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SELECTED ISSUES

January 2025

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SOUTH AFRICA

SELECTED ISSUES

January 7, 2025

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GROWTH BENEFITS OF MACRO-STRUCTURAL REFORMS IN SOUTH AFRICA[1]

South Africa's economic growth has stagnated over the past decade due to entrenched structural rigidities. This paper examines the impact of reforms addressing shortcomings in governance, business regulation, and labor market on output and employment. The analysis quantifies the potential economic gains from narrowing structural gaps in these three areas relative to peer countries. Reforms in governance and business regulation are found to boost medium-term output by up to 9 percent. Complementary labor market reforms could further bolster these gains and enhance employment. These findings emphasize the importance of a well-prioritized reform agenda to unlock South Africa's growth potential and generate broad-based improvements in living standards.

A. Introduction

1. South Africa has been stuck in a low growth trap for more than a decade, reflecting deep-rooted structural rigidities and an inability of policymakers to address them. In the first decade following the end of Apartheid, the economy performed well, with an average annual growth rate of 3.6 percent during 1994-2007. However, growth gradually fell to an average of 1.1 percent in the subsequent years (2008-2023), marked by recurrent infrastructure breakdowns, eroded state capacity, and declining private investment. By 2023, real income per capita had fallen to its 2007 level, with an erosion of living standards for average South Africans. More recent episodes of electricity power shortages and transportation disruptions have further exacerbated the situation, placing South Africa among the emerging markets (EMs) with lowest growth in 2023.

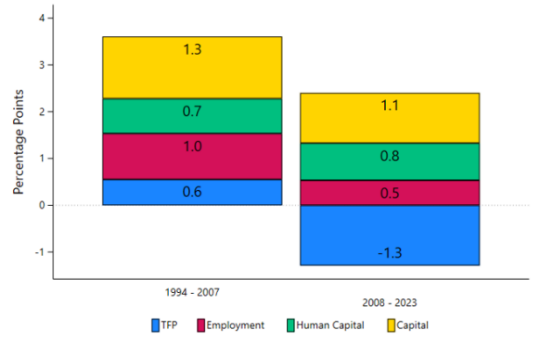
2. The weak growth performance since 2008 reflects a sharp decline in total factor productivity (TFP) growth (Figure 1). Our growth accounting analysis[2] shows that the biggest contributor to the growth slowdown between 2008 and 2023 relative to the 1994-2007 period, was total factor productivity (TFP) growth, which subtracted 1.3 percentage points from overall growth. It has been often argued that this reflects high levels of bureaucracy, red tape, governance deficiencies and corruption during the "state capture" era (2009-2018), and inefficient state-owned enterprises operating in key sectors of the economy. Despite robust population growth, job creation failed to keep pace, with the contribution of employment to growth estimated at around 0.5 percentage points (some 0.5 ppt lower than in the pre-GFC period). Capital accumulation contributed some 1.1 percent to growth (lower by 0.2 ppt relative to the 1994-2007 period).

[1] Prepared by Andrea Medici (RES), Elmer Li (RES), Marina Tavares (RES), Taehoon Kim (AFR) and Alexis Meyer Cirkel (AFR).

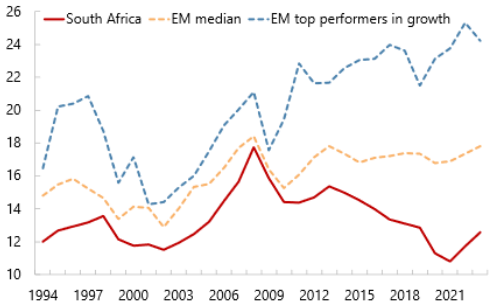
[2] See Annex IV of South Africa's Staff Report for the 2024 Article IV Consultation. OECD Economic Survey: South Africa (2022) presents comparable estimates of TFP growth over 2000–19.

Figure 1. Growth Accounting and Investment Dynamics

Growth Decomposition



Private Investment (Share of GDP)



Source: WEO.

Source: IMF Staff.

3. This paper assesses the structural impediments to growth in South Africa and estimate the potential growth impact of reforms to address them. We employ an econometric framework adapted from Budina et al. (2023)[3]. The cross-sectional data allows us to compare South Africa's performance along several structural dimensions with that of other emerging and developed economies. By correlating improvements in key structural indicators with growth outcomes in our sample of countries, the potential growth benefits of reforms are derived. The cross-country results are then used to estimate the potential impact on South Africa's economic growth if it were to implement reforms that would bring it closer to best practices.

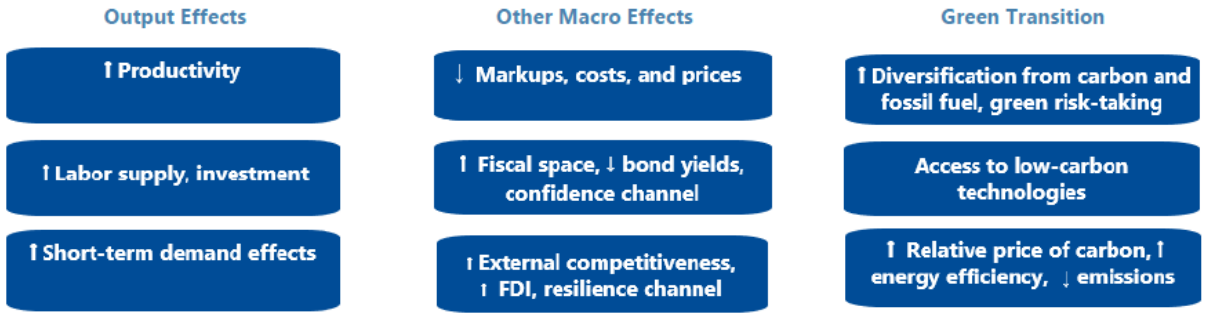
4. The remainder of the paper is organized as follows. Section B provides an overview of the dataset and methodology. Sections C, D and E discuss key impediments to growth in three key structural areas--governance, business environment, and labor markets--and derive estimated output and employment gains from undertaking reforms in these areas aimed at closing South Africa's gap relative to peers. Section F concludes.

B. Estimating the Impact of Structural Reforms on Output

5. Structural reforms can affect economic growth through multiple channels. Structural reforms can enhance productivity and investment by promoting competition and efficient resource allocation. These "output channels" enable greater labor and capital efficiency and support aggregate demand, which are particularly impactful in emerging markets with structural gaps and subdued growth. Some reforms provide a conducive environment to consumer welfare, fiscal stability and external competitiveness by impacting key macroeconomic variables, such as prices, markups, risk premium and the cost and composition of external financing. Additionally, macrostructural reforms also play a role in the green transition, which enables a shift toward low-carbon sectors through improved governance, regulatory adjustments, and trade reforms (Figure 2).

[3] "Structural Reforms to Accelerate Growth, Ease Policy Trade-offs, and Support the Green Transition in Emerging Market and Developing Economies," IMF Staff Discussion Note, Budina et al (2023).

Figure 2. Selected Transmission Channels of Macrostructural Reforms



Source: IMF Staff.

6. The analysis relies on a cross-country database of structural reform indicators across various macro-structural reform areas. The data covers a sample of 108 emerging markets and developing countries from 2000 to 2021. The reform indexes are sourced from the Fraser Institute and the World Bank's, Worldwide Governance Indicators database. These indicators are categorized into five areas: governance, business regulation, the external sector, credit market regulation, and labor market regulation (Figure 3, 4). The first three areas focus on macroeconomic stability and market-friendly conditions and are referred to as first-generation reforms, as they represent the initial phase of economic reforms for developing or transitioning economies. The last two areas, known as second-generation reforms, aim to address deeper, more structural aspects of the economy, essential for long-term sustainable growth and development.

7. The data indicate that South Africa lags its peers in most aspects of structural reform, particularly in governance, business environment, and labor market regulation. Figure 3 illustrates that South Africa's performance in all five areas remains well below that of both global and emerging market leaders, highlighting persistent challenges with regulatory frameworks and institutional quality. The shortcomings in governance, business regulation, and labor market efficiency are especially pronounced, and will constitute the focus on the remaining analysis.

8. To assess the potential impact of structural reforms on output, we use the local projection method in a panel data setting: For governance and business environment reforms the following regression specification is used:

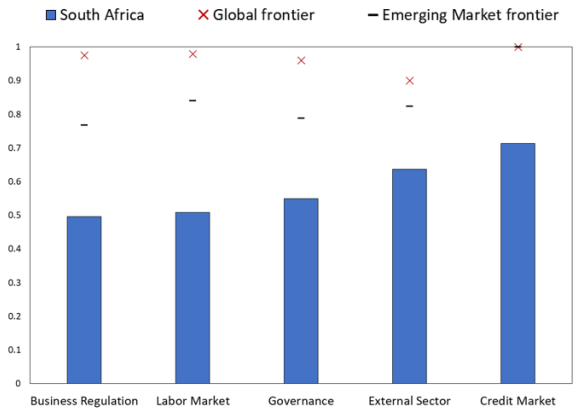
$$y_{i,t+k} - y_{i,t-1} = \alpha_i + \lambda_t + \beta_k \Delta GV_{i,t} + \rho_k \Delta BR_{it} + \gamma(\Delta BR_{it} \times I_{it}) + \theta X'_{i,t} + \epsilon_{i,t}$$

where $y_{i,t+k}$ is the log of real GDP (PPP) for country i in year $t+k$, α_i and λ_t denote the country and year fixed effects, which help control for unobservable cross-country heterogeneity as well as common global factors, $\Delta GV_{i,t}$ is the change in the average structural reform score[4] indicator for country i in governance between t and $t-1$, ΔBR_{it} is the change in the average structural reform indicator in business environment and $X'_{i,t}$ is the set of time-varying controls, including lags of the

[4] Each reform area includes multiple sub-indicators, with 1 representing the highest score.

dependent variable, past economic growth, and past reforms.[5] For additional robustness, $X'_{i,t}$ also controls for simultaneous and past reforms in other areas, such as external sector, credit market, and labor market, which could affect the estimated output response. I_{it} denotes a dummy variable to indicate if the country's informal sector is larger than the sample median. Its coefficient, γ captures the difference in effect when implementing the business regulation reforms in a high-informality environment versus a low-informality case.

Figure 3. Distance to the Frontier of Structural Indicators 1/



Sources: Fraser Institute, World Bank's Worldwide Governance. Indicators, and IMF Staff calculations.

1/ Structural indicators range between 0 and 1, where higher values imply more flexible regulation (business regulation, labor, and credit market), higher perceived quality of institutions (governance), and fewer barriers to international trade and capital flows (external sector).

Figure 4. Structural Reform Indicators

Source: Budina et al. 2023.

9. As a first step, the coefficients, β_k and ρ_k, which represent the reform multipliers, are estimated using a sub-sample of countries whose structural gaps were similar to South Arica. Specifically, these coefficients are calculated separately for three sub-samples of countries, the first, second, and third terciles, categorized by their level of progress in the first-generation reforms. For this analysis, the estimated reform multipliers for South Africa are obtained whose average first-generation reform scores are in the second tercile where South Africa belongs. In a second step, the structural gaps between South Africa and the leading emerging market performer, $GV_{Frontier,t} - GV_{ZAF,t}$ and $BR_{Frontier,t} - BR_{ZAF,t}$, are multiplied to the estimated multipliers for each year to derive the muti-year impact on the level of real output. A similar methodology is used for labor market reforms, where the regression specification is:

$$y_{i,t+k} - y_{i,t-1} = \alpha_i + \lambda_t + \beta_k \Delta LR_{i,t} + \theta X'_{i,t} + \epsilon_{i,t}$$

[5] Our specification does not control for qualitative measures such as the quality of investment.

where $y_{i,t+k}$ now represents the log of total employment for country i in year $t+k$, and $\Delta LR_{i,t}$represents the change in the average labor market score indicators, with other factors as explained above. The following sections will discuss the impact on South Africa' real output of closing the structural gaps relative to peers in these three areas.

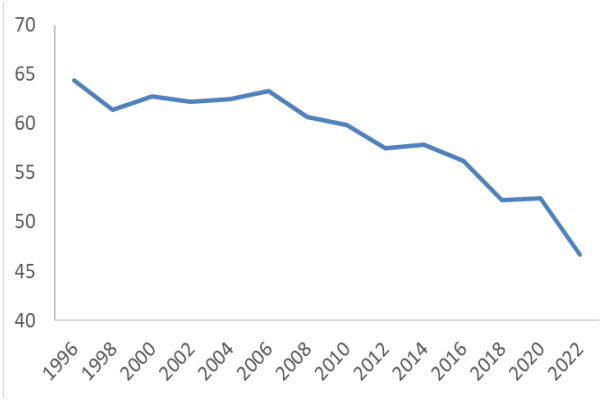
C. First-Generation Reforms: Governance

State of Affairs & Key Identified Impediments

10. Good governance is a foundational element for economic development. It safeguards the rule of law, protecting citizens' rights and fostering trust in institutions. It promotes accountability and transparency in public administration, and quality in governance reduces corruption and enhances citizen confidence. Additionally, effective governance is essential for efficient public service delivery, improving access to vital services such as healthcare and education. Finally, it plays a significant role in promoting social equity, ensuring that all individuals have equal access to opportunities and resources.

11. South Africa's governance has deteriorated markedly over past two decades (Figure 5). According to the World Bank's Worldwide Governance Indicators, while South Africa stood at the 76th highest percentile of countries on corruption control in 1996, it has fallen to around the 45th percentile by 2022. The post-2008 period saw a particularly sharp decline. Deteriorating governance has also been reflected in the worsening performance of the electricity sector over the last 15 years (Hausmann et al 2023), once a source of comparative advantage through cheap and reliable power. Corruption, loss of talent at Eskom (the state-owned electricity company), and declining productivity contributed to this decline. Deeper causes include political gridlock, opposition to private sector participation, overburdening through preferential procurement rules, and state capture. The crisis culminated in 2023, with massive disruptions to electricity capacity, which severely affected activity.[6]

Figure 5. South Africa's Rank Deterioration in Worldwide Governance Indicators
(In percentile rank)



Source: World Bank - The Worldwide Governance Indicators.
Note: Indicator is the simple average of the percentile rank of the six indicators. Percentile rank among all countries (ranges from 0 (lowest) to 100 (highest) rank).

12. Surging crime rates also reflect weakening governance structures. Economically motivated crimes, particularly violent offenses such as homicides, are alarmingly high. According to

[6] The South African Reserve Bank estimates the impact of loadshedding at between -0.7 and. -3.2 percentage points of GDP growth. See "Reflections on load-shedding and potential GDP," SARB Occasional Bulletin of Economic Notes (2023).

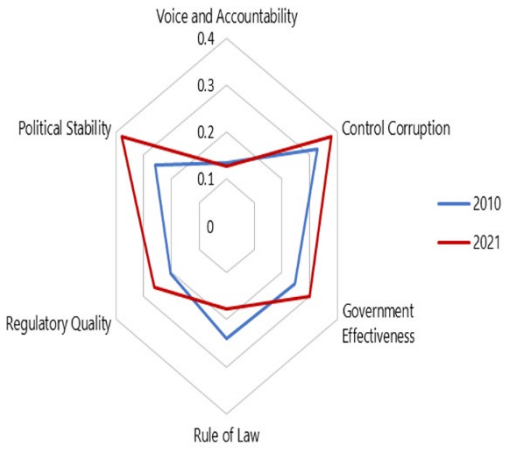
the World Bank (2023), the total economic cost of crime can be considerable, encompassing direct losses, protection expenses, and opportunity costs – with an estimated total cost to the economy of about ten percent. Different sectors of society experience these effects unevenly. Businesses incur significant annual costs due to losses and security measures (2.9 percent), undermining competitiveness and growth potential. Households, particularly in urban areas, face substantial expenses (1.3 percent), exacerbating inequality, as poorer families have limited access to protection. While direct costs to state-owned enterprises are notable, the indirect economic impacts from service disruptions are likely even greater.

Potential Gains from Governance Reforms

13. South Africa exhibits a significant gap relative to the good governance frontier. Figure 6 plots South Africa's distance to the Emerging Market frontier along six key dimensions (derived from the World Bank's Worldwide Governance Indicator's, WGI), whereby a larger number implies a bigger gap to the frontier. The blue line marks the outcomes in 2010, while the red line shows the outcomes in 2021. Four indicators stand out, where South Africa's gap to the frontier is the largest and has deteriorated since 2010: Political Stability (which measures the likelihood of political instability and/or politically motivated violence, including terrorism), Control of Corruption (which reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand corruption), Government Effectiveness (which assesses the quality of public services, the capacity of the civil service, and its independence from political pressures), and Regulatory Quality (which captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development—this latter indicator includes elements of regulatory environment that in part overlap with business environment indicators discussed in the next section).

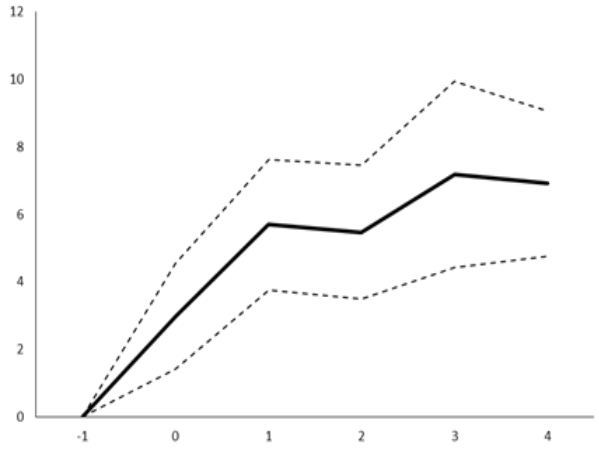
14. Closure of the gap can generate a very significant and positive impact on output. Applying the methodological framework detailed in the previous section allows us to estimate the gains from closing South Africa's gap to the governance frontier (where a single governance indicator is computed as the simple average of the six above-mentioned components). As Figure 7 shows, halving the gap to the EM frontier is estimated to lead to an increase in real output by up to 5 percent in two years and 7 percent in the medium term compared to a no-reform scenario. This would imply that adopting ambitious governance reforms in South Africa, particularly to improve government effectiveness, regulatory quality, and control of corruption, where the gap to the frontier is the largest, could boost average medium-term real growth by up to 1.4 percentage points per year.

Figure 6. South Africa's Distance to Good Governance Frontier



Source: IMF staff calculations.
Note: For a given year, structural gaps are calculated as the difference in the underlying structural index between the frontier and South Africa. Structural gaps range between 0 and 1, where a lower value implies the country is closer to the frontier, and vice versa.

Figure 7. Gain from Moving Closer to Good Governance Frontier



Source: IMF staff calculations.
Note: t = 0 is the year of the shock. The bars denote the response to an improvement in the underlying indicator which would see South Africa close half of the structural gap to EM frontier. The plotted bands denote 90 percent confidence intervals.

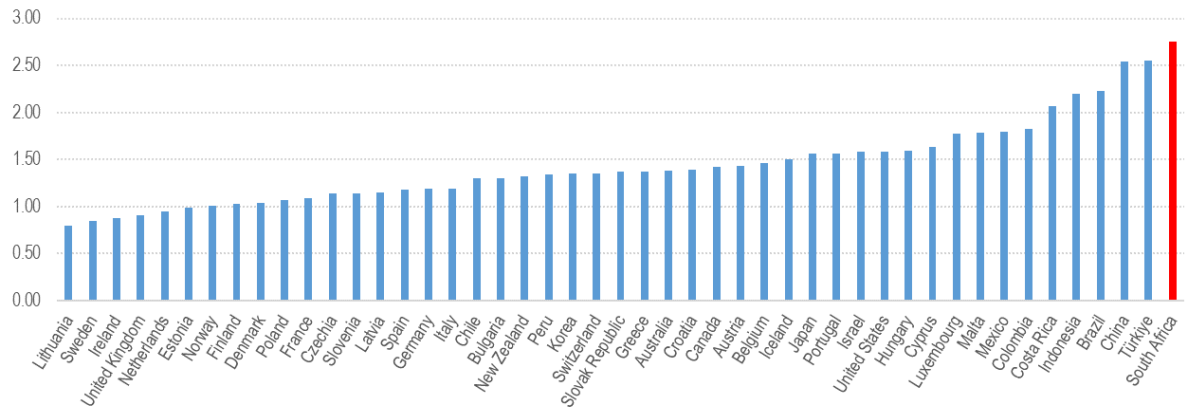
D. First-Generation Reforms: Business Regulation

State of Affairs & Key Identified Impediments

15. Appropriately designed business regulation is essential for the well-functioning of an economy. Business regulation is crucial for ensuring fair competition, protecting consumers, and maintaining industry standards, which can ultimately foster economic stability and public trust. However, excessive, or poorly designed regulations can pose significant risks, such as stifling innovation, increasing compliance costs, and burdening small and medium enterprises (SMEs) disproportionately, potentially leading to reduced economic growth and job creation. Striking a balance between necessary oversight and enabling a thriving business environment is essential for a healthy economy.

16. South Africa stands out as having the most restrictive business environment across all OECD countries (Figure 8). The OECD Indicators of Product Market Regulation (PMR) are a comprehensive, internationally comparable set of indicators that assess how policies promote or hinder competition in viable product market areas. South Africa tops the list of countries according to the OECD's PMR composite indicator. Underpinning this weak performance relative to OECD peers are: (i) burdensome government regulations and administrative procedures that impose costs and complexities on businesses; (ii) high regulatory obstacles that impede competition and market entry in service and network industries; and (iii) ineffective processes to measure the outcomes of regulatory measures and make informed decisions regarding future regulations.

Figure 8. OECD Product Market Regulation–Overall Indicator for 2023



Source: OECD. Note: The PMR are comprehensive and internationally comparable set of indicators that measure the degree to which policies promote or inhibit competition in areas of the product market where competition is viable. They measure the economy-wide regulatory and market environments in OECD economies and key non-OECD economies.

17. Indeed, bureaucracy costs are estimated to be substantial in South Africa. The ILO (Christensen et al. 2016) conducted a study on administrative barriers and regulatory costs for small and medium enterprises (SMEs) in South Africa focusing on two municipalities in the Free State province. The study surveyed 414 SMEs to assess their views on regulations, compliance costs, and suggestions for improvement. The estimated total compliance cost for all businesses in the Free State is 2.7 percent of the province's annual GDP. This estimate should be interpreted with care, given that it is based on a small number of businesses. Still, it is much larger than reported estimated regulatory costs relative to GDP in other countries, such as Finland (1 percent), Iceland (1.3 percent), and in Belgium (1.8 percent).

Potential Gains from Business Regulation Reforms

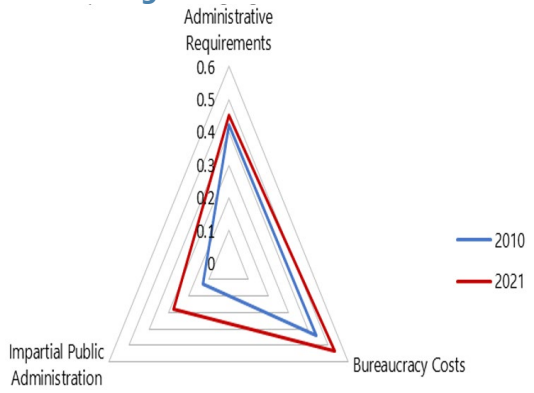
18. South Africa also exhibits a significant gap to the business regulation frontier. Figure 9 plots South Africa's distance to the Emerging Market frontier along three dimensions derived from the Fraser Institute's Economic Freedom of the World database.[7] The data indicates that South Africa's gap is particularly large and has widened since 2010 on two fronts: Bureaucratic Costs, and Administrative Requirements. The "Bureaucracy Costs" indicator captures the extent to which bureaucratic processes and regulations impose costs on individuals and businesses. The "Administrative Requirements" indicator assesses the extent and complexity of administrative processes that businesses must navigate to comply with government regulations. This indicator is essential for understanding how regulatory frameworks can either facilitate or hinder economic activity and entrepreneurship. Finally, the "Impartial Public Administration" indicator measures the extent to which government institutions operate fairly, transparently, and without bias in their dealings with individuals and businesses (to some extent, this indicator captures broader aspects of governance). While the gap on Impartial Public Administration is relatively less pronounced than for

[7] The OECD includes detailed sub-indicators for product market regulations for South Africa. We use Fraser Institute data for its broader coverage of developing countries.

the other two dimensions, the worsening of performance since 2010 is notable (and in line with the observation of deteriorating governance discussed in the previous section).

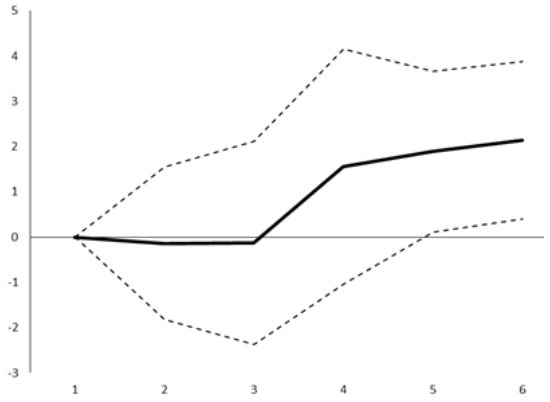
19. Closing the gap to the frontier could generate material output gains. Reforms aiming to close 50 percent of South Africa's gap relative to the EM frontier on business regulations can boost real output by around 2 percent in the medium run relative to a no-reform scenario (Figure 10). These results are conditioned on a low level of informality, as is the case in South Africa (see next section). In contrast to governance reforms, which can be impactful in the near term (possibly due to announcement effects and improvements in trust, which can bolster broader confidence in the government and its reform efforts, as noted above) business regulation reforms require more time for output gains to materialize. This is likely because companies can only gradually internalize the regulatory changes and modify their investment decisions. While the medium-term gains from these reforms appear relatively lower than for governance reforms, as noted above, there are overlaps between the two sets of indicators, making it difficult to fully disentangle their separate impacts (see para 19 below).

Figure 9. South Africa's Distance to Business Regulation Frontier



Sources: World Bank and IMF staff.
Note: For a given year, structural gaps are calculated as the difference in the underlying structural index between the frontier and South Africa. Structural gaps range between 0 and 1, where a lower value implies the country is closer to the frontier, and vice versa.

Figure 10. Output Gains from Business Regulation Reform



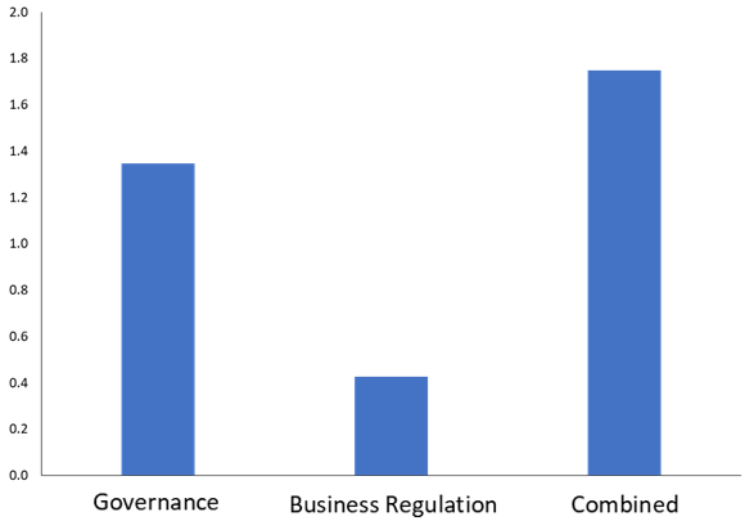
Sources: Fraser Institute; and IMF staff.
Note: t = 0 is the year of the shock. The bars denote the response to an improvement in the underlying indicator which would see South Africa close half of the structural gap to EM frontier. The plotted bands denote 90 percent confidence intervals.

20. A package comprising both business regulation and governance reforms can boost real output by up to 9 percent in the medium term (Figure 11). When combining these reforms, the impact on output demonstrates their complementarity. Indeed, governance reforms have been shown to be essential for fostering public trust in institutions, which is vital for achieving social support for broader structural reforms, thus bolstering their impact.[8] In the first two years, governance reforms could lift output by 5–7 percent, while in the following years, the combined

[8] Also see Annex III of the 2024 Article IV for South Africa and Chapter 3 of the October 2024 IMF World Economic Outlook.

effects of business regulation reforms and continuing governance improvements further add to output. In all, such a reform package could boost South Africa's average yearly growth by up to 1.8 percentage points relative to a no-reform scenario.

Figure 11. Impact of Closing Structural Gaps on Output
(Average yearly p.p. change from closing governance and business regulation gaps to EM frontier by 50% relative to a no-reform scenario)



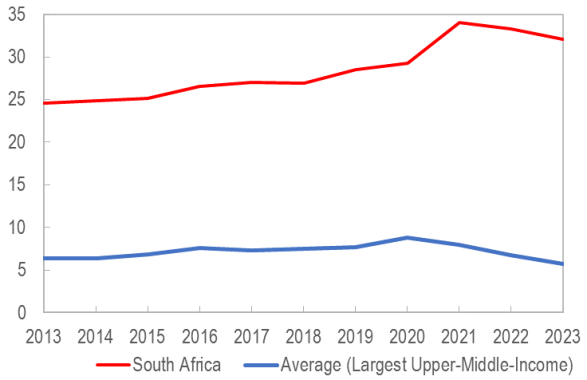
Sources: Fraser Institute, World Bank's Worldwide Governance Indicators, and IMF staff calculations.
Note: The bar charts represent the cumulative impacts on output over a five-year period from governance and business regulation reforms, converted to an average yearly growth rate. It is important to note that these gains are only materialized over the specified horizon of five years and should not be regarded as permanent.

E. Second-Generation Reforms: Labor Market

State of Affairs & Key Identified Impediments

21. South Africa has one of the highest unemployment rates in the world. At close to 34 percent in 2024, South Africa's unemployment rate is second in the world only to Eswatini's, and close to six times as high as the average for the largest upper-middle income countries (Figure12). Moreover, its youth unemployment stands at a staggering 60 percent. Only about 40 percent of the active labor force is in employment, significantly lower than in peers (Figure 13). The overall employment rate makes large differences across geographical lines and racial groups (Figure 14). The employment rate of rural formal homelands is less than half of those in the other region. And the unemployment rate of the black/African population is about four times as high as for whites. Finally, South Africa exhibits relatively lower informal employment opportunities than other EMs, such as Mexico, for example (Figure 15).

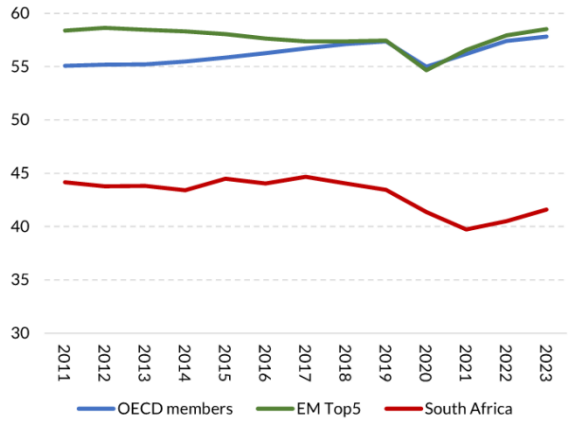
Figure 12. Unemployment 1/
(% of total labor force)



Source: World Bank

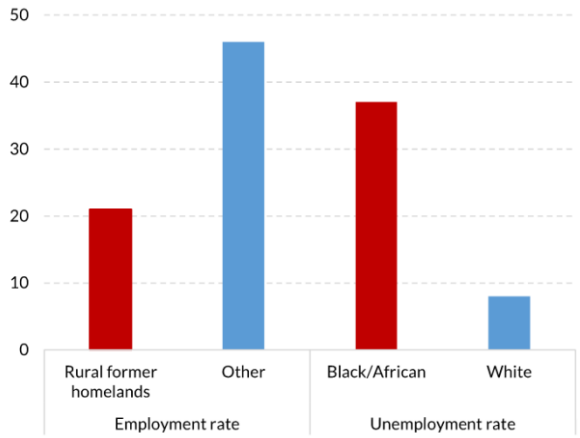
1/ The comparator group refers to the nine most populous Upper-Middle-Income countries (ARG, BRA, CHN, COL, IDN, IRN, MEX, THA, TUR), following the World bank definition.

Figure 13. Employment
(% of labor force)



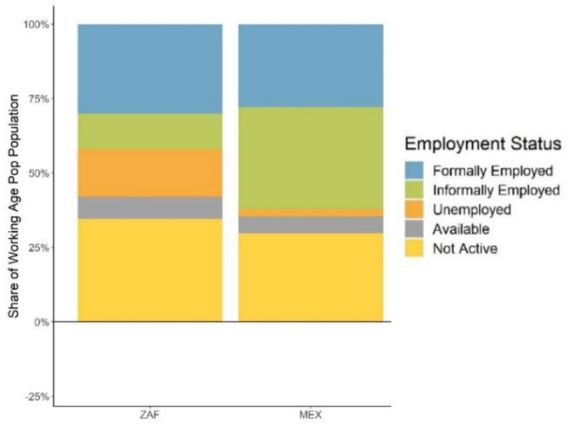
Source: World Bank Development Indicator, ILO Stat, EM Top5 includes China, India, Brazil, Mexico, Russia.

Figure 14. Exclusion Structures



Sources: World Bank Development Indicator, ILO Stat, South Africa OLFS, Shah (2022).

Figure 15. South Africa and Mexico

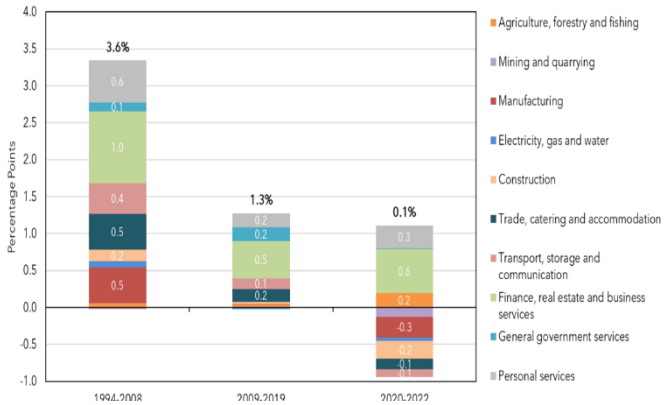


Source: Shah (2022).

22. South Africa is undergoing structural change, with a decline in manufacturing, utilities, and mining jobs, and there is insufficient growth in the service sector to absorb the displaced workforce. The country has experienced declining growth in key sectors, with the economic slowdown driven primarily by declines in utilities, manufacturing, and mining (Figure 16). The weakening of mining began before 2008, despite global commodity prices remaining strong for several years after. Manufacturing has been particularly affected, shedding jobs since 2008 at a pace

well beyond what global trends of "premature deindustrialization" can explain. This exceptional deindustrialization is traced to key supply-side constraints, especially the intensifying electricity crisis, and high reliance on declining domestic demand. With core sectors of the economy failing to generate jobs, the few jobs that were created tended to be concentrated in three main areas: (i) security services, (ii) household services, and (iii) publicly funded community services. However, South Africa lags in key service sectors that are more effective at generating employment, such as hospitality and retail trade, which may be hindered by high levels of spatial exclusion and crime.[9] Public work programs have created some temporary, lower quality job opportunities. This shift indicates that job creation has moved away from productive, core economic sectors towards service-oriented and publicly supported employment. This pattern suggests a lack of robust job creation in key industries that typically drive economic growth and provide stable, higher-quality employment opportunities (Hausmann et al 2023).

Figure 16. Sector Decomposition of GDP Growth
(Compounded)



Sources: Hausmann et. al (2023).

23. The weak labor market is significantly influenced by both demand and supply factors (Table 1):

- ***On the demand side***, South Africa has introduced strong labor laws and wage bargaining systems in the post-Apartheid period. However, the collective bargaining system lacks key elements that have made sector-level bargaining successful in other countries, such as strong coordination, high trust between partners, representative bargaining parties, and firm-level flexibility. Moreover, South Africa's minimum-to-median wage ratio (90 percent) is almost double the level of peers, which could make it difficult for SMEs to hire workers Finally, South Africa's employment protection legislation (EPL) provides important legal protections against discrimination in South Africa, but its enforcement is burdensome and slow, with outcomes of dispute resolution processes varying widely and creating undue uncertainty for both employers and employees. These factors can affect employers' willingness and ability to hire workers, in particular start-ups and SMEs, which may also encounter more regulations. These firms also tend to have less access to credit, with only 5 percent of South African firms holding loans or credit, which makes it even more difficult for them to create jobs. Moreover, due to its labor market composition, South Africa is more exposed to routinization, given its higher share of jobs with

[9] For instance, compared to Mexico, urban employment in hospitality and retail trade sectors in South Africa is 4 percent lower, driven by the lack of informal employment.

standardized and repetitive task. This exposure makes the country particularly vulnerable to automation and trade shocks, as already shown in Figure 16.

- ***On the supply side***, the post-Apartheid legacy of high commuting costs and spatial exclusion discourage search and mobility (Box 1). While the relatively high level of social assistance in South Africa is essential to address the high poverty rate and mitigate excessive inequality, it may act as a deterrent to seeking employment. Indeed, a micro-data probit analysis suggests a significant negative association between the welfare grant and employment (Annex). While South Africa's education level is comparable to peers in terms of years of schooling, our micro-data empirical analysis indicates that it is positively (and significantly) associated with employment, albeit having a high school education may lower employment outcomes (even compared with less schooling).[10] Moreover, skills mismatches are prevalent, further constraining the labor market; according to OECD (2022),[11] South Africa faces significant worker underqualification, with rates that are 10 percentage points higher than the OECD average and nearly 2 to 2.5 times the rates in Mexico and Brazil.

Table 1. South Africa: Quantifications for Demand and Supply Side Variables

	Indicator	Year	ZAF	EM Top	Range
Supply (on workers)					
Education	Years of schooling	2020	10.5	9.3	[7,8 - 11.6]
Commuting costs	Rural road transport expense share	2010	5.3%	1.9%	[0.5% - 3.3%]
Grants	Social assistance/GDP	2015	3.3%	1.4%	[0.7% - 1.9%]
Demand (on firms)					
Firm entry	Firms with loan or credit	2009-22	5%	37%	[11% - 59%]
Bargaining, EPL	Flexibility of wage determination	2019	3.5	4.9	[4.3 - 5.7]
Dispute resolution	Firms citing court as biggest obstacle	2009-22	2.6%	1.0%	[0.1% - 2.0%]
Min wage	Min/med wage	2017	90%	52%	[20% - 76%]
Routinization	Routine exposure index	2018	0.9	0.6	[0.3-0.9]

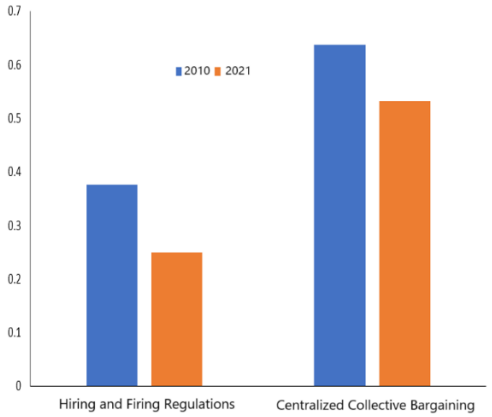
Sources: World Bank Development Indicators, World Bank Global Consumption Survey, World Bank ASPIRE, OECD Economic Surveys, Das and Hilgenstock (2018), ILO Stat, South Africa Statistics, World Economic Forum Global Competitiveness Report 2019, World Bank Enterprise Survey.
Notes: EM Top5 includes China, India, Brazil, Mexico, and Russia.

[10] See also Table 3 of Labor Market Intelligence report from March 2024.

Potential Gains from Labor-Market Reforms

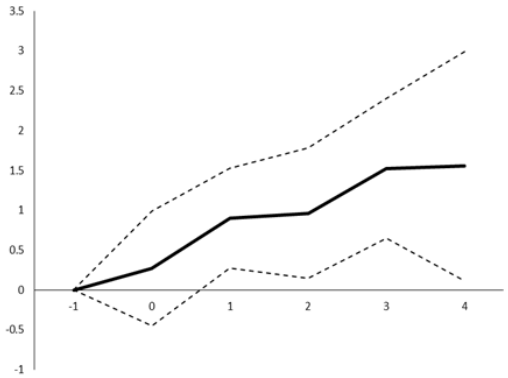
24. Following governance and business regulation reforms noted above, complementary reforms closing the structural gap to the labor-market frontier can help maximize employment gains. Labor market reforms, which may be more difficult to implement socially and politically, can follow and complement first-generation reforms focused on governance and business regulation that allow greater up-front gains—even in challenging contexts such as adverse supply shocks or high debt level—and which could help alleviate potential negative distributional impacts that could threaten social stability. Reforms aimed at closing 50 percent of the labor market gap to the EM frontier can boost employment up by a further 1.5 percent in the medium run (Figure 18).

Figure 17. Labor Market Structural Gaps



Source: IMF staff.
Note: For a given year, structural gaps are calculated as the difference in the underlying structural index between the frontier and South Africa. Structural gaps range between 0 and 1, where a lower value implies the country is closer to the frontier, and vice versa.

Figure 18. Impact on Employment



Source: IMF staff.
Note: The lines denote the employment response to an improvement in the underlying indicator which would see South Africa close half of the structural gap to EM frontier. The dashed lines denote 90 percent confidence intervals.

Box 1. Spatial Disparities

South African cities are characterized by extreme fragmentation, with long distances between residential areas and business districts. This spatial structure makes commuting costly and time-consuming, especially for lower-income workers. Post-apartheid housing policies have inadvertently entrenched spatial exclusion by providing low-density housing in city peripheries rather than higher-density solutions closer to city centers.

The direct consequence of low proximity to labor markets is high commuting costs, which discourages job creation and labor market participation. Transport costs average 57 percentage of net wage income, with even higher percentages for low-income groups. This spatial mismatch explains much of South Africa's labor market exclusion, including both low formal employment and extremely low informal employment compared to peer countries. For illustrative purposes, the World Bank has calculated that the take home pay for a South African employee earning $1,000 dollars gross and commuting between Johannesburg and the Soweto suburb would be $384, which is much lower than the $862 dollars that a colleague in Vietnam would take home for the same gross income and similar commute.[1]

[1] https://blogs.worldbank.org/en/africacan/reduce-south-africas-unemployment-make-work-more-attractive.

Box 1. Spatial Disparities (concluded)

Rural areas of former homelands face extreme economic exclusion, with very low employment rates compared to other areas. While infrastructure improvements have been made since apartheid, the economies of former homelands remain structurally weaker than can be explained by observable characteristics. Exceptions exist where some former homeland areas have achieved higher employment by developing enterprises serving surrounding markets or through commercial partnerships, especially in agriculture. These cases demonstrate the potential for economic integration when barriers are removed. The Harvard Growth Lab[2] suggests developing a more dynamic market for business partnerships to connect businesses needing land and labor with communities in former homelands that have matching comparative advantages. Overall, addressing spatial exclusion is crucial for achieving economic growth through greater inclusion of South Africa's population in productive economic activities (Shah and Sturzenegger 2022).

[2] Hausmann et al. (2023).

F. Conclusion

25. South Africa's growth potential has been significantly undermined by long-standing structural rigidities. The decline in real income per capita over the last decade and still very high unemployment rate are symptoms of significand and persistent constraints on growth. In part, these reflect sectoral supply constraints, such as electricity and logistics, which the authorities are tackling as part of their reform efforts coordinated under Operation Vulindlela. However, our analysis finds that there are other horizontal constraints to growth arising from large structural gaps relative to peers in governance, business environment, and labor markets. Addressing these would require additional reforms.

26. Reducing South Africa's structural gaps relative to peers in governance, business regulation, and labor markets can result in significant output and employment gains. Our analysis suggests that a "first-generation" reform package combining ambitious governance and business environment reforms aimed at halving South Africa' structural gap relative to the best practice frontier could boost the level of output by up to 9 percent over the medium run, corresponding to a boost in medium-term average annual growth of up to 1.8 percentage points relative to a no-reform scenario. A "second-generation" reform package focused on reducing labor-market rigidities (also by half relative to the best practice frontier) could boost employment by an additional 1.5 percent in the medium run. Thus, such reforms could help unlock substantial growth and employment gains, which would be key to reducing inequality and enhancing living standards.

27. Careful sequencing and communication of structural reforms is essential to their success. Prioritizing reforms that alleviate the most critically binding constraints to economic activity, such as governance and business regulation, can help front-load output gains by promoting domestic and foreign investment and enhancing labor productivity. These reforms can have positive output effects even during periods of macroeconomic stress, when other policy levers are constrained but the potential for productive factor reallocations is large. Such first-generation reforms can also help ease macroeconomic pressures (e.g. price pressures, elevated sovereign risk premiums, weak capital inflows) through increased competition and improved investor confidence.

The benefits of these reforms can also support buy in of the reform agenda more broadly and help mitigate potential negative distributional impacts from more complex second-generation labor-market reforms. Careful communication of reforms and their benefits will be key to maximize support and achieve reform gains.

Annex I. Probit Analysis of the Labor Market

1. In this Annex, we delve into the unemployment in South Africa using micro data. We begin with presenting basic summary statistics, followed by a probit analysis to examine the significance of various factors influencing unemployment rate, and then we perform a decomposition to assess their relative importance. For this analysis, we use the Labour Market Dynamics in South Africa (LMDSA) dataset 2022, which builds on the Quarterly Labour Force Survey (QLFS). The QLFS is a quarterly household survey covering individuals aged 15 and older, capturing key indicators such as employment rates, unemployment rates, labor force participation, and detailed demographic information. The LMDSA extends QLFS by using its panel structure to analyze labor market flows over time, tracking individuals across years to explore transitions between sectors, employment, unemployment, and inactivity, which is crucial for understanding the factors driving unemployment.

Figure 1. Unemployment Rates by Worker Characteristics in South Africa

Sources: Labour Market Dynamics in South Africa (LMDSA) 2022 and IMF staff calculations.

2. Figure 1 presents summary statistics from the LMDSA on unemployment rates by worker characteristics. The top panels show that unemployment rates are lowest for those with a college education or some college, and males have lower rates overall than females. Nonetheless,

the relationship between education and unemployment is non-linear—high school graduates face slightly higher unemployment rate than middle school graduates, potentially reflecting South Africa's high routinization and shrinking manufacturing sector that impacts middle-skilled workers. The bottom panels depicts unemployment rates by education, race, and age. For middle-school and college-educated individuals, unemployment differences across racial groups are minimal, but the gaps are significantly wider for those with only a high school diploma or some college. Notably, regardless of education level, the differences across age groups are stark. Youth aged 15 to 24 consistently face much higher unemployment of around 60 percent, highlighting that education alone is insufficient to mitigate youth unemployment.

Table 1. South Africa: Probit Analysis of Employment and Labor Force Participation

		(1) Employed	(2) Informal	(3) Youth	(4) LFP
Age		0.004***	-0.001***	-0.000	-0.008***
		[0.000]	[0.000]	[0.004]	[0.000]
Race	Coloured	0.010*	-0.019***	0.052**	-0.067***
(Base: Black)		[0.005]	[0.006]	[0.021]	[0.014]
	Indian/Asian	0.026**	-0.005	0.085	-0.029
		[0.011]	[0.011]	[0.054]	[0.039]
	White	0.094***	0.027***	0.214***	-0.168***
		[0.005]	[0.007]	[0.023]	[0.029]
Education	HighSch	-0.010**	-0.064***	-0.045**	0.051***
(Base: MidSch)		[0.004]	[0.005]	[0.021]	[0.011]
	SomeCol	0.028*	-0.074***	0.068	0.180***
		[0.014]	[0.017]	[0.140]	[0.054]
	Col	0.037***	-0.083***	0.135***	0.143***
		[0.008]	[0.009]	[0.038]	[0.029]
Female		-0.015***	-0.043***	-0.032**	-0.081***
		[0.004]	[0.004]	[0.016]	[0.010]
Urban		0.033***	-0.016***	-0.012	0.019*
		[0.004]	[0.004]	[0.018]	[0.010]
Province	EC	-0.026***	0.079***	-0.024	-0.028*
(Base: WC)		[0.007]	[0.007]	[0.029]	[0.016]
	KZN	0.063***	0.032***	0.116***	-0.214***
		[0.006]	[0.006]	[0.028]	[0.017]
	NW	-0.016**	0.058***	-0.025	-0.054***
		[0.007]	[0.008]	[0.036]	[0.019]
	LP	0.007	0.027***	0.071***	0.030**
		[0.006]	[0.006]	[0.025]	[0.015]
Grants	Childcare				-0.002
					[0.010]
	Welfare				-0.034***
					[0.010]
	Ind, Occ FE	X	X	X	X
	Observations	61,684	52,608	4,597	16,181

Sources: Labour Market Dynamics in South Africa (LMDSA) 2022 and IMF Staff calculations.

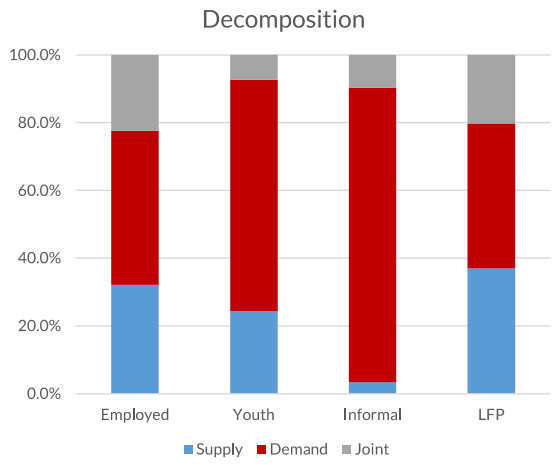
3. Next, we conduct a probit analysis examining the likelihood of being employed, informally employed, youth employment (ages 15–24), and labor force participation, as summarized in Table 1, which presents the marginal effects. The analysis includes variables for workers' age, racial groups, education levels, urbanicity status, and provincial indicators. Given that social grants are available to those who are unemployed or not in the labor force, we incorporate this factor specifically in the labor force participation analysis. Further, since the LMDSA dataset provides both current and previous industry and occupation data at the 3-digit level, we include industry and occupation fixed effects across all outcomes to account for sectoral and occupational compositions. The equation below shows this probit model:

$$Pr(Y_{ijk} = 1 | X_{ijk}) = \Phi(\alpha + \beta_1 Age_{ijk} + \beta_2 Race_{ijk} + \beta_3 Education_{ijk} + \beta_4 Urbanicity_{ijk} + \beta_5 Province_{ijk} + \beta_6 SocialGrants_{ijk} + \gamma_k + \gamma_j + \epsilon_{ijk})$$

where Y_{ijk} is the binary outcome for being employed, informally employed, a youth employed, or participating in the labor force for worker i; j and k denote the individual's occupation and industry with their current employer, or with their most recent employer if they are not employed. Φ represents the CDF of the standard normal distribution.

4. Several patterns emerge from the analysis. Age is a significant factor for most outcomes, except for youth employment. White individuals have a much higher probability of employment compared to Black individuals, though whites are also less likely to participate in the labor force; whereas the impact of being in other racial groups is much weaker. Females tend to have lower rates for all employment-related outcomes. Regarding education, higher levels of education are consistently linked to higher labor force participation and lower rates of informal employment. However, having a high school diploma is significantly associated with poorer employment outcomes, consistent with results in Figure 1. In terms of regional variations, compared to the Western Cape, other provinces, including former homeland regions, do not consistently show significantly worse outcomes. Finally, welfare grants are negatively associated with labor force participation, while childcare support shows no significant effect.

Figure 2. Decomposition of Supply vs. Demand Factors for Employment



Sources: Labour Market Dynamics in South Africa (LMDSA) 2022 and IMF Staff calculations.

5. A natural question arising from the probit analysis is which factors are most important for employment outcomes. To address this, we conduct a variance decomposition exercise, attributing the contributions of supply-side factors (worker characteristics) versus demand-side factors (industry and occupation fixed effects) by examining

incremental R-squared increases when adding these factors into the above probit regression, with the results shown in Figure 2. The results indicate that for overall employment and labor force participation, supply- and demand-side factors are nearly equally important. However, for youth and informal employment—two key areas of weakness in South Africa—demand-side factors dominate, accounting for 68% and 87% of the variation, respectively. This suggests that while a balanced policy approach is needed to address unemployment broadly, demand-side policies are particularly critical for improving youth and informal employment outcomes.

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SOUTH AFRICA'S FISCAL FRAMEWORK: CHALLENGES AND OPTIONS FOR REFORM[1]

South Africa's public debt has tripled since the global financial crisis and is not expected to stabilize over the medium term under staff's baseline. Cross-country evidence suggests that fiscal rules anchored in debt ceilings can be helpful in supporting fiscal adjustments aimed at reducing public debt and bolstering policy credibility. Design features such as institutional coverage, statutory base, correction mechanisms, and flexibility provisions can make the rules more credible and durable, and formal enforcement mechanism and independent institutions can strengthen their compliance. Strengthening South Africa's fiscal framework by introducing a debt anchor and a credible operational fiscal rule in line with international best practice could help support the authorities' fiscal objectives and safeguard debt sustainability.

A. Introduction

1. South Africa's debt dynamics have weakened significantly over the last decade. The existing fiscal framework, comprised of a non-interest expenditure ceiling, and aiming to support the government's stated budget objectives, has not been able to rein in the rise in public debt, primarily due to consistent revenue underperformance (also given subdued growth and volatile commodity prices), unbudgeted transfers to SOEs, and rising debt servicing cost. The pandemic added to pressures on the public finances. Consequently, public debt increased from 23.6 percent of GDP in 2008 to 74.1 percent of GDP at end-2023, one of the largest increases among EM peers during this period. Under staff's baseline projections, debt is projected to rise further over the medium term and reach close to 86 percent of GDP by 2030, with a quarter of fiscal revenues being spent on debt servicing. This would further limit fiscal space needed to mitigate future adverse shocks and close financing gaps in infrastructure and critical service delivery.

2. Strong fiscal rules anchored in debt ceilings can serve as an effective tool for safeguarding debt sustainability and bolstering policy credibility. The authorities are exploring options for integrating debt sustainability objectives in fiscal planning and budgeting processes. Such a framework can have significant commitment and signaling effects that can help strengthen policy credibility and, eventually, lower financing costs. An extensive empirical literature associates the presence of strong fiscal rules with a greater probability of meeting consolidation plans and stabilizing debt levels. However, the effectiveness of fiscal rules hinges on their design and careful calibration. This paper draws lessons from technical and empirical work on fiscal rules and country experiences that can help inform considerations for enhancing South Africa's fiscal framework.

3. The paper is organized as follows. Section B discusses the evolution of public debt in the last 15 years and its drivers. Section C assesses the existing fiscal framework. Section D summarizes the empirical literature on fiscal rules. Section E identifies key design features and institutional

[1] Prepared by Asma Khalid and Anh Dinh Minh Nguyen (both FAD).

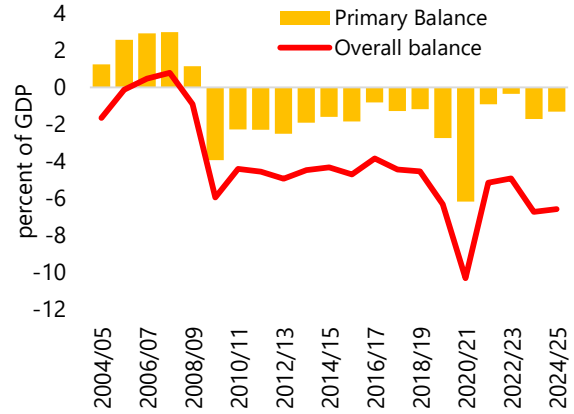
frameworks used by countries around the world to strengthen the link between fiscal rules and objectives. Section F lays out possible options for calibrating a debt anchor for South Africa and designing supporting operational rules. The last section concludes.

B. Evolution of Public Debt

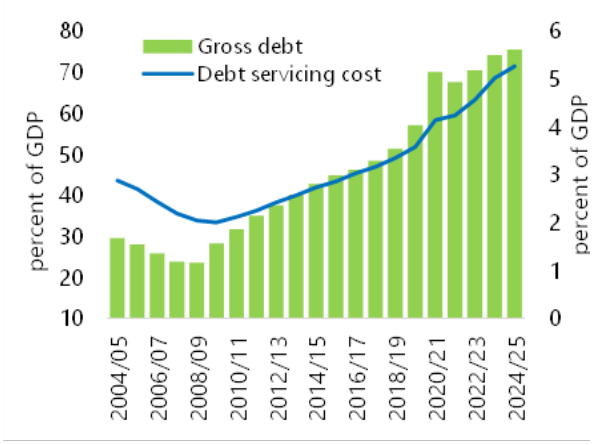
4. South Africa's fiscal position and debt dynamics deteriorated significantly in the aftermath of the Global Financial Crisis (GFC). Increases in public wages and social benefits to counter the impact of the crisis, together with a moderation in revenues given the end of the commodity super cycle, brought about a shift in public finances, with the primary balance turning into a deficit in 2009/10 for the first time since the country's political transformation in 1994.[2] While much of the increase in the deficit persisted, the authorities delayed consolidation efforts due to the slow recovery from the GFC, resulting in a continuous increase in public debt. To reign in these unfavorable trends, the authorities introduced expenditure ceilings in 2012, increased some tax rates, and started tightening capital investments. While these efforts led to a gradual correction in the primary balance, they were insufficient to slow down the debt accumulation due to growing interest payments (Figure 1). Consequently, the public debt-to-GDP ratio doubled between 2008 and 2019 to reach 57 percent of GDP, above the EM average, leading to downgrades by most credit rating agencies (S&P and Fitch) below investment grade.[3]

Figure 1. South Africa's Fiscal and Debt Indicators

Despite consolidation in post GFC period, overall deficit persisted at high levels…



…and public debt continued to mount.



Source: South African Authorities' data.

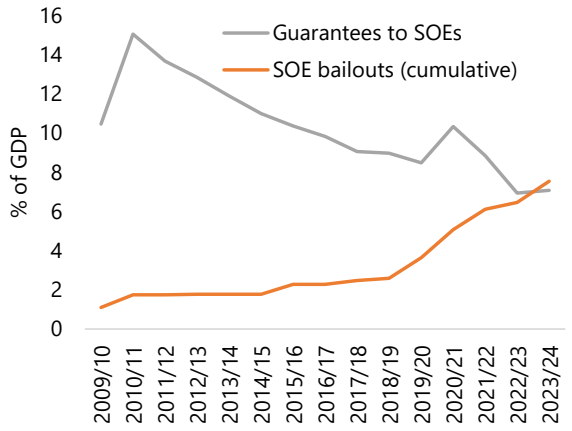
[2] IMF 2018. Selected Issue Paper. What led to the doubling of public debt in the last decade? Was debt good for growth?

[3] S&P, Fitch, and Moody's downgraded South Africa's sovereign credit rating to sub-investment grade in 2015, 2016, and 2020 respectively.

5. The Covid-19 crisis put an additional strain on the public finances. Given high deficits and debt pre-pandemic, the authorities accommodated part of the pandemic-related relief through expenditure re-prioritization. Social grants and benefits related to the Unemployment Insurance Fund were partially offset by cuts in the acquisition of goods and services and delays in investment projects (IMF 2023). The growth in non-interest expenditures (main budget) was therefore relatively contained (4.7 percent in 2020, compared to an average of 8.7 percent in the preceding three years). Nonetheless, deficits and debt deteriorated sharply due to lower revenues and nominal GDP. The deficit improved post pandemic, but remained elevated, averaging 5.6 percent of GDP, given the high global interest rate environment, multiple extensions of the pandemic Social Relief Distress (SRD) Grant, a sizeable public wage increase agreed in 2023, and materialization of contingent liabilities including from SOEs (averaging 0.7 percent of GDP annually over the last 10 years) – the latter has persistently been a major factor causing fiscal slippages over the past few years (Figure 2). The revenue boost provided by the commodity price boom in 2022 was short lived.

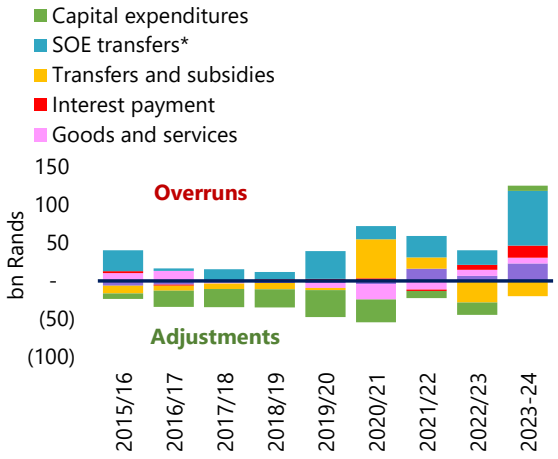
Figure 2. Fiscal Burden and Risks from SOEs

Spending pressures from materialization of contingent liabilities remained pervasive…



Source: National Treasury, and IMF staff calculations.

…and contributed mostly to budget overruns.



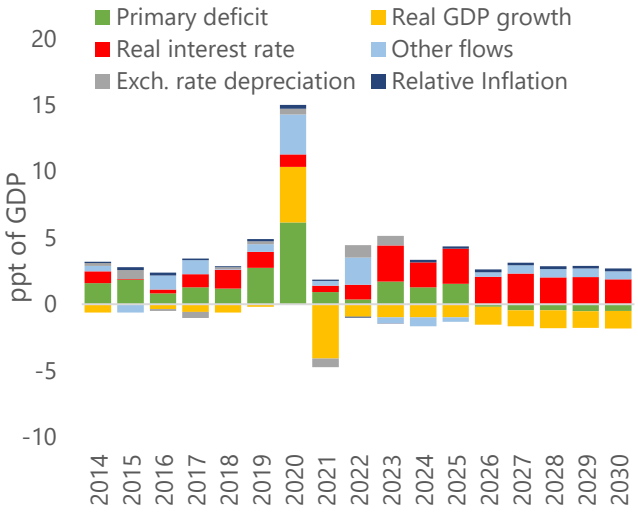
Note: Payment for financial assets category comprises mainly of transfers to SOEs. This includes Eskom's bailout in 2023/24 (which the authorities reported below the line).
Overruns are estimated as actual outcome minus original budget estimates. Source: National Treasury, and IMF staff calculations.

6. Under staff's baseline, debt is expected to continue to rise, given unfavorable automatic debt dynamics. While the primary balance is expected to attain a modest surplus in the medium turn, as support to SOEs declines (but is not eliminated), this will likely be insufficient to stabilize debt in the absence of additional concrete reforms to rein in public spending. The contribution from interest-growth differential to the change in debt has been strongly positive since 2010 and is expected to remain so over the medium term (Figure 3). Finally, stock-flow adjustments due to revaluations of inflation-linked bonds, foreign debt, and debt issuances at a discount (1.5

percent of GDP per year in the last years) are expected to persist.[4] In this context, debt is expected to remain on a non-stabilizing path over the medium term.[5]

Figure 3. South Africa's Public Debt Dynamics

Debt is expected to continue to rise given unfavorable automatic debt dynamics and insufficient primary surpluses.



Source: National Treasury and IMF Staff calculations.

7. The high debt level has increased South Africa's macroeconomic vulnerability to shocks. Although the composition of debt remains favorable compared to EMs given long maturities and low foreign currency exposure, the high debt level and interest payments make the fiscal position increasingly sensitive to sudden changes in global financial conditions. Presently, around 21 percent of government revenues are spent on interest payments, which is very close to perceived safe limits (Figure 4).[6] Since the GFC, interest spending has outpaced all other spending items, whereas consistently large borrowing requirements have pushed up sovereign yields and crowded out private investments. Rising interest cost has also constrained the government's ability to respond to shocks. In a more shock prone world, restoring debt sustainability and building policy buffers would be critical to bolster resilience and the capacity of the authorities to mitigate the adverse impact of shocks on the economy.

C. Assessing the Existing Fiscal Framework

8. Since 2012, the authorities have been relying on an expenditure ceiling to anchor fiscal policy. The main budget primary expenditure ceiling provides an upper limit within which departments prepare and manage their budgets. The ceiling is adjusted by inflation every year in the medium-term expenditure framework (MTEF) period to maintain a target of non-interest

[4] Inflation linked bonds constitute over 22 percent of total domestic debt portfolio, and their share is expected to increase by 1 percentage point by 2026/27 (in line with the 2024 Budget). CPI inflation is expected to remain stable at 4.5 percent through the medium term, which is the rate at which the R1 trillion of the principal debt stock is expected to grow (minus redemptions). The second big component within SFA is revaluation of foreign currency loans. These two components alone had contributed 1 percent of GDP to increase in debt in 2023/24 (Budget Review 2024). Finally, the 'discount from loan transactions' was the largest item within SFA in 2023/24 and alone added R59.6 billion (0.85 percent of GDP) to debt. This component reflects the fact that domestic debt is being issued at a discount to their value at maturity reflecting excess supply and/or higher perceived risk. The size of the discount depends on the size of debt issuance in a year and the prevailing bond prices.

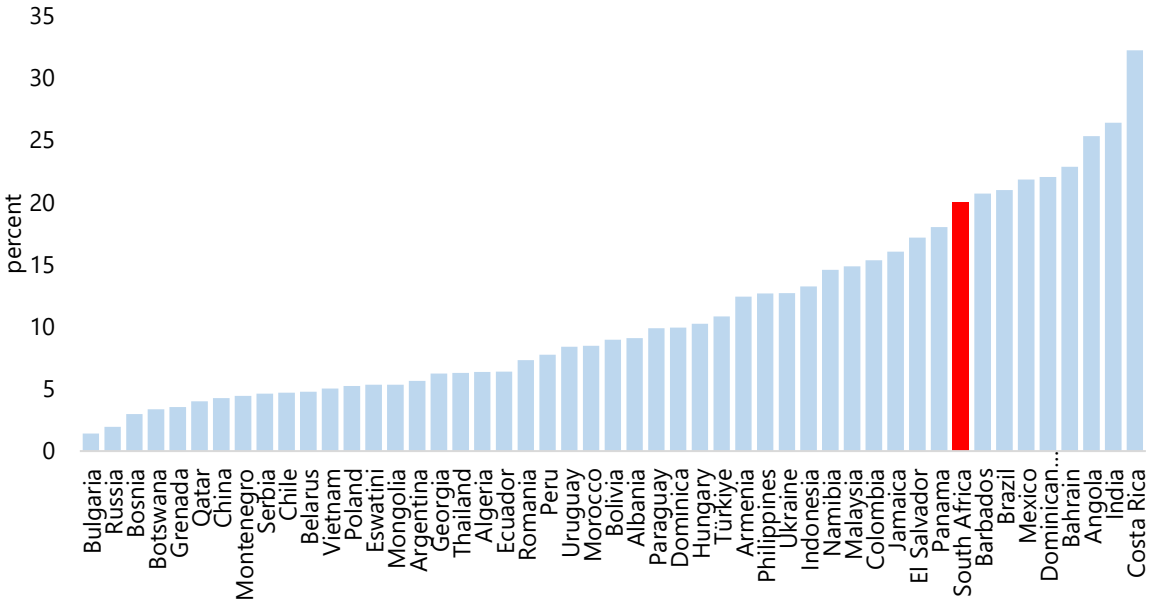
[5] IMF Staff Report on Post Financing Assessment, September 2024, and Staff Report on Article IV, June 2023.

[6] For instance, Debrun and Kinda (2013) estimated a threshold level of 26 percent beyond which the sensitivity of primary balance (and the need for additional fiscal consolidation) to the size of interest bill changes significantly. Similarly, Comelli and others (2023) suggests that estimated threshold for interest-to-revenue ratios between 16 to 19 percent robustly predicts a higher risk of upcoming fiscal stress.

expenditure. The ceiling is simple and transparent, helping provide certainty for budget execution. Nominal allocations for the current budget year are enshrined in law once the budget-related bills are approved by the Parliament. The Budget also includes two-years ahead ceilings; these are indicative and not binding.

Figure 4. South Africa's Interest Payments Compared to EMs

South Africa's Interest Payments as % of Revenues are higher than most EMs and very close to perceived safe limits.



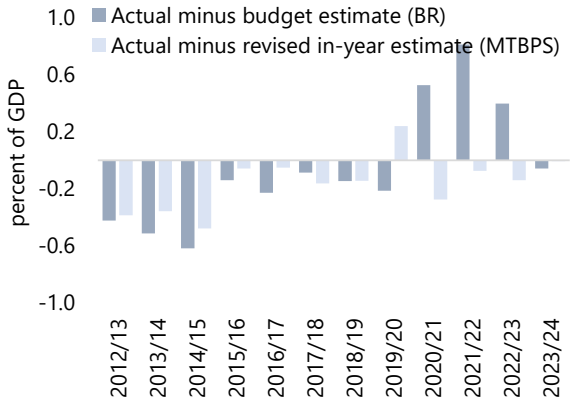
Source: WEO database.

9. Compliance with expenditure ceilings helped broadly stabilize the spending-to-GDP ratio since 2009, except for the post-pandemic period (Figure 5)**.** Non-interest expenditures have mostly remained within prescribed ceilings during 2009-2018. According to the current framework, if unbudgeted spending pressures arise during the year or revenues underperform, NT advises departments to reappropriate expenditures *within* the ceiling budget – indeed this implied a more pronounced containment of discretionary capital spending to accommodate unavoidable pressures related to wages, social transfers, or SOE bailouts. However, if the entire adjustment could not be absorbed within the ceilings, then in-year *level* adjustments are done at the time of MTBPS through the Adjustments Appropriation Bill.[7] However, since 2020, large revisions in ceiling levels have been observed to account for the Covid-19 impact and commodity-driven changes in projected revenues. Moreover, since 2023, SOE support (averaging 1 percent of GDP per year) has been excluded from the ceilings and is treated below the line.

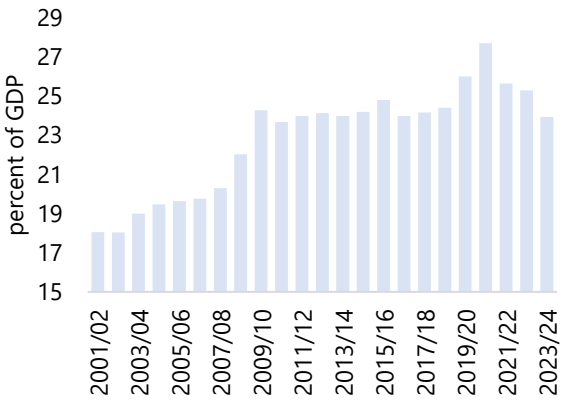
[7] For instance, compensation ceilings for labor intensive sectors were increased in 2023/24 to reflect the impact of wage agreement that was finalized after the budget process.

Figure 5. Performance of South Africa's Non-Interest Expenditure Ceilings

Panel A: Non-Interest Expenditures Have Mostly Remained Within the Prescribed Ceilings



Panel B: Non-Interest Expenditures Have Stabilized Since the Introduction of Ceilings



Source: South African Authorities' data.

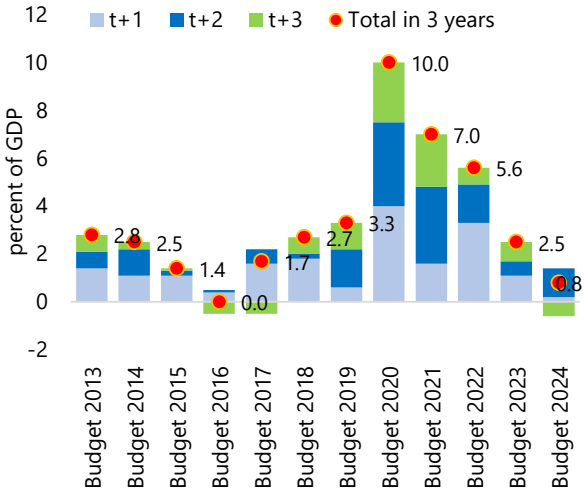
10. Despite solid compliance, the existing fiscal framework has not been successful in stabilizing public debt. Several factors explain this phenomenon, including rising interest costs, stock-flow adjustments, and support to SOEs, as noted above. However, there are also calibration and design issues with expenditure ceilings that weaken their effectiveness in managing fiscal slippages:

- **Missing anchor:** Although each MTBPS and Budget Review has debt sustainability as the key fiscal objective, the calibration of expenditure ceilings has been such that overall budget balances remain in deficit and debt is projected to rise throughout the medium-term expenditure framework (MTEF) period (except 2016, 2017, and 2024 when the debt was projected to fall in the final year of MTEF) (Figure 6). Furthermore, there has been no feedback loop between previous debt outcomes and ceiling calibrations for the next MTEF (Soobiyah and others, 2022). Indeed, actual increases in debt were even larger than budget projections in the MTEF period, reflecting lower revenues and weaker-than-expected growth.

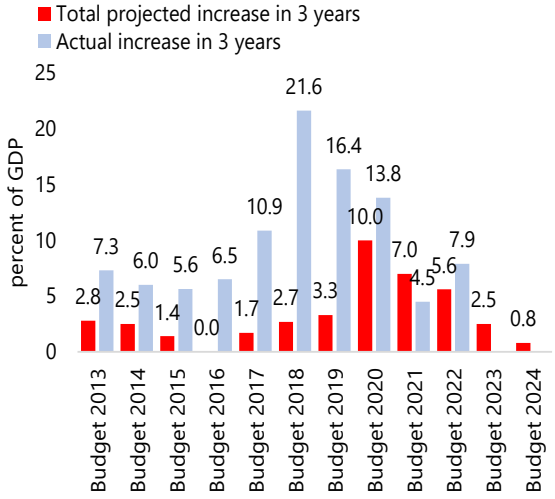
- **Optimistic growth projections:** The authorities' MTEF and expenditure ceilings have been calibrated around optimistic growth and revenue projections. When revenue outturns fall short, in-year rigidities in nominal expenditures do not allow ceiling adjustments proportional to the revenue shortfall. As a result, deficits and debt overshoot even if nominal expenditure ceilings are complied with. Within the budget framework, forecast errors are seen to be more pronounced in revenues than expenditures (Figure 7).

Figure 6. Budget Projections for Increase in Debt in the MTEF

Most budgets have projected increase in debt throughout the MTEF since the introduction of the ceilings…



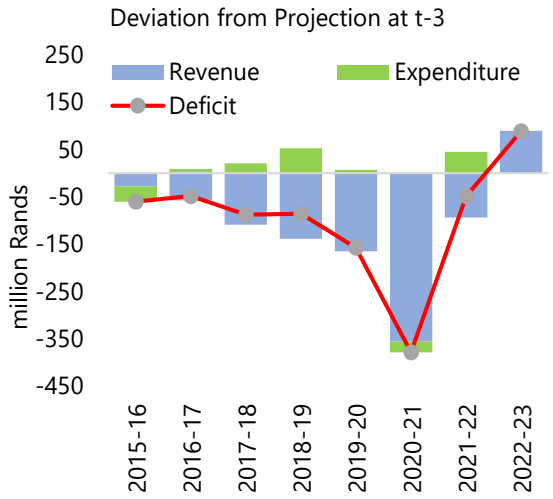
…Actual debt increases have been much larger than projected in the corresponding 3-year period.



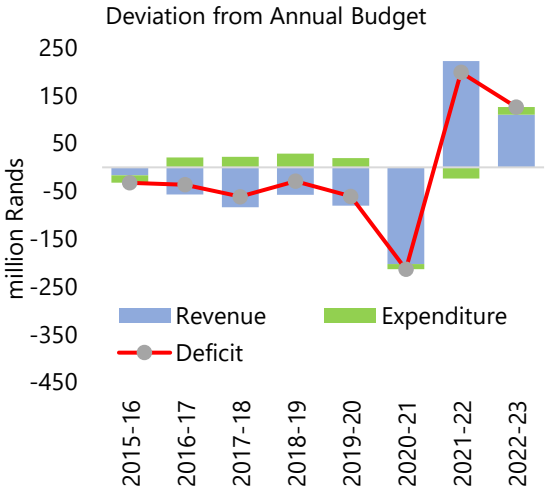
Source: South African Authorities' data, and IMF staff calculations.

Figure 7. Deviation of Fiscal Indicators from MTEF and Budget Projections

Revenues explain most of the forecast errors in budget deficit…



…This also reflects difficulties in making in-year adjustments in expenditure.

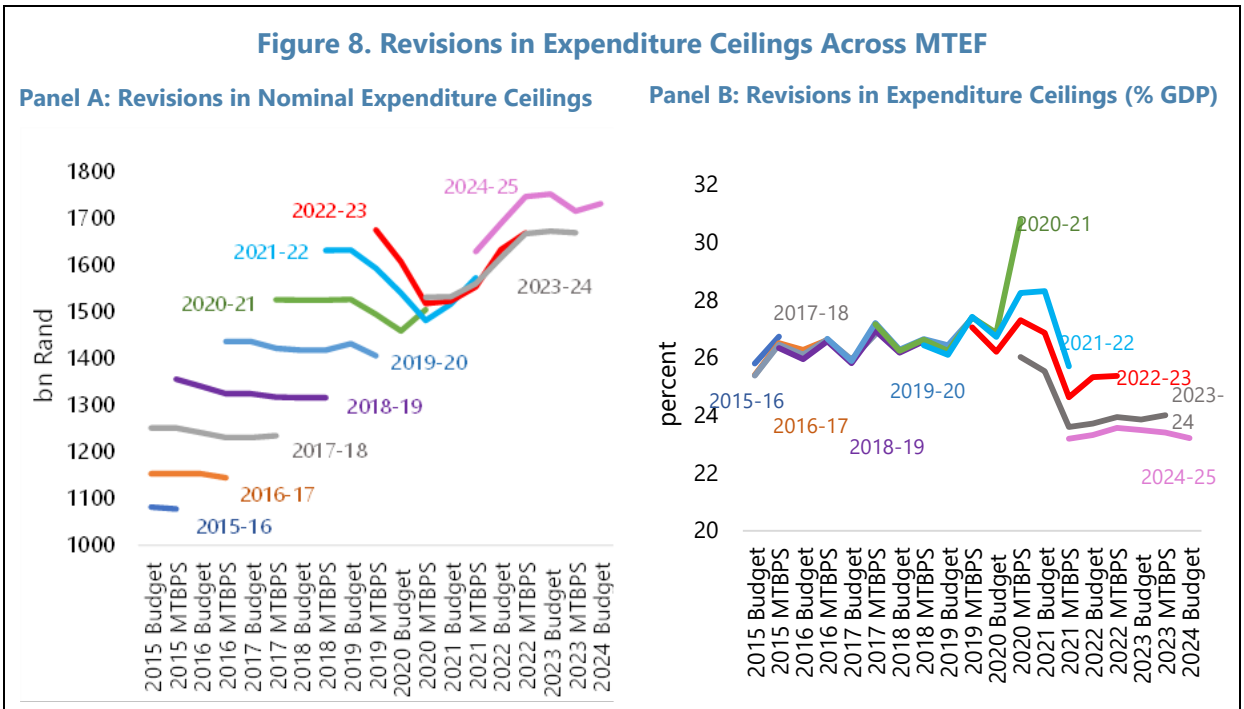


Deviation of actual outcome from projections at t-3 and Annual Budget: For revenues, the negative value shows a shortfall. For expenditures, a negative value shows overspending compared to projections/budget and positive value shows underspending. To reflect forecast error, actual revenue and expenditures are as per authorities' definition.

Source: South African Authorities' data, and IMF staff calculations.

- **Discretionary adjustments:** Since the ceilings are not anchored to a specific debt or deficit target, adjustments are discretionary. Expenditure ceilings are determined 3 years in advance and are reviewed every 6 months with each Budget and MTBPS. Any upside or downside forecast revision in GDP and revenues, or unanticipated spending need necessitates adjustments in ceilings. However, there is no clear pattern regarding the size of adjustments, with both nominal and real ceilings being subject to change (Figure 8). A tendency for asymmetric responses to upside and downside surprises is also observed: when revenue projections were revised up by R83.5 billion in 2022 MTBPS compared to the budget, expenditure ceilings were revised up by R37 billion. However, when revenue projections were revised down by R44.4 billion in 2023 MTBPS compared to the budget, expenditure ceilings were revised down by only R3.7 billion, leading to a deficit overshoot.

Figure 8. Revisions in Expenditure Ceilings Across MTEF



Source: South African Authorities' data, and IMF staff calculations.

- **Misaligned wage negotiation cycle:** Public-service wage agreements are finalized after the completion of the budget cycle and are therefore a major risk to fiscal performance. At the time of the budget (February), preliminary compensation ceilings for each department are determined. However, actual wage allocations come at the time of MTBPS (October) to reflect wage agreements (usually finalized in May-June). If the deviation from budget allocations and adjusted allocations is not too large, departments are typically asked to adjust additional allocations within the expenditure ceilings. Otherwise, additional allocations are made mid-year

through the Adjustments Appropriation Bill. During the last 3 years, wage bill outcomes have turned out to be higher than the respective annual budgets.[8]

- **Exclusions:** Some large spending items are excluded from expenditure ceilings, such as payments directly financed by dedicated revenue flows and payments "not subject to policy". An important recent exclusion has been the debt-relief support to Eskom, averaging 1.1 percent of GDP per year between 2023/24 and 2025/26.

D. Have Fiscal Rules Delivered Elsewhere?

11. While fiscal rules have generally been found to be associated with better fiscal outcomes, other factors may complicate the assessment. The literature indicates a positive relationship between the adoption of fiscal rules and deficit and debt outcomes, e.g., Poterba (1996), Debrun and others (2008), Tapsoba (2012), Bergman and others (2016), Asatryan (2018), Heinemann and others (2018). Indeed, the presence of strong national fiscal rules that extend to sub-national governments has been found to be associated with a greater probability of meeting adjustment targets and stabilizing debt ratios (Mauro and Villafuerte, 2013), and countries with strong fiscal rules were found to be more likely to stick to their consolidation plans (Heylen, Hoebeeck, and Buyse, 2012). However, selection bias and other sources of endogeneity may lead to overestimating the benefits of fiscal rules (e.g. Caselli and Reynaud, 2020, and Heinemann, Moessinger, and Yeter, 2018). This is because countries might adopt fiscal rules in periods of stress or crisis, or after consolidation episodes, to lock-in gains. Moreover, society's preference for fiscal discipline could be responsible for both positive fiscal outcomes and a country's decision to adopt fiscal rules.

12. The literature indicates that the design of fiscal rules is key to reducing fiscal deficits, particularly in AEs. Several features improve the effectiveness of the rules, including institutional coverage, monitoring and enforcement bodies, statutory base, flexibility, correction mechanisms, and sanctions. Studies focused on US states show that more binding rules have a stronger disciplinary effect (von Hagen 1991; Bohn and Inman 1996; Clemens and Miran 2012; Lutz and Follette 2012). Evidence for European countries also suggests that stronger rules are associated with lower deficits, even after correcting for selection bias (Debrun and others 2008; Afonso and Hauptmeier 2009; Bergman, Hutchison, and Hougaard Jensen; 2016). In addition, Badinger and Reuter (2017) show that countries with more stringent fiscal rules have lower deficits and output volatility. Caselli and Reynaud (2020) confirm these results and find a positive impact on the fiscal balance (0.6 ppt of GDP) from moving from a relatively weakly designed fiscal rule to a better designed rule. Davoodi and others (2023) show that stronger fiscal rules are associated with

[8] In 2023, an in-year adjustment of 0.3 percent of GDP had to be made because the wage increase settled in the agreement was much higher than budgeted. The Treasury had to provide additional funds to support wage increases in labor intensive sectors, but other departments were asked to absorb wage increases within existing budgets (for instance through limiting the recruitment of non-critical posts).

stronger primary balances,[9] and countries with stronger budget balance rules (BBRs) have smaller and less frequent breaches of the rules. Using a panel of 40 AEs, Chrysanthakopoulos and Tagkalakis (2023) find that well designed fiscal rules increase both the probability to initiate and to successfully conclude a fiscal adjustment.

13. The impact of fiscal rules on fiscal consolidation efforts in EMs has been found to be conditional on institutional quality. Looking at EMs in Latin America and the Caribbean, Ardanaz and others (2023) concluded that countries that comply with fiscal rules show, on average, lower probability of public debt accelerations compared to countries that are not able to comply with the rules. Using a panel predominantly comprised of developing countries, Manasse (2006) shows that fiscal rules and fiscal responsibility laws tend to reduce the deficit bias; however, fiscal frameworks do not exert independent effects when the quality of institutions (proxied by measures of social, institutional, economic, and financial vulnerability reported by International Country Risk Guide (ICRG) is accounted for. Gootjes and de Haan (2022), using a panel data of 73 countries over the 2003-2013 period, find that that fiscal rules make the success of fiscal adjustments more likely only when fiscal transparency is sufficiently high.

14. The adoption of fiscal rules has been associated with lower sovereign spreads in both AEs and EMs. Several studies focused on AEs indicate that the adoption of rules lower both sovereign spreads and the response of spreads to fiscal outcomes (e.g., Bayoumi, Goldstein, and Woglom (1995), Poterba and Rueben (1999), Johnson and Kriz (2005), and Iara and Wolff (2010)). Eyraud (2018) also finds that the sovereign spreads of non-complying EU countries with the EU fiscal frameworks are on average higher by 50–150 basis points compared to countries that comply. Using a 90-country sample of AEs and EMDCs, Davoodi and others (2022b) shows that, after exceeding a budget balance rule, a country is expected to have higher CDS spreads than countries that adhere to the rule. Gomez-Gonzales et. Al. (2022) find that introducing a fiscal rule lowers sovereign default risk and the probability of a sudden stop; similarly, Sawadogo (2020) finds that the adoption of fiscal rules reduces sovereign bond spreads and increases sovereign debt ratings for a sample of 36 EMDCs. Thornton and Vasilakis (2017) estimate that the adoption of fiscal rules reduces sovereign risk premia by 1.1–1.2 percent for debt rules and by 1.5–1.8 percent for budget balance rules in a sample of AEs and EMDCs. Afonso and Jalles (2019) find a similar impact of rules on sovereign spreads (1.2-1.8 percentage points). Finally, the WB (2024) documents that countries with fiscal rules in place faced 350 bps lower sovereign spreads relative to countries without rules.[10]

[9] The fiscal rule strength index is developed based on the approach used by European Commission's Fiscal Rule Index (2015), by mapping the variables used in IMF Fiscal Rule dataset: 1985-2021 and IMF Fiscal Council dataset, and using four institutional criteria: i) statutory or legal basis of the fiscal rule; ii) nature of the entity in charge of monitoring the fiscal rule; (iii) enforcement and correction mechanism; and (iv) flexibility and resilience of the fiscal rules against shocks.

[10] The results further suggest that during periods of global crisis, credit markets interpret the mere existence of fiscal rules as a signal of the sovereign government's fiscal responsibility. Even if a rule is temporarily abandoned during a global crisis, the sovereign is expected to restore fiscal discipline in the aftermath of the crisis.

E. What Makes Rules More Effective and Successful?

15. Limited compliance and lack of political support, together with too much rigidity, can undermine the effectiveness of fiscal rules. Deviations of fiscal outturns from targets have been common across all regions and income groups (Reuter, 2015, Davoodi et al., 2022; Blanco et al., 2020, Larch and Santacroce, 2020, and Larch and others, 2023, Ulloa-Su´arez and Valencia, 2022). Moreover, the European sovereign crisis reminds us that even when rules are in place, lack of political support can undermine their effectiveness in safeguarding fiscal sustainability. Separately, even when complied with, rules can be overly rigid, preventing fiscal policy from providing counter-cyclical support when economies are hit by large exogenous shocks, with the negative effect on output exacerbated when monetary policy is constrained (e.g. by the lower bound), which can erode support for the rules.

16. A stronger legal basis and broad social and political support can help make fiscal rules more durable and credible. Currently more than 60 countries have fiscal rules featured at or above statutory levels such as in a fiscal responsibility or budget framework laws (Armenia, Jamaica, Paraguay) or in constitutions (Brazil, Denmark). However, the mixed compliance record implies that a strong legal basis is a necessary but not a sufficient condition for the successful implementation of rules. In addition, ensuring social and political buy in for fiscal rules and objectives is key. Jamaica's successful debt reduction (from 144 percent in 2012 to 73 percent in 2023) supported by its Fiscal Responsibility Framework highlights the importance of social consensus and reduced political polarization to achieve fiscal objectives (NBER 2024). Similarly, Sweden's respect for rules has been associated with broad public and political consensus to limit deficits (Eyraud and others, 2018).

17. Flexibility provisions in fiscal rules are key to avoiding unduly large adjustments that can undermine support. Introducing escape clauses in the fiscal framework has allowed countries to deviate or suspend the rules temporarily under exceptional circumstances without undermining the credibility of the framework (e.g. EU 2011, Colombia 2011, Jamaica 2014, Grenada 2015 However, escape clauses should be designed carefully and clearly to avoid misuse and strengthen credibility of the framework (Dudine and others, 2019). Specifically:

- The trigger that activates the escape clause should be clearly specified, such as "state of emergency", "natural calamity", "extraordinary events threatening macro-stability" (e.g., Mexico, Germany, Switzerland), or using a quantitative benchmark such as the size of GDP contraction (Poland, Ecuador, Brazil, Panama), or both (Jamaica, India, and Costa Rica).

- The authority and conditions to trigger the escape clause also needs to be clear. In Switzerland, only a supermajority in Parliament can invoke the escape clause. In Poland, the escape clause cannot be invoked when debt exceeds 48 percent of GDP, or the deficit exceeds 3 percent of GDP.

- Countries with frameworks comprised of several elements (i.e. two or more rules and/or correction mechanisms) should clarify which element of the framework would be suspended when the escape clause is in effect.

- Limiting the size of the allowed deviation from the rule is important. For example, Colombia allows deviation up to 20 percent of the output gap, Ecuador allows 1 percent of GDP increase in primary expenditures, Peru allows the fiscal deficit to go up to 2.5 percent of GDP (against 1 percent rule), and Panama allows the budget deficit to go of up to 3 percent of GDP (against 1.5 percent rule). These allowances can be adjusted depending on the nature of shocks.

18. Formal enforcement mechanisms can help ensure ex-post compliance and strengthen government accountability. Among the 104 countries with fiscal rules, 72 have put in place formal enforcement mechanisms (Davoodi and others, 2022). European countries use the Excessive Deficit Procedure to specify actions to return to the fiscal rules.[11] The Swiss and German structural budget balance rules contain "debt brakes" (Budina and Kinda, 2013), whereby deviations from the structural budget balance rule are stored in a notional account, which, when exceeding a set threshold, triggers automatic improvements in the structural balance within a defined time frame. Poland has specified preemptive triggers as debt approaches its fiscal rule limits.[12] Similarly, Peru, Panama, and Jamaica have correction mechanisms that guide the return of the fiscal rules after deviations.

19. Independent institutions (fiscal councils) can further support compliance with fiscal rules. The empirical evidence highlights the important role these institutions play in achieving better fiscal outcomes (Debrun and Kinda, 2017), accuracy of budget forecasts (Beetsma and others 2019), better compliance with rules (Beetsma and others, 2019 and Capraru 2022), and reducing procyclicality (Chrysanthakopoulos and Tagkalakis, 2022). Fiscal councils can also help improve estimates of structural balances (e.g. Chile) or assessment of compliance with over-the-cycle rules. Over 80 percent of fiscal councils in advanced economies had de-jure operational independence in 2021, such as appointing their own staff, having their own communication channels, and benefitting from long-term appointments to limit political interference. Independence is often enshrined in legal provisions prohibiting political interference, especially among recently established fiscal councils. The key roles of fiscal councils are:

[11] If a member state breaches the maximum limit for government deficit (3 percent of GDP) and debt (60 percent of GDP) under the Stability and Growth Pact, the surveillance of its fiscal policies and request for corrective action intensifies through the declaration of an Excessive Deficit Procedure (EDP). However, the declaration of an EDP is not automatic given various escape clauses in assessing the breach of the SGP criteria. Countries in EDP are given a deadline of six months (or three for a serious breach) to comply with recommendations that provide them with a concrete path for correcting their excessive deficit within a set timeframe. In case the members fail to take effective action, the EDP is stepped up resulting in the imposition or strengthening of sanctions in the form of a fine of 0.2 percent of GDP (countries in receipt of assistance from the European Structural and investment Funds (ESIF) may face a temporary suspension of this financing). The EDP is abrogated when the excessive deficit is corrected in a durable manner. The Two Pack regulation, which entered into force on May 30, 2013, includes specific provisions on closer monitoring of member countries in EDP (to allow early detection of Member States at risk for not correcting its excessive deficit by the deadline set by the Council), by increasing the scope and frequency of information to be submitted to the Commission and to the Council for their review.

[12] Specifically, the rule limits the growth of nominal expenditure to the product of an estimate of real potential output and the inflation target. However, when debt exceeds 43 percent of GDP, 1.5 percentage points are to be deducted from the estimate of potential output; when debt exceeds 48 percent of GDP or deficit exceeds 3 percent of GDP, 2 percentage points are to be deducted from the estimate of potential output.

- ***Watchdog.*** The primary role of most fiscal councils is to evaluate public finances. They examine annual and medium-term government budget proposals and assess the long-term sustainability and associated fiscal risks. Additionally, they conduct ex-post evaluations of fiscal performance relative to government targets or objectives.

- ***Forecasts.*** Many fiscal councils are responsible for preparing or assessing macroeconomic and budget forecasts. For example, fiscal councils prepare forecasts in Brazil, Chile, Vietnam, Kenya, Colombia and Hungary, although except for Vietnam, these forecasts are not binding. In most countries, fiscal councils only assess the forecast done by budget institutions (e.g., Mexico, Peru and Uganda).

- ***Compliance.*** Most fiscal councils are tasked to independently monitor the implementation of fiscal rules (Davoodi and others 2022). This is primarily the case in European countries and Latin America (including Costa Rica, Chile, Colombia, Brazil, Panama, Peru, and Uruguay).

- ***Costing.*** Nearly half of fiscal councils are involved in costing of policy measures, ranging from simple reviews of tax and expenditure estimates in the budget to an extensive costing of specific policy initiatives by the government or parliamentarians. The latter is more common if the councils are associated with the legislative branch (e.g., Parliamentary Budget Office in Greece, Georgia, Canada and Australia, Congressional Budget Office in the US, and the Office for Budget Responsibility in the UK).

F. Designing a Fiscal Rule for South Africa—Initial Considerations

20. Designing a fiscal rule involves a two-step process. The first step is the calibration of a long-term fiscal objective (anchor). Anchoring fiscal policy to a stock variable, such as public debt, is necessary because fiscal sustainability is determined by the government balance sheet and its capacity to meet financing needs and service debt. However, because the debt stock is not under the full control of the government, the debt anchor should be primarily used to guide fiscal policy over the medium term. The second step is to select the operational rule to achieve the long-term debt anchor. Operational rules can be based on fiscal indicators that have a close and predictable link to debt dynamics (e.g. expenditure or deficit rules). In addition, as noted above, clear escape clauses, adjustment mechanisms, and supporting fiscal institutions (councils) are key to supporting the fiscal rule.

Debt Anchor

21. In line with methodologies proposed by Debrun and others (2019), Baum and others (2017), and Eyraud and others (2018), calibrating the debt anchor involves two steps. First, a maximum debt limit would need to be estimated based on macroeconomic dynamics. Second, a safety buffer around the maximum debt limit would be determined, taking into account past macroeconomic and fiscal volatility. The long-term debt anchor would then be derived as the difference between the maximum debt limit and the safety buffer. An intermediate medium-term debt objective could be defined as a step toward the long-term anchor.

22. Conceptually, a country's maximum debt limit represents the level beyond which fiscal sustainability would be jeopardized. The literature shows that debt limits are fundamentally linked to countries' debt carrying capacity, which is determined by the strength of their institutions, access to financing, fiscal multipliers, the size, and depth of domestic financial market, etc. Indeed, debt limits vary across countries, reflecting their unique country characteristics, but are clustered predominantly around 60 and 70 percent of GDP for both national and supernational rules (IMF 2018).

23. Various approaches can be used to calculate the maximum debt limit for South Africa:

- ***Debt limits with exogenous interest rates***: Comelli and others (2023) use a probit model to estimate the maximum threshold of the interest-to-revenue ratio beyond which a high probability of fiscal stress would ensue. For South Africa, this approach would imply a maximum debt limit of around 73 percent of GDP.[13] Another method estimates a maximum debt limit associated with highest primary surplus a country can achieve in times of stress. IMF (2023), IMF (2029), IMF (2017) used this methodology to compute debt limits for Brazil (90 percent), Colombia (50 percent) and Paraguay (50–70 percent). For South Africa, using a primary surplus of 2.5 percent of GDP the average achieved over 2000–07) suggests a range of debt limits of 60–100 percent of GDP, depending on whether the estimate of the interest-growth differential (r-g) under stress is calibrated in line with South Africa's own experience or with the upper bound of EMs' average. These methods, however, treat interest rates as exogenous to changing debt levels, which may run the risk of overestimating debt limits. Empirical evidence, however, suggests higher debt could place upward pressure on interest rates through, higher risk premiums or diminishing convenience yields (Laubach, 2009).

- ***Debt limits with endogenous interest rates***: Mian, Straub, and Sufi (MSS, 2022) propose a framework that also defines the maximum sustainable level of debt as that consistent with a maximum primary balance that a government can sustain over long periods, while incorporating the endogenous relationship between debt and interest rates.[14] For South Africa, assuming a socially and politically sustainable primary surplus of no more than 2.5 percent of GDP (as achieved in 2000–07) would imply a maximum debt limit of 80 percent of GDP, assuming an elasticity of the interest rate to changes in debt at 2.5 percent. Incorporating the impact of projected stock-flow adjustments further squeezes the maximum sustainable debt level to around 70 percent of GDP. Another endogenous-interest rate framework developed by Jian, Sargent, Wang, and Yang (2024) associates maximum primary balance with optimal taxes as determined by the country's overall tax capacity and sovereign default cost, where the interest-growth differential is influenced by the probability of a debt surge, a convenience yield, and risk

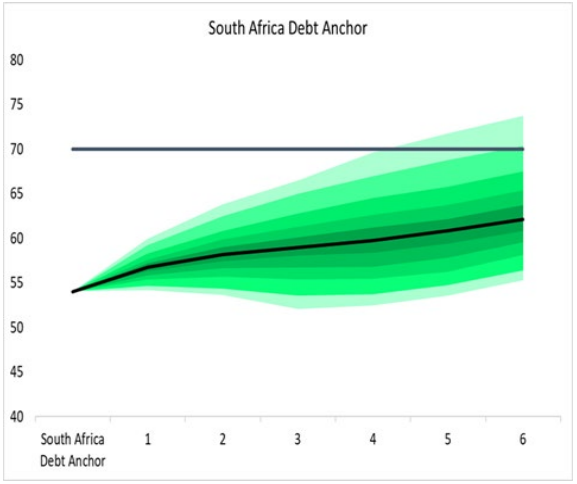
[13] This estimate is based on an estimated threshold of 20.8 percent and the (maximum) revenue of 30 percent of GDP.

[14] In essence, this framework provides multiple steady state equilibria with constant levels of primary balances that keep the debt levels unchanged at given levels. The framework allows this deficit-debt relationship to vary with changes in risk perception as reflected in elasticity of interest rate to changes in debt levels.

premium on GDP volatility. According to this method also, South Africa's debt limit is estimated at around 60–70 percent of GDP (Cao et al, 2024).

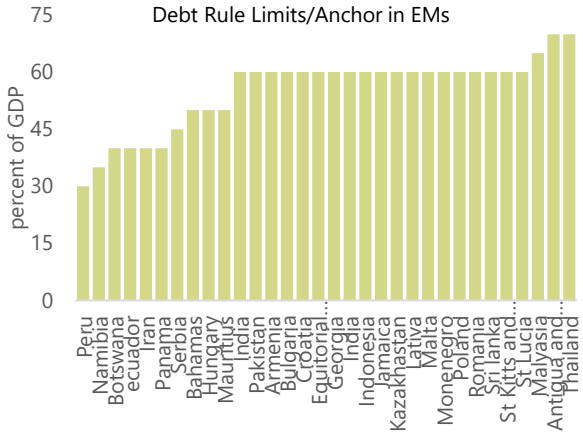
24. A more prudent debt anchor would ensure a high probability of not surpassing the maximum debt limit even under adverse shocks. As noted above, the long-run debt anchor should account for a safety margin (buffer) such that, with high probability, debt would not exceed the maximum limit even under adverse shocks. The likelihood of surpassing the debt ceiling can be estimated by simulating distributions of future debt outcomes under shock scenarios. This involves first estimating the distribution of macroeconomic and fiscal shocks based on historical data for South Africa, followed by performing stochastic simulations of the future deficit and debt trajectory under those shocks.[15] The fan charts present the results of the simulations (Figure 9). The results suggest that a buffer of 10 percent of GDP would reduce the probability of debt surpassing 70 percent of GDP in South Africa to less than 10 percent. Thus, a debt anchor of 60 percent of GDP would be prudent over the long term. This level is in line with debt rule limits/anchors set by other EMs (Figure 10).

Figure 9. Debt Ceiling and Safety Margin



Source: IMF Staff calculations.

Figure 10. Level of Debt Rule Limits/Anchors of Emerging Market Economies



Source: IMF's Fiscal Rules Dataset (2021).

25. Setting an interim target for debt can provide short term operational guidance and lend credibility to fiscal framework. Significant gains can be achieved from developing credible plans to reduce the debt-to-GDP ratio to 70 percent of GDP by 2030. This could be an interim target on the way toward achieving further debt reduction and ultimately the sustainable long-term debt anchor of 60 percent of GDP noted above. Ambitious and early implementation of this plan would

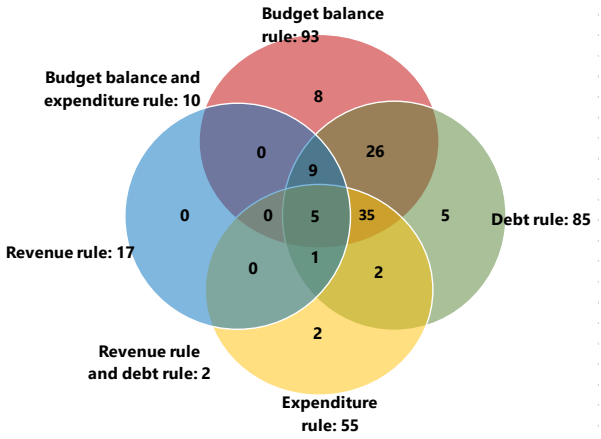
[15] In all cases we maintain a maximum primary surplus of 2.5 percent of GDP (historic high) and assume no change in the currency composition of debt.

improve fiscal credibility and start rebuilding fiscal buffers and reduce marginal interest costs via improved market access, with positive spillovers to private sector borrowing costs.

Operational Rules

26. Based on their unique structural dynamics and policy objectives, countries choose from four broad categories of fiscal rules. Each of these rules has advantages and disadvantages:

Figure 11. A Snapshot of Adoption of Different Fiscal Rules (by number of countries)



Source: IMF's Fiscal Rules Dataset (2021).

- ***A debt rule* offers a clear link to the ultimate debt target but may be difficult to implement.** Since the debt rule sets an explicit ceiling on public debt (usually as percent of GDP), it has the most direct link to ultimate fiscal objective, i.e., converging to a sustainable debt target. In practice, however, it is the least controllable indicator, since debt ratios are influenced by many factors that are not directly under the control of the government (e.g, interest rates, exchange rate, inflation, other determinants of stock-flow adjustments). This is likely the reason why out of 85 countries with debt rules, only five have this on a standalone basis, with the rest combining it with other rules (Figure 11). [16]

- ***Budget balance rules* (BBRs)** provide clear operational limits on the overall balance, primary balance, or structural or cyclically adjusted balance:

    - *Overall balance rule:* This rule is the simplest and easiest to communicate, monitor, and enforce. Given that it is closely tied to debt dynamics, it is the most frequently adopted rule. On the flip side, the overall balance rule can make fiscal policy more procyclical (Eyraud and others, 2018), reducing the quality of the budget composition (since it incentivizes politically easier cuts in capital rather than current spending), and failing to prevent spending windfall revenues (IMF 2018). Therefore, BBRs are often adopted with flexibility features such as exclusion of capital investments or cyclical trends, (see below).

    - *Golden rule:* To avoid public investment cuts, countries sometime exclude capital expenditures from the BBRs (e.g., Brazil, Malaysia, Costa Rica). However, this risks excessive borrowing (to fund investment projects) and weakens the connection with the debt objective. Furthermore, in the absence of sound public investment management frameworks, unrestricted borrowing could reduce incentives for thorough cost-benefit

[16] Countries with only the debt rule includes Cambodia, Mauritius, Liberia, St Lucia, and St Kitts and Nevis. On the other extreme, Australia, France, Netherlands, Vietnam, and Andorra have at some stage adopted all the rules.

analysis, leading to the selection of projects with low social returns and revenues (Balassone and Franco 2000). Finally, creative accounting may undermine the effectiveness of golden rule (Serven, 2007).[17]

- *Primary balance rule:* Since interest payments are excluded, the rule is more directly under the control of policymakers than other BBRs. However, this exclusion weakens the link to debt dynamics, since interest payments could constitute the bulk of the overall balance and financing requirement. Therefore, the rule threshold needs to be recalibrated on a regular basis to incorporate changing debt dynamics.

- *Cyclically adjusted/structural rule:* Cyclically adjusted/structural balance rules can adjust for cyclical changes in revenues and spending and thus better reflect the authorities' discretionary fiscal efforts. Moreover, they have been shown to have a better compliance rate among BBRs (Skrok 2020). However, they are difficult to communicate and monitor, since output gaps are difficult to assess in real time (IMF 2018). This is why these rules are predominantly adopted by AEs. Among EMs, the cases of Colombia and Chile illustrate that even if these rules are adopted, generating, and maintaining countercyclical buffers could still be challenging, and debt may not stabilize (Ardanaz and others, 2023).

- ***Revenue rules* set floors or impose ceilings on government revenues.** In contrast to other rules, revenue rules are seldom adopted on their own and are rather used in combination with other rules to help support fiscal sustainability. Given the cyclicality of revenues, the implementation of these rules can complicate macroeconomic stabilization efforts. For instance, revenue floors increase procyclicality, as these might require tax hikes in bad times, whereas ceilings (such as in Australia till 2022)[18] can limit revenue mobilization and fiscal savings in good times (IMF 2018). However, earmarking windfall revenues could mitigate deficit and procyclical bias, especially if these are allocated for debt (Netherlands) or deficit (Lithuania) reduction.

- ***Expenditure rules* (ERs) are fully under the government's control, but the link with debt dynamics is relatively weak.** ERs typically set expenditure ceilings in absolute terms (levels) or growth rates, and sometimes as percent of GDP. ERs are increasingly common among AEs, with less than a third of EMDCs having adopted them (e.g., Brazil, Mongolia, Paraguay). Most countries combine it with a budget balance and/or debt rule. ERs allow most automatic stabilizers to operate freely since revenues are allowed to fluctuate with the business cycle (IMF 2018). As a result, ERs are associated with lower pro-cyclical bias (e.g., Manescu and Bova, 2020 and Cordes and others 2015) and expenditure volatility (Fall and others, 2015) compared to other rules. They can also avoid procyclicality in good times by preventing higher-than-expected revenues from being spent, assuming no upward adjustments re allowed (this is not the case in

[17] Conceptually, by allowing governments to borrow just for creating return-yielding assets, the golden rule implies that public debt is fully backed by public capital in the long run. In practice, however, there is no guarantee that the assets will yield a return high enough to cover the interest on the debt that financed their acquisition (Serven 2007).

[18] Australia's tax to GDP was previously capped at 23.9 percent.

South Africa). However, ERs are also associated with procyclical changes in investment spending (e.g., Guerguil and others, 2017) and high income inequality (e.g., Combes and others, 2024).

27. In the case of South Africa, tightening the existing expenditure rule and combining it with a primary balance rule could help achieve the debt objective. The expenditure rule could be calibrated to ensure a minimum improvement in primary balance that is required to achieve the debt target. This requires avoiding any exclusions (e.g. SOE support) to strengthen the link with debt dynamics and make the rule transparent and easier to monitor. In case of an upside revenue surprise, the expenditure rule will ensure that additional revenues are saved or used for debt repayments. In the case of unforeseen spending pressures, mid-year adjustments would be limited to spending reappropriations. Contingency allocations could help this process if fiscal risks are carefully calibrated and accounted for. The rule would allow accommodating new spending initiatives (such as public health insurance) when they come with a dedicated resource base and are budget neutral. Given uncertainties around revenue outturns, the combination of an expenditure and primary balance rule could be more effective in reaching debt objectives than the current framework. For instance, in the case of a downside surprise, the primary balance rule would allow for consolidation on both the revenue and spending sides to make the required adjustment possible.

28. The arrangements discussed above could be viewed as transitional rules, which would guide the fiscal position towards a steady state. The transitional rules could be aimed at addressing the immediate challenge of reversing the trend of rising debt and reaching the intermediate debt target of 70 percent by 2030, putting its trajectory on a firm downward path until it reaches 60 percent anchor. Once the debt reaches the level of the fiscal anchor, the rules could be reviewed and recalibrated to focus on stabilizing debt at this level.

29. Implementation of the fiscal rule framework would require strong public financial and expenditure frameworks. This would require boosting capacity to accommodate urgent and unforeseen expenditure through reprioritization, specifically by enhancing the ability to identify and secure decisions to make expenditure savings. Moreover, the authorities need to strengthen long-term fiscal-forecasting capacity and reporting and strengthen fiscal risk management, including of risks arising from SOEs. Assigning an independent institution to assess budget assumptions and report on the government's adherence to its strategy would enhance accountability and credibility.

G. Conclusion

30. The current spending rule in South Africa did not prevent the rapid rise in public debt over the past decade. In the absence of a clear fiscal policy anchor amid rising spending pressures, the effectiveness of the primary expenditure ceiling has been diluted by policy discretion and, to some extent, pandemic-related spending pressures. Under the current staff baseline, debt is not expected to stabilize over the medium term as unfavorable interest-growth differential and sizable stock-flow adjustments are projected to more than offset a modest consolidation in the primary balance. To reduce debt vulnerabilities in a more shock-prone world, putting public debt on a downward path toward a lower, more prudent level, is essential.

31. Adopting an operational fiscal rule anchored in a debt ceiling could help safeguard debt sustainability and strengthen policy credibility. Such a framework would need to include the following elements: (i) a prudent debt anchor—estimated using a variety of methods, and accounting for a safety buffer—of around 60 percent of GDP in the long run, supported by an intermediate debt target of 70 percent of GDP in the medium run; (ii) a credible fiscal rule, which could build on and strengthen the existing framework of expenditure ceilings, and be complemented by a primary balance rule, including well-defined escape clauses in case of large unforeseen shocks; and (iii) assigning an independent fiscal body to assess the robustness of assumptions and report on implementation. Effective implementation of the rule will necessitate a sound legal framework consistent with medium-to-long-term fiscal and debt policy objectives and underlying fiscal rules (along with specific provisions for enforcement and independent monitoring), strong supporting public financial and expenditure frameworks and sound fiscal risk management practices.

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MACROECONOMIC EFFECTS OF A POTENTIAL CHANGE IN SOUTH AFRICA'S INFLATION TARGET[1]

South Africa's inflation-targeting framework has served the country well, playing a key role in reducing inflation since 2000. However, with inflation still above that of key trading partners, questions have arisen whether a potential shift from the current target band (3 to 6 percent) to a lower point target could better support macroeconomic stability over the medium term. This chapter explores the macroeconomic implications of such a shift. While medium run gains result from lower borrowing costs, the modeling analysis points to the critical role of inflation expectations and central bank credibility in minimizing near-term output costs; fiscal-monetary interactions are also important. A review of select case studies highlights the importance of close coordination among policymakers, clear communication, and gradual transitions to support the achievement of lower inflation.

A. Introduction

1. South Africa's inflation-targeting framework has served the country well, playing a key role in safeguarding macroeconomic stability over the past two and a half decades. Implemented in 2000, this framework has generally succeeded in maintaining inflation within the 3–6 percent target range and providing monetary policy anchor. However, inflation expectations have predominantly been anchored at the upper end of the band. Moreover, persistent inflation differentials with major trading partners (given their lower inflation targets) have exerted pressure on the exchange rate. This has raised questions about whether a lower inflation target in South Africa might better support long-term macroeconomic stability.

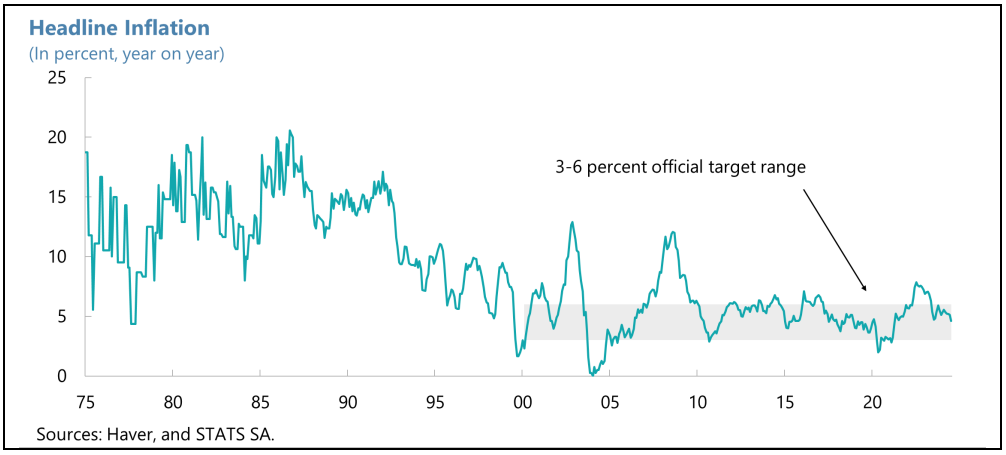
2. This paper explores the macroeconomic effects of a potential change in South Africa's inflation target. It examines whether a shift to a lower target could enhance economic stability and improve public debt dynamics, while also considering potential costs to real output as measured through the so-called "sacrifice ratio." The analysis considers the trade-offs involved in such a policy change, drawing on model-based analysis and cross-country experience.

3. The paper is organized as follows. Section B reviews the evolution and effectiveness of the SARB's inflation targeting framework highlighting key developments in monetary policy, inflation, and inflation expectations, and summarizes the key findings and recommendations of recent policy reviews. Section C discusses the costs and benefits of a potential change to the framework consisting of lowering the inflation target, using a multicounty dynamic general equilibrium model. Section D presents some lessons from country experiences with changes to their inflation target frameworks. The final section concludes and provides some policy recommendations.

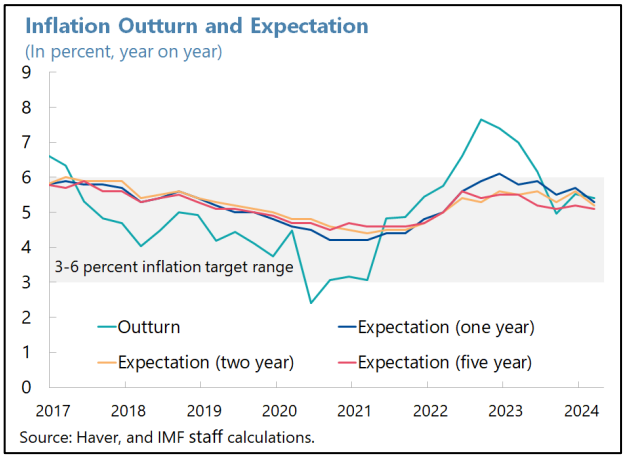
[1] Prepared by Jana Bricco (AFR), Philippe Wingender (RES), and Mario Mansilla (MCM).

B. Evolution and Effectiveness of the Current Inflation Targeting Framework

4. Inflation targeting was introduced in 2000 in South Africa. The intention to adopt inflation targeting was announced in August 1999. Originally, the authorities planned to narrow the target range from 3–6 percent in 2002–03 to 3–5 percent in 2004–05. However, a spike in the rand in 2001 accelerated inflation above target in 2002 and the planned switch was put off, highlighting the key role that the exchange rate plays in inflation dynamics. Inflation accelerated again because of the commodity price surge in 2008 and subsequently fell to the lower end of the target range. Between 2011–17, inflation hovered around the upper end of the target range.[2]



5. In 2017, the SARB communicated its preference on the 4.5 percent midpoint of the target range.[3] Following this communication, inflation and expectations declined from around 6 to 4.5 percent without the need for the SARB to raise policy rates. However, following the pandemic, inflation surged both in South Africa and elsewhere. In line with other central banks, the SARB tightened monetary policy during 2021–23, which helped reduce inflation gradually to 3.8 percent by September 2024. The SARB has continued to highlight the benefits of low and stable



[2] In 2009, the reference inflation rate for the IT changed from the CPIX (CPI less the interest on mortgage bonds) to the CPI.

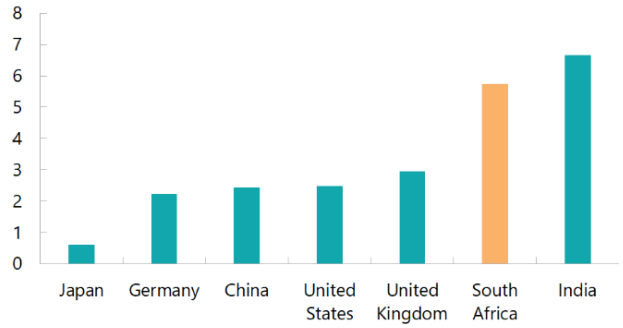
[3] Statement of the Monetary Policy Committee (resbank.co.za) July 2017.

inflation, including price competitiveness, pro-poor distributional effects, lower debt financing costs, and investor confidence.[4]

6. The SARB's monetary policy has been assessed to have been effective. The Independent Review of Monetary Policy conducted by Honohan and Orphanides (2022) found that policy was successful in maintaining inflation within the SARB's target range and stabilizing inflation expectations. In its 2024 Macroeconomic Policy Review, the National Treasury also concluded that the inflation-targeting regime has been associated with a decline in average inflation and its volatility and was successful in anchoring expectations.

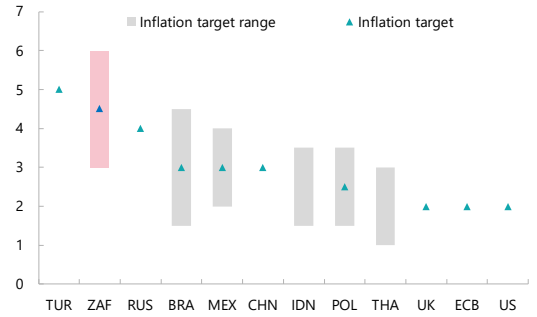
7. However, some challenges have also been identified. Honohan and Orphanides (2022) posit that the SARB's target band allows for too large variation over a long-term horizon, resulting in higher inflation risk premiums being added to long-term financial asset yields.[5] They also note that inflation of 4.5 percent is arguably still too high to be considered as price stability. Miyajima and Yetman (2018) note that inflation expectations have been well anchored but tended to stabilize at levels around the upper end of the official target range during 2000–17, with notable heterogeneity across agents. The National Treasury (2024) highlights that, given South Africa's target band of 3–6 percent, inflation has remained higher than the global average and that of trading partners, putting downward pressure on the exchange rate. While the exchange-rate passthrough to inflation has been declining over time, latest estimates suggest it ranges between 15–20 percent in 2017–18.[6] Moreover, administrative prices, which have risen more quickly than other prices, have put upward pressure on inflation, complicating the implementation of monetary policy.

South Africa's Inflation Relative to Main Trading Partners
(In percent, average 2007–23)



Source: IMF WEO database.

Inflation Target Range
(In percent, 2024)



Source: Haver, and IMF staff calculations.

8. Questions have thus arisen whether changes to the current framework may be needed to better support long-term macroeconomic stability in South Africa. Honohan and Orphanides (2022) recommended moving from the 3–6 target band with an implicit mid-point target to an

[4] IMF Article IV report (2018).

[5] In particular, they see long-term borrowers being disadvantaged by this uncertainty, especially if inflation outturns are lower than the upper bound of the band.

[6] A Kabundi and M Mlachila, 'Monetary Policy Credibility and Exchange Rate Pass-Through in South Africa', South African Reserve Bank Working Paper Series No. WP/18/04, Pretoria: South African Reserve Bank, August 2018. Miayima "Exchange Rate Volatility and Pass-Through to Inflation in South Africa" (2019) IMF Working Paper.

explicit point target of 3 percent, in line with other central banks' experience with achieving price stability, while taking into account estimates of South Africa's neutral rate. The National Treasury (2024) questioned whether "the current definition of the target is the most appropriate given inflation differentials compared to our peers and trading partners," noting that further assessments of the appropriate level of the target and its form (point or range) would be needed to inform policy decisions. More recently, the SARB noted that its increased credibility—as evidenced in the success in reducing inflation and expectations during 2016–19 without the need to raise policy rates—and current inflation dynamics (already well below the midpoint of the target band and expected to fall further) could support the achievement of permanently lower inflation at little economic cost.[7]

C. Assessing the Macroeconomic Effects of Lowering the Inflation Target

9. In deciding on whether to reduce the inflation target, policymakers will need to carefully weigh the economic benefits against potential costs. There is broad agreement that once achieved, low and stable inflation comes with significant macroeconomic benefits: higher confidence would support higher growth; stronger purchasing power would disproportionately benefit the poor, helping reduce inequality; lower inflation premia reduce debt-financing costs and thus debt burdens;[8] and lower inflation differentials with trading partners would reduce pressures on the exchange rate. However, bringing inflation down usually necessitates higher interest rates, especially if inflation expectations adjust slowly. This could result in near-term economic costs via lower employment and output. Such costs could be lower if inflation expectations are more forward-looking and monetary policy is highly credible. In this case, the announcement of the new lower target can influence expectations without the need to raise interest rates.

10. The IMF's Global Integrated Monetary and Fiscal Model (GIMF) can provide some insights into the costs and benefits of a potential reduction in South Africa's inflation target. The GIMF model is a multi-region dynamic general equilibrium model analyzing macroeconomic policy interactions, including monetary and fiscal policies. It features nominal and real rigidities and so captures the dynamics of inflation, output, and trade across different economies, which allows assessing the impact of changing inflation targets on economic performance. The model has been calibrated to the characteristics of the South African economy (see Technical Annex).

11. The model is used to simulate a reduction in the SARB's inflation target from the current midpoint of 4.5 percent to 3 percent. As noted above, the behavior of inflation expectations is an important determinant of how the economy responds to the policy change, and, as such, of the potential magnitude of related costs. The model considers three key specifications: (i) "fully forward-looking" expectations, where changes in the inflation target are immediately and completely integrated into expectations; (ii) "rapidly-adapting" expectations, where expectations adjust swiftly to information about the central bank's new inflation target, which is the GIMF

[7] Kganyago (2024).[8] Fouejieu and Roger (2013).

[8] Fouejieu and Roger (2013).

baseline calibration; and (iii) "gradual learning", where expectations evolve more slowly, as backward-looking agents take time to learn about and adapt to the new inflation target. [9]

12. Under the baseline scenario, near-term output costs are moderate, with medium-term gains resulting from a lower interest rate on public debt (Figure 1). Assuming rapidly (but not fully) adapting expectations, the level of output would be lower by 0.4 percent in the first year following the implementation of the policy change (compared to a no-policy change scenario), with continued but declining level losses (growth gains) in the following two years.[10] The initial growth decline is due to an appreciation of the currency and net exports declining, which also cause consumption to decline temporarily.[11] In the model, the change in the inflation target does not necessitate an increase in the policy rate; rather, the announcement effect is sufficient to put inflation on a downward path to the new target. The cumulative near-term output loss (in levels) under this scenario is estimated at 0.9 percent, corresponding to a "sacrifice ratio" (output loss per percent inflation decline) of 0.6. This is in line with Loewald et al. (2022), who use a structural vector autoregression approach developed by Cecchetti and Rich (2001) and estimate a sacrifice ratio of 0.5 for the post-apartheid period in South Africa. In the medium run, temporary output gains would emerge in the transition to the new equilibrium, as lower real interest rates continue to support investment and a pickup in consumption. While public debt interest costs tick up in the near term, they would be lower by 0.6 percent of GDP in the medium run given the lower interest rate.

13. Near-term output costs would be significantly lower if inflation expectations are fully forward looking; conversely, costs would be significantly higher if expectations adjust only slowly (Figure 2). If agents are fully forward looking—corresponding to a high degree of credibility of the central bank—the sacrifice ratio would be close to zero, and the reduction in inflation could be achieved with little to no cost to output. Indeed, using the trend analysis approach developed by Ball (1994), Loewald et al (2022) find that the reduction in trend inflation between 2016–19 was not associated with output losses, suggesting that the sacrifice ratio may have declined close to zero in the pre-pandemic period. However, if agents only gradually come to believe that the inflation target change is permanent, the transition costs of the policy change would increase, with the cumulative output costs amounting to about 1.9 percent over five years, corresponding to a sacrifice ratio of around 1.2. Under this scenario, the nominal interest rate still declines, given the falling inflation and output, albeit more gradually than in the other two scenarios, given the stickier inflation expectations. As a result, the real interest rate increases (by around 0.2 percent) compared to a no-policy change scenario.

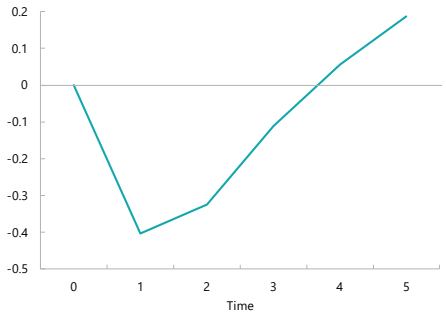
[9] The scenarios with different structures for inflation expectations are offered as illustrative simulations. Quantifying the degree of "forward-lookingness" of inflation expectations and credibility of the central bank in South Africa would require additional analyses. See for example IMF (2023c).

[10] Using its quarterly projections model (QPM), the SARB found the near-term impact on growth to be similar (0.3 percent). See Monetary Policy Review (2024).

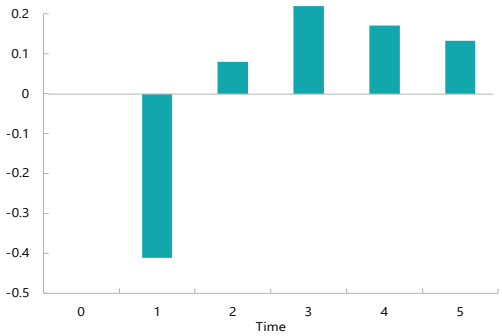
[11] The model assumes a constant overall fiscal balance, implying that that government consumption increases by the same amount as the decline in interest payments. This effect, combined with a purchasing-power parity channel from lower expected inflation, causes an appreciation of the exchange rate.

Figure 1. Impact of Inflation Target Change Under Baseline GIMF Assumptions

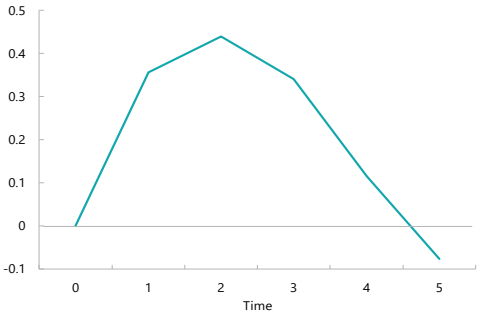
Real GDP Level
(Deviation from steady state level, percent)



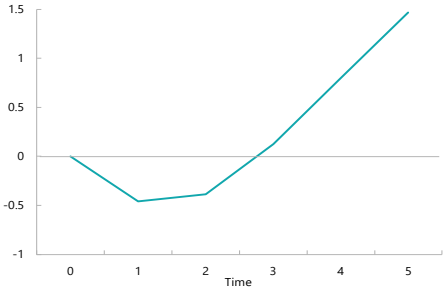
Real GDP Growth Rate
(Deviation from steady state growth rate, percent)



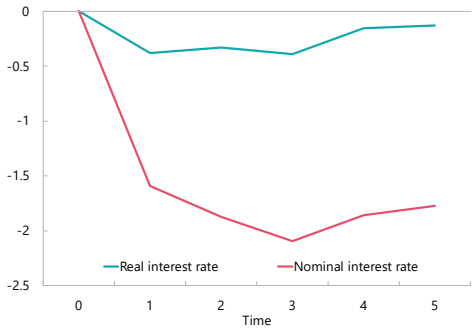
Real Investment
(Deviation from steady state level, percent)



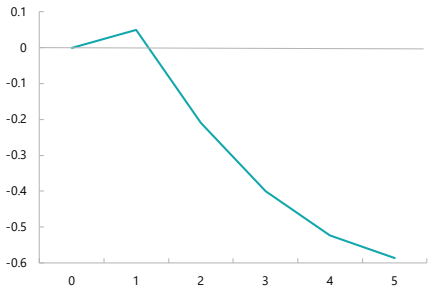
Real Consumption
(Deviation from steady state level, percent)



Nominal and Real Interest Rates
(Deviation from steady state level, percent)



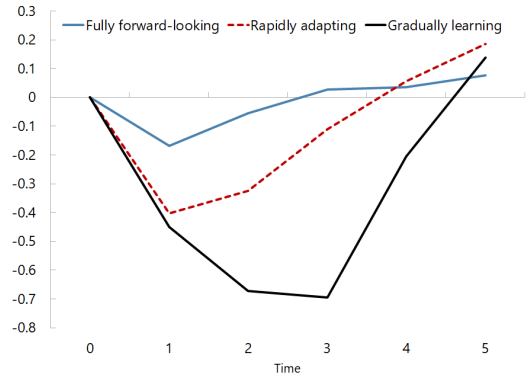
Interest Cost on Public Debt
(Deviation from steady state level, percent)



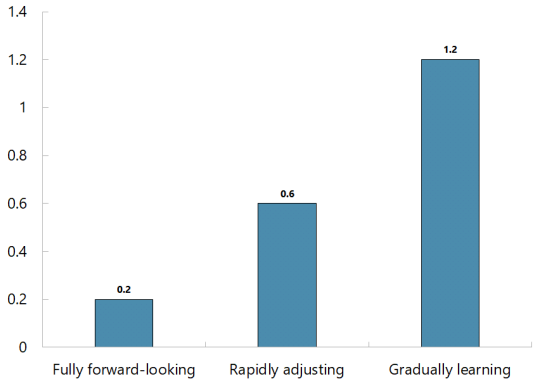
Source: IMF staff calculations using GIMF.

Figure 2. Inflation Target Change Under Various Inflation Expectations Assumptions

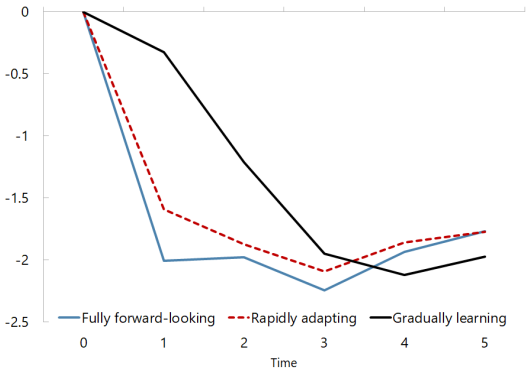
GDP Level Impact of an Inflation Target Change
(Deviation from steady state level, percent)



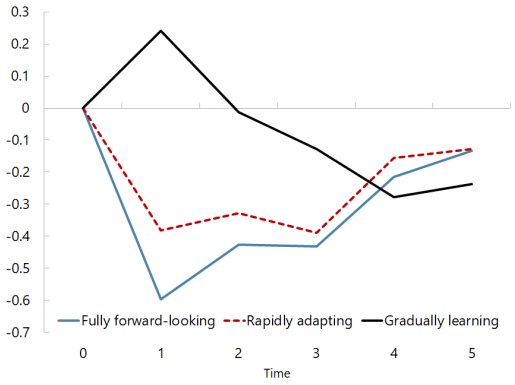
Sacrifice Ratio of an Inflation Target Change
(Cumulative GDP losses per percent inflation decline)



Changes in the Nominal Policy Rate Required to Achieve Inflation Target Change
(Deviation from steady state level, percentage points)



Changes in the Real Interest Rate of an Inflation Target Change
(Deviation from steady state level, percentage points)



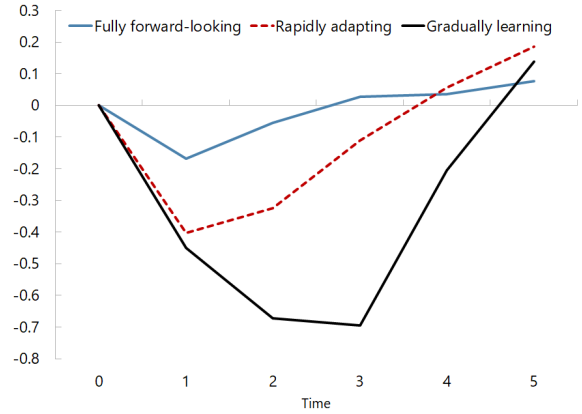
Source: IMF staff calculations using GIMF.

14. If the inflation target change results in a decline in sovereign risk premia, this could help reduce near-term output costs. A (credible) commitment to a lower target would be expected to translate into lower variability in expected and realized inflation, which would likely transmit to a lower risk premium. We simulate this effect by reducing the Uncovered Interest Rate Parity (UIP) premia for South Africa by 25 basis points gradually and permanently over 5 years. While the change in the inflation target still results in a decline in output in the first year (both in the baseline and the specification with fully forward-looking expectations), the near-term output cost is significantly lower compared to the previous simulation, with sacrifice ratios in both scenarios now close to zero. Higher temporary medium-term output gains (0.6-0.8 percent) can be achieved due to higher investment induced by the lower effective cost of borrowing. Public interest costs also decline more markedly (by up to 0.8 percentage points of GDP in the medium term). With more sluggish inflation expectations, the beneficial effects of lower risk premia would be dampened.

Figure 3. Impact of Inflation Target Change Under UIP Improvement

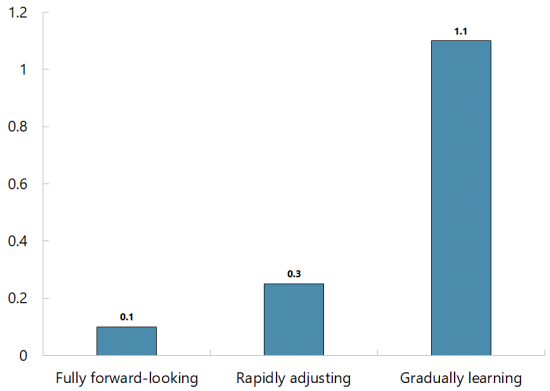
GDP impact of an Inflation Target Change, Lower Borrowing Costs

(Deviation from steady state level, percent)



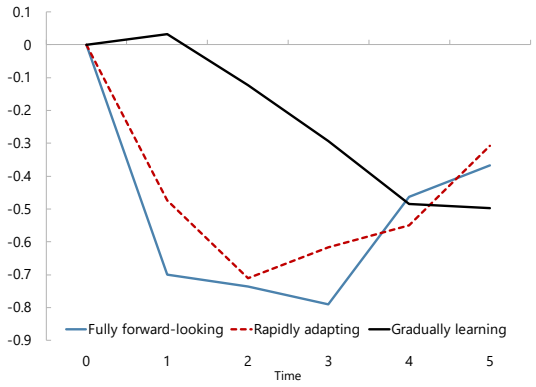
Sacrifice Ratio of an Inflation Target Change, Lower Borrowing Costs

(Cumulative GDP losses per percent inflation decline)



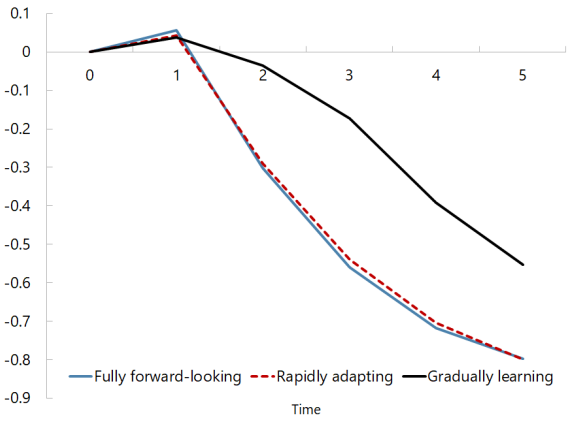
Real Interest Rates

(Deviation from steady state level, percent)



Interest Cost on Public Debt

(Deviation from steady state level, percent)



Source: IMF staff calculations using GIMF.

15. Fiscal consolidation, while adding to output costs, can help reduce the near-term costs associated with lowering the inflation target. In view of the high debt level**,** the authorities are planning to embark on a spending-based fiscal consolidation over the next three years to stabilize public debt by FY25 and put it on a declining path thereafter.[12] Fiscal consolidation is expected to lower aggregate demand and output in the near term.[13] However, if implemented concurrently with the inflation target reduction, consolidation is expected to help with the disinflation process, helping monetary policy achieve the lower inflation target. Lower UIP risk premia help with both the fiscal consolidation and inflation target reduction, especially if expectations are more forward-looking.

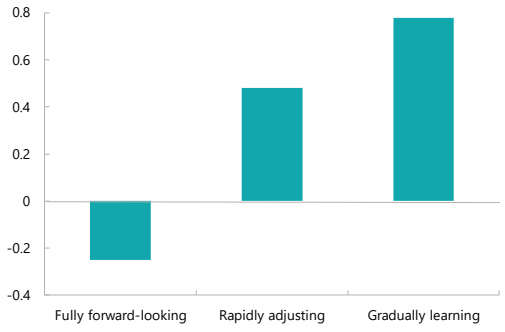
[12] See October 2024 Medium Term Budget Policy Statement.

[13] The implicit fiscal multiplier associated with the fiscal consolidation and a partial reduction in the UIP premium in the model is 0.4 for fully forward-looking expectations, 0.6 for rapidly adapting expectations and 0.7 for gradually learning expectations.

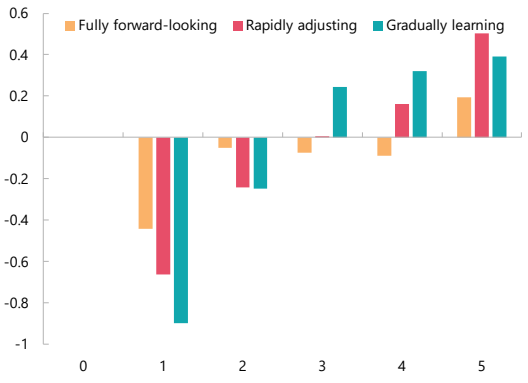
Thus, the output costs of a scenario combining fiscal consolidation and a reduction in the inflation target would be lower than the sum of the costs of implementing each of these initiatives, given the complementarities noted above. Indeed, the simulation results suggests that fiscal consolidation helps reduce the sacrifice ratio associated with lowering the inflation target in all three inflation expectation scenarios. Specifically, the marginal sacrifice ratio of the inflation target change conditional on fiscal consolidation would be small and negative (-0.25) in the case of fully forward-looking expectations, as the consolidation causes inflation to decline below the target in the near term.[14] The marginal sacrifice ratio turns positive (0.5 and 0.8) for rapidly adapting and gradually learning expectations respectively, but still lower than what it would be in the absence of consolidation.[15]

Figure 4. Impact of Inflation Target Change Under Improved UIP and Fiscal Consolidation

Marginal Sacrifice Ratios of an Inflation Target Change, Lower Borrowing Costs Conditional on Fiscal Consolidation
(Cumulative percent GDP losses per percent inflation decline)



Real GDP Growth Rates Under Both Fiscal Consolidation and Lower Inflation Target
(Deviation from steady state growth rate, percent)



Source: IMF staff calculations using GIMF

D. Cross-Country Experiences with Changes in Inflation Targets

16. With inflation targeting (IT) frameworks now widely used around the world, there are lessons to be learned from country experiences with lowering inflation targets. The use of IT frameworks has increased over time, with 45 countries currently identified as having an IT monetary regime.[16] Given the diverse initial economic conditions in which IT has been applied, countries

[14] The marginal sacrifice ratio is defined as the additional output losses from lowering inflation, conditional on implementing a fiscal consolidation.

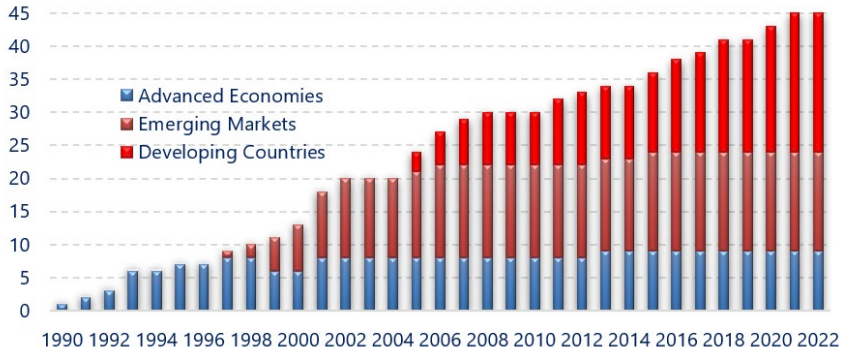
[15] The sacrifice ratio could also be reduced further if administered prices for public utilities—electricity, water, some transportation, which account for around 16 percent of the consumption basket—would rise more slowly. A quantification of this channel is left for future work.

[16] Jacome et.al. (2024) analyze the heterogeneity of inflation targeting countries and the importance of the inflation history in a country prior to IT adoption.

adapted in different ways to enhance the effectiveness of the IT monetary frameworks. Indeed, a number of countries have successfully managed the transition to a lower inflation target (Box 1).

Figure 5. Adoption of the Inflation Targeting Framework 1/

Inflation targeting has been widely adopted in the world since the 1990s



Source: IMF Annual Reports on Exchange Arrangements and Exchange Restrictions.
Note: The classification of emerging markets is from Morgan Stanley's Emerging Market Index.
1/ As cited in Jacome et. al. (2024). Annex I.

17. First, cross-country experience points to the importance of clear communications of policy decisions. As a matter of general practice, all central banks need to ensure transparent and consistent communication with the public and markets to guide expectations. This is particularly important when changes to frameworks are being planned. For example, the Reserve Bank of New Zealand implemented an effective communication plan to explain the reasons for adjusting its inflation target (earlier in the process) and framework and the expected economic outcomes. The reaction function to unexpected deviations from a glide path should also be part of the communication plan, e.g. the central bank may opt to take measures in an asymmetric way if outcomes are below versus when they are above target.

18. Second, timely and effective coordination between monetary and fiscal policies is crucial and should be an ongoing effort. Successful IT frameworks require policy consistency and involve formal and informal coordination of monetary and fiscal authorities. This is more so if the timeline for the transition to a lower IT involves several years. In Canada and New Zealand, the target resulted from a joint agreement between the governor of the central bank and the executive branch. In jurisdictions with highly independent central banks (e.g. Riksbank in Sweden) it is the central bank that announces the inflation target without need for explicit endorsement from the government; nonetheless, the changes were subsequently endorsed by the government or parliament. In Indonesia, effectiveness of the framework to keep inflation within the target range in recent years has been attributed to a better policy mix.

19. Third, successful IT reduction plans generally involved a phased-in process. This approach helps to avoid sudden shocks to the economy. Episodes of target change have many idiosyncratic elements, but one of the common factors is that for a given change (or deviation from target) central banks define their 'time to target' typically as medium term—which typically is 3 years. However, some prefer a looser timeframe ('over time', for instance Australia, Norway, and

Canada's). In all major central banks this timeframe is made explicit in the communications to the public and in the published forecasts.[17] In some cases, central banks prefer to have frequent renewals of their target (even if there is no change) until they judge that expectations are anchored. One example of successful gradual processes is Canada.

20. Flexibility and periodic reviews of the key elements of IT frameworks are important in the face of continued uncertainty. Central banks must continuously monitor economic indicators, assess the IT performance, and remain flexible to adjust policies and frameworks if needed. The experience of several major central banks with their own IT renewal and review is heterogeneous in terms of the scope (technical or state dependent), who undertakes the reviews (central bank or other institutions), and frequency (periodic or ad hoc). The UK Treasury, for example, reviews its IT framework annually; in the early days of the IT regime, it adjusted its framework based on economic conditions (Box 1). Despite the differences in practices, IT frameworks have evolved to have similar core elements, notably targets tend to be point targets (typically at 2 percent in advanced economies) with bands (commonly of +/- 1 percent)[18] Their implementation has been flexible and on a forward-looking manner, especially in relation to the cycle and the conditions to avoid undue economic impacts or financial stability risks. This flexibility has added credibility and effectiveness to the regime.[19]

21. Finally, international experience suggests that lower inflation in the context of effective IT regimes can create conditions for faster and sustainable growth. Lower inflation outcomes within a credible framework can effectively reduce the perceived risk of investment, which can lead to a more stable macroeconomic environment. While the range of macroeconomic conditions vary from case to case and over time, successful inflation targeting countries tend to face lower risk premia on their debt. In a panel study, Fouejieu and Roger (2013) find that IT lowers a country's risk premium relative to other monetary policy frameworks. This effect is due to lower inflation levels and volatility among IT countries,[20] with the positive impacts being higher in emerging markets.

[17] See Wadsworth (2017).

[18] Bands of 1 percent around the mid-point are in place in the majority of cases where inflation is in the lower single digits. Some countries opted for inflation target ranges at the onset but later transitioned to a point target as their frameworks became well established and credible. Wider bands may be applicable during volatile contexts.

[19] Amano et. al. (2020).

[20] Kiley (2007) shows that inflation levels and volatility are positively correlated.

Box 1. Selected Country Examples of Experiences with Lowering Inflation Targets

- **Brazil**. In 1999 Brazil adopted the IT framework with a band of +/- 2 percent around a mid-point of 8 percent. During the first few years of the IT regime authorities announced several downward adjustments to the bandwidth and mid-point. Starting in 2005, the announced target became more stable at 4.5 percent (+/- 2 percent). In 2017 the band was tightened to +/-1.5 percent, and in 2018 authorities decided to start reducing the target over a period of 6 years by 0.25 percent each year (down to 3 percent). Authorities kept their glide path through this period, including during the monetary tightening cycle of the post pandemic period, and actual inflation fell within the target range except in 2021–22 due to the pandemic. In mid-2023 the National Monetary Council replaced the previous practice of setting medium term targets three years in advance every calendar year for a continuous 3 percent target (+/- 1.5 percent) from 2025 onwards. This change was established by presidential decree,[1] and is deemed to have helped re-anchor medium term expectations. At the same time, policy action and communication have been geared to build credibility around the continuous target. In recent quarters inflation has once again deviated from the target, partly due to changes in the policy mix, and the central bank is responding within the framework with a new monetary tightening cycle.
- **Czech Republic**. IT was officially introduced in the Czech Republic in 1999, following a detailed assessment of the necessary prerequisites, and in the context of the country's integration into the EMU. At that point it was established that the target established for year 2000 (4.5 percent +/- 1 percent) would gradually move to the long-term target until 2005 (2 percent +/- 1 percent), which was considered the price stability level.[2] This implied a yearly glide of half a point. Underlying this decision was the consensus between the government and the Czech National Bank that price and monetary stability was a major policy objective. The Czech framework defines its targets in terms of 'net inflation', which is derived from the overall CPI adjusted for regulated prices, i.e. prices affected by administrative interventions and for indirect tax changes. This was later replaced by the full CPI and since 2010 the target was set at 2 percent (+/- 1 percent of tolerance). At the same time, a set of exceptions were established that allowed authorities not to react immediately creating counterproductive effects on the real economy. The exceptions are mainly exogenous and unforeseeable factors: substantial changes in global prices, deviation of the exchange rate unrelated to domestic monetary policy, agricultural shocks, and natural disasters.
- **Indonesia.** Indonesia's IT framework has faced continuous challenges since it was implemented in 2005. Several factors including external shocks leading to capital flow volatility, coordination with fiscal policy, supply-side constraints associated to structural issues, and financial stability concerns, have led to deviations from the announced targets over the years. A relatively high exchange rate pass-through is also present due to dollarization. Nevertheless, over time, IT has helped achieve more stable inflation rates. Following the reforms in the aftermath of the Asian Crisis, the Bank of Indonesia officially adopted an IT framework. The inflation target in Indonesia is set by the government, and was originally announced at 6 percent (+1 percent) for 2005, 5.5 percent for 2006, and 5 percent for 2007, with the aim to reach 3 percent in the long run. This glide path, however, was later revised and raised in response to shocks associated to volatile oil prices and the global financial crisis of 2008/2009. By 2015, headline inflation was in the mid-single digits, and for 2016 a band of +/- 1 percent was announced around a target of 4 percent. Subsequent announcements in 2018 and 2020 lowered the midpoint target to 3.5 and 3 percent respectively, and actual inflation has remained within or below the target band since then, excepting2022. The target for 2024 was set at 2.5 percent**.**

[1] IMF (2023) and Banco Central do Brazil (2024).

[2] While slightly higher than the ECB's target, this initial target was also seen as appropriate given the distortions still in place for a transitioning economy (Czech National Bank and IMF (2000)).

Box 1. Selected Country Examples of Experiences with Lowering Inflation Targets (concluded)

- **Philippines.** The inflation targeting regime started in the early 2000s with a target defined as a range. For 2005–2006 the range was 4–5 percent. Starting in 2010 the target was redefined as a point target of 4.5 percent with a tolerance of +/- 1 percent, and the target announced from 2011 onwards was 4 percent (+/- 1 percent). After 2015, the target was set at 3 percent (+/- 1 percent) and remained unchanged. Except for 2018 and the post pandemic period, headline inflation has fluctuated within the target range. For 2024, the country in on track to meet the inflation target.
- **Canada.** When the country initially adopted an inflation target in 1991, the inflation rate was around 6 percent. The new framework aimed to bring down inflation to lower levels more consistent with price stability. Hence the government and the Bank of Canada agreed to a glide path to take inflation (measured by CPI) gradually to 3 percent by the end of 1992, then 2.5 percent by mid-1994, and finally 2 percent by the end of 1995 with a band of 1 percent around the target. It was further agreed that at that point the framework's performance would be reviewed periodically to reconsider the target rate for the future. Subsequent reviews included explicit language clarifying the importance of the midpoint of the target band, emphasizing that the band should be interpreted "as a reflection of […] short-run uncertainty" rather than "a measure of […] indifference". Other elements have also been incorporated in the agreements. For instance, the 2001 agreement provided more detail on operational aspects of the monetary policy framework, especially concerning the role that measures of core inflation played in the Bank of Canada's decision making, and incorporation of financial stability considerations in exceptional circumstances.[3] Renewals are presently carried out every five years and are normally preceded by a research program focused on specific issues. For instance, the 2001 agreement provided more detail on operational aspects of the monetary policy framework, especially concerning the role that measures of core inflation played in the Bank of Canada's decision making, and incorporation of financial stability considerations in exceptional circumstances.[4] Renewals are presently carried out every five years and are normally preceded by a research program focused on specific issues.
- **UK.** The IT framework of the UK is often cited as an example of how a well-defined point target can effectively anchor inflation expectations. The UK was one of the early adopters of IT framework in 1992. The initial target was announced as a range of 1–4 percent ("with the intent to be in the lower part of the range")[5] and "2 percent or less" for the long run. In the initial years actual inflation fluctuated around 2–3.3 percent, but inflation expectations and risk premiums signaled long-run credibility issues. Then, following a period in which inflation expectations were systematically above both the target range and actual inflation outcomes, the regime was modified to a 2.5 percent point target in 1997 (+/- 1 percent range) and expectations fell accordingly relatively quickly and the inflation premium on long-term bonds aligned with the target as well. Note that the announcement on IT was part of a broader monetary framework reform that assigned instrument independence to the Bank of England.[6] Further changes were introduced in 2003, when a different index was introduced though the essential elements were kept, which left the IT at 2 percent point target with +/- 1 percent band.

[3] Amano et. al. (2024).
[4] Amano et. al. (2024).
[5] Amano et. al. (2020).
[6] IMF (2005) Chapter 4. See also IMF (2018).

E. Conclusions

22. This paper discusses South Africa's inflation targeting framework and the macroeconomic effects of a potential change in the framework. While the inflation targeting regime has served South Africa well in maintaining macroeconomic stability, some challenges have been identified, given that inflation has persistently remained above the global average. This has prompted questions as to whether the framework should be changed, and the inflation target reduced. This paper has examined whether a shift to a lower target could enhance economic stability and lower debt costs, while assessing the potential costs to output, drawing on model-based analysis. Cross-country experience complemented the analysis.

23. Our modeling results point to a number of issues that policymakers will need to consider in their decision regarding a potential reduction in the inflation target. First, the credibility of the central bank in influencing both the behavior of inflation expectations and the market's views with regard to South Africa's risk premia is key to lowering the potential near-term economic costs of such a policy change. Indeed, lower economic costs could substantially support buy in of the reform. Second, monetary-fiscal interactions present both challenges and opportunities with respect to lowering inflation and public debt at the same time: while the policies can be reinforcing, their combined output costs would weigh more on the economy in the near term.

24. Cross-country experience offers important lessons that can further inform decisionmakers. First, clear communications of policy decisions are essential to anchor expectations and ensure the successful implementation of policy changes. Second, timely and effective coordination between monetary and fiscal policies is crucial and should be an ongoing effort. Third, successful IT reduction plans generally involved a phased-in process. Finally, flexibility and periodic reviews of the key elements of IT frameworks are important in the face of continued global uncertainty.

25. In sum, shifting toward a (lower) point target at an appropriate time could help support macroeconomic stability in South Africa. Our analysis suggests that moving toward a lower inflation target would support macroeconomic stability and confidence and reduce financing costs over the medium run. However, such a change may face near term trade-offs in terms of output, with the size of the costs critically dependent on the credibility of the central bank and its ability to influence expectations quickly. Fiscal consolidation, while supporting the disinflation process, may also add to near-term output costs. Thus, appropriate timing, careful design and gradual implementation of a potential policy change will be key to minimize costs and secure buy in. Moreover, allowing for flexibility during the transition phase will be important given the volatile and shock-prone global environment. Careful coordination between the Treasury and the SARB and appropriate communication of policy plans will be critical to help anchor expectations.

Annex I. Model Calibration and Assumptions

For a comprehensive overview of the Global Integrated Monetary and Fiscal Model (GIMF), see the foundational work by Kumhof and others (2010) and Anderson and others (2013). Recent applications of the GIMF can be found in IMF (2023) and Carton and Muir (forthcoming).

1. In calibrating the GIMF model for South Africa, the following adjustments were made to reflect the economic characteristics of the country:

- Nominal rigidities are informed by South Africa-specific Phillips curve estimates, with a quarterly slope of 0.25, indicating the response of inflation to economic activity.[1]Markups in domestic goods markets are higher compared to the baseline for advanced economies, reflecting structural market conditions. Additionally, the share of liquidity-constrained households at 60 percent is greater than in advanced economies at 25 percent, capturing the financial constraints faced by a significant portion of the population which is one of the most unequal in the world (Table 1).

Table 1. South Africa: Key Calibrated Parameters

	South Africa	China	Euro Area	Rest of the World	United States
Nominal Rigidities (annual)					
Domestic goods prices	12.0	48.0	72.0	48.0	48.0
Imported goods prices	4.8	16.0	24.0	4.8	48.0
Wages	25.0	120.0	180.0	120.0	120.0
Markups					
Consumption goods	1.20	1.10	1.10	1.10	1.10
Investment goods	1.15	1.05	1.05	1.05	1.05
Intermediate goods	1.20	1.20	1.20	1.20	1.20
Imported goods	1.05	1.05	1.05	1.05	1.05
Wages	1.10	1.10	1.10	1.10	1.10
Share of Liquidity-constrained Households	0.60	0.25	0.25	0.40	0.25

Source: GIMF and IMF staff calibration.

- In addition to the pure inflation target change scenario under different inflation expectations, the analysis includes two additional variations. In the first variation, a lower inflation target is combined with reduced government risk premium due to lower debt default and inflation risk, calibrated by a 25basis point decline in the Uncovered Interest Parity (UIP) premium. In the second scenario, a fiscal consolidation of three percentage points over three years, as recommended in the Staff Report 2024, is assumed alongside the change in the inflation target

[1] Kabundi, Schaling and Some (2019); Botha, Kuhn and Steenkamp (2020); Dladla and Malikane (2022); Reid and Siklos (2022).

and lower risk premiums. For technical reasons, the inflation reform is modeled as a reduction from SARB's implicit inflation point target of 4.5 percent to 3 percent. [2]

- Regarding the fiscal balance, under the pure inflation target change scenario, the government is assumed to maintain a constant overall fiscal balance. As the primary balance declines due to lower debt servicing costs, government consumption is increased to keep the overall balance steady. Alternative fiscal rules could involve maintaining a constant primary balance or adjusting household transfers instead of government consumption.

Model Framework and Calibration

2. While the GIMF model is calibrated to reflect the unique economic characteristics of South Africa, many assumptions are common across each county/region. For instance, in each country/region households are divided into two groups: (i) those within an overlapping generation structure (OLG) who make decisions on consumption, savings, and labor supply, and (ii) liquidity-constrained households who consume all their income each period and follow the labor supply decisions of the OLG households. This configuration introduces significant non-Ricardian properties into the economy, influencing short-term dynamics through habit persistence in both consumption and labor supply.

3. Firms operate in monopolistically competitive markets, setting profit-maximizing prices subject to nominal rigidities and residual demand for their differentiated products. Sector sizes are calibrated using the latest 2023 OECD Inter-Country Input-Output Database, focusing on non-tradable and tradable goods, which include sectors such as agriculture, mining, manufacturing, and services. Firms in these sectors employ Cobb-Douglas technology, combining labor and capital to produce output.

4. Investment decisions are driven by firms seeking to maximize profits, subject to real adjustment costs, and requiring inputs sourced both domestically and internationally. The financial accelerator mechanism, as outlined by Bernanke, Gertler, and Gilchrist (1999), plays a crucial role in investment dynamics, where firms must borrow from financial intermediaries due to insufficient retained earnings, and corporate risk premia are determined endogenously.

5. Trade flows are modeled bilaterally, accounting for consumption and investment goods, and responding to demand, supply, and pricing conditions, including terms of trade and real exchange rates. This framework captures the influence of international economic interactions on the domestic economy.

Fiscal and Monetary Policy Assumptions

[2] For technical reasons, the inflation reform is modeled as a reduction from the SARB's implicit inflation point target of 4.5 percent to 3 percent, as it is not possible to solve the model for a unique solution under an inflation band target.

6. Fiscal policy in each region aims to ensure long-term debt sustainability while stabilizing output in the short run. This is achieved by endogenously adjusting tax rates, expenditures, and transfers. Monetary policy is designed to respond to economic shocks based on inflation forecast targeting, shaping economic dynamics over a five to ten-year horizon without affecting long-term real economic outcomes.

7. The GIMF model's calibration relies on data from the OECD Inter-Country Input-Output Database (2023) and fiscal ratios from the IMF's Government Finance Statistics database. This ensures that the model accurately reflects the economic environment and policy framework specific to South Africa, enabling robust analysis of macroeconomic trade-offs and policy impacts.

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