CODERA ANALYTICS

Evaluating monetary policy rate settings under data uncertainty in South Africa

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Abstract

This paper evaluates the South African Reserve Bank's historical monetary policy stance by applying different inputs to the Bank's forecasting model's Taylor rule specification. We quantify the impact of input measurement on assessments of the appropriate policy stance, as well as the impacts of a shift to a lower inflation target. Our findings emphasise the importance of communicating uncertainty around the central bank's assessment of the state of the economy, inflation expectations and price setting, and the expected path of inflation. We argue that, in the absence of a sequence of favourable economic shocks, South African interest rates will likely have to remain restrictive for longer than SARB currently assumes.

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1 Executive Summary[1]

The South African Reserve Bank (SARB) shifted to a 3 percent inflation target in November 2025. The SARB now faces the first serious test of the new target as the ongoing global oil price shock pushes inflation further away from the target.[2]

In the SARB's forecasting model, a 'Taylor'-rule (Taylor, 1993) is used to express how the central bank should react to deviations in inflation and changes in economic slack to meet its inflation target. This paper evaluates the SARB's historical monetary policy stance by applying different inputs to the Bank's forecasting model's Taylor rule specification. SARB's model not only uses observable economic data like inflation, but also draws on unobservable estimates of potential growth, expected inflation and risk premia. Using SARB's framework, and alternative estimates, we compare what using different data in SARB's Taylor rule mean for the appropriate interest rate settings in South Africa.

Over recent months, there has been a marked disagreement between market analysts' policy rate expectations and the policy path implied by market pricing (see Steenkamp (2026a)). Despite the large inflation shock underway, SARB has continued to predict that the policy rate will fall in November. Our paper provides a possible explanation for the divergence of policy expectations between SARB, market analysts and market pricing. In particular, this paper evaluates the SARB's historical monetary policy stance by applying different inputs to the Bank's forecasting model's Taylor rule specification. This allows us to quantify the impact of data uncertainty on assessments of the appropriate policy stance in South Africa.

Our findings emphasise the importance of communicating uncertainty around the central bank's assessment of the state of the economy, inflation expectations and price setting, and the expected path of inflation. We demonstrate that, within the framework used by SARB to model its reaction function, there would only be scope to lower interest rates if survey-based inflation expectation measures accurately describe price and wage setting behaviour, inflation expectations remain anchored at the new target and risk premia decline as SARB currently assumes.[3] However, our estimates show that market-based inflation expectations are higher than implied by surveys, and have not declined following the adoption of the lower inflation target. We argue that this implies, in the absence of a sequence of favourable economic shocks, South African interest rates will likely have to remain restrictive for longer than SARB currently assumes.

2 What does SARB's Taylor rule say about where interest rates should be?

As a sensitivity check of the SARB's preferred Taylor rule specification, we start by comparing what SARB's most recent estimates and projections imply for assessment of the appropriate level of interest rates. The current version of SARB's model (Pirozhkova et al., 2023) implies that interest rates should be set consistent with the Bank's estimates of how much economic slack there is (the 'output gap'), how far it expects inflation to deviate from target (which depends partly on inflation expectations), its estimate of the 'goldilocks' level of interest rates where they neither speed up or slow down the economy (known as 'neutral'), and how much growth is expected to deviate from potential growth. As SARB only began to publish detailed

[1]We thank Byron Botha and Dawie van Lill for comments and suggestions.

[2]See Steenkamp (2026b) for more.

[3]This post discusses the transition costs to a lower inflation target that includes extensive supporting links.

forecasts in 2017, this is where our sample starts.[4] Unfortunately, the full parameterisation of the 2023 version of the SARB's Quarterly Projection Model (QPM) has not been released, so we cannot run a full general equilibrium Taylor rule comparison. Instead, we use a back-of-the-envelope approach, using just the Taylor-rule specification from QPM and SARB's latest ex-post neutral and output gap estimates and inflation projections.[5]

Figure 1 compares SARB's published rule and latest assumptions against historical MPC policy rate settings. The first thing to note is that there are differences between what SARB's ex-post estimates imply for Taylor rule policy rate estimates and actual policy rates over time. On the one hand, this might be because the specific Taylor rule specification used does not capture actual MPC decision making or ex-post model inputs differ from what was used in real-time. But one cannot answer this question as one cannot reconstruct the full set of inputs used in QPM with the data that SARB publishes or match the full specification of the QPM. This means that Figure 1 does not provide evidence that policy rate settings have necessarily been inappropriate or that the Bank's forecasts have been inaccurate.[6] Instead, this demonstrates that there is a lot of sensitivity in Taylor rule-implied policy prescriptions to the inputs used. For the most recent quarter, the estimates are consistent with SARB's recent MPC statements that have emphasised that it currently judges the policy stance to be broadly restrictive, although it is marginally less restrictive than SARB currently assumes. SARB argues, for example, that a lower target implies that monetary policy has shifted to a mildly restrictive stance. SARB's current neutral estimate is 2.8 percent for 2026 after adjusting for inflation (or 5.8 percent nominal assuming a 3 percent inflation target). This implies that the current policy stance is tight, as the current 7 percent policy rate is above that level.[7]

Figure 2 decomposes the policy rate into the contributions from the neutral real policy rate, inflation deviations from its target, the output gap and growth momentum.[8] The figure shows that the recent increase in the policy rate has reflected mostly the recent level of the policy rate and neutral rate, while inflation expectations and pressures from changes in economic slack have a limited direct contribution. However, the red bars will also be driven by historical inflation expectations and economic slack, but one cannot accurately represent their contributions to the average level of the policy rate in the context of QPM without access to the fully specified model. The implication is that our analysis should not be read as implying where the policy rate should have been historically. Instead of being prescriptive, these estimates are sense checks of the inputs used in policy assessments. Our estimates show how using alternative inputs in the framework used by SARB would change the Taylor-rule implied policy rate at specific points in time.

[4] EconData (Codera Analytics, 2025) makes it easy to access vintages of SARB forecasts and real-time vintages of macroeconomic data.

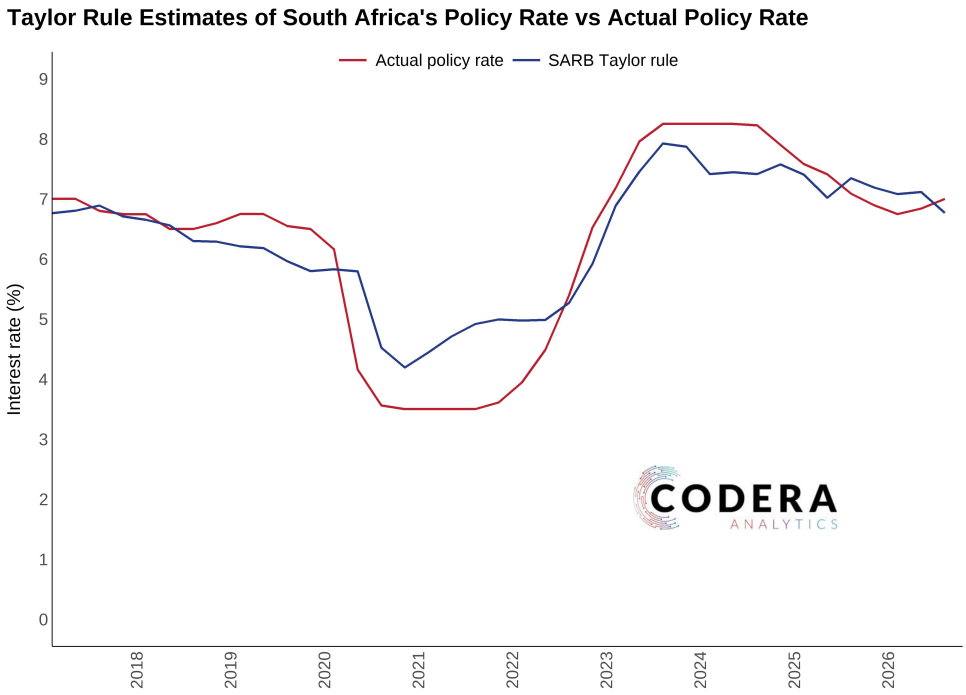
[5] Under the 2017 calibration, the inflation-gap term uses the average expected inflation rate three to five quarters ahead relative to the prevailing inflation target, while the 2023 calibration uses the three-quarter-ahead expectation relative to the target, among other differences.

[6] To the contrary, this comparison uses SARB's historical inflation projections, which have been fairly accurate, on average. See this post for more. In the section that follows, we discuss the importance of different aspects of SARB's forecasts for policy rate assessment.

[7] Future extensions of this research should consider using real-time estimates from SARB. We also compared results based on the updated version of the SARB monetary policy model to its 2017 version (Botha et al., 2017) to demonstrate the impacts of the update to the Taylor rule specification on such assessments. Contact us if you are interested in the results.

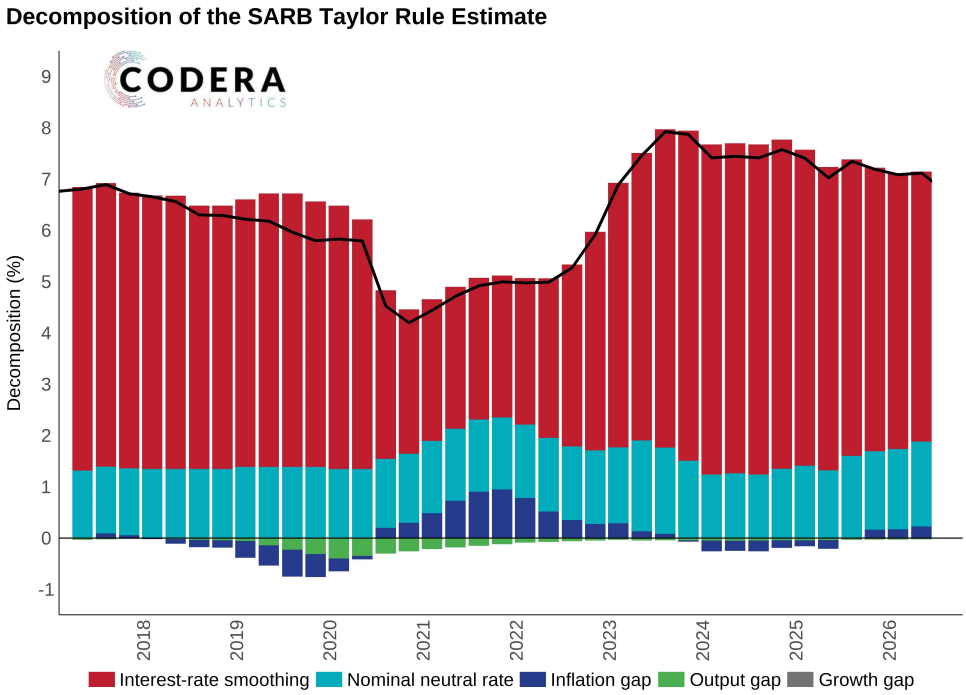
[8] In the 2023 version of the SARB model, the neutral rate is a function of the foreign neutral real rate, the equilibrium risk premium and expected change in the real exchange rate.

Figure 1: Actual policy rate and SARB Taylor rule-implied policy rate



Source: SARB, EconData, Codera Analytics. *Note:* The 2017 QPM calibration is used until 2023Q1, whereafter the 2023 QPM calibration is used. The 2023 calibration incorporates the output gap, the deviation of expected inflation (incorporating inflation expectations) from the prevailing inflation target, the nominal neutral interest rate and the one-year-ahead growth deviation from potential. We use the SARB's latest ex-post neutral and output gap estimates and inflation projections and use the inflation target applicable at each point in time.

Figure 2: Decomposing the Taylor rule-implied policy rate



Source: SARB, EconData, Codera Analytics. *Note:* The 2017 QPM calibration is used until 2023Q1, whereafter the 2023 QPM calibration is used. The 2023 calibration incorporates the output gap, the deviation of expected inflation (incorporating inflation expectations) from the prevailing inflation target, the nominal neutral interest rate and the one-year-ahead growth deviation from potential. We use the SARB's latest ex-post neutral and output gap estimates and inflation projections and use the inflation target applicable at each point in time.

2.1 What if one uses different inflation expectation measures in SARB's Taylor rule?

The appropriate policy stance depends not just on the Taylor rule specification, but also on the input data used. We argue that an important reason for the divergence between market analyst policy rate projections and market pricing over the last year has been that the market expects inflation to remain higher over the long term, with inflation expectations not as anchored as the surveys that SARB focuses on imply.[9] Survey-based inflation expectations have declined since the lowering of South Africa's inflation target (formally agreed with Treasury on 12 November 2025, but communicated as the preferred target by the Reserve Bank from July 2025).[10] Using the entire shape of the nominal and inflation-linked bond curves to extract market-based inflation expectations and inflation risk premia, we show in Christensen and Steenkamp (2026) that market-implied inflation expectations have not declined since the announcement of a lower target. Our analysis suggests that government borrowing costs have come down on account of lower sovereign credit risk, and lower inflation risk, not lower inflation expectations (see Christensen and Steenkamp (2025)).[11] Our market-implied estimates imply that the neutral rate has tended to be higher than SARB's assumed level, by between 25 and 50 basis points at present, depending on the measure used.[12] As we argue below, the measure of inflation expectations used in assessment of the appropriate policy stance affects one's assessment of whether the policy stance is currently restrictive.

To provide a heuristic of the impact of using alternative inflation expectations series, Figure 3 swaps out the SARB's expected inflation series and neutral estimates for market-implied based series from Christensen and Steenkamp (2026) and Erasmus and Steenkamp (2022).[13] We demonstrate that if one were to base expected inflation on market-based measures instead of survey-based measures, then policy would need to tighten to ensure that it will achieve a 3 percent target over the medium-term.[14]

Economists sometime use their preferred Taylor rule specification to assess the stance of policy. For example, when the spread between the actual policy rate and a Taylor-rule implied rate is positive, one might judge policy to be restrictive relative to the reaction function the Taylor rule implies. Taking our back-of-the-envelope estimates literally would imply that the policy rate has not been restrictive since 2024, which is at odds with SARB's assessment (Figure 4).[15] We find the same result when using market-implied inflation expectations of various horizons.[16]

[9] Deviations of inflation expectations from target are summarised here and show that South Africa's inflation expectations have shifted upward relative to the new 3 percent target across short-, medium-, and long-term horizons. This suggests risks of a self-fulfilling wage-price spiral is rising, should higher expected costs become embedded into future pricing and salary demands. It is also worth noting that there are open questions around the representativeness of inflation survey measures, and potential bias in responses. Amaral et al. (2024), show for example, that the survey response rates has been declined dramatically, from around 1600 businesses in 2011 to around 400 in 2023.

[10] This post summarised market-implied inflation expectations measures, while this post shows how the term structure of South Africa's sovereign term premia has changed over time.

[11] This post for estimates of South African sovereign bond liquidity and credit premia.

[12] See this post for more. An alternative market-implied approach suggests that the stance of monetary policy is mildly restrictive, in line with the SARB's own assessment (see Christensen and Steenkamp (2026)).

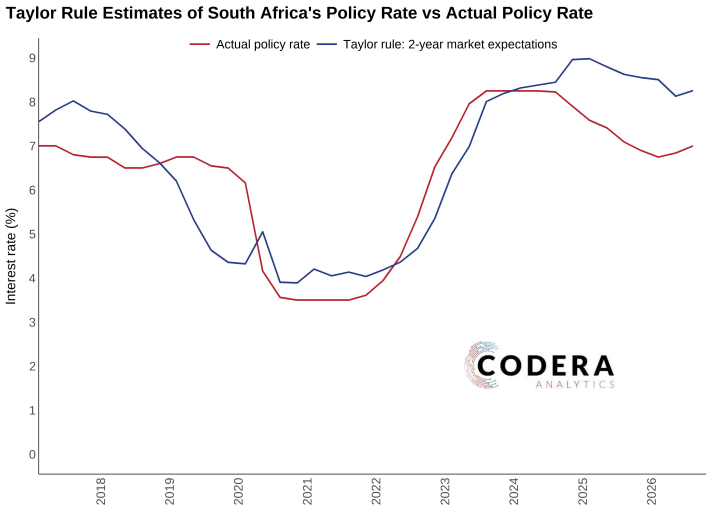
[13] This post visualises Codera's historical market-implied rate estimates.

[14] As we show in the results later, if one were to assume that potential growth is lower than SARB's estimate, it would also increase the extent of required policy rate hikes.

[15] This post argues that SARB has not been behind the curve as some have suggested, though it might not have as much space to cut as it projected in 2024. Also see Steenkamp (2024a) and Steenkamp (2024b) for more discussion.

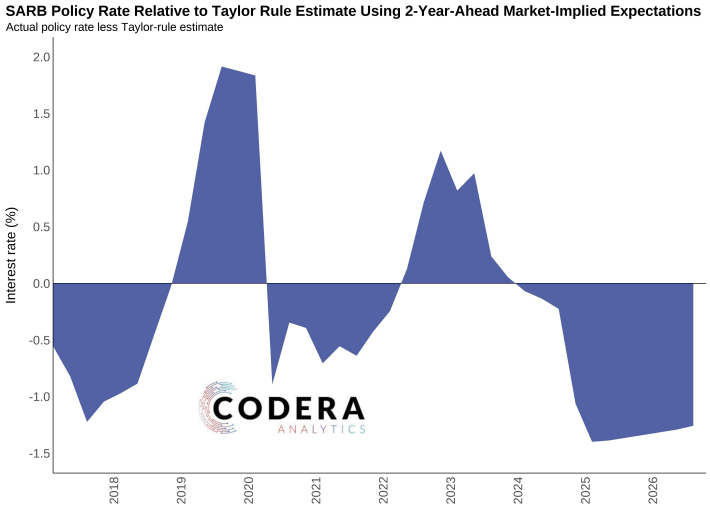
[16] Contact us if you are interested in Taylor-rule implied policy rates when using survey- and market-based inflation expectations at different horizons.

Figure 3: Policy rate and SARB Taylor rule-implied with market inflation expectations



Source: SARB, EconData, Codera Analytics. *Note:* The 2017 QPM calibration is used until 2023Q1, whereafter the 2023 QPM calibration is used. The 2023 calibration incorporates the output gap, the deviation of expected inflation (incorporating inflation expectations) from the prevailing inflation target, the nominal neutral interest rate and the one-year-ahead growth deviation from potential. We use the SARB's latest ex-post neutral and output gap estimates and inflation projections and use the inflation target applicable at each point in time. Note that the blue line is based on using market-based inflation expectations instead of SARB's expected inflation series and market-based neutral estimates instead of SARB's estimates.

Figure 4: Difference between policy rate and SARB Taylor rule-implied with market inflation expectations



2.2 What if we use different inputs in SARB's Taylor rule?

Beyond the input sensitivity of Taylor-rule implied estimates we discussed so far, there is a lot of uncertainty around the Taylor rule specification to use, as well as substantial uncertainty around how input measures are estimated. Data revisions will also affect these estimates. For example, GDP revisions, as well as the estimation approach used to construct a potential growth measures, will affect the Taylor-rule implied policy rate at a particular point of time. In the charts above and the analysis that follows, we compare the policy rate advice from Taylor rules incorporating SARB's estimate of slack, a statistical measure of slack and estimates drawing on Codera's projected GDP growth path.[17] As we show in Figure 2, in our simple setup, the role of the output gap to the changes in the Taylor-rule implied policy rate will be relatively small. However, in a fully specified version of QPM where the unobservables in the model are jointly determined, its role will likely be more important.[18] Likewise, the SARB's current Taylor rule specification incorporates expected deviations from the inflation target, which means that differences in inflation projections and assumed paths for inflation expectations will affect the estimates in Figure 1. In the sections that follow, we consider the implications of using alternative assessments of the economic outlook, including alternative output gap and inflation projections as inputs.

3 Should the SARB hike?

The SARB MPC will announce their decision about whether to hike the policy rate on 23 September 2026. Market analysts are still split about whether a hike will happen in September, but agree that tightening is on the horizon. SARB's projections, however, assume that monetary policy can ease in November.

Our estimates suggest that, within the framework used by SARB to model its reaction function, the SARB's economic narrative is only credible if survey-based inflation expectation measures accurately describe price and wage setting behaviour, inflation expectations remain anchored at the new target and risk premia decline as SARB assumes. We argue that market-based inflation expectations are higher than implied by surveys, and that market-based expectations have not declined following the adoption of the lower inflation target. This implies, in the absence of a sequence of favourable economic shocks, that South African interest rates will likely have to remain restrictive for longer than SARB currently assumes. Of course, in the most recent month, lower food inflation and domestic petrol prices have helped to reduce inflation momentum. However, Codera's projections suggest inflation will continue to rise, in contrast to SARB's assumed lower inflation path.

Figure 5 compares SARB's projected policy path against one based on Codera's neutral estimate, growth projections and implied output gap, and inflation projections.[19] Our projections imply that further tightening will be needed to maintain SARB's policy credibility. For SARB to be able to cut as it continues to project, on the other hand, inflation will need to come down a lot compared to what most market analysts currently expect, and inflation expectations be much more anchored than we have historically observed.[20] Our projections imply that sustainably reducing inflation to the new target will require monetary policy to remain tighter for longer to re-anchor inflation expectations to a permanently lower level. This would also imply

[17] For more on output gap estimates and SARB's estimates see here or here. See here for a comparison of SARB, IMF and statistical estimates.

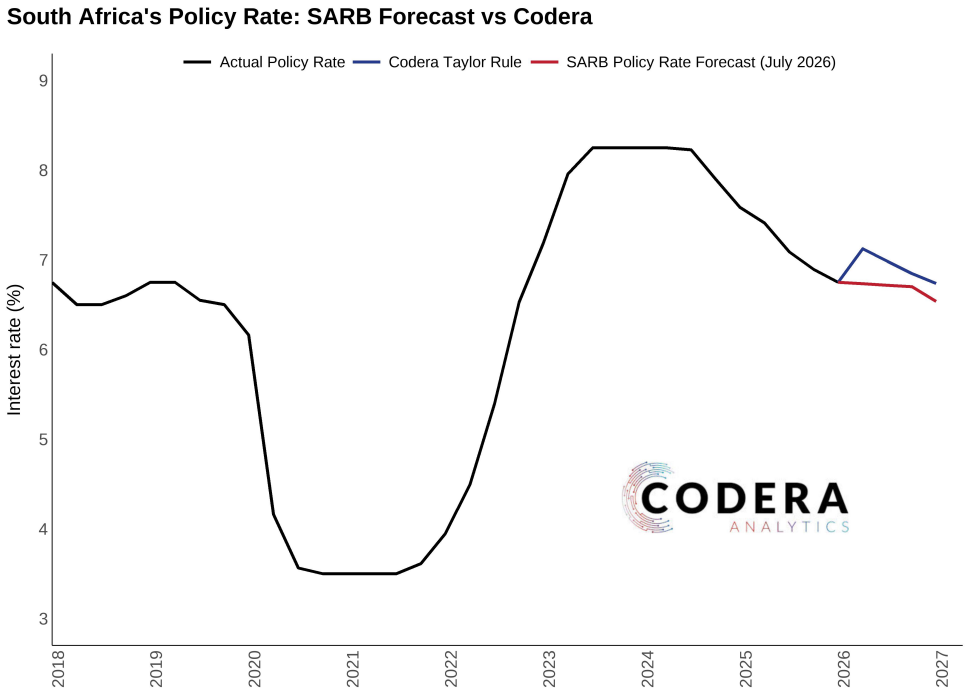
[18] Contact us if you are interested in seeing versions of the results with alternative output gap measures.

[19] Forecasts from Morgan Stanley (Masia, 2026) have a similar profile at present.

[20] See here for an evaluation of how anchored inflation expectations are.

that the benefits of a lower target will be smaller over the next few years than SARB assumes, since borrowing costs continue to build in high inflation expectations.[21] Our analysis shows that how much the SARB will need to tighten depends on how long one expects inflation to remain above target, whether you think our slow growth is cyclical or structural, whether you believe surveys or market-based measures of expectations best capture price and wage setting behaviour in South Africa and whether you think market risk premia will fall to the level SARB assumes (see Steenkamp (2025)).

Figure 5: SARB policy rate projection vs Codera-implied policy track



Source: SARB, EconData, Codera Analytics.

We argue that South Africa's structural fundamentals do not give the SARB a lot of room to manoeuvre. Government inflation continues to run well over double the inflation target level[22], while our market-based estimates of inflation expectations imply that sustainably reducing inflation to the new target will require monetary policy to remain tighter for longer to re-anchor inflation expectations to a permanently lower level.[23] Infrastructure bottlenecks and increasing compliance burdens on business are also eroding our growth potential and have tended to raise costs throughout the economy (Steenkamp and Fourie (2026)). The possibility of a 'super El Niño' and continuation of the conflict between the US and Iran create further upside risk to the inflation outlook.

Everyone wants to feel optimistic about South Africa's future, and the Reserve Bank has led the charge, generally overestimating economic growth over the past decade.[24] But plugging

[21] As we show in Christensen and Steenkamp (2026), forecasts based on data to the end of December 2025 show that expected inflation will only gradually fall towards the new target, suggesting that sustainably reducing inflation to the new target would require monetary policy to remain tight to re-anchor inflation expectations to a permanently lower level.

[22] This post compares private and public inflation in South Africa.

[23] This post shows that historically, inflation expectations have been fairly tied to current inflation and less anchored than SARB assumes.

[24] This post compares historical SARB, market analyst and IMF CPI and GDP projection errors. The SARB has, like other institutions tended to be optimistic about the growth outlook, although its CPI forecasts have tended to be fairly accurate.

more realistic assumptions into the Bank's own interest rate formula delivers an important reality check: South Africans will not see lasting interest rate relief without deep economic and political reforms.

Economists tend to disagree about the state of the economy and the underlying drivers of macroeconomic phenomena. Our analysis illustrates how the SARB's framework can be used to evaluate how different economic assumptions affect policy assessments. We show that there is substantial data uncertainty when making monetary policy assessments in South Africa, which means that communicating uncertainty around the central bank's assessment of the state of the economy, inflation expectations and price setting, and the expected path of inflation is particularly important.

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