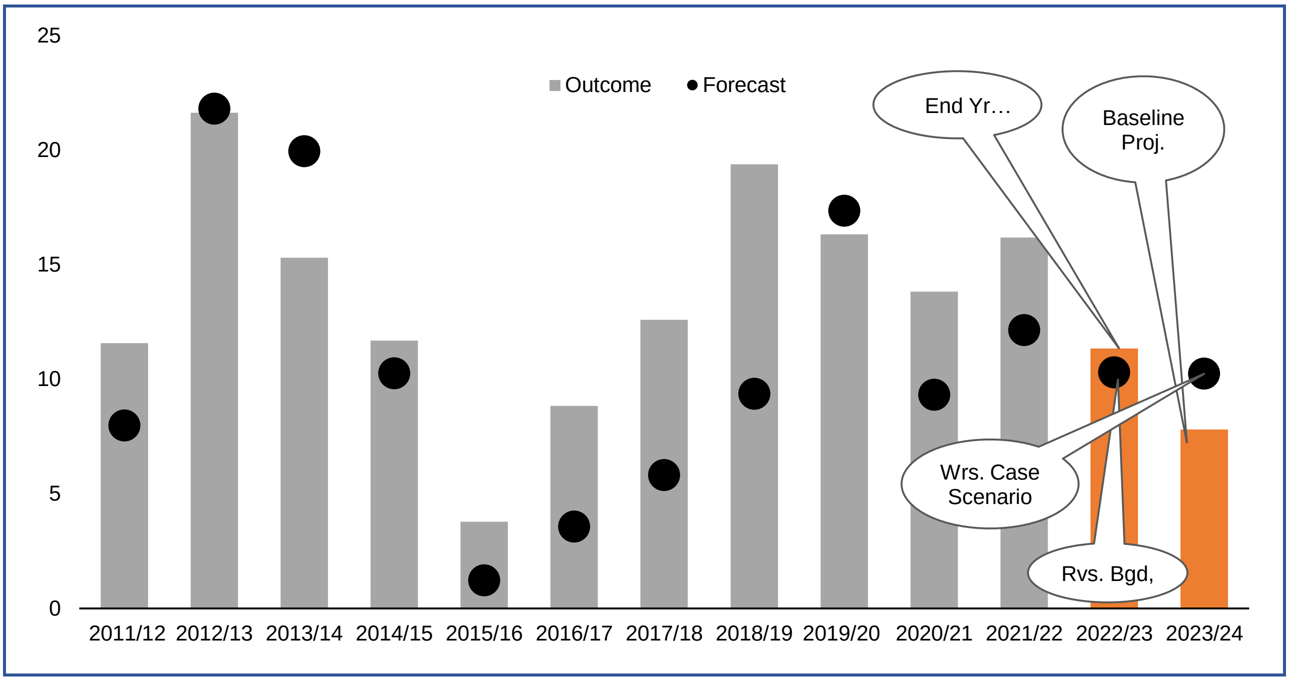
The above projection revenue growth for end FY 2022/23 to FY 2023/24 estimate is a result of the expected continuing economic recovery from the pandemic, different government revenue reforms and revenue policies and administration measures. Figure 4 shows a confidence interval with 70 percent probability that the revenue-to-GDP ratio will be between 17.6 and 19.2 percent in FY 2022/23 and 16.9 and 18.5 percent in FY 2023/24 impacted by high inflation not benefiting tax revenues.

Grant revenue forecasting has kept its improved performance in recent years (Figure 5), following sharp deviations in 2012/13 and 2014/15.

### *Expenditure*

Expenditure growth outcomes have been higher than forecasted for the past 5 years of pre-COVID-19 period FY 2019/20. This reflects unexpected expenditure on wages and salaries of some ministries and agencies due to the restructuring and establishment of new institutions. For the FY 20219/20 due to COVID, government operations were at half due to the non-operational at full capacity of all economic activities.

*Figure 5: Expenditure growth forecast and outcome (Percent)*




*Source: MINECOFIN*

In FY 2020/21, spending was higher due to higher COVID-19-related spending including vaccines which continued in the FY 2021/22 as well. In this ending FY 2022/23, expenditures are expected to continue to grow but at a slower pace than observed in previous two fiscal years. The FY 2023/24 also will grow less than FY 2022/23 following the government measures for the fiscal consolidation where the baseline scenario will show a grow of 7.8 percent and 11.3 percent in the worst case scenario from 11.3 percent expected growth for the end of FY 2022/23.

## III. QUANTITATIVE CLIMATE CHANGE FISCAL RISK ANALYSIS

Rwanda is experiencing rising temperatures, in line with global and continental patterns, while rainfall has also been fluctuating. Temperature is approximately 1.25 to 1.5°C higher than -preindustrial times and has accelerated from the 1990s. More detailed analysis reveals some regional variation in rainfall and an intensification of rainfall extremes, but no changes in droughts. These trends are consistent with broader regional patterns.

The main climate-related natural disasters that adversely affect the population include droughts, floods, and landslides. These are associated with damages to infrastructure, loss of lives and property including crops, soil erosion, water pollution, etc. As economic development is changing the landscape quickly, it is difficult to ascertain how much of the observed patterns in frequency of landslides and floods can be attributed to the intensification of precipitations.

A further rise in temperature across Rwanda is expected in coming years. The exact change will depend on the global efforts to mitigate emissions. Best estimates based on plausible emission scenarios indicate a potential for additional warming between 1 and 3ºC, but higher warming cannot be ruled out.

Scenarios of precipitations are very uncertain and there is no clear indication of significant changes from normal conditions and seasonality. Projections of droughts at national level are very uncertain, but they can increase locally, especially in the eastern part of the country. High emission scenarios and a more accentuated warming response can lead to emerging risks from extreme temperatures and an intensification of precipitations in the second half of the century.

## 1. Long term climate change fiscal risks

Rising temperatures associated with climate change will have increasing long term impacts for both the economy and sustainability of the public finances, increasing fiscal risks. The impact of higher temperatures on economic growth is assessed based on empirical analysis of past temperature changes on growth, and the consequent impact of slower economic growth on fiscal projections to assess building fiscal pressures. The assessment of the impacts of climate change is undertaken through to the end of the century, given the long-term implications of climate change on the economy and public finances.

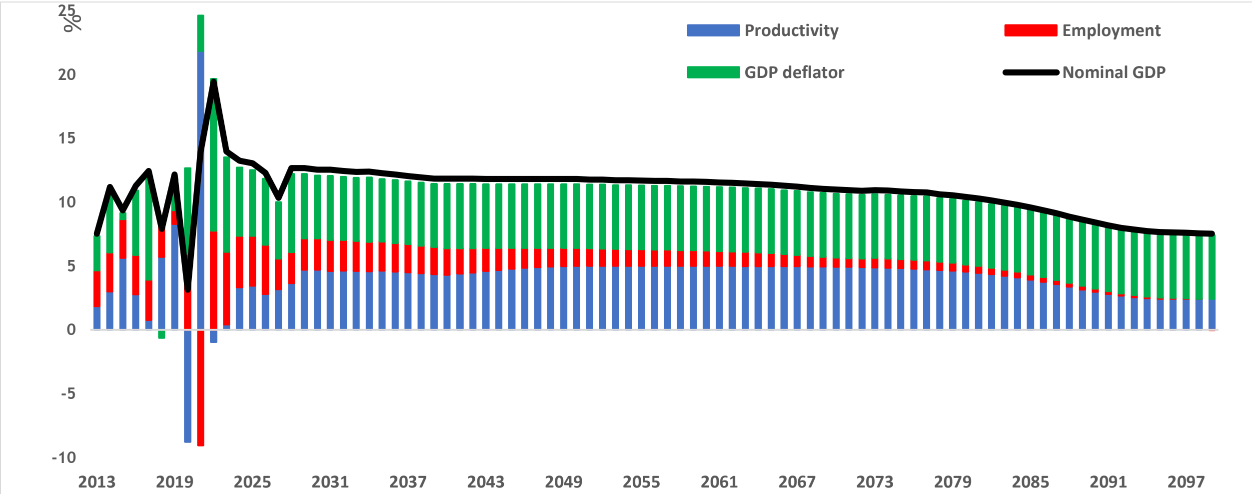
The analysis demonstrates the impact of four different scenarios of increasingly severe climate change impacts, against a baseline which reflects the continuation of the current economic and fiscal path in the absence of climate change. The scenarios are:

- **Baseline scenario**: the continuation of unchanged current economic and fiscal policies (business as usual) and observed climate trends. The key drivers of long-term economic growth are the economic fundamentals of growth in working age population and participation (the level of employment) and productivity (output per person). The decomposition of long-term growth is given in Fig. 1.
- **Paris**: based on the SSP1-2.6 IPCC scenario and keeps global temperature increase above its pre-industrial level below 2ºC at the end of the century.[1]
- **Moderate**: based on the SSP2-4.5 IPCC scenario. Emissions continue increasing in line with the continuation of present trends and stabilize at the end of the century. This scenario assumes that climate mitigation policies continue along the observed trend but countries do not take more aggressive actions to fulfill their Paris commitments.
- **High**: based on the SSP3-7.0 IPCC scenario. Rather than intensifying climate mitigation efforts, countries start scaling back their implemented policies in a world with limited energy efficiency improvements and continued use of fossil fuels.

[1] The IPCC calculates warming at the end of the century by comparing 2081-2100 average temperature to average temperature in the pre-industrial period. The increase in temperature for each scenario in this section is the IPCC “Best Estimate”, which is the average of the projected temperature increase over all climate models for a specific emission scenario.

- **Hot**: emissions are as in the *high* scenario, but it uses the 90th percentile of temperature increases among all climate models that used SSP3-7.0 emissions, instead of the average temperature projection.

*Figure 6: Decomposition of Nominal GDP Growth and Drivers*




Source: MINECOFIN

The impact of climate change reduces GDP growth through several transmission channels, with more severe climate impacts associated with larger reductions in GDP. Key transmission mechanisms include:

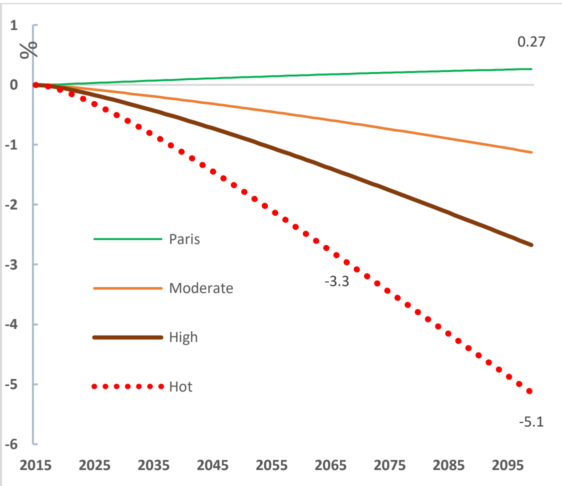
- **Reduced hours worked and effort**. Hotter days can reduce productivity, through decreases in the number of days or hours employees are able to work effectively and may also result in worsening health outcomes (including through increased spread of diseases such as malaria), although the impact would be expected to be relatively subdued given Rwanda's temperate climate.
- **Higher depreciation of the public and private capital stock**. Higher and more volatile temperatures and changing precipitation will degrade roads, power transmission lines, machinery and equipment and floods and landslides can damage or destroy assets, all of which degrade the capital stock.
- **More frequent and severe climate induced natural disasters**. Rwanda experiences floods, droughts and landslides. Increases in the frequency and severity of these events would be expected to lead to more adverse economic outcomes.
- **Other longer-term effects on economic structure and productivity**. For example, in a relatively worse climate scenario, certain sectors such as high value-added agriculture (reduction in yields) or tourism may be affected. As a country highly dependent on both sectors, this could have a significant impact in Rwanda.

## 2. Macroeconomic impacts of climate change

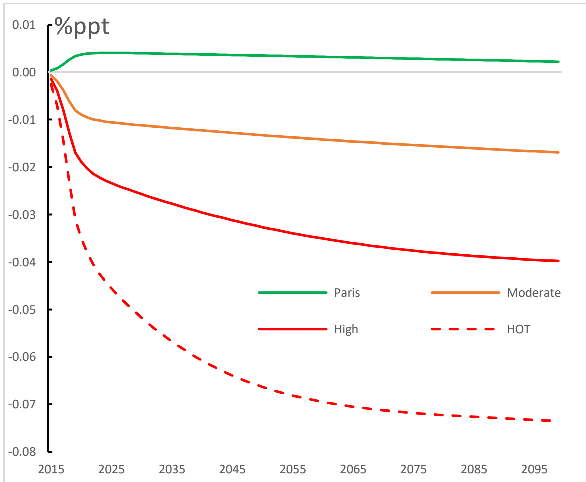
Apart from the Paris scenario which sees a marginal improvement in GDP growth and level, under each of the climate change scenarios there is a compounding decrease in annual GDP growth and the level of GDP. Under the hot scenario, GDP growth would be 0.07 percentage points per annum lower than baseline by 2073, which would compound to a level of GDP 3.3 percentage points lower than baseline by 2073 and 5 percent by 2100, Fig. 8.

*Figure 7:Macroeconomic Effects of Climate Change*

Deviations from the baseline (levels), percent



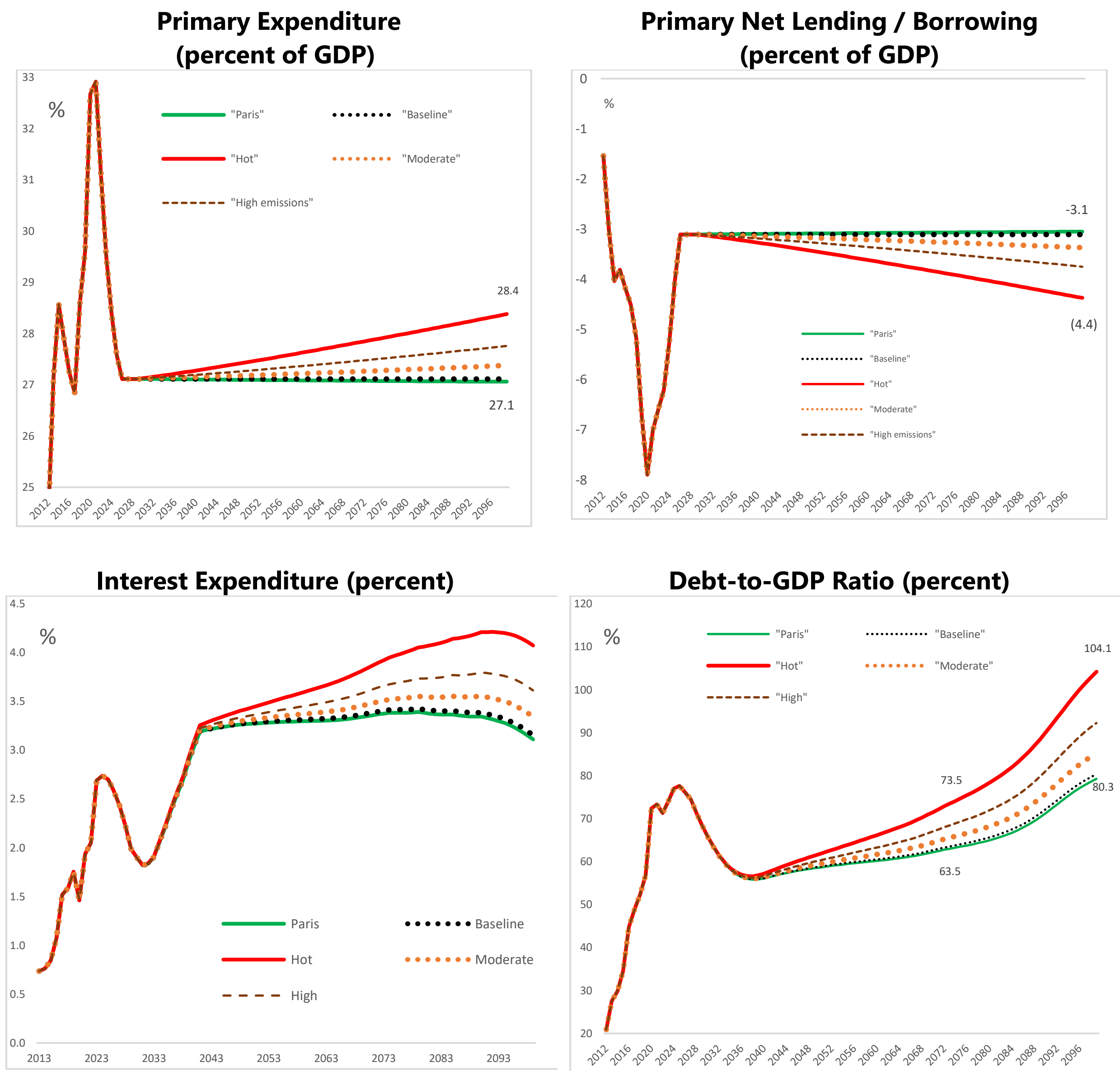

Deviations from the baseline (growth rate), percentage points




## 3. Effects of climate change on fiscal projections

Based on an assumption of unchanged expenditure against baseline, and declining revenue in line with the lower levels of GDP, the primary deficit increases under each scenario except Paris, leading to an increase in net borrowing and the debt to GDP ratio. In line with the modest impact on GDP, this remains relatively moderate, but would still require some fiscal adjustment to ensure finances remain on a sustainable path.

*Figure 8: Effects of Climate Change on Fiscal Projections (2013-2099)*




Under the hot scenario, the primary deficit in 2073 increases to 3.9 percent of GDP from 3.1 percent of GDP under the baseline. The increase in the primary deficit leads to an increase in borrowing under all scenarios except Paris, and the debt to GDP ratio begins rising from 2039 and would rise above the current anchor of 65 percent. Under the hot scenario, the debt to GDP ratio reaches 73.1 percent of GDP by 2073, 10 percent of GDP higher than baseline. The fiscal effects of climate change become more visible by the end of the century, where under the hot scenario the primary deficit is 4.4 percent of GDP and the debt-to-GDP ratio would reach 104 percent.

The baseline scenario requires a modest fiscal consolidation of around 0.2 percentage points of GDP to ensure a stabilization of the debt to GDP ratio. Climate change would add to this burden but appears manageable. Under the hot scenario, scenarios the fiscal consolidation required would be 0.6 percent of GDO by 2073, rising to 1.3 percent of GDO by 2099 (Table 1). Adjustment of either expenditure or revenue through the projection period would reduce the end level of consolidation required.

*Table 2: Recalibration requirements to stabilize the debt to GDP ratio*

| Scenario | 2023 | | | 2041 | | | 2073 | | | 2099 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PB | PB* | Task | PB | PB* | Task | PB | PB* | Task | PB | PB* | Task |
| Baseline | -6.2 | -6.1 | 0.1 | -3.1 | -2.9 | 0.2 | -3.1 | -2.8 | 0.3 | -3.1 | -2.4 | 0.7 |
| Paris | | | | -3.1 | -2.9 | 0.2 | -3.1 | -2.8 | 0.2 | -3.1 | -2.4 | 0.6 |
| Moderate | | | | -3.2 | -2.9 | 0.3 | -3.3 | -2.9 | 0.3 | -3.4 | -2.6 | 0.8 |
| High | | | | -3.3 | -2.9 | 0.3 | -3.5 | -3.0 | 0.4 | -3.7 | -2.8 | 1.0 |
| **Hot** | | | | -3.4 | -3.0 | 0.4 | -3.9 | -3.2 | 0.6 | -4.4 | -3.1 | 1.3 |
| **All in percent of GDP. PB = primary balance. PB* = debt-stabilizing primary balance. Task = fiscal consolidation needed to stabilize the debt-GDP ratio.** | | | | | | | | | | | | |

## 4. Discrete Fiscal Risks

Discrete fiscal risks arise from the exposure of the government budget to natural hazards and climate change risks. A discrete risk relates to a situation that may or may not occur but if it did could negatively impact assets, liabilities and government spending and revenues. There are two key types of fiscal risks of concern:

- **Direct physical risks**, for example landslides causing damage to key public infrastructure. These risks can be acute because of extreme weather events, or chronic because of gradual changes to the environment that could result in an increase in the number or severity of natural hazards.
- **Transition risks** that may arise when transitioning to a carbon neutral economy which could affect the value of government assets, and the potential need for support to adjust operations to climate neutral production, outside of current transition plans.

While the overall fiscal risks from the macroeconomic effects of climate change are expected to be relatively modest, at least over the next 30 years, the impact from discrete fiscal risks could be significant.

For example, public corporations (PCs) play a key role in the Rwanda economy and operate in sectors prone to natural hazards and climate change risks. While PCs in Rwanda are only responsible for around 10 percent of annual public investment as most PC capital stock is mostly funded through the budget, they have a significant role in delivering and operating critical infrastructure, particularly in the water and energy sectors.

The vulnerability to discrete fiscal risks increases when the capacity to absorb risks is low. Financially weak PCs and, more generally, thinly capitalized sectors such as agriculture and mining do not have the financial capacity or access to finance to absorb the financial consequences of natural hazards and climate change risks, and the cost is more likely to fall on the Government.

A complete understanding of discrete fiscal risks and assessment of their relevance to fiscal policy and the budget requires a comprehensive assessment of climate change risks across the general government sector and for all public corporations. Further work will be done on the assessment and quantification of discrete fiscal risks in the coming year.

# IV. SPECIFIC RISKS AND CONTINGENT LIABILITIES[2]

## 1. Public Corporations

Public corporations are currently 27, of which 23 are non-financial and 4 are financial corporations, see the table below. They serve to implement Government's socio-economic policies and strategies. Government business enterprises operate in different business sectors and are exposed to different types of risks.

*Table 3: Public Corporations Classification*

| **Non-Financial Public Corporations** | **23** |
|---|---|
| Non-commercial Public Institution | 7 |
| Commercial State-Owned Companies | 16 |
| | |
| **Financial Public Corporations** | **4** |
| Non-commercial Public Institution | 1 |
| Commercial State-Owned Companies | 0 |
| Special Organs | 3 |
| **Total** | **27** |

*Source: MININVEST*

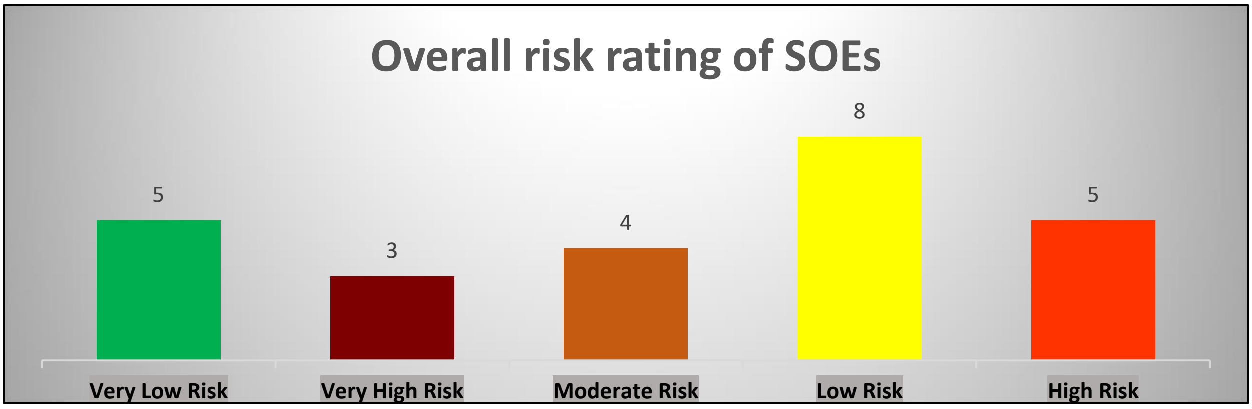
### *1.1 Health Check: General overview of Public Corporations risk ratings*

Health check analysis of Public Corporations helps to assess fiscal risk exposure of Government business enterprises by judging the financial performance and financial position of PCs to establish their financial health. The health check depicts a picture of Government investment risk exposure as a whole and analyses each individual enterprise.

It is a dashboard that displays periodical analysis of the health of enterprises using financial ratios and economic indicators and signals risk exposure of individual companies as well as the aggregate picture.

[2] Contingent Liabilities are obligations that arise or are triggered by discrete but uncertain future events that may or may not occur in the future. Realisation of these risks may require the Government to make substantial and unexpected payments.

*Figure 9: Public Corporations risk rating[3]*




*Source: MININVEST*

The figure above displays the overall risk ratings. Each individual enterprise's risk exposure is rated against each type of risk (profitability, solvency and liquidity) and an overall risk is generated. Among twenty-seven companies under scrutiny; five enterprises flagged very low risk, eight enterprises flagged low risk, four enterprises flagged moderate risk, five enterprises flagged high risk and three flagged very high risk.

It is important to highlight that the health check has demonstrated that the five enterprises rated high risk and the three rated very high risk in general, are singularly rated even very high risk against more than one type of scrutinized risks (liquidity risk, solvency risk and profitability risk). Consequently, a more in-depth scrutiny is needed in order to comprehend the underlying causes of risks in order to recommend proper remedy actions.

### *Health Check: Sectoral Analysis*

At the sector level, losses and the accumulation of debt and liquidity challenges are concentrated in the transport and infrastructure sectors. Regarding infrastructure, losses are concentrated in utility companies: REG and WASAC.

*Table 4: States Owned Enterprises Sectoral analysis*

| | | **Profitability** | | **Liquidity** | | **Solvency** | |
|---|---|---|---|---|---|---|---|
| **Sector** | **SOE** | Return on Assets | Return on Equity | Current Ratio | Quick Ratio | Debt to Assets | Debt to Equity |
| **Transportation** | RwandAir | 13.5% | -31% | 23.3% | 23.1% | 144% | -327% |
| **Infrastructure/Utility** | REG | -0.02% | -101% | 112% | 87% | 104% | -5520% |
| | WASAC | 0.01% | 0.03% | 214% | 250% | 83% | 480% |

*Source: MININVEST*

[3] Out of the 27 PCs, 4 are financial public institutions.

### *Health Check: Quasi-fiscal activities*

*Table 5: Public Corporations with quasi-fiscal activities (billion Frw)*

| | | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| **Rwanda Energy Group** | *Total Revenue* | *130.8* | *148.9* | *155.4* | *177.7* | *200.6* |
| | *Government Grants Received* | *34.1* | *39.9* | *36.0* | *42.7* | *56.5* |
| | **GoR Contribution (%)** | **26%** | **27%** | **23%** | **24%** | **28%** |
| **Water and Sanitation Corporation** | *Total Revenue* | *41.80* | *30.70* | *35.80* | *37.70* | *39.64* |
| | *Government Grants Received* | *25.70* | *10.40* | *13.90* | *13.60* | *9.74* |
| | **GoR Contribution (%)** | **62%** | **34%** | **39%** | **36%** | **25%** |
| **Rwandair** | *Total Revenue* | *159* | *334* | *300* | *271* | *341* |
| | *Government Grants Received* | *97* | *131* | *132* | *146* | *144* |
| | **GoR Contribution (%)** | **61%** | **39%** | **44%** | **44%** | **42%** |
| **Aggregate** | *Total Revenue* | *332.0* | *513.7* | *490.9* | *486.4* | *581.7* |
| | *Government Grants Received* | *156.8* | *181.5* | *182.2* | *201.9* | *210.4* |
| | **GoR Contribution (%)** | **47%** | **35%** | **37%** | **42%** | **36%** |

*Source: MININVEST*

The infrastructure sector (energy and transport), Rwanda Energy Group, RwandAir and Water and Sanitation Corporation take the lead in receiving Government subsidies due to the importance of the sector in the development of the country.

It is important to highlight that certain state-owned enterprises are gradually minimizing their fiscal risks. This is particularly evident in the case of RwandAir. The airline is anticipating a decline in fuel expenses and improved lease rates for its aircraft. Additionally, the repayment of costly loans will create more cash flow space and allow the company to expand. RwandAir's plan is to enhance its fleet by adding new aircraft, including a Cargo freighter, and replacing old planes to accommodate the growing demand for popular destinations such as Dubai, Doha, and Europe. The airline's goal is to cater to both business and leisure travelers, as well as provide Cargo services to contribute to the region's economic growth. These expectations demonstrate the airline's commitment to delivering exceptional services while maintaining financial stability.

## 2. Public debt related risks

This section analyses four major risks associated with Rwanda's public debt portfolio, as well as the corresponding mitigating measures[4]. The main risks include: (1) refinancing risk, (2) interest rate risk, (3) foreign currency risk, (4) as well as risks associated with Debt Sustainability.

***Sustainability Risk:***

Rwanda's public debt remains sustainable despite its constant increase currently at 67.5 per cent vs 58 per cent and carries only a moderate risk of debt distress, largely owed to the concessional nature of the portfolio. The latest debt sustainability analysis reveals that both Liquidity and solvency indicators are well below the respective thresholds. However, prudent debt management will be essential to face the tight global financial conditions, high inflation, cost of fuel, and fertilizer, and any macro and market related shock that could adversely affect government efforts to maintain a sustainable debt path and achieve its target to reach 65 per cent of PPG Debt to GDP by 2031.

***Refinancing Risk:***

Rwanda has been managing its external and domestic debt refinancing risk prudently. A comparison between FY 21/22 and FY 22/23 reveals that the external debt maturing in the next year has reduced from 10.6 percent to 6.0 percent respectively, while the domestic debt maturing in one year has decreased from 7.1 percent to 5.3 percent. This reduction in external debt maturing next year is due to paying off the remaining portion of the 2013 Eurobond and converting some short-term external debt into long-term domestic debt. On the domestic debt front, long-term securities are being issued instead of short-term notes, leading to a reduction in debt maturing in one year. However, despite the improvement in refinancing risk, there is still a possibility of facing challenges upon maturity of debt. The difficult funding environment for the region is likely to remain a key feature of the new normal.

***Interest rate risk:***

Rwanda, like many other sub-Saharan African countries, may have to deal with higher borrowing costs due to several key factors. Firstly, external borrowing costs have gone up because of higher interest rates on US treasury bonds and the search for safe assets in times of global uncertainty. Secondly, concessional financing, which still constitutes the largest share of borrowing, is becoming more limited and being replaced by mixed financing terms with variable interest rates. This, in turn, increases the risk and complexity of the country's debt portfolio. Thirdly, there is a significant rise in domestic interest rates, which poses a high re-fixing risk for any debt maturing in a short period.

***Foreign Currency risk:***

Rwanda's debt portfolio consists mainly of external debt, making it vulnerable to foreign exchange risk due to global uncertainties and increased prices, which may lead to the depreciation of the Rwandan Franc. However, by converting and refinancing expensive external debt with domestic debt, the liability management strategy has helped minimize this risk. Despite this, the majority of the public debt

[4] An in-depth analysis of debt risks and associated mitigating measures, is found in the annual debt strategy document produced by the Debt Management Directorate in MINECOFIN.

(https://www.minecofin.gov.rw/1/publications/reports?tx_filelist_filelist%5Baction%5D=list&tx_filelist_filelist%5Bcontroller%5D=File&tx_filelist_filelist%5Bpath%5D=%2Fuser_upload%2FMinecofin%2FPublications%2FREPORTS%2FChief_Economist%2FDebt_Management%2F&cHash=c740c1b388f07e75324a50971292037b)

portfolio is still foreign currency-denominated, which exposes it to higher exchange rate risk. However, liability management strategies are being implemented to gradually reduce this risk. In 2022, currency depreciation in the region against the US dollar caused an increase in general government debt by about 40% of sub-Saharan Africa's debt as of 2021. Geopolitical fragmentation, escalation of the war in Ukraine, and unexpected inflation are additional global downside risks that could worsen the situation.

## 3. Government guarantees on loans from public corporations

To help public corporations and selected joint ventures attract private investment in infrastructure and enable them to borrow at affordable interest rates, the government issues guarantee. These guarantees commit the government to cover the debt obligations of borrowers in the event of loan default. Rwanda's total SoEs Debt stood at FRW 465.5 bn (3.4 % of GDP) as of end 2022 against FRW 372.9 bn as of end 2021. This increase is mainly due to the expansion of debt data coverage to include both guaranteed and non-guaranteed SoEs. A call on guarantees would result in the commitment of fiscal resources by Government. The risk of default is deemed to be low.

*Table 6: Government guarantees as of December 2022*

| STATE OWNED ENTREPRISES EXTERNAL DEBT STOCK (USD million) | | |
|---|---|---|
| Entity | Guaranteed Amount at end December, 2022 (USD Million) | **Billion FRW** |
| *Rwandair* | Guaranteed | 44.7 |
| *Bugesera Airport Company (BAC)* | Guaranteed | 1.4 |
| **SUB-TOTAL** | | **46.1** |
| **STATE OWNED ENTREPRISES DOMESTIC DEBT STOCK (FRW billion)** | | |
| Entity | Guaranteed Amount at end December, 2022 (FRW Billion) | **Billion FRW** |
| *Ultimate Concept Ltd (UCL)* | Guaranteed | 152.4 |
| *EWASA* | | 48.5 |
| *SONARWA* | Guaranteed | 4.0 |
| *Bugesera Airport Company (BAC)* | Guaranteed | 153.4 |
| *Horizon Groups* | Non-Guaranteed | 13.2 |
| *WASAC* | Non-Guaranteed | 13.7 |
| *Bella Flowers* | Non-Guaranteed | 1.1 |
| *Rwandair Domestic* | Non-Guaranteed | 31.1 |
| *EAX* | Non-Guaranteed | 1.9 |
| **SUB-TOTAL** | | **419.4** |
| **TOTAL** | | **465.5** |
| | | |
| Norminal GDP | | 13716.0 |
| EOP Echange rate | | 1070.7 |
| **Guarantees % of GDP** | | **3.4** |

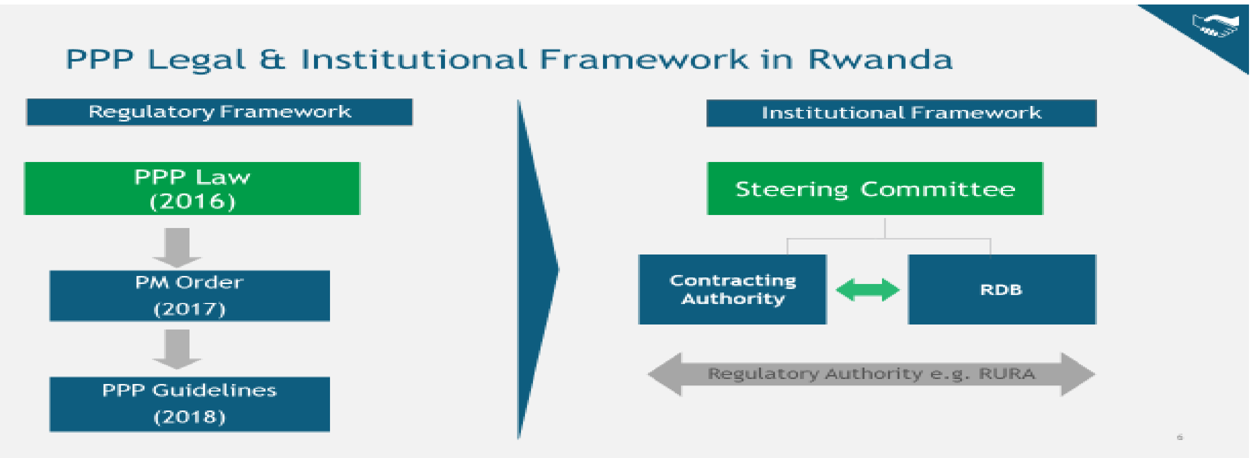
Source: MINECOFIN

## 4. Public Private Partnerships (PPPs)

Public private partnerships (PPPs) are long-term contracts between a private partner and a government entity, for providing a public asset or service, where the private partner bears significant risks and management responsibility, and is remunerated linked to performance or use of the asset/service. In practice, PPPs comprise different types of contracts depending on the nature of the agreement. PPP models in Rwanda as per the legal framework include: **Build, Operate and Transfer (BOT); Build, Operate Own (BOO), Management Contracts and Lease Operate Develop (LOD) contracts.** Power Purchase Agreements (PPA's) are the common form of PPPs in Rwanda and include design, build, finance, operate and maintain a new power plant, with power supplied in bulk by the private partner (PPP company) to a government-owned transmission company.

PPPs in Rwanda are anchored in a strong regulatory & institutional framework to ensure efficient and transparent processes. The PPP Steering Committee that oversees the functioning of PPP's is chaired and co-chaired by the Minister of Finance & the CEO of the Rwanda Development Board respectively.

*Figure 10: PPP Legal and Institutional Framework in Rwanda:*




Source: RDB

To date, the Government has signed 59 PPP contracts with a total project value of approximately USD 2,249 billion. Around 91.5 percent by both number and project value are in the energy sector, with the rest spread across water and sanitation, culture, tourism, and logistics. Based on the total number of projects, 64.4 percent are operational (26.2 percent by project value), 8.4 percent are under construction, and the rest are at various stages of negotiation. Table 6 below provides further details on PPPs by sector and status.

PPP projects in the energy and water and sanitation sectors are purchase agreements, where the government-owned public corporations [Energy Utility Corporation Ltd - EUCL & Water and Sanitation Corporation - WASAC] signed contracts with private partners to design, build, finance, operate and maintain a new power plant, and supply water and power in bulk. The other PPPs are Management Contracts and Design Build Finance Transfer (DBFT) in logistics.

*Table 6: Ongoing PPPs in Rwanda by sector and status*

| Ongoing PPPs | Number | Project Value (USD million) |
|---|---|---|
| **Energy Sector** | **54** | **2,102.686** |
| *Operational* | *27* | *422.2* |
| *Under construction* | *4* | *924.5* |
| *Under negotiation* | *23* | *735.9* |
| **Other Sectors** | **5** | **147.3** |
| *Operational* | *5* | *147.3* |
| *Under construction* | *0* | *0* |
| *Under negotiation* | *0* | *0* |
| **Total** | **59** | **2.249.9** |
| *Operational* | *32* | *589.5* |
| *Under construction* | *4* | *924.5* |
| *Under negotiation* | *23* | *735.9* |

*Source: RDB.*

*Notes: Project value is equal to the investment cost of the project, not the total value of the contract or the total public sector exposure.*

### *Identification and analysis of the fiscal impact of PPPs*

The fiscal impact of PPPs includes both "fiscal costs" and "fiscal risks" for the different government entities involved. In the case of Rwanda, where most of the projects are PPAs signed by public corporations which benefit from broad government support, the following fiscal costs and risks are identified;

### *Fiscal impact of PPPs and PPAs on central government budget*

In Rwanda the central government (i.e., government budget) is not the main counterpart of the PPAs contract, which are signed by public corporations. However, the central government supports these contracts in different ways, as summarized in Table 7.

*Table 7: Fiscal impact of PPPs and PCs for central government*

| Source of fiscal impact | Fiscal cost or risk | Magnitude of impact | Probability of occurrence |
|---|---|---|---|
| Capital grants to public corporations to cover part of the payment to the private partner | Fiscal costs | **Medium:** This is an expense for the budget. This mechanism has been used only in the water and sanitation project | **High:** This is a firm commitment by the central government |
| Explicit and implicit guarantees to public corporations. | Fiscal risk | **Medium:** payment guarantees are provided in case utility companies fail to fulfil their payment obligations | **Medium:** financial position of WASAC and REG were both deemed high risk based on the most recent health check assessment. |
| Providing direct project guarantees | Fiscal risk | **Low:** Do not exist in Rwanda | **Low:** Do not exist in Rwanda |

Based on the above analysis, the central government incurs fiscal costs in the form of capital grants paid to the water utility company (WASAC) to cover for the capital cost of the PPA contract. In addition, the main risk to central government is the payment guarantee, given that the financial health of the water utility company (WASAC) and the umbrella energy company REG were at high risk based on the 2020 health check assessment.

### *Fiscal impact of PPPs and PPAs on public corporations*

When public corporations sign PPAs, these contracts impact their financial performance (cash flows, as well as their net worth), and depending on the contract specificities, they are also exposed to various types of fiscal risks given that:

a) The water and power plants are strategic assets that have been commissioned by the public corporations (not developed by the private sector on their own behalf);
b) The legal ownership of the assets is expected to return to the public corporation at the end of the contract, and
c) Public corporations bear a significant portion of the risks.

It is expected according to international accounting standards, that these assets (water and power plants) would be recorded in the balance sheet of the public corporations (accrual accounting). Beyond how the assets are reflected in the public corporation balance sheet, they will record the total payments to the private partner as a cash outflow (in cash accounting). At the same time, the public corporations will sell water and energy to the users and receive cash inflows, which will depend on the tariffs and the demand for services. If regulated tariffs are not adjusted to fully cover costs, the balance sheet of the public corporations will be negatively impacted. On the other hand, if demand for water or energy does not materialize as expected, it would also negatively impact the public corporations balance sheet.

*Table 8: Fiscal impact of PPPs and PPAs for public corporations*

| Sources of fiscal impact | Fiscal cost or risk | Magnitude of impact | Probability of occurrence |
|---|---|---|---|
| Nonfinancial asset and equal liability in balance sheet on an accrual basis | Fiscal cost | **Medium:** Estimated by the construction value of the asset. Neutral in terms of net worth (asset=liability) | **High:** it is most likely that the asset should be regarded as a public asset (strategic asset) |
| Payments to the private partner (cash outflows) | Fiscal cost | **Medium:** payments to the private partner are significant for the public corporation. Yet, they are linked to performance. If the private partner does not deliver, the public corporation payments are reduced. | **High:** The public corporation has a firm commitment to pay |
| User charges for services (cash inflows) | Fiscal revenue | **High:** public corporations sell water and energy to users at regulated tariffs. Tariff are subsidized in the water sector, while in the | **Medium:** There are risks that regulated tariffs are not adjusted to fully cover costs. If they are set below cost |

| Sources of fiscal impact | Fiscal cost or risk | Magnitude of impact | Probability of occurrence |
|---|---|---|---|
| | | energy sector tariffs are expected to fully cover costs. | recovery, public corporations' revenues will not materialize. |
| Insufficient-demand-(demand is lower than water supply and/or energy generation) | Fiscal risk | **Medium:** Currently demand is assumed to be equal to supply, both in water and energy sector. If demand does not materialize the impact on public corporations' revenues could be significant. | **Medium:** Low probability in the water sector. But in the energy sector there might be excess supply once all power projects become operational [unless old plants are decommissioned gradually] |
| **Operational risks.** (Projects are delayed and/or services interrupted) | Fiscal risk | **Medium:** Delays and interruptions typically generate significant cost overruns that have a negative impact on public corporations **depending on the nature of the PPP contract** | **High:** Currently some energy projects provide less than expected energy to the grid due to various issues. |
| **Foreign exchange rate risks** (payments to private partner were negotiated in foreign currency) | Fiscal risk | **High:** devaluation of domestic currency would have a large impact on public corporations' balance sheet by increasing payments | **High:** Large nominal exchange rate fluctuations since project signing (e.g. some contracts are more than 5 years old) |

Source: RDB

Notes: The above table is a summary of risks based on a contract-by-contract assessment of the portfolio.

### *Estimation of fiscal impact for four selected projects*

A detailed assessment of Rwanda's four largest PPAs and Water Purchase Agreement projects was conducted using a simplified version of the PPP Fiscal Risk Assessment Model (PFRAM). These projects have a total asset value of $USD 621 million and account for approximately a third of the total PPP portfolio.[5]

### *Summary of the fiscal impact of the four largest projects*

Fiscal impact is calculated both in gross and net terms. The assessment is based on projects contract information, as well as feedback from public corporations.

[5] With assistance from IMF, a simplified version of the PPP Fiscal Risk Assessment Model (PFRAM) was developed to help the government in analysing and assessing the potential fiscal costs and risks arising from PPP projects. Going forward, all the remaining existing and new PPP's will be assessed through the PFRAM tool. https://infrastructuregovern.imf.org/content/PIMA/Home/PPPs-and-PFRAM.html

**Total gross exposure** represents total payments to the private partner over the whole contract period. In practice, the payments to the private partner are done by the public corporations or the central government if public corporations were to default on their payments (explicit guarantees). However, the funding of these projects is determined by the contract agreement and the tariff structure. The government can absorb part of the funding burden by supporting either the public corporation (i.e., grants) and/or the users (i.e., tariff subsidies). The public corporations can also partially fund the project with their work capital (i.e., use of cash, new loan). And ultimately, the users can fund part or the full project by buying the services sold by the public corporations at the market tariffs (i.e., water, electricity).

**Total net exposure** is calculated as total payments to the private partner (i.e., gross exposure) minus expected revenues of public corporations from selling services to users at market prices. Expected revenues are estimated assuming that all the water and energy generated by the 4 projects is demanded by the users, and that tariff are adjusted over time.

**Baseline fiscal costs** is calculated as the value of the firm commitment made by the central government to support public corporations to fund part of the project costs. This support will materialize as a central government expense (i.e., capital grant) that will be included in the government budget.

The estimation of total gross and net exposure, as well as baseline fiscal costs for the above 4 projects is presented in Table 9 below. Total gross exposure is estimated at USD 4.0 billion (19.3 percent of GDP) covering the whole contract period.[6] The funding composition over the PPAs period, comprises 4 percent of the costs, on average, borne by the GoR, 4 percent by the public corporations, and 92 percent borne by user tariffs. In turn, given the estimations of public corporations' revenues is based on demand and tariff projections, total net exposure is negative, meaning that public corporations would have an overall positive effect due to these contracts estimated at USD 1.2 billion (4.7 percent of GDP). Finally, the baseline fiscal cost for the central government is estimated at 1.0 percent of GDP.

*Table 9: Risk identification and analysis of the four main projects*

| Estimations | USDm | | FRW m | | % GDP | |
|---|---|---|---|---|---|---|
| | Total | NPV | Total | NPV | Total | NPV |
| **Total gross exposure** | **4,021** | **1,793** | **7,404,240** | **2,899,362** | **19.3** | **9.7** |
| Funding structure | 4,021 | 1,793 | 7,404,240 | 2,899,362 | 19.3 | 9.7 |
| Government payments | 146 | 75 | 208,132 | 94,312 | 1.0 | 0.6 |
| Public corporation payments | 153 | 73 | 230,868 | 98,795 | 0.9 | 0.5 |
| User tariffs | 3,721 | 1,644 | 6,965,240 | 2,795,255 | 17.4 | 8.6 |
| **Total net exposure** | **-1,200** | **-505** | **-2,058,277** | **-799,076** | **-4.7** | **-2.2** |
| **Baseline fiscal cost** | **146** | **75** | **208,132** | **94,312** | **1.0** | **0.6** |

Source: RDB

[6] PPAs contracts assessed cover the period 2011 to 2044.

Notes: Net present value is discounted at 5 percent.

### *Summary detailed risk assessment by projects*

The table below outlines the main sources of risk identified, their size and probability of occurrence

*Table 10: Risk identification and analysis of the four main projects*

| Sources of fiscal impact | Fiscal cost or risk | Magnitude | Probability of occurrence |
|---|---|---|---|
| **Water Project** | | | |
| Insufficient demand | Fiscal risk | **Medium:** If demand does not materialize, impact on WASAC financial health would be significant given that the project represents a significant portion of WASAC revenues | **Low:** Heavy demand in Kigali and population growth and This is the only water project in the City of Kigali |
| Default risk | Fiscal risk | **Medium:** Total payments for the whole contract period estimated at 1.2 percent of GDP | **Medium:** On lent repayments due from 2025 and existing revenue streams are insufficient to cover current or future repayments without reform. |
| Forex risk | Fiscal risk | **Medium:** A depreciation would increase WASAC payments | **Medium:** Project signed in 2015 and the exchange rate has depreciated since then |
| **Power generation projects** | | | |
| Demand risk | Fiscal risk | **Medium:** When all projects are completed there could be excess supply | **Medium:** New investments will add two thirds to energy capacity |
| Default risk | Fiscal risk | **Medium:** Financial health of REG is at high risk | **Medium** |
| Forex risk (Tariffs are set in USD and payments done in FRW at the prevailing exchange rate set by the Central Bank | Fiscal risk | **Medium:** Two energy projects are currently under operation | **Medium:** Continued depreciation of FRW likely |

Source: RDB

*Table 11:Pension contribution compared to Benefits*

| **Pension contributions Compared to benefits (millions)** | | | | | | |
|---|---|---|---|---|---|---|
| | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** |
| **Contributions** | 74,695 | 74,897 | 83,344 | 94,371 | 102,178 | 106,821 |
| **Benefits paid** | 15,992 | 18,155 | 21,537 | 27,594 | 30,468 | 35,248 |
| **Incremental Contribution compared to benefits payout (growth rates)** | | | | | | |
| | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Contributions** | 22.20% | 0.300% | 11.30% | 13.20% | 8.30% | 4.54% |
| **Benefits paid** | 5.90% | 13.50% | 18.60% | 28.10% | 10.40% | 15.69% |

*Source: RDB, RSSB*

However, it is noticeable that benefits payout is increasing more than contributions. This implies that the pension liability is also increasing.

## 5. Local Government

Local Government plays a significant role in providing essential social and economic services, and Government considers local financial management capacity when assessing fiscal risk. In recent years, financial management and reporting capacity at district Government level has improved. As of February 2023, 5,940 local Government entities have enrolled on Government's integrated financial management and information system (IFMIS) and Schools Data Management System (SDMS), up from 1,225 a year earlier, this represents coverage of 30 districts plus 1 City of Kigali, 416 district sectors, 46 district hospitals, 508 health centers to use IFMIS, with 4,939 schools using SDMS as a schools specialized component of IFMIS. 194 additional new school have been rollout out with SDMS in this FY 2022/2023.

Furthermore, there has been development of new models under IFMIS since April 2022 to include; Public debt module, Audit management module, Enhancement of the existing Fixed asset module in line with IPSAS, Digital signature, Enhancement of consolidation module and Performance Based Budgeting implementation and under SDMS including; Integration of the SDMS with Umwalimu SACCO core banking system, Capitation grant and School feeding request new process according to the new guidelines, Grading and Publication of National exams marks plus Placement modules for students pursuing National Examination and National Education statistic year book report automation. This system strengthening and presence of hands-on PFM Specialists at decentralized entities support in building decentralized entities financial management muscle.

**As the table below shows, the percentage of local Government budgets contributed by central Government stabilized at average of 78 percent in FY 2018/19, there after increasing on a stable rate of 86 percent in FY 2019/20, FY 2020/21 and 2021/22 respectively with a noticeable increase in to 90 percent in FY 2022/23**. Own-revenue generation capacity in local Government is expected to continue increasing with the implementation of the new law determining the source of revenue and property of decentralized entities, and introduction of Computer Assisted Mass Appraisal (CAMA) thereby reducing dependency on central government transfers to finance local government development projects. Nevertheless, local Government funding of development projects is still inadequate and highly dependent on Central Government transfers and external grants.

*Table 12: Trend of local Government budget composition[7]*

[7] From FY 2019/20 external grants have been merged with Transfers from Central Government.

| Designation | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 |
|---|---|---|---|---|---|
| District Own revenues (Taxes & Fees) | 64 | 74 | 87 | 88.5 | 90 |
| Transfers from CG | 391 | 450 | 546 | 559.5 | 774 |
| External Grants | 45 | 0 | 0 | 0 | 0 |
| **Total District Budget** | **500** | **524** | **633** | **648** | **864** |
| % 0f Own revenues to the LG Budget | 13 | 14 | 14 | 14 | 10 |
| % of CG Transfers to the Budget | 78 | 86 | 86 | 86 | 90 |
| % of External Grants to the LG Budget | 9 | 0 | 0 | 0 | 0 |

*Source: MINECOFIN*

## 6. Analysis of the Financial sector performance

The financial sector remains adequately capitalized and liquid. As at end December 2022, the banking sector aggregate Tier 1 CAR and total CAR stood at 20.9 percent and 21.7 percent respectively, higher than the prescribed minimum prudential requirements, and all banks continue to maintain capital buffers in excess of the minimum requirements. Regarding the capitalization of the microfinance sector, the aggregate CAR of MFIs stood at 34.5 percent, higher than the 15 percent minimum regulatory requirement. All categories of MFIs hold adequate capital buffers. The insurance sector remained solvent. Private insurer's solvency ratio stood at 221 percent as at end December 2022, compared to 142 percent in December 2021, driven by increased quality of assets due to changes in the investment mix of insurers.

On the other hand, the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR), the key liquidity indicators of banks, stood at 215.9 percent and 136.8 percent respectively against the 100 percent minimum requirements. Similarly, the industrywide liquidity ratio of MFIs stood at 90.9 percent higher than the 30 percent minimum prudential requirement. The stability of the liquidity conditions of MFIs has been supported by the growth of deposits, growth of capital, improved assets quality and profitability, consistent with the recovery of economic activities. And all categories of MFIs hold liquidity buffers above the regulatory requirement. In the insurance sector, liquidity improved to 98% from 94% due to increased investment in more liquid assets and an improvement in asset liquid composition

The impact of inflation on debt servicing has so far been moderate but vulnerabilities to credit risk remain. The outstanding Non-Performing Loans (NPLs) in banking sector dropped to FRW 127 billion in December 2022 from FRW 158 billion in December 2021, largely due to write offs of overdue loans (FRW 37.9 billion in 2022) and recoveries from non-performing loans. As result, the NPL ratio declined to 3.1 percent in December 2022, from 4.6 percent in December 2021. In the MFI sector, credit defaults remained moderate during the period under review. As at end December 2022, the stock of NPLs in microfinances amounted FRW 11.3 billion, the same amount as at end December 2021. Following an improved growth in outstanding loans, NPLs ratio declined to 3.5 percent as at end December 2022, down from 4.8 percent in December 2021.

*Table 13: Financial Soundness Indicators (Banking Sector) - In Percent*

| Indicators | Dec-18 | Dec-19 | Dec-20 | Dec-21 | Dec-22 |
|---|---|---|---|---|---|
| Total CAR (min 15 %) | 25.5 | 24.1 | 21.5 | 21.5 | 21.7 |
| Core Capital Tier 1 (min 12.5%) | 23.8 | 22.6 | 20.3 | 20.6 | 20.9 |
| NPLs Ratio | 6.4 | 4.9 | 4.5 | 4.6 | 3.1 |
| Provisions / NPLs | 68.2 | 81.5 | 106.3 | 119.8 | 141.9 |
| LCR (min 100%) | 299 | 215 | 254.7 | 268.9 | 215.9 |
| NSFR (min 100%) | 222 | 111 | 161.4 | 147.1 | 136.8 |
| FX Exposure/Core Capital (± 20%) | -5.6 | -4.8 | -4.4 | -3.7 | -0.6 |

**Source:** NBR, Financial Stability Directorate

*Table 14: Financial Soundness Indicators (Microfinance Sector) - In Percent*

| Indicators | Dec-18 | Dec-19 | Dec-20 | Dec-21 | Dec-22 |
|---|---|---|---|---|---|
| Total CAR (min 15 %) | 25.5 | 24.1 | 21.5 | 21.5 | 21.7 |
| Core Capital Tier 1 (min 12.5%) | 23.8 | 22.6 | 20.3 | 20.6 | 20.9 |
| NPLs Ratio | 6.4 | 4.9 | 4.5 | 4.6 | 3.1 |
| Provisions / NPLs | 68.2 | 81.5 | 106.3 | 119.8 | 141.9 |
| LCR (min 100%) | 299 | 215 | 254.7 | 268.9 | 215.9 |
| NSFR (min 100%) | 222 | 111 | 161.4 | 147.1 | 136.8 |
| FX Exposure/Core Capital (± 20%) | -5.6 | -4.8 | -4.4 | -3.7 | -0.6 |

**Source:** NBR, Financial Stability Directorate

*Table 1715: Financial Soundness Indictors (Insurance Sector) - In Percentage*

| Description (Ratios %) | Public Insurers | | Private Insurers | | Insurance sector | |
|---|---|---|---|---|---|---|
| | Dec 2021 | Dec-2022 | Dec 2021 | Dec 2022 | Dec 2021 | Dec2022 |
| Solvency margin (Min. 100%) | 2879% | 2379% | 142% | 221% | 1477% | 1375% |
| Claims ratio (max.60%) | 53% | 51% | 67% | 62% | 60% | 56% |
| Expenses ratio (max. 30%) | 14% | 12% | 37% | 38% | 25% | 24% |
| Combined ratio (max.90%) | 67% | 63% | 104% | 100% | 244% | 226% |
| ROE (Min.16%) | 16% | 15% | 19% | 13% | 16% | 14% |

| | | | | | | |
|---|---|---|---|---|---|---|
| ROA (Min.4%) | 16% | 14% | 6% | 5% | 16% | 14% |
| Current Ratio (min. 120%) | 3837% | 3711% | 85% | 94% | 244% | 226% |
| Liquidity ratio (min. 100%) | 4922% | 5238% | 94% | 98% | 299% | 286% |

**Source:** NBR, Financial Stability Directorate

Despite the war in Ukraine, high inflation, and lingering effects from Covid-19 that pose financial stability risks, the financial system has continued demonstrated resilience to these new shocks. projected economic prospects are favourable for the growth and stability of the financial sector. In medium term, the financial sector is expected to remain sound and stable. The capital and liquidity buffers held by the financial sector indicate the resilience and capacity of the sector to withstand shocks.

The continuing journey of aligning the regulatory framework with international standards has also been of paramount importance in prompting a stable, resilient and transparent sector. In view of this, the NBR will continue to revamp regulatory instruments to ensure they are up to date and comprehensively promote stability of the sector. In addition, through regular oversight of the financial sector.

## 7. Natural disasters

Rwanda is highly dependent on its diverse ecosystems to sustain its population and support economic growth. The country is prone to a variety of natural and man-made disasters mainly storms, landslides, and floods, and 55 percent of total land area is at risk of soil erosion. These disasters cause physical, socio-economic and environmental damages and losses. The major disasters that cause huge impacts in Rwanda include mainly hydro-meteorological disasters. However, Rwanda is also prone to hazard, exposure and vulnerability to volcanic eruption and seismic activities.

On average, five districts per year face serious natural disasters, but in 2016 and 2018 the spread and severity of floods and landslides rose well above average, with over 2 million people affected, and negative consequences for agriculture, trade, and industry.

Disasters invariably require significant emergency management and longer-term responses. By disrupting normal business activities, they can also reduce revenue collection. Tourism is the country's largest source of foreign exchange, and disaster pose particular risks to wildlife tourism.

The number of events classified as natural disasters increased in recent years killing 298 people in 2020, 116 in 2021 and 205 in 2022 while the number of people injured was 414 in 2020, 248 in 2021 and 401 in 2022. These events destroyed 8,098 houses in 2020; 4,808 houses in 2021; 4,156 in 2022 and damaged 4,662 Ha of crops in 2020; 3,802Ha of crops in 2021 and 1,917.74 Ha of crops in 2022. Moreover, in 2021; 2,043 livestock were smashed by heavy rainstorms and 201 in 2022 whereas 381 classrooms were damaged in 2021 and 323 in 2022.

Government scaled up its response for disaster management with a budget increasing from FRW 21.4 billion in FY 2016/17 to 63.5 billion in FY 2022/23.

*Table 16: Natural disasters in 2021 and 2022*

| 2021 Disasters effects | | | | | 2022 Disasters effects | | | |
|---|---|---|---|---|---|---|---|---|
| Disaster type | Deaths | Injured | Houses Damaged | Damages in crops Ha. | Deaths | Injured | Houses Damaged | Damages in crops Ha. |
| EARTHQUAKE | 1 | 2 | 1969 | 4 | 0 | 0 | 0 | 0 |
| FIRE | 3 | 8 | 117 | 0 | 1 | 10 | 251 | 101.3025 |
| FLOODS | 3 | 0 | 29 | 373 | 33 | 1 | 93 | 445.09 |
| HAILSTORM | 0 | 0 | 129 | 477.5 | 0 | 0 | 264 | 652.4 |
| HOUSE COLLAPSE | 0 | 0 | 1 | 0 | 5 | 12 | 21 | 0 |
| LANDSLIDES | 2 | 2 | 58 | 13 | 24 | 9 | 140 | 10.4 |
| LIGHTNING | 59 | 184 | 8 | 0 | 57 | 219 | 12 | 0 |
| MINE DISASTER | 3 | 2 | 1 | 2 | 71 | 46 | 0 | 0 |
| RAINSTORMS | 45 | 47 | 2247 | 2875.72 | 12 | 76 | 1572 | 564.95 |
| WILDFIRE | 0 | 0 | 5 | 4.57 | 0 | 0 | 0 | 3 |
| WINDSTORM | 0 | 3 | 244 | 52.5 | 2 | 28 | 1803 | 140.6 |
| **TOTAL** | **116** | **248** | **4808** | **3802.29** | **205** | **401** | **4156** | **1917.743** |

*Source: Ministry in charge of Emergency Management (MINEMA)*

*Table 17: Budget for natural disasters and 21/22 and 22/23*

| Bln Frw | 2016/17 | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 |
|---|---|---|---|---|---|---|---|
| Budget Commitments for Disaster management activities | 21.4 | 36 | 53.7 | 44.9 | 61.9 | 74.9 | 63.5 |

*Source: MINECOFIN*

# V. MITIGATION MEASURES

## a) Mitigation measures in case of a Macroeconomic shock

The macroeconomic shock described above may lead to public finance challenges. To maintain a good financial management, Government will continue to implement the rationalization policy which will affect mostly recurrent spending in the medium term. This will preserve the **fiscal deficit path** necessary to bring the **debt level** to 65 percent of GDP by 2030.

On **inflation shock**, the GoR stands ready to use monetary policy instruments and other measures to address inflation pressures.

## b) Mitigation/Adaption measures for climate change fiscal risks

Rwanda remains steadfastly committed to the Paris Agreement and has dedicated the resources required to achieve substantial emissions reductions. To support this, the government has committed to mitigation measures as indicated below. To reduce vulnerability to the impacts of climate change, several adaptation measures are also being implemented as highlighted below.

**Mitigation Measures**

- Increased use of renewables
- Climate compatible mining
- Improved livestock husbandry
- Energy efficiency in agro-processing
- Off-grid and rooftop solar electrification
- Soil and water conservation
- Promotion of electric vehicles and public transport infrastructure
- Promotion of on-farm biogas for energy

*Figure 10-12: **Mitigation measures under Rwanda's NDCs (RoR, 2020b).***

**Adaptation Measures**

- Integrated Water Resources planning and management
- Diversity in local and export agricultural markets
- Sustainable forestry, agroforestry & biomass energy
- Institutional capacity development
- Vector-based disease prevention
- Climate sensitive integrated land use planning and spatial planning
- Disaster preparedness and emergency response
- Climate data and projections for EWS

*Figure 10-13: **Adaptation measures under Rwanda's NDCs (RoR, 2020b)***

### c) Government mitigation measures for SOEs

*Table 18: Government mitigation measures for SOEs*

| Source of Risk | Likelihood of occurrence | Mitigation/policy measure |
|---|---|---|
| | | |
| **Poor performance:** high operational costs and Loan servicing costs | **Medium:** inherent risk associated to business management | - enforce regular accounting and financial reporting to enhance performance monitoring.<br>- Regular undertaking a stress test to establish the reason behind poor performance<br>- Ensuring appointment of right persons for SOEs directors and management<br>- Solving subsidy related issues |
| **Gearing:** Equity finance is low compared to high debt finance | **High:** enterprises financing that does not reflect their capital requirement and expansion/Growth plan**.** | - Sustainable funding strategy of SOEs<br>- Viable business and strategic plan |
| **Poor working capital:** Lack of short term resources for day-to-day operations | **High** | - Ensuring availability of adequate working capital at every stage of growth<br>- Consistency capacity building of SOEs Boards and management to enhance management operational efficiency |

| Source of Risk | Likelihood of occurrence | Mitigation/policy measure |
|---|---|---|
| **Uncompensated quasi fiscal operations**: The need to comply with Government policy requirement for WASAC and REG to provide Water and electricity based on set tariffs put the companies at risk. | **High**: Grants and subsidies not likely to fully compensate the costs incurred by the enterprises | GoR, REG and WASAC to undertake a full review of the quasi fiscal operations and ensure that non-commercial activities are being sufficiently compensated for. |

**Source: MININVEST**

### d) Management of public debt related risks

Rwanda is actively addressing its debt risks and has taken several key measures to mitigate them. This is reflected in the decrease of total debt as a percentage of GDP, which can be largely attributed to higher nominal GDP and the repayment of the last portion of Eurobond. Looking ahead, Rwanda aims to further reduce its debt to GDP ratio to 65% by 2031 through a spending rationalization plan and a domestic revenue mobilization strategy. The government will continue to prioritize public spending to support inclusive economic growth while maximizing concessional financing opportunities.

Rwanda will take proactive steps to mitigate refinancing risk. Making longer-tenure T-bonds more widely available in the domestic market while replacing short-term debt, will help lower refinancing risk while also contributing to the development of the domestic capital market. Regarding the cost of debt, concessional loans will continue to constitute a large share of Rwanda's debt portfolio.

Furthermore, Rwanda has reduced its reliance on external debt, as shown by the decline in forex debt as a share of total debt compared to the previous year. This highlights the country's efforts to diversify funding sources and manage external debt risks effectively.

### e) Management of Government guarantees

On July 30$^{th}$, 2022, the Ministry of Public Investment and Privatization was established in order to strengthen the oversight, management, and governance of SOEs. Most importantly, the Ministry will evaluate new public investments, financial viability and governance of SOEs, and review the existing legal framework. MININVEST will also coordinate closely with MINECOFIN, especially with respect to the quantification and management of fiscal risks from SOEs.

### f) Mitigation measures of PPP Risks

*Table 19: PPPs Risk mitigation measures*

| Description of risk | Mitigation measure |
|---|---|
| **Demand risk:** that the increased in supply will not be met by commensurate demand | • Increase demand for energy intensive industries. The government is currently focusing in its investment attraction policy on large manufacturing industries to increase the demand for energy consumption<br>• The government is exploring options to export energy to the DRC and other neighbouring countries |
| **Financing risk:** repayment risks from the | • Ensure prudent corporate and governance structures for public corporations |

| | |
|---|---|
| public corporations to private providers | • Reduce losses through targeted interventions e.g., operational losses in WASAC<br>• The government is in the process of exploring ways to refinance some of the big energy projects to reduce the fiscal costs to the public corporations and future pass-through costs to consumers that will in turn boost the demand<br>• Have mechanisms in our PPA's to ensure that cost overruns due to change in price do not affect the contract performance<br>• Compensation of Force Majeure (FM) handled through extension of time delays and in case of prolonged FM, contract handled through termination process |
| **Forex risk:** increased repayments for energy and water produced resulting from exchange rate volatility | • Through the National Export Strategy, the government's major objective is to increase exports which will reduce the trade deficit and ultimately reduce local currency devaluation.<br>• Maintain a prudent monetary policy and consider setting up contingency reserve funds for forex risks arising from PPP projects. |

Source: RDB

#### g) Management of pension liabilities

The Rwanda Social Security Board (RSSB) is aware of the pensions liabilities that are arising and will continue to monitor the trend of the contributions and benefits paid.  In this regards, the RSSB will be prepared to face the payment of any liability that may occur in due time.

#### h) Management of local Government risks

Government will continue strengthening PFM management systems, support local Government through capacity building initiatives and target to increase its own source revenue generation thorough implementation of the new law determining the sources of revenue and property of decentralized entities.

#### i) NBR mitigation measures for the financial sector

The NBR will continue ensuring that financial institutions hold enough capital and sufficient liquidity to meet financial obligations, and will also continue to monitor the implication of the global banking distress on the domestic financial institutions, and stands ready to take appropriate measures to contain risks that may arise.

#### j) Mitigation measures for natural disasters

As natural disasters remain one of the major sources of fiscal risks, the Government's disaster risk financing has led to the formulation of recovery needs estimates that intends to address the four levels of disaster risk financing namely agriculture, housing, infrastructure and environment as well as strengthen disaster preparedness and management. Building on lessons learnt over the past several years, the Government has shifted to a more proactive approach. The country has strengthened the institutional, legal and coordination framework for disaster risk management.

# VI. CONCLUSION

Rwanda's fourth Fiscal Risk Statement (FRS) outlines a range of risks. In the current Ukraine-Russia war and inflation situation, the **Government assesses the general level of fiscal risk as manageable**, and has put in place mitigation measures across a range of risks.

The Government is aware of the current crises above mentioned. However, due to uncertainties, which are mostly external and beyond control, risks remain on the magnitude of the general economic impact. **Government will continue to monitor and control regularly the fiscal impact to mitigate the fiscal risks.**

**End.**