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Macroeconomic Effects of a Potential Change in South Africa's Inflation Target

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Macroeconomic Effects of a Potential Change in South Africa's Inflation Target
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ABSTRACT: 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.

Macroeconomic Effects of a Potential Change in South Africa's Inflation Target

South Africa

Prepared by Jana Bricco, Mario Mansilla and Philippe Wingender [1]


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.

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]

Headline Inflation
(In percent, year on year)

Sources: Haver, and STATS SA.

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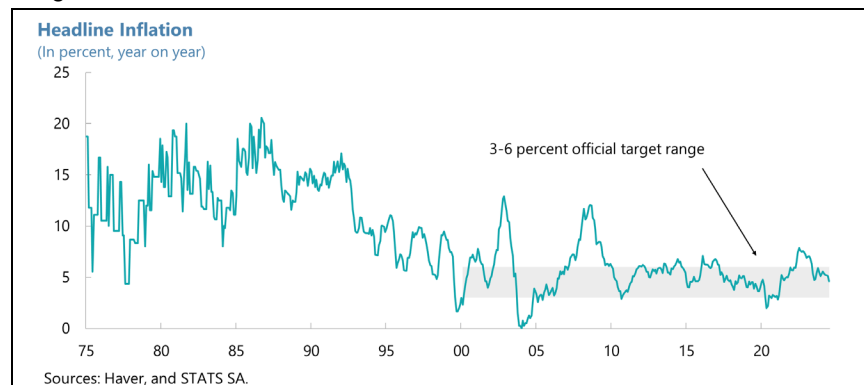
[2] In 2009, the reference inflation rate for the IT changed from the CPIX (CPI less the interest on mortgage bonds) to the CPI.

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

Inflation Outturn and Expectation
(In percent, year on year)

Source: Haver, and IMF staff calculations.
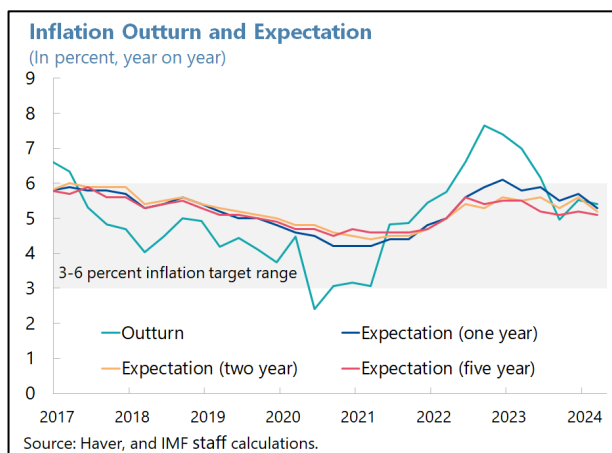
6.   The SARB's monetary policy has been assessed to have been effective. The Independent Review of Monetary Policy conducted by Honohan and Orphanides (2022) found that policy was successful in maintaining inflation within the SARB's target range and stabilizing inflation expectations. In its 2024 Macroeconomic 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.
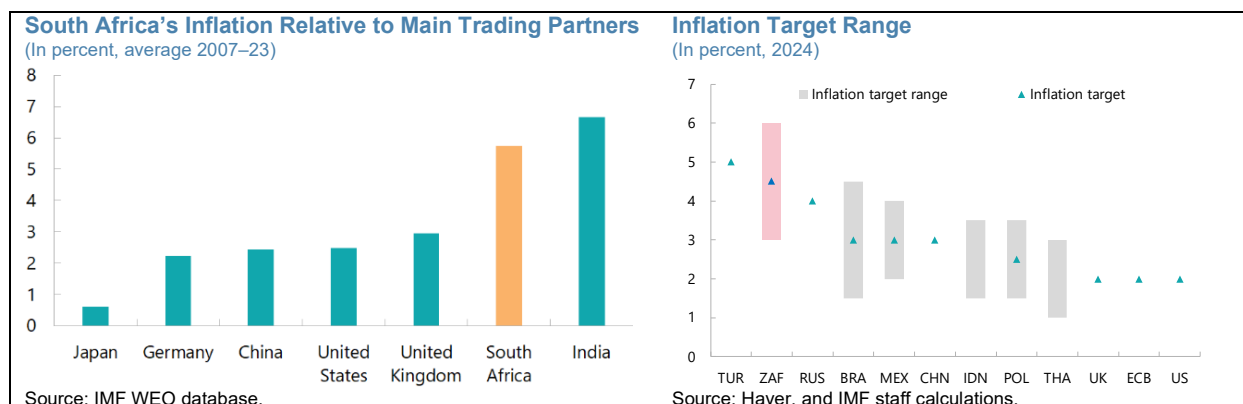
7.   However, some challenges have also been identified. Honohan and Orphanides (2022) posit that the SARB's target band allows for too large variation over a long-term horizon, resulting in higher inflation risk premiums being added to long-term financial asset yields.[5] They also note that inflation 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.

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

[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.

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

Inflation Target Range
(In percent, 2024)

Source: IMF WEO database.

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 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

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[7] Kganyago (2024).

[8] Fouejieu and Roger (2013).

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 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

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[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.

expectations. As a result, the real interest rate increases (by around 0.2 percent) compared to a no-policy change scenario.

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

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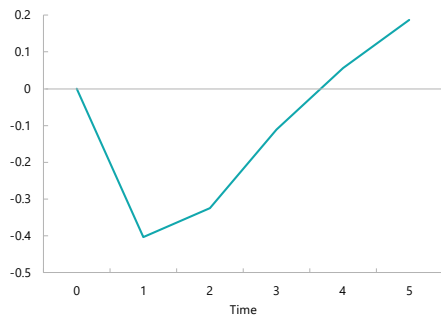
Real GDP Growth Rate
(Deviation from steady state growth rate, percent)
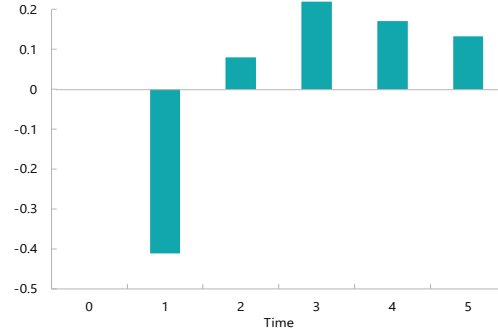
Real Investment
(Deviation from steady state level, percent)

Real Consumption
(Deviation from steady state level, percent)

Nominal and Real Interest Rates
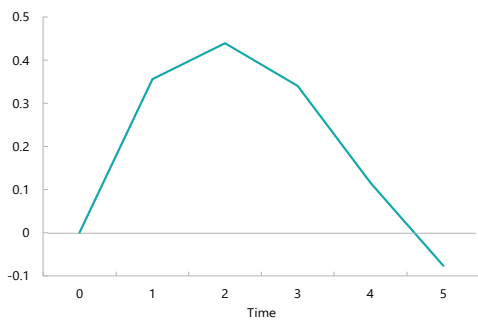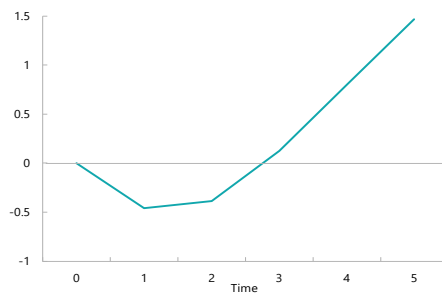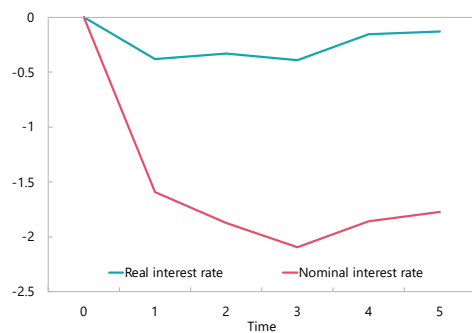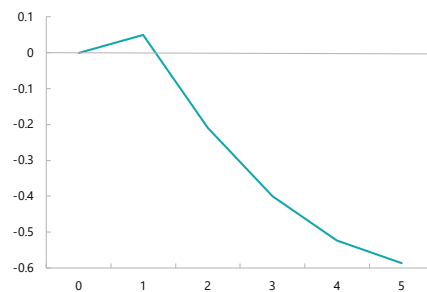*(Deviation from steady state level, percent)*
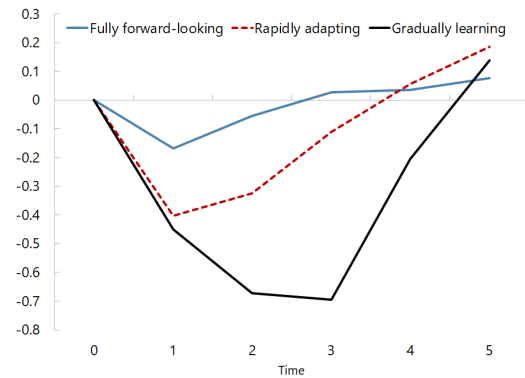
Interest Cost on Public Debt
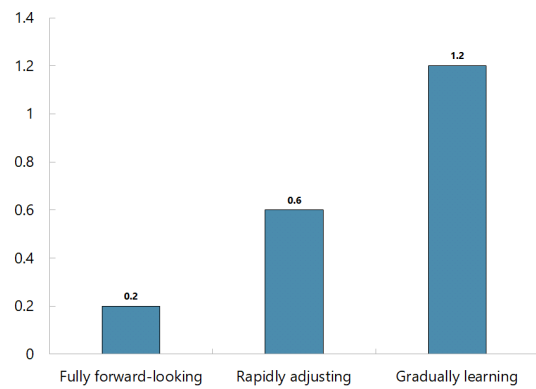*(Deviation from steady state level, percent)*

Source: IMF staff calculations using GIMF.

Figure 2. Inflation Target Change Under Various Inflation Expectations Assumptions
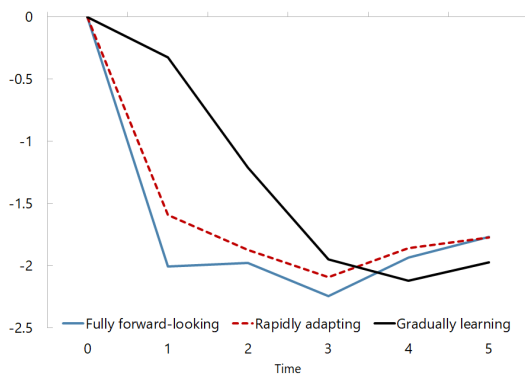
GDP Level Impact of an Inflation Target Change
(Deviation from steady state level, percent)

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)
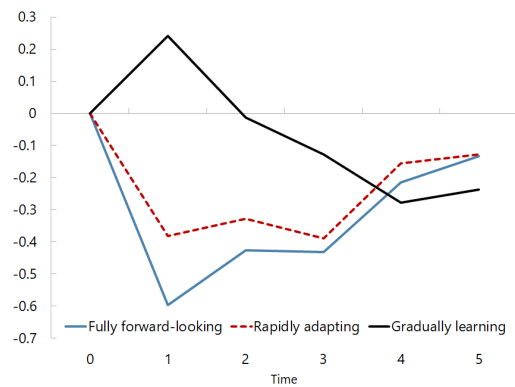
Source: IMF staff calculations using GIMF.

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)
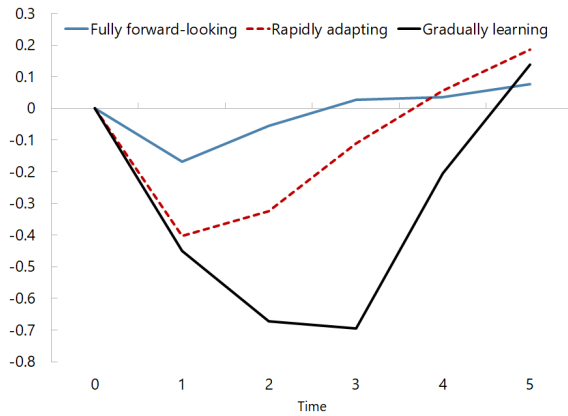
Sacrifice Ratio of an Inflation Target Change, Lower Borrowing Costs
(Cumulative GDP losses per percent inflation decline)
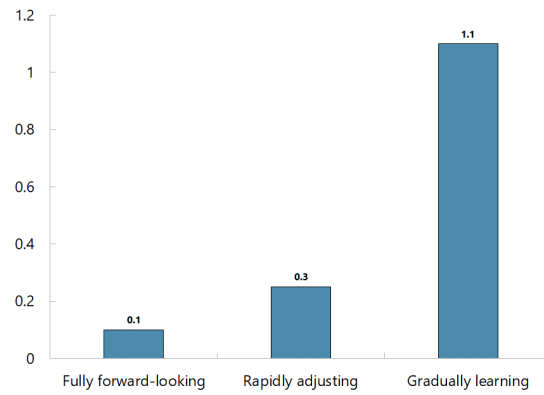
Real Interest Rates
(Deviation from steady state level, percent)
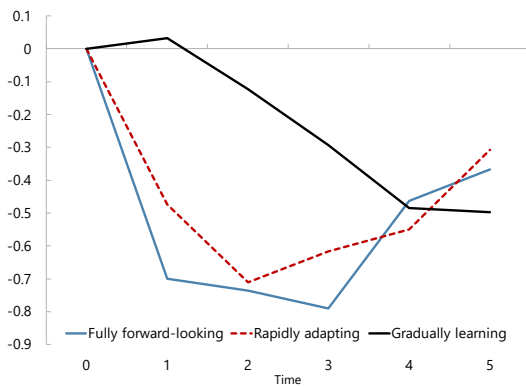
Interest Cost on Public Debt
(Deviation from steady state level, percent)
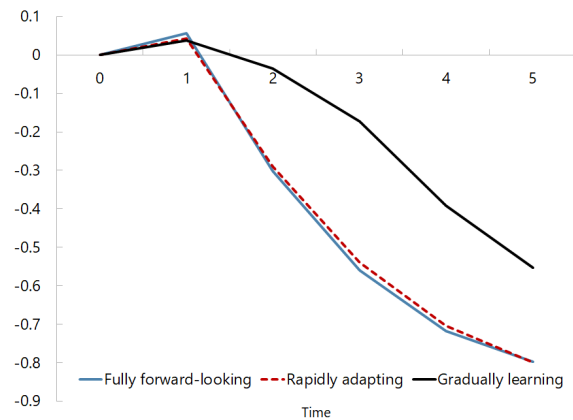
Source: IMF staff calculations using GIMF.

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. 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 suggest that fiscal consolidation helps reduce the sacrifice ratio associated with lowering the inflation target in all three

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[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.

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 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).

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[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.

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.
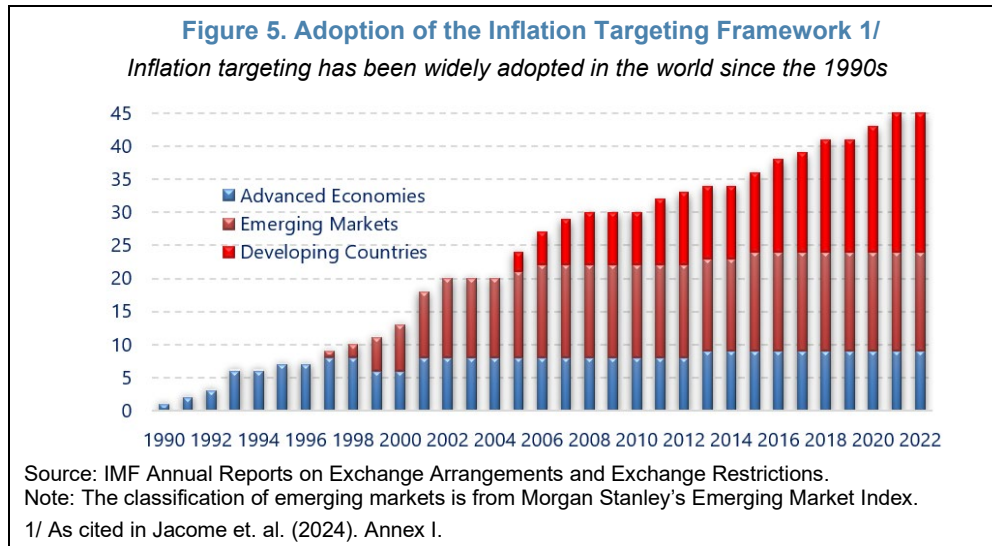
17.   First, cross-country experience points to the importance of clear communications of policy decisions. As a matter of general practice, all central banks need to ensure transparent and consistent communication with the public and markets to guide expectations. This is particularly important when 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.

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[17] See Wadsworth (2017).

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.

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[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, excepting 2022. The target for 2024 was set at 2.5 percent.

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[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.

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[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 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]

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

[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.

- 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

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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