



South African Reserve Bank Occasional Bulletin of Economic Notes

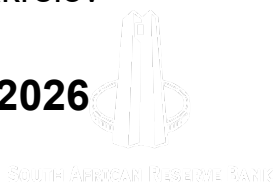
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SARB Occasional Bulletin of Economic Notes

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OBEN 2601* – September 2025

Stress testing the 3% inflation target

Theo Janse van Rensburg, Jeffrey Rakgalakane and Rudi Steinbach

Abstract

In this note we stress test the new 3% inflation target and conclude that:

- There is a 78% chance that inflation will vary between 2% and 4% (based on a standard deviation of around 0.9%).
- Inflation will deviate by less than 1 percentage point in the event of a standalone 1 standard deviation shock to the most important inflation drivers in the Quarterly Projection Model (over a one-year horizon).
- There is a 62% weighted probability that headline inflation will be between 2% and 4% when hit by a combination of shocks.

These outcomes are due to inflation expectations being more forward-looking (i.e. anchored by the inflation target) – particularly since the South African Reserve Bank adopted its preferred inflation target of 4.5% in mid-2017. These results reflect increased monetary policy credibility, which bodes well for the achievement of a 3% inflation target.

1. Introduction

The South African Reserve Bank's (SARB's) inflation target range of 3–6% has been in place since 2000. From July 2017, the SARB explicitly revealed a preference for inflation at the midpoint of the target range (4.5%). The credibility of this target has been proven over the years, with both inflation outcomes and inflation expectations converging to the 4.5% target (see, for instance, Loewald, Steinbach and Rakgalakane 2025). Only during the global supply chain disruptions in 2022/23 did inflation temporarily – albeit substantially – overshoot the 4.5% target.

At the May 2025 Monetary Policy Committee (MPC) media conference, the Governor expressed a preference for a 3% inflation target (SARB 2025a). At the subsequent MPC meeting in July, the Governor was even more explicit and said: “We will use forecasts with a 3% inflation anchor at future meetings” (SARB 2025b). The announcement sparked mixed reactions among economists, analysts and financial markets. While some welcomed the potential shift, others raised concerns about the feasibility of achieving this lower target.

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In this economic note, we stress test the ability of a 3% inflation target to handle a variety of standardised shocks. The note is structured as follows: first, we reflect on credibility considerations; we then describe the methodology; and in the final sections we reflect on the results and the implications for monetary policy.

2. Inflation-targeting considerations

Inflation targeting as a monetary policy framework is credible if it can withstand various economic conditions and shocks and maintain well-anchored inflation expectations (see, for instance, Du Plessis and Rietveld 2014; Arias and Kirchner 2019). This in turn is crucial for anchoring inflation expectations, maintaining price stability and fostering sustainable economic growth.

Balancing the goal of price stability with other economic policy objectives, such as employment growth, presents challenges to monetary policy. In addition, monetary policy actions can take a while to affect inflation, making it difficult to maintain the inflation target over all horizons.

Although clear communication about the target and the central bank's actions can build public understanding and support, credibility is essential because it allows the central bank to implement its monetary policy effectively by minimising the risk of destabilising inflation fluctuations (Honkapohja and McClung 2023).

3. Methodology

The MPC has previously emphasised that it prefers inflation to be at the 4.5% midpoint within the 3% to 6% target range. In effect that allowed a 1.5% tolerance band around the midpoint. With a 3% inflation target, if the band is also adjusted in a pro-rata manner, then the comparable band should narrow to 1% ($3.5\%/4.5\% \times 1.5\% = 1\%$). This should, however, not be interpreted as an MPC preference for a 1% target band around the inflation target – in our view an explicit point target (without bands) is better for managing inflation expectations.¹

The credibility of an inflation-targeting framework can be tested by its ability to withstand the majority of one standard deviation shock – that is, the typical shock magnitude that historically accounts for about 70% of past shocks. However, it will not be required to withstand severe shocks. In numerical terms we take that to mean that headline inflation should oscillate by no more than 1 percentage point from the 3% inflation target when hit by major shocks, with each having a magnitude of one standard deviation.

It is important to note that the inflation-targeting framework has lowered average inflation and reduced inflation volatility. Compared to the 1990s, when inflation averaged 10.1% with a standard deviation of 3.6%, it moderated to an average of 6.2% with a standard deviation of 2.0% between 2000 and the first half of 2017 (Figure 1). Between 2017Q3 (when the 4.5% inflation target was announced) and 2025Q2, headline inflation moderated further, averaging 4.7% with a standard deviation of 1.29%. Alongside the decline in both inflation and its volatility, the standard deviation as a ratio to average inflation fell too (Figure 2). This is unsurprising as there is widespread consensus in macroeconomics that the level of inflation and inflation volatility are strongly and positively correlated (Karras 2017).

¹ These are strictly the views of the authors and do not necessarily reflect those of the MPC.

Figure 1: Evolution of inflation volatility over time

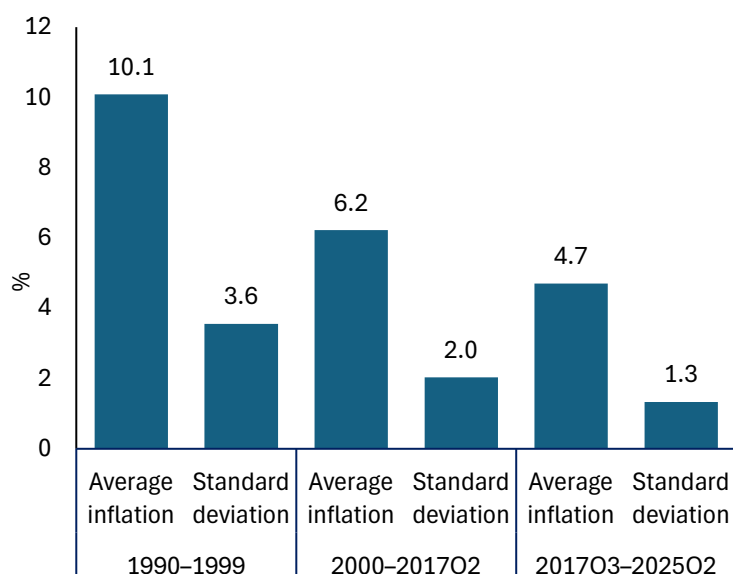
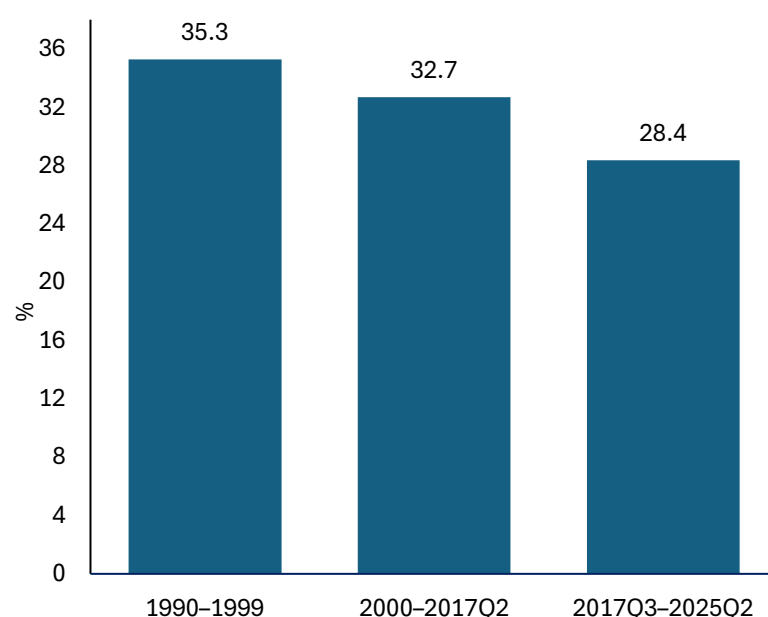


Figure 2: Standard deviation to mean ratio



Based on that consensus, it is fair to expect a further decline in the volatility of inflation under a 3% target. But even if we assume that the ratio of the standard deviation to the average observed inflation over the 2017Q3 to 2025Q2 period – 28.4% or 1.3%/4.7% – remains unchanged, ‘normal’ oscillation around the 3% inflation target is likely to be around 0.9 percentage points (i.e. 28.4% x 3% inflation target).

In our view the inflation target will thus be credible if it can withstand at least a 1 standard deviation shock, without deviating by more than 1 percentage point² from the 3% inflation target. In the Quarterly Projection Model (QPM),³ the most important drivers of inflation are

² For simplicity, the 0.9 percentage point standard deviation is rounded up to 1 percentage point.

³ For details on the QPM, see Pirozhkova et al. (2023).

inflation expectations (both backward- and forward-looking components), unit labour cost, the exchange rate, oil, food, electricity and remaining administered prices. In the next section we calculate the standard deviation for each of these variables, as well as the average period these respective shocks typically last. In the subsequent section we introduce these shocks into the QPM to quantify their effects on headline inflation and inflation expectations, reporting both the peak responses and the average impacts during the first year following the shock.

4. Results

Table 1 presents the impact of a 1 standard deviation shock (column B) of mean duration (column C) on headline inflation as well as inflation expectations for the following key drivers of inflation fluctuations: G3 nominal effective exchange rate (rand), oil, food, unit labour costs, electricity, administrative prices excluding fuel and electricity, and inflation.

Table 1: Impact of a 1 standard deviation shock on headline inflation

Variable	Size of shock		CPI impact				Inflation expectations impact	
	One standard deviation	Mean duration (quarters)	Peak impact	Average impact in 1st year	Minimum shock size that moves annual inflation by more than one percentage point	Minimum shock duration (in quarters) that moves annual inflation by more than one percentage point	Peak impact	Average impact in 1st year
Rand	8.84	2	0.89	0.63	14.03	6*	0.23	0.08
(Peak, quarters after shock)			(4)				(5)	
Oil	39.94	3	1.01	0.87	45.91	4	0.26	0.15
			(3)				(4)	
Food	2.93	3	0.67	0.61	4.81	5**	0.19	0.10
			(4)				(5)	
Unit labour cost	1.18	3	0.30	0.23	5.14	4**	0.08	0.03
			(4)				(5)	
Electricity	4.11	4	0.33	0.24	17.14	8**	0.08	0.03
			(4)				(5)	
Admin excl. fuel & electricity	1.31	2	0.15	0.14	9.36	8**	0.05	0.03
			(3)				(4)	
Headline inflation	1.33	4	NA	NA	NA	NA	0.45	0.26
							(5)	

Note:

* Longer duration raises inflation by less than 1% in the first year; the full 1 percentage point impact occurs in the second year.

** The shock is not large enough to raise inflation by more than 1 percentage point. Values reflect the number of quarters needed for the maximum (sub-1pp) impact to materialise.

In Table 1 we see that an 8.84% change in the exchange rate is equivalent to a 1 standard deviation shock (column B). Typically, as measured by the mean duration in column C, the shock lasts 2 quarters. Such a shock will, at its peak impact, raise headline inflation by 0.89 percentage points (column D) after 4 quarters (column D). On average, headline inflation will rise by 0.63 percentage points in the first year (column E). In the process, inflation expectations will increase by 0.23 percentage points at their peak impact after 5 quarters (column H), while the average first year impact will be 0.08 percentage points (column I). These impacts are also illustrated in Figures 3 and 4.

Figure 3: Impact of regular-sized (1 standard deviation) shock on headline inflation

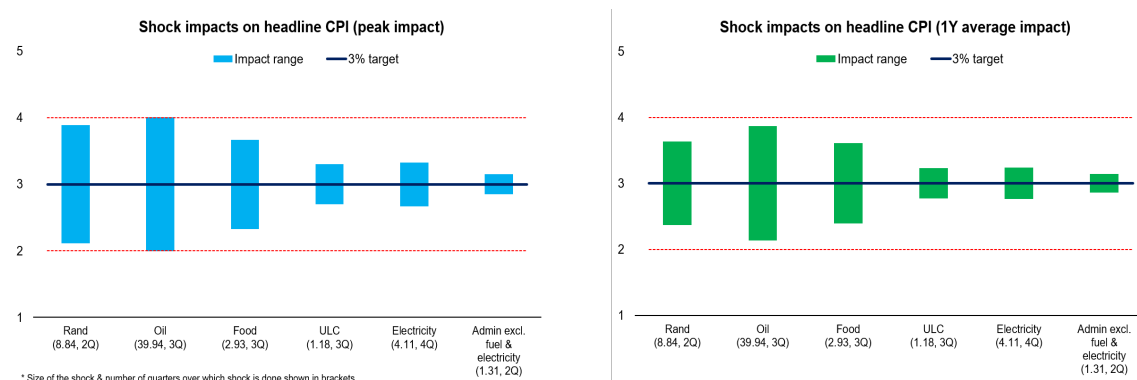
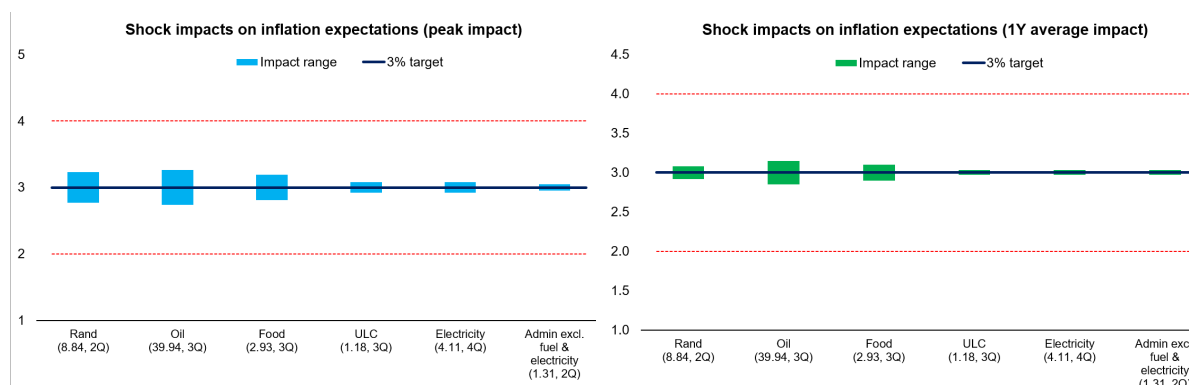


Figure 4: Impact of regular-sized shock on inflation expectations



A 1 standard deviation shock to electricity prices amounts to 4.11%, with an average duration of 4 quarters. In contrast, oil prices are very volatile, with a standard deviation of almost 40%. Specifically, a 39.94% oil price shock sustained over 3 quarters results in a peak impact of 1.01 percentage points on headline inflation (in the third quarter after the shock begins). On average, it raises headline inflation by 0.87 percentage points and inflation expectations by just 0.15 percentage points over the first year.

Apart from oil prices, a 1 standard deviation shock to food prices (2.93% price increase for 3 quarters) carries the largest risk of headline inflation (a 0.67% increase), deviating by more than 1 percentage point from the 3% inflation target. The impacts on inflation expectations are similar, albeit smaller in size, and with longer lags.

It is important to note that for all the respective 1 standard deviation shocks of mean duration reported in Table 1, the average first year impact causes headline inflation to deviate by less than 1 percentage point from the 3% inflation target. This suggests that a 3% inflation target would be able to withstand typical shocks affecting the main drivers of headline inflation, when evaluated over a one-year horizon.

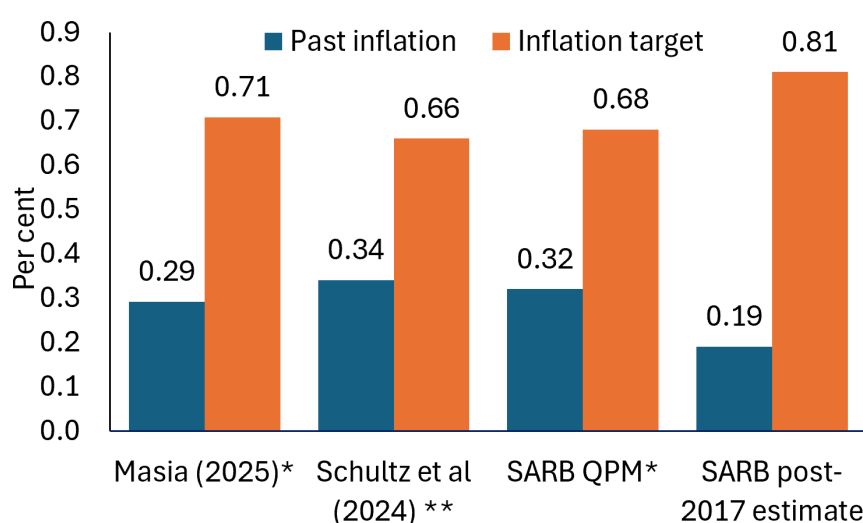
A further observation from the above is the small spillovers to inflation expectations. We reflect on this in the next section.

5. Reflections on inflation expectations

A major concern has been that the stickiness of inflation expectations might negatively affect the credibility of the inflation target. However, econometric analysis has found that inflation expectations are (at least partly) anchored to the inflation target – rather than purely backward-looking. This is confirmed by work done by the SARB and other institutions.

Figure 5 presents modelling results from Masia (2025), Schultz, Carrara and Klein (2024), and the SARB,⁴ based on regressions of inflation expectations on past inflation – representing the backward-looking component – and the inflation target, which captures the forward-looking aspect of expectations.⁵ Across all specifications, the findings consistently indicate that the inflation target acts as the dominant anchor for expectations.

Figure 5: Regression coefficients for drivers of inflation expectations



Note: * Coefficients for past inflation and the inflation target are rescaled to sum to 1; the persistence term is excluded. ** Latest coefficient estimates derived from a rolling window regression.

A more formal exercise has also been conducted at the SARB. Foresto et al. (2026) find that inflation expectations have been predominantly anchored to the inflation target. Importantly, after the announcement of the 4.5% inflation target in 2017, the weight of the backward-looking component has declined further. This partly reflects enhanced policy credibility and bodes well for the official introduction of a lower inflation target.

6. What will cause inflation to deviate by more than 1 percentage point from the target?

Given the ability of the inflation target to withstand 1 standard deviation shocks of mean duration, we investigate what type of shocks will be needed to move inflation by more than 1 percentage point from the target. The results in terms of size and duration are reported in Table 1 and Figure 6.

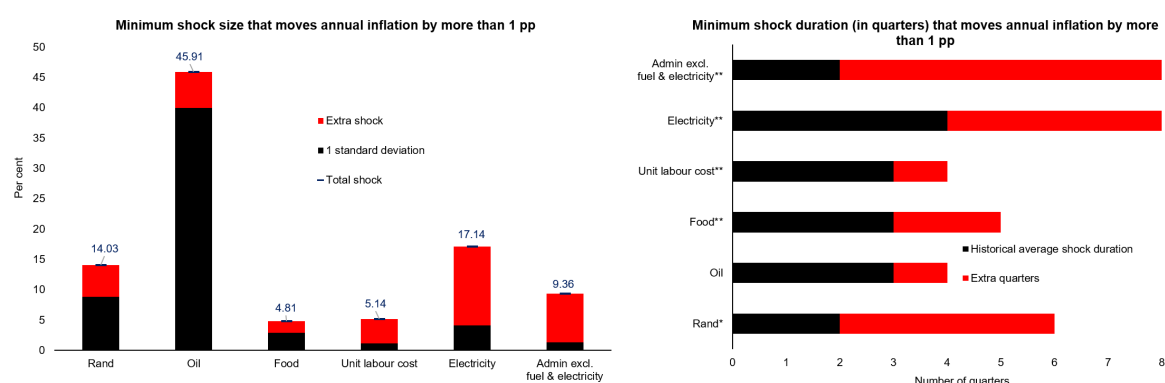
⁴ SARB results are from the QPM, as well as our own estimates obtained via ordinary least squares regression based on the 2017Q3–2025Q2 sample.

⁵ Some of the regression specifications included a persistence term for inflation expectations; however, the results reported here exclude this component.

For example, to increase headline inflation by more than 1 percentage point for a full year – and thus no longer be interpreted as a temporary shock – the rand would need to depreciate by about 14% (1.6 standard deviations (SDs)), while oil prices would need to rise by roughly 46% (1.1 SDs). The respective shock sizes for food (4.81%, 1.6 SDs), unit labour cost (5.14%, 4.4 SDs), electricity (17.14%, 4.2 SDs) and non-energy administrative prices (9.36%, 7.1 SDs) are reported in Table 1, column H.

Alternatively, shocks of standard magnitude but extended duration can also result in inflation deviating by more than 1 percentage point from the target. As shown in Table 1, column I, a 1 standard deviation rand depreciation lasting 6 quarters – compared to the average of 2 – pushes headline inflation beyond the 1 percentage point threshold, though this effect only materialises in the second year. A similarly prolonged oil price shock (lasting at least 4 quarters) also produces a deviation exceeding 1 percentage point on an annual basis. For the remaining inflation drivers, however, even extended durations do not generate deviations of this magnitude. Their peak annual impact occurs before inflation breaches the 1 percentage point threshold. Therefore, as long as the magnitude of these shocks remains within 1 standard deviation, the 3% inflation target remains sturdy.

Figure 6: Shocks that will take inflation outside a 1 percentage point band



Note:

* Longer duration raises inflation by less than 1% in the first year; the full 1 percentage point impact occurs in the second year.

** The shock is not large enough to raise inflation by more than 1 percentage point. Values reflect the number of quarters needed for the maximum (sub-1pp) impact to materialise.

However, it is also important to keep in mind that multiple shocks can occur at once and reinforce each other. In the next section we investigate the impact when a combination of shocks happens simultaneously.

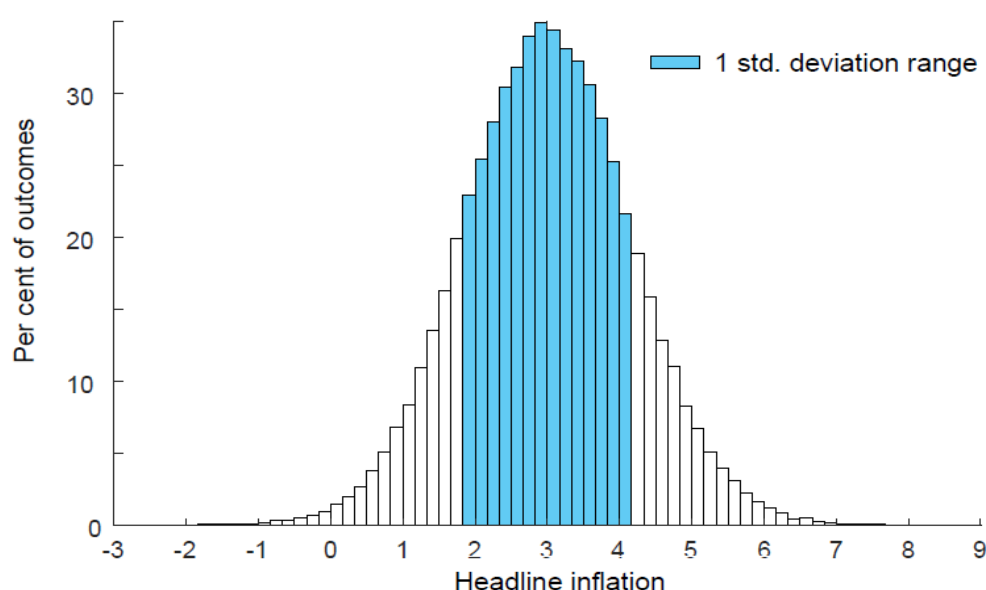
7. What if inflation is hit by a combination of shocks?

The shocks reported earlier were done as standalone 1 standard deviation shocks where nothing else changes (*ceteris paribus* conditions). In real life, multiple shocks of varying degree and duration continuously hit the economy. Sometimes these shocks (partially) neutralise each other, but they may also result in (perfect) storms that will exacerbate the inflation impacts. For instance, between 2016 and 2017 there was a strong negative correlation (-0.79) between oil prices and the rand/US\$ exchange rate. As oil prices rose, the rand strengthened, thereby (partly) neutralising the impact of higher oil prices. On the other hand, over the 2022–2023 period, higher global inflation strongly correlated with a weaker

rand (the correlation coefficient was +0.96 for US inflation and the rand/US\$ exchange rate), thus exacerbating the shock.

It is impossible to predict the next confluence of shocks, their size or sign. Consequently, we refrained from testing specific scenarios, instead opting to employ the QPM to perform 100 000 random simulations over a 10-quarter horizon based on historical data and shocks, including not only the most important shocks described earlier, but accounting for all possible sources of inflation variation.⁶ For each of the shocks in every quarter of each simulation, a random magnitude is drawn from a statistical distribution with a mean and standard deviation based on the specific shock's historical properties.⁷ This approach allows for the shock combinations to vary between shocks that are smaller and larger than 1 standard deviation, but also between positive and negative. In some instances, several shocks could be large and of the same sign, while at other times combined shock impacts on inflation may be either small or offsetting (e.g. a weaker rand combined with falling oil prices). Moreover, using a range of statistical distributions helps to better reflect the outliers often observed in inflation outcomes. Figure 7 depicts the distribution of potential inflation outcomes 6 quarters ahead – broadly aligning with the policy horizon.

Figure 7: Distributional impact on headline inflation of a combination of shocks



We see that 68% of the 100 000 simulation outcomes result in headline inflation varying between 1.83% and 4.17% around the 3% target. In extreme cases, where shocks combine to exacerbate the impact in an unfortunate way, headline inflation could rise to more than 7% (or fall below 0%). But the probability of that happening is extremely small. In fact, based on

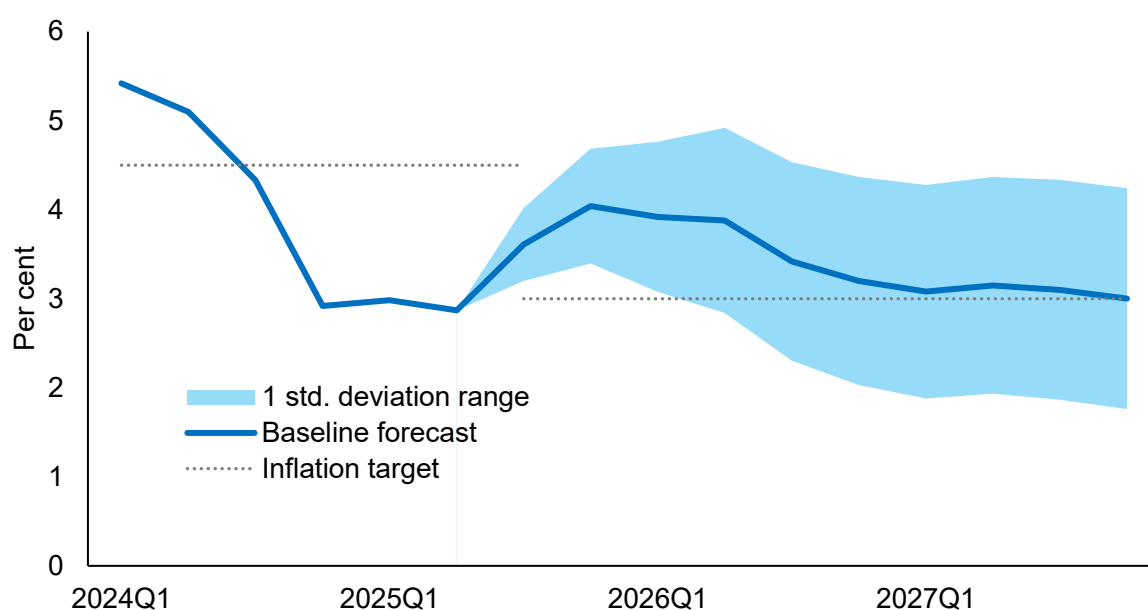
⁶ A total of 43 shocks drive macroeconomic fluctuations that affect inflation in the QPM. Some shocks such as oil prices and the exchange rate have larger impacts on inflation, while others such as changes in the fiscal stance have lesser impacts.

⁷ The historical distribution of each of the 43 shocks is compared to five separate candidate statistical distributions, with the best-fitting distribution for each shock selected based on the Kolmogorov-Smirnov goodness-of-fit hypothesis test. The following distributions are considered: a normal distribution; two composite normal distributions that have higher variance in the tails to better capture outliers; and Student's t-distributions with differing degrees of tail heaviness.

all the modelled outcomes, there is a 62% weighted probability⁸ that headline inflation will vary between 2% and 4% when hit by a combination of shocks. With lower inflation and by implication reduced volatility, standard deviations for many variables are also likely to decline, *ceteris paribus*. This will likely reduce the variance of the simulated outcomes.

Imposing these distributed shock combinations on the September MPC inflation forecast yields similar results. If past patterns hold, inflation could rise to 4.9% in the second quarter of 2026, compared to the baseline prediction of 3.9%. On the contrary, if shocks were to combine in a beneficial way, inflation could register 2.8% in that quarter. Moving to the second half of 2026 – a key time frame of the current policy horizon – inflation could be expected to vary within a range from 2.2% to 4.5%. These ranges capture the most likely outcomes, but it is possible – though less likely – that inflation could fall outside them if unusual shocks occur.

Figure 8: Distributional impact of a combination of shocks over the inflation forecast



8. Concluding remarks

Inflation targeting as a monetary policy framework is credible if it can withstand various economic conditions and shocks. This in turn is crucial for anchoring inflation expectations, maintaining price stability and fostering sustainable economic growth.

Our econometric analysis finds that under normal circumstances (i.e. an absence of material shocks) there is a 78% chance that inflation will vary between 2% and 4%. In the event of a standalone 1 standard deviation shock to the most important inflation drivers, inflation will deviate by less than 1 percentage point from the target in the QPM over a one-year horizon.

Even when hit by a combination of shocks, there is still a 62% weighted probability that headline inflation should vary between 2% and 4%. (The probability was also tested under the 4.5% inflation target regime, with similar outcomes.) However, it is important to note that when lower inflation is accompanied by reduced volatility – as has been the case historically – the

⁸ We also back tested the probabilities under the 4.5% inflation target scenario and found similar likelihood when hit by a combination of shocks.

responses to shocks are likely to be more muted. This could reduce the variance of the simulated outcomes under the 3% target scenario.

Finally, our simulations indicated that inflation expectations are predominantly forward-looking – that is, largely anchored by the inflation target. Moreover, following the announcement of the new 4.5% inflation target in 2017, the coefficient on the backward-looking inflation component declined. This is reflective of a credible central bank and bodes well for the official introduction of the lower inflation target of 3%.

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Competition and food prices: the case of rockets and feathers

Pamela Vorster

Abstract

The South African economy is concentrated, with low investment levels and weak productivity growth. During pricing shocks, firms with market power raise prices quickly but reduce them slowly when their input costs fall, fuelling sticky inflation and elevated inflation expectations. Limited competition weakens the effectiveness of monetary policy pass-through, as dominant firms with strong reserves and pricing power are less sensitive to interest rate changes than firms in competitive markets. Weak competition across food and agro-processing value chains contributes to persistently high prices.

1. Introduction

The South African economy is highly concentrated, despite nearly three decades of the existence of the Competition Act 89 of 1998. Concentrated markets may signal a lack of effective competition, which may explain low investment, weak growth and persistently high levels of unemployment.

In markets where companies compete, markups tend to be lower, whereas in less competitive markets, firms with market power tend to maximise profits. When supply-side shocks occur, firms without competitors pass on the full extent of the shocks to consumers. When the shock dissipates, these firms are slow to lower prices. This pattern, known as the “rocket and feather” phenomenon, means prices shoot up fast but drift down slowly, keeping inflation high and fuelling consumer expectations of further price increases.¹

Both monetary policy and competition policy aim to keep inflation in check and support growth, but they work in different ways. Central banks use interest rates to influence borrowing, exchange rates, aggregate demand and inflation expectations. Competition authorities focus on anticompetitive behaviour that keeps prices artificially high. Market competitiveness directly influences the ability of monetary policy to curtail inflation, as it affects how firms respond to monetary policy actions. And monetary policy decisions, in turn, can affect the level of concentration and firm dominance in a market.

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¹ The rocket and feather analogy was first used to refer to the retail energy markets where collusive behaviour was blamed for asymmetric price adjustments. Studies have since used it to refer to pricing patterns in various markets with little competition (market power and oligopolistic pricing), information asymmetry and consumer search costs (Tappata 2009; Ogbuabor, Orji and Anthony-Orji 2020).

This note looks at how the state of competition influences the transmission of monetary policy to inflation and, in turn, how monetary policy can influence the level of competition. It explores the current state of competition in South Africa and examines the link between competition and food prices.

2. The relationship between competition and monetary policy

One way that monetary policy is transmitted to the real economy is through the cost channel.² Firms adjust their output levels in response to credit constraints and borrowing costs. The extent of the pass-through to firms' output levels depends on how competitive the market is (Ferrando et al. 2021). The pass-through effects are weaker in markets without effective competition, as the interest rate and credit channels are less effective.

Firms' profit-maximising output level depends on their marginal revenue and marginal cost. Perfectly competitive firms have a flat marginal revenue curve for all levels of output. An increase in interest rates raises their borrowing costs and therefore their marginal cost curve. Competitive firms are therefore responsive to changes in interest rates and adjust their output levels accordingly (Ferrando et al. 2021; Syverson 2019).

Firms without rivals have a downward-sloping marginal revenue curve. They maximise their margins through pricing systematically above their marginal costs. In addition, large global firms often have high cash reserves and borrowing capacity, so small changes in interest rates have little effect on their marginal cost curves (Ferrando et al. 2021). An increase in interest rates has a weaker effect for these firms, as they adjust their output less than firms in a competitive market (Ferrando et al. 2021; Duval et al. 2021). These firms are also less responsive to a loosening of monetary policy (Syverson 2019). See the annexure for a graphical representation.

Furthermore, firms with market power may form preferential agreements within the supply chain, limiting opportunities for smaller competitors. The smaller firms cannot expand due to dominant firm behaviour, and they therefore have reduced borrowing capacity. The weakened borrowing capacity does not change when monetary policy changes (Ferrando et al. 2021).

Monetary policy can influence market structure and competition through the credit and exchange rate channels. When monetary policy tightens, borrowing and operational costs increase and demand weakens. Small- and medium-sized enterprises may find it more difficult to compete as higher costs increase the barriers to entry and reinforce large firms' dominance (Mukunoki 2024; Popov and Steininger 2023). Loosening monetary policy weakens the currency, which decreases import competition, further strengthening the position of established domestic firms.

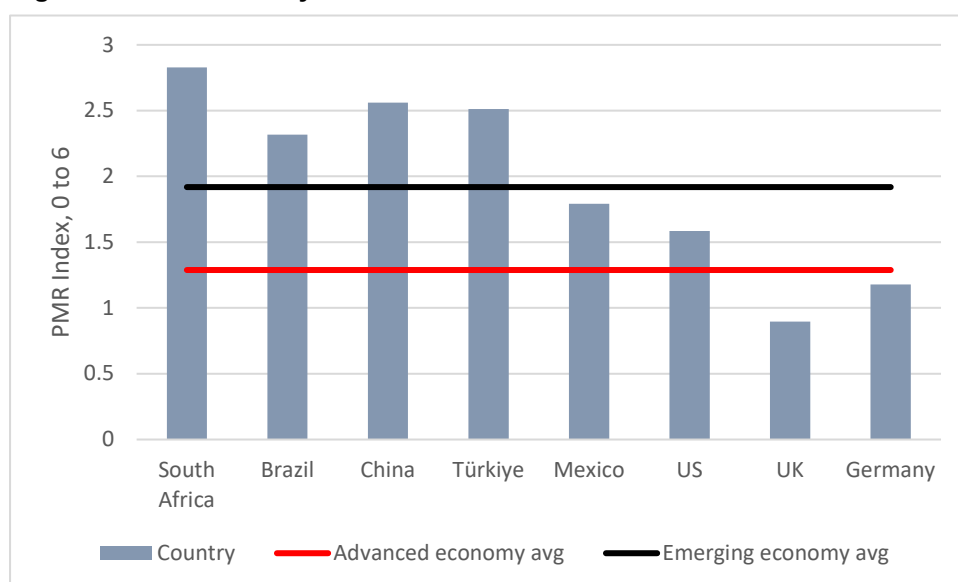
² The cost channel refers to how an increase in interest rates leads to higher borrowing costs, which causes firms to cut back on production. In an environment that is not perfectly competitive, less supply for a given demand is inflationary. It is usually assumed that the demand channel (higher interest rates increase borrowing costs and reduce customer demand, which eases pricing pressure) dominates the cost channel so the overall effect is disinflationary. However, the level of competition in a market will influence the extent of the impact.

3. State of competition in South Africa

The South African economy has highly concentrated markets with dominant state-owned enterprises (SOEs) and natural monopolies (OECD 2025). Concentration exists in food, energy, transportation, construction, mining and financial services, among other sectors (Hodge et al. 2021). The apartheid government developed industrial SOEs and encouraged monopolies as national champions. Since the end of apartheid, large conglomerates have sold non-core businesses but retained their main operations (Hodge et al. 2021). Many of these businesses remain vertically integrated and continue to benefit from economies of scale due to earlier support.

South Africa has restrictive regulations that stifle competition and prevent innovative entry (OECD 2025). The Organisation for Economic Co-operation and Development (OECD) Product Market Regulation (PMR) indicators measure how regulations affect industry competitiveness. The OECD scores countries from 0 to 6, with higher scores indicating more restrictive regulations. In 2023, South Africa scored 2.83, the highest among 51 countries (see Figure 1 for selected country averages).

Figure 1: PMR economy-wide indicator for selected countries



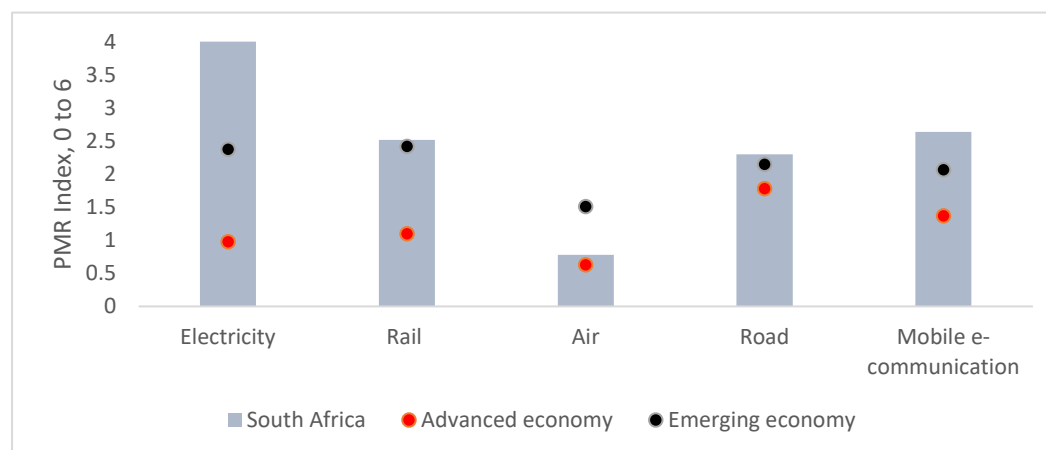
Source: Compiled using data from OECD PMR indicators.

Governments often intervene in markets by creating SOEs to achieve distributional or equity objectives (Robb 2020). Natural monopolies arise where only one firm can efficiently provide services due to high infrastructure and capital requirements (Robb 2020). In South Africa, sectors requiring significant capital outlay, such as electricity, rail, energy, telecommunications and airlines, have historically been publicly owned monopolies. Some SOEs, such as airlines, energy and telecommunications, now face competition from the private sector. Some of these firms have used their historical market power to act anticompetitively. South African Airways (SAA), Sasol and Telkom have received fines for anticompetitive behaviour.

The OECD uses a sectoral PMR indicator to evaluate how regulations affect competition in energy, transport and e-communications sectors. In 2023, South Africa received a sector regulation score of 2.67, ranking 45th out of 50 countries and exceeding the average for

emerging economies. Figure 2 compares South Africa's PMR scores with other emerging and advanced economies. South Africa's electricity sector scored high on the PMR index compared to other emerging economies. The air transport sector's score was only slightly higher than that of advanced economies, reflecting the government's decision to allow competing airlines and limit SAA's dominance.

Figure 2: South Africa's PMR sector indicators



Source: Compiled using data from OECD PMR sector indicators.

Markups in South Africa

Rivalry among firms encourages lower markups because firms risk losing customers to competitors if they raise prices too much. Firms with market power can raise prices without considering competitors. Aghion, Braun and Fedderke (2006) reported that South African industries' profitability margins were significantly higher than – and, in some cases, double those of – their counterparts worldwide. Fedderke, Mariotti and Kularatne (2007) showed that market concentration in South Africa led to higher markups over marginal costs, and that firms did not pass cost savings on to consumers. More recently, Fedderke, Obikili and Viegj (2018) identified heterogeneity in market structure across manufacturing sectors and noted that concentrated sectors with high entry barriers had higher markups. Driver (2019) found that trade pressure did not affect markups in South Africa and that rent capture in upstream manufacturing contributed to high markups.

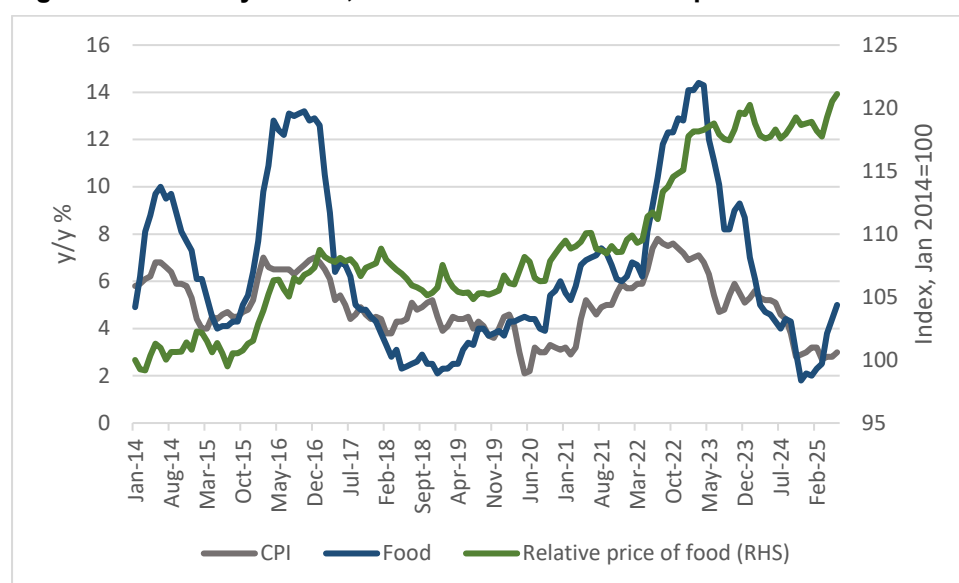
Cartels also drive markups higher. Some firms pretend to compete but secretly collude by agreeing to maximise profits through price fixing or tender rigging, or by allocating customers or geographic areas (Vilakazi and Roberts 2019). Ivaldi, Khimich and Jenny (2014) estimated that cartels in developing countries overcharged by a median rate of about 20%. In South Africa, the wheat flour cartel overcharged by between 7% and 42% between 1997 and 2009 (Mncube 2013).³ Markets with higher markups may indicate ineffective competition, and firms in these markets may be slow to adjust their output in response to interest rate changes.

³ From 1999 to 2007, several large South African firms (Pioneer Foods, Foodcorp, Tiger Brands, Premier Foods and Godrich Flour Mills) colluded on fixing selling prices and allocating customers in the market for wheat flour.

4. Case study on competition in food prices

Well-functioning food and agro-processing sectors support food security and drive economic growth (Nsomba et al. 2022). Over the past 10 years, South African agricultural and food markets faced significant challenges. Food prices have, for the most part, remained above the consumer price index (CPI). The relative price of food compared to other items in the CPI basket has increased by 17% to 21% since 2014 (Figure 3).⁴ The 2015–16 El Niño and the 2021–23 post-COVID-19 shock caused two major disruptions. In Figure 3, the relative price of food illustrates market stickiness, as food prices remained higher than other goods following these shocks.⁵ High food prices placed a heavy burden on low-income earners and the most vulnerable.

Figure 3: Year-on-year CPI, food inflation and relative price of food



Source: Compiled using Statistics South Africa data.

Many supply- and demand-side factors shape the prices that consumers pay for food. Extreme weather events, such as droughts and floods, and outbreaks of disease like avian flu and foot-and-mouth disease disrupt supply and drive prices higher (Nsomba et al. 2022). Global political events such as the war in Ukraine have disrupted global supply chains. After the war began, Russia blocked Ukrainian exports of wheat and maize (Smal and Knox 2023), resulting in higher fertiliser prices (Gajigo 2022), which raised input costs in agricultural markets. Dumping of imported products influences local prices. The South African poultry industry attributes its limited growth and inability to benefit from economies of scale to the dumping of imported frozen chickens, which increases the available supply (Madibana, Fouche and Manyeula 2024).

Lockdowns and changes in regulations following the COVID-19 pandemic altered consumer demand patterns globally. Trade restrictions, such as China's border closures in 2020, reduced demand for South African exports of macadamia nuts, among other products. The

⁴ The relative price of food compared to other items in the CPI basket is 17% higher than in 2014 when food to headline inflation (including food and non-alcoholic beverages) is used and is 21% higher when food to headline inflation excluding food and non-alcoholic beverages is used.

⁵ The relative price of food, indexed to January 2014, is calculated using the food and non-alcoholic beverages index as a ratio to CPI headline index excluding food and non-alcoholic beverages.

European Union's (EU's) Green Deal, which includes the Carbon Border Adjustment Mechanism and Farm to Fork Strategy, will likely reduce the EU's demand for South African agricultural products, including citrus and wine, until local farms meet EU requirements (Bell et al. 2023). These requirements will increase domestic production costs and lower global demand for South African exports.

Loadshedding drove food prices higher in 2022 and 2023. Food production is energy intensive, and businesses relied on generators with increasingly higher fuel costs (CCSA 2024a; Esterhuizen 2022). On farms, loadshedding in this period disrupted irrigation, which reduced crop production (Esterhuizen 2022; Cloete, Pienaar and van der Merwe 2023). In January 2023, loadshedding forced producers to dispose of 10 million chickens (Smal and Knox 2023). While loadshedding has stopped for now, many companies have invested in alternative power supplies, which keep prices elevated as they recover their capital expenditure (CCSA 2024a). Other domestic policies, such as increases in farm workers' minimum wages, raise domestic farmers' costs and reduce their competitiveness within the region, where wage rates are significantly lower. Even though South Africa produces commodities like sunflower oil, maize and wheat, international prices directly affect local commodity prices (Smal and Knox 2023). Anticompetitive firm behaviour is an important supply-side factor that is often overlooked.

The Competition Commission of South Africa's (CCSA's) long history of intervening in food and agro-processing value chains includes uncovering cartels, investigating abuse of dominance, performing market inquiries and ongoing monitoring of prices. Table 1 lists some of the CCSA's interventions.

Table 1: Sample of Competition Commission interventions in food and agro-processing

Type of intervention	Firms involved	Fine or financial impact of anticompetitive behaviour
Cartel: wheat flour (1999–2007)	Pioneer Foods, Foodcorp, Tiger Brands, Premier Foods and Godrich Flour Mills	Percentage markup is estimated to be 7–42% higher than if the cartel did not exist ⁶
Cartel, price fixing and customer allocation: bread (1999–2007)	Pioneer Foods, Foodcorp, Tiger Brands and Premier Foods	Fines: Pioneer – R195 718 000 Foodcorp – R45 406 000 Tiger Brands – R98 874 000
Cartel: maize milling (1999–2007)	CCSA has settled with 14 firms to date	Administrative penalties collected: just under R650 million
Information exchange: milk (2005)	Lancewood	Fine: R100 000
Cartel, customer and product market division: edible oils and fats (2004–2012)	Sime Darby and Unilever	Fine for Unilever: R16 million
Cartel: fertiliser (mid-2000s)	Sasol, Omnia and Kynoch (Yara)	Sasol paid a penalty of just over R250 million for colluding
Abuse of dominance: fertiliser (settled 2009)	Sasol and Foskor	The various interventions saved consumers between R1 billion and R10.5 billion
Abuse of dominance: tea (2020)	Rooibos Ltd	Rooibos Ltd agreed to behavioural remedies including how Rooibos contracts with farmers

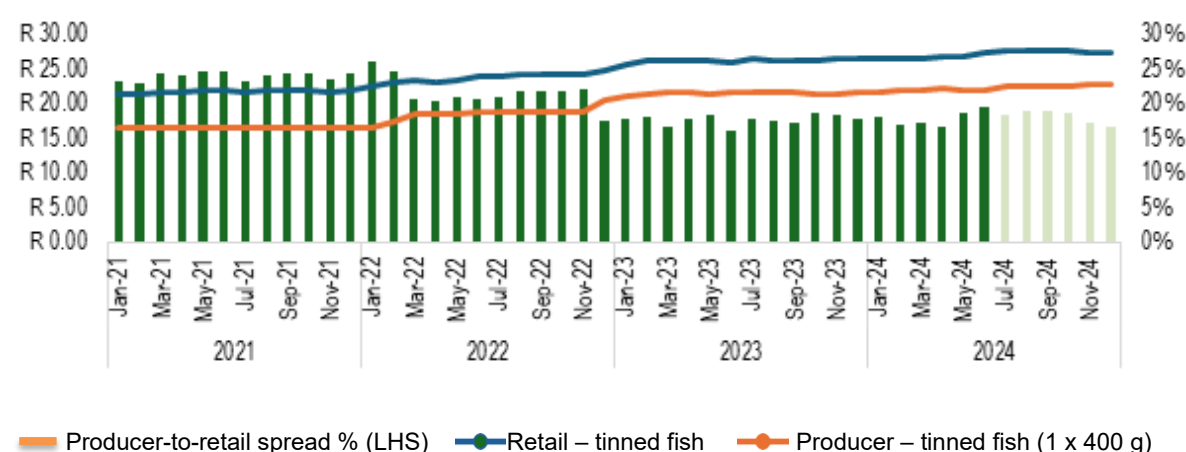
⁶ Mncube (2013).

The CCSA responded to complaints of price gouging during the COVID-19 pandemic by monitoring food prices and related margins.⁷ The Essential Food Price Monitoring (EFPM) report tracks the prices of sunflower oil, maize meal, eggs, brown bread, individually quick frozen chicken and canned pilchards. The report provides the spreads between the various levels of the value chain.⁸ Over time, changes in these spreads, or markups, explain the transmission of changes in commodity prices to producer prices, and finally to consumer prices. Through monitoring prices and spreads, the CCSA determines whether retailers and consumers receive proportional cost changes from the upstream market (CCSA 2025). Changes in spreads over time may indicate anticompetitive practices. The CCSA used findings from EFPM reports to identify areas for further investigation in the fresh produce and poultry market inquiries (CCSA 2024b). The findings also resulted in investigations into maize meal, sunflower cooking oil and bread and other wheat products (CCSA 2024b).

Canned pilchards

The EFPM report found that the market for canned pilchards is working effectively, as consumers are benefiting from a gradual shrinking in the producer-to-retail spread (Figure 4). From August to December 2024, retailers lowered prices slightly, while producers increased their prices slightly (CCSA 2025).

Figure 4: Producer-to-retail spread for canned pilchards



Source: CCSA 2025.

⁷ Price gouging is when firms charge high (and increasing) prices for goods or services that are in high demand but supply is limited, for instance during a national disaster. Excessive pricing is when dominant firms charge high prices to the detriment of consumers when compared to a comparable competitive benchmark.

⁸ The CCSA uses publicly available data to identify upstream commodity prices, factory gate or producer prices, and retail or consumer prices. For the producer level, the CCSA “compares the farm value of a good – value of raw materials required to manufacture a given quantity – and the producer price of that quantity”. The CCSA uses a three-month time lag for SAFEX prices. The retail spread is the percentage difference between the producer price of goods and the retail price:

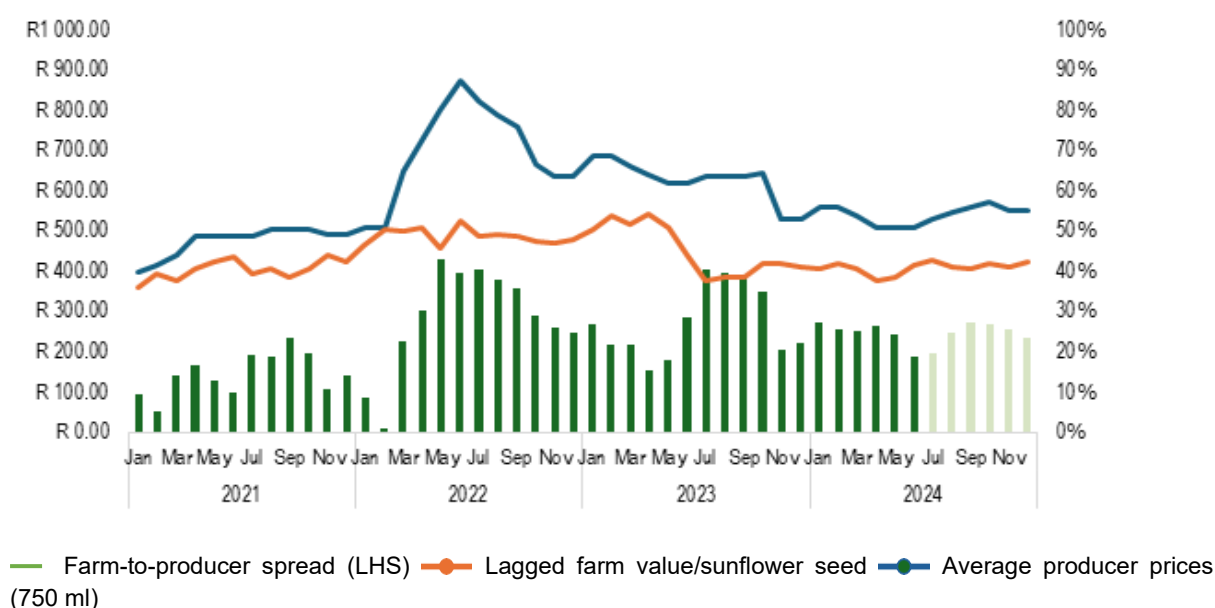
$$\text{Retail spread} = \frac{(\text{Retail price} - \text{Producer price})}{\text{Retail price}}$$

For more detail on the methodology, including a table that provides the methodology for calculating farm values, please see CCSA (2023).

Cooking oil

The market for cooking oil does not function as efficiently as the market for canned pilchards. Changes in farm value (measured by lagged sunflower seed prices) and average producer prices for 750 ml of oil affect the farm-to-producer spread (Figure 5). In 2022, producers sharply increased their prices, even though seed prices remained stable. This increase could be attributed to crushing and refining firms, which are concentrated and integrated, exercising their market power (CCSA 2022).⁹ These firms may have anticipated higher input costs resulting from the war in Ukraine and increased their margins, even though these costs did not materialise in the South African Futures Exchange (SAFEX) market (CCSA 2023).

Figure 5: Farm-to-producer spread for cooking oil

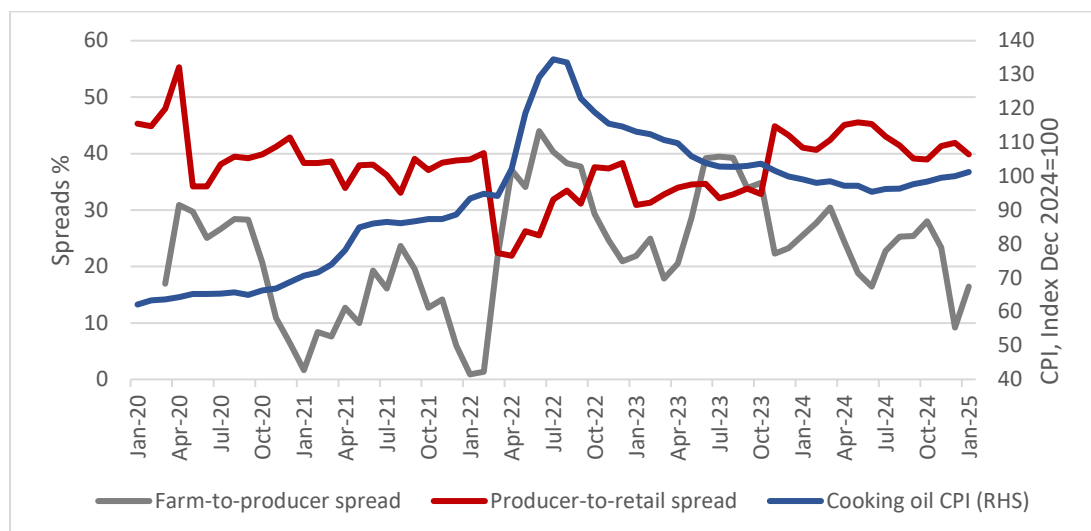


Source: CCSA 2025.

Figure 6 shows that the farm-to-producer spread and cooking oil inflation rose sharply in early 2022. Retailers absorbed part of the cost increase as the producer-to-retailer spread decreased during this period. When producer prices eased in late 2022, the CPI for cooking oil also declined. However, the producer-to-retailer margins increased and returned to previous levels. Towards the end of 2023, producer prices dropped, but the producer-to-retailer spread increased. Retailers did not pass recent decreases in producer prices to consumers (CCSA 2025). This slow adjustment keeps retail prices high and sticky, highlighting inefficiencies in the market.

⁹ The CCSA provides a detailed analysis of the sunflower value chain in its August 2022 report. It considers the import and export parity prices of seeds as well as the level of seed imports. Other reasons why the wholesale price of sunflower oil has increased include higher energy and transport costs.

Figure 6: Spreads and cooking oil CPI



Source: Compiled using figures from CCSA and Stats SA.

5. Conclusion and recommendations

Central banks' efforts to control inflation through monetary policy are more effective when markets are competitive. Many of South Africa's markets remain highly concentrated, with significant barriers to entry and with dominant firms integrated across the value chain. This concentration limits competition, which leads to high markups and causes prices to rise quickly during shocks but fall slowly afterwards – the rocket and feather effect.

Monetary policy cannot directly resolve these supply-side issues. However, when setting monetary policy, the South African Reserve Bank (SARB) can consider market concentration in key sectors, such as food and agro-processing. The SARB can engage with sector experts at the CCSA to identify problematic markets. By incorporating metrics like the Herfindahl-Hirschman Index into macro models and exchange rate estimates, the SARB can better understand how market structure affects the pass-through effect to inflation. The SARB can also identify tools that promote financial inclusion and reduce credit constraints to support small- and medium-sized enterprises.

Annexure

Figure A1: Perfectly competitive market

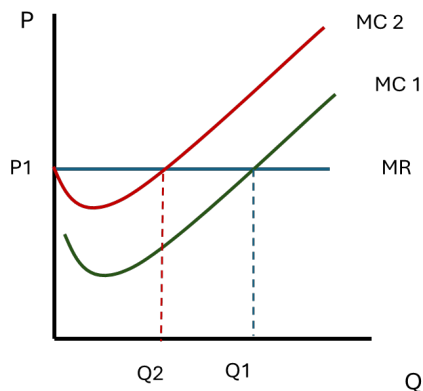


Figure A2: Monopoly

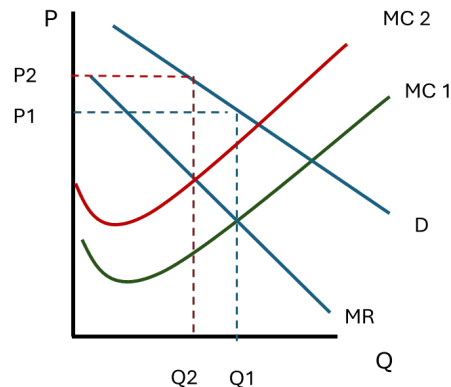


Figure A1 illustrates how, in a perfectly competitive market, the interaction of marginal revenue and marginal cost sets the price and quantity (output produced). When monetary policy raises the cost of capital for a prolonged period, making capital a variable cost, then the marginal cost curve shifts upwards. Firms respond by producing less output at the same price.

In a monopoly (Figure A2), both the demand and marginal revenue curves slope downwards. The intersection of marginal revenue and marginal cost still determines the quantity (output) produced; however, the demand curve sets the price for that output level. When marginal costs rise, the monopolist reduces output by a smaller amount than competitive firms. At the same time, the price increases as less quantity is available for purchase. The curvature of the demand curve and marginal revenue curve influences the extent to which changes in marginal cost affect both price and quantity (Ferrando et al. 2021; Syverson 2019).

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BER special question: Do firms know about the new inflation target? Implications for the path to 3%

Monique Reid, Anis Foresto and Pabalelo Mosoma

Abstract

In this note, once-off questions in the 2025Q4 Bureau for Economic Research inflation expectations survey are used to assess whether South African firms are aware that the inflation target was lowered to 3%. Nearly half of the sample (48%) of surveyed firms correctly identified the new target of 3%. When asked why they believed that is the target, most of this group referred to the announcement of the target by the Minister of Finance. A large proportion of the remaining respondents (38%) reported that the target is between 3% and 4.5%. This group relied on a range of macroeconomic conditions to motivate their view of the South African Reserve Bank's preferred target. Both groups of respondents have revised their inflation expectations downward significantly throughout 2025. These findings indicate that firms are attentive to news about inflation. This is encouraging for policymakers as it suggests that risk from inattention creating a drag on the path to 3% is not present in the 2025Q4 data.

1. Introduction

The inflation target was officially lowered to 3% with a 1% tolerance band on 12 November 2025. For a range of reasons, communicated in Loewald, Steinbach and Rakgalakane (2025), policymakers believe South Africa will benefit from adopting a lower inflation target. However, given persistent concerns about slow economic growth, high levels of unemployment and an unsustainable fiscal position, there is concern about the potential costs of this adjustment.

Much of the public debate about whether to lower the inflation target revolved around the degree to which inflation expectations are forward- or backward-looking. However, developments in both the international and South African literature suggest that the degree of attention that the public pays to the available information is at least as important as, if not more so than, whether they use forward- or backward-looking information when updating their expectations (Pfauti 2025; Foresto, Reid and Rakgalakane 2025; Foresto et al. 2026). South African Reserve Bank (SARB) research (Foresto et al. 2026) suggests that persistent beliefs (i.e. lagged inflation expectations) explain a large portion of the variation in inflation expectations. The question of whether the public is paying attention to information about the changing of the target and therefore making their own economic decisions based on up-to-date information is important.

* The views expressed in these economic notes are those of the author(s) and should not be attributed to the South African Reserve Bank (SARB) or its policy. While every precaution is taken to ensure the accuracy of information, the SARB shall not be liable to any person for inaccurate information, omissions or opinions contained herein.

Following the post-pandemic inflation, the public in most countries was far more attentive to developments in inflation and monetary policy (Pfauti 2025; Weber et al. 2025). In line with the theory of rational inattention (Sims 2003), inflation that was persistently high for an extended period had increased the costs of being inattentive. Within this high attention context, when South African inflation fell to levels around 3% in October 2024, an opportunity arose to lower the target. The Minister of Finance formalised this process in the 2025 Medium Term Budget Policy Statement (National Treasury 2025). It is important to continue monitoring inflation expectations to assess whether policy action is needed for convergence to a level close to the new target.

In pursuit of this objective, the Bureau for Economic Research (BER) included special questions for the SARB in the BER inflation expectations survey for the second time in 2025Q4. The aim was to determine the extent to which firms have knowledge about the new inflation target. We report on the results of the survey data in this note.

2. The role of inflation expectations in the path to 3%

2.1 Public debate: forward- vs backward-looking expectations

Much of the public discussion about the cost of lowering the inflation target, or the speed with which the target would be reached, revolved around the weight placed on forward- or backward-looking expectations. Those that believe that inflation would be difficult and costly to bring down argued that a higher sacrifice ratio in the post-pandemic period and the backward-looking behaviour of expectations will increase the costs associated with reducing the inflation target in South Africa (Du Rand, Hollander and van Lill 2023; Kabundi, Schaling and Some 2014). In a modelling sense, this is usually captured by placing a greater weight on historical inflation (lagged inflation, α_1 in Equation (1)).

$$\pi_t^e = \alpha_1 \pi_{t-1}^{CPI} + \alpha_2 \pi_t^{target} \quad (1)$$

In contrast, those that believe that inflation expectations are more forward-looking tend to argue that the SARB is credible and the public generally places more weight on the target (α_2 in Equation (1)) than historical inflation (Loewald, Steinbach and Rakgalakane 2025). For some economic decision makers, this focus on the target might capture explicit knowledge of the formal target, but for others it might simply capture a tendency to believe that inflation will revert to some long-term average that would be close to the target if the central bank is credible. This need not mean that the decision makers have knowledge about the target or the mechanics of monetary policy. Instead, if they just believe that there is a tendency to revert to some long-term trend that is at the level of the target, it would be *as though* they have knowledge of the target and trust the ability of the SARB to achieve it.

¹ In this case, deviations from the target are viewed as temporary, as transitory movements in headline consumer price index do not feed through into inflation expectations.

¹ A credible central bank would have a track record in line with its inflation target. If the firms come to trust that inflation itself is generally at this level, they do not need to have knowledge about the institutional structure to set their expectations in line with the target. The reality is that many decision makers do not have direct knowledge.

2.2 Inattention is where the risk lies in 2026

Foresto et al. (2026) point out that inflation expectations are very persistent, because decision makers are often inattentive to new information. In other words, it is not enough to ask which information (forward- or backward-looking) decision makers are using to update their expectations. We also need to ask to what extent they are updating their expectations with any information at all – to what extent are they paying attention to new information?

It is difficult to model expectations without a weight on lagged inflation expectations (β_1 in Equation (2)) that is far larger than that on the target (forward-looking) or historical inflation (backward-looking). It is important to critically consider the interpretation of this lagged inflation expectations term, as it is, in fact, typically doing most of the work.

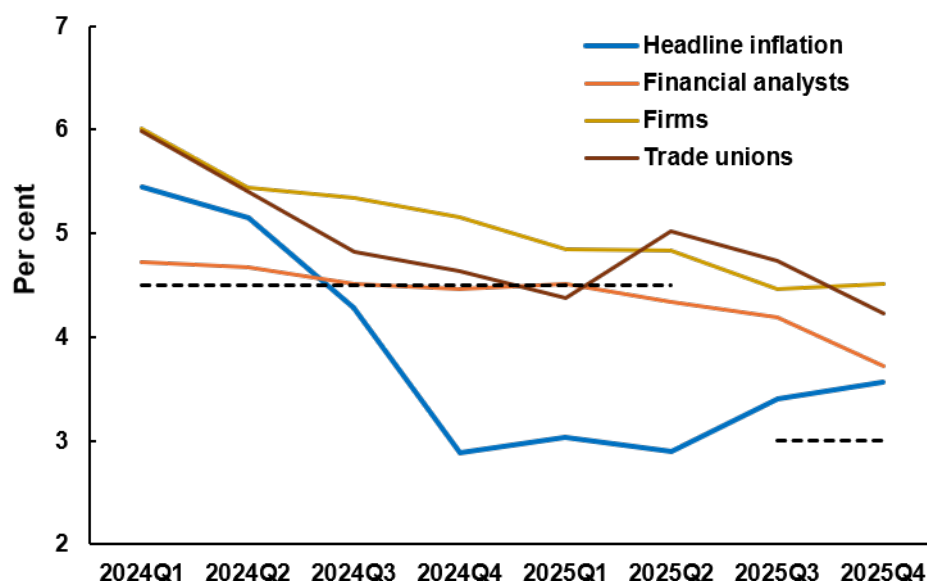
$$\pi_t^e = \beta_1 \pi_{t-1}^e + \beta_2 \pi_{t-1}^{CPI} + \beta_3 \pi_t^{target} + \varepsilon_t \quad (2)^2$$

It is natural to argue that the lagged inflation expectations are themselves a backward-looking term. In contrast, Foresto et al. (2026) argue that when survey respondents made their decisions in earlier periods, they also used the inflation target as one of their information inputs. Since the target is typically constant over time, it will cause the same convergence to the target as the forward-looking term does. This logic breaks down when the target is adjusted. If the decision makers who respond to the survey still have the outdated inflation target (4.5% in the case of South Africa) in their lagged expectations, this will keep their current expectations higher. Once they update these beliefs (to a 3% target), the lagged expectations will again have a component that we can treat *as though it is forward-looking*. It is therefore important that the economic decision makers in South Africa update their beliefs about the long-term trend of inflation as soon as possible.

Under the conditions when the target was formally lowered at the end of 2025, inattention was a greater risk than backward-looking expectations for the path to 3% inflation. The target has now officially been lowered to 3% (dashed line in Figure 1) and historical inflation was 3.5% year on year in November 2025. Lagged expectations of financial analysts, trade unions and firms were 4.2 (4.3), 4.7 (5.0) and 4.5 (4.8) in 2025Q3 (2025Q2), lying above the target and historical inflation in late 2025.

² The first term on the right-hand side represents a lack of updating or inattention, measured as agents' expectations that were formed in the previous period for the current period.

Figure 1: Headline inflation (year on year) and lagged two-year-ahead expectations for financial analysts, firms and trade unions*



Note: * The black dotted line represents the inflation target.

Source: Stats SA and BER.

2.3 How quickly will firms follow the opinion leaders?

It is intuitive and well established in the literature that financial specialists tend to be better informed about inflation than trade unions and firms.³ Price setters tend to follow the lead of financial experts (Carroll 2003; Reid 2015), so in this sense, financial analysts can be viewed as opinion leaders.⁴ The trade unions component of the South African data receives far less attention because the sample is the smallest and there is some hesitance about how consistently the key decision makers within the unions are the ones who respond to the survey. There is, however, evidence that trade unions forecast a little more accurately than firms, suggesting that the information content is reasonable (Reid and Siklos 2021). With the high level of unionisation in South Africa,⁵ trade unions remain important opinion leaders with respect to the price of labour.

Relative to the other two groups, the sample of firms is far larger and more heterogenous.⁶ They are the least rational (Crowther-Ehlers 2019) and forecast with the least precision (Reid and Siklos 2021). They pose the most significant risk of sticky inflation expectations. Foresto et al. (2026) find that when the SARB announced in 2017 that it planned to shift the de facto target from 6% to 4.5%, the firms adjusted at a notably slower pace (7 quarters) than the financial analysts and trade unions (4 and 2 quarters, respectively). They point out, however, that conditions in 2025/26 are different to those in 2017. There is evidence (Foresto et al. 2026) that the level of attention to inflation is far higher in 2025/26 than it was in 2017. The

³ There is a lot of South African literature that shows that on average financial analysts tend to be more rational and better at forecasting inflation than trade unions and firms. See Crowther-Ehlers (2019) for a good summary of this literature.

⁴ Smuts (2023) started using the term 'opinion leaders' to describe a role played by analysts.

⁵ The level of labour unionisation in South Africa (27.5% in 2023) is higher than the Organisation for Economic Co-operation and Development (OECD) average (14.7% in 2023) (see OECD 2025).

⁶ See Kershoff and Smit (2002) and Reid and Siklos (2021) for more detailed information about the composition of the BER inflation expectations surveys.

first BER survey results (2025Q4) following the 2025 announcement recorded sharp decreases of 11.1% for financial analysts and 10.6% for trade unions, and a more muted 1.1% increase for firms.

3. BER special question: knowledge about the lowering of the inflation target

To move beyond speculation about firms' knowledge regarding the formal lowering of the inflation target, a BER special question was added at the end of the BER's inflation expectations survey.⁷ Respondents were asked two questions.

3.1 Question 1: Are firms aware of the new target?

Question 1: In your opinion, at what level of inflation (percentage change) does the South African Reserve Bank prefer to keep inflation (what is the preferred target of the South African Reserve Bank)?

The decision was made to avoid providing ranges for respondents to select because it can cause priming (Coibion et al. 2020).⁸ We also chose to refer to a preferred target to avoid any reference to a formal position or announcement, which might increase the likelihood that survey respondents search the internet to learn more before answering the question.⁹

The results, summarised in Table 1 and Figure 2, show that the non-response rate was low, and few respondents (4%) responded with a range rather than a point target. Of those that answered the question, 48% gave the correct answer of 3%. It is encouraging to see that almost half of all firm respondents believe the SARB is now targeting 3% only four days after the formalisation of the target,¹⁰ given that firms tend to be the less attentive group.¹¹ Perhaps even more encouraging is that 38.4% of the remaining respondents selected a number greater than 3% but less than 4.5% – a figure lower than the midpoint of the old target band. Only a small share of respondents chose 4.5% or some number in the upper half of the old target range (4% and 2.4%, respectively).

⁷ The Economic Research Department of the SARB includes a single extra question each quarter in the inflation expectations survey. This 'special question' allows the SARB to collect survey data about topics as the need arises.

⁸ For example, the old target was a range whereas the new one is a point target with a tolerance band. To avoid nudging the respondent to the kind of answer we wanted, we would need to offer a lot of different options. We would also have had to offer options that are very high because there are always some respondents that offer unrealistically high forecasts.

⁹ In other words, the slightly less formal phrasing of the question was intentional.

¹⁰ This is not a comment about when respondents became aware that the SARB prefers inflation to be at 3%, but rather an observation about their awareness at a point in time (four days after the official announcement).

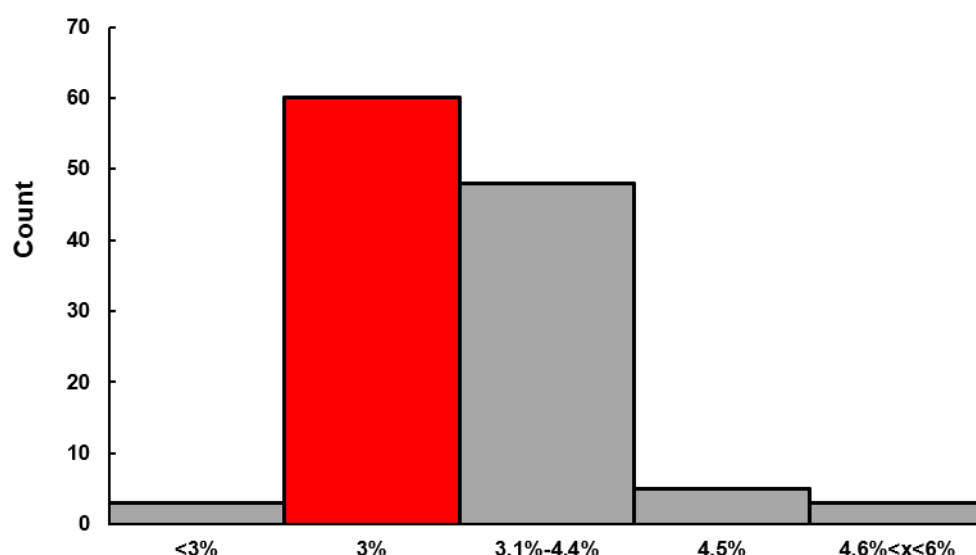
¹¹ The BER survey was sent on 18 November 2025, shortly after the inflation target was formalised on 12 November 2025.

Table 1: Detailed results to question 1*

	Total	% (of those that answered the question; /125)
Total surveyed	133	
Total that answered	125	
No response	8	
Inflation range	5	
<3%	3	2.4%
3%	60	48%
3%<x<4.5%	48	38.4%
4.5%	5	4%
4.6%<x<6%	3	2.4%

Note: * Of the group that reports that the SARB prefers inflation to be 3<x<4.5%, 50% report that the SARB prefers 3.5%.

Source: Own calculation based on BER survey data.

Figure 2: Firms' view of the SARB's preferred target

Source: Own construction based on BER survey data.

The most surprising result was that 19.2% of the respondents selected 3.5%. Given that it is common to round numbers in surveys (Crowther-Ehlers 2019) and the most recent historical inflation figure (October 2025) was 3.6%, it is likely that this group was strongly influenced by recent experience of inflation.

3.2 Question 2: Open-ended question

Question 2: Please give a reason for your answer above.

Question 2 elicited text answers from respondents, allowing them to provide reasons for their answer to the first question. This open-ended question allowed us to avoid priming again and to explore unknown unknowns. They might have knowledge about the new target for reasons we have considered, but we might also learn new things about their understanding of the new target if we do not limit the answers they can give and do not nudge them in one of the

directions we have already considered. A reasonable proportion of the survey respondents answered the question (66%).¹²

The sample is small, and the answers given tend to be brief, but they do offer some insight into the primary motivation behind survey respondents' answers to question 1. We noticed that the answers of respondents that chose 3% (group 1) tended to fall into one of two broad categories: (i) those that reported knowledge about the formalisation of the target through the announcement by the Minister of Finance, and (ii) those that gave an economic motivation for the choice of the SARB. Of the respondents that chose 3%, 61% relied on the official announcement by the Minister of Finance as the primary motivation for their choice, reflected in the fact that words about the announcement were dominant in a word cloud (Figure 3).¹³ The smaller group that provided an economic motivation for their 3% answer used language that focused on the economy more broadly, without mentioning the inflation target directly. Similarly, the motivations of respondents that believe the target is $3\% < x < 4.5\%$ (group 2) encompass a range of macroeconomic considerations (Figure 4).

Figure 3: Firms that believe the target is 3%



Source: Own construction using text from the BER special question (2025Q4).

¹² For group 1, 43 respondents answered question 2, and 32 respondents in group 2 gave a reason for their response to question 1.

¹³ While respondents appear to be highly attentive to information about the new target, we are unable to distinguish between the effects of the SARB's announcement in the July Monetary Policy Committee press release about its preferred target and the statement in the Medium Term Budget Policy Statement about the official lowering of the target. The timing of both announcements falls between the Q3 and Q4 surveys. It is unclear if respondents with knowledge of the target formalisation focused on language related to the announcement by the Minister of Finance due to recency bias or because it was the only source of information behind their decision.

Figure 4: Firms that believe the target is between 3 and 4.5%



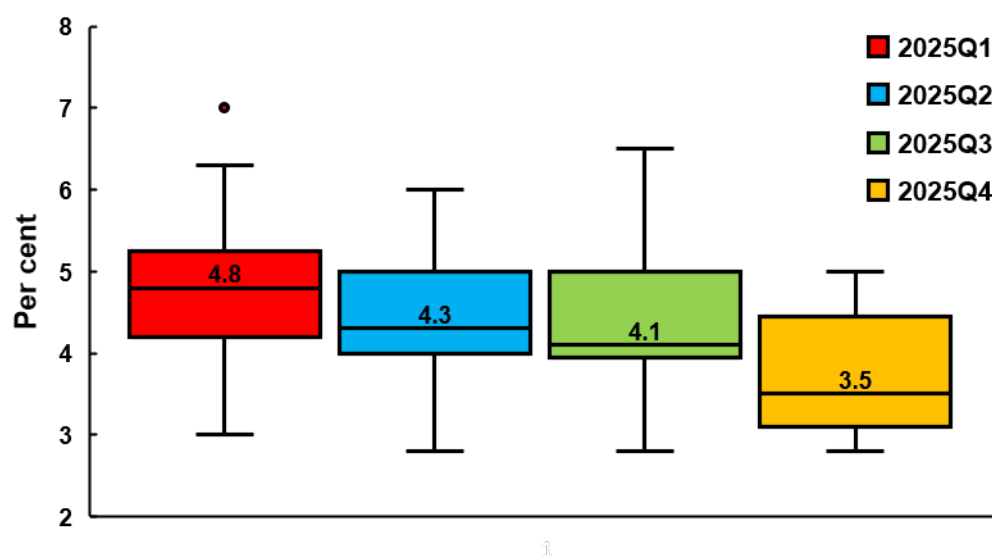
Source: Own construction using text from the BER special question (2025Q4).

3.3 Relationship between beliefs about the target and inflation expectations

Sticking to the respondent grouping analysed in section 3.2, we ask if group 1 reported inflation expectations that were systematically different from group 2. We are testing if knowledge of the new target affected inflation expectations. We conducted formal regression analysis (based on Equation (2)) to provide greater confidence in our conclusions about the information survey respondents relied on to form their beliefs about the target (see the annexure). The formal analysis supports the evidence from the unconditional relationships displayed in Figures 5 and 6.

Representing the distributions of the two groups in Figures 5 and 6, we find that both groups have consistently revised their two-year-ahead expectations down throughout 2025. The revisions by group 1 were larger (1.3 percentage point fall in the median) than that of group 2 (0.77 percentage point drop in the median) over the full year. However, we cannot overinterpret quarter-to-quarter revisions, because the differences are potentially statistically indistinguishable (Figure 7).

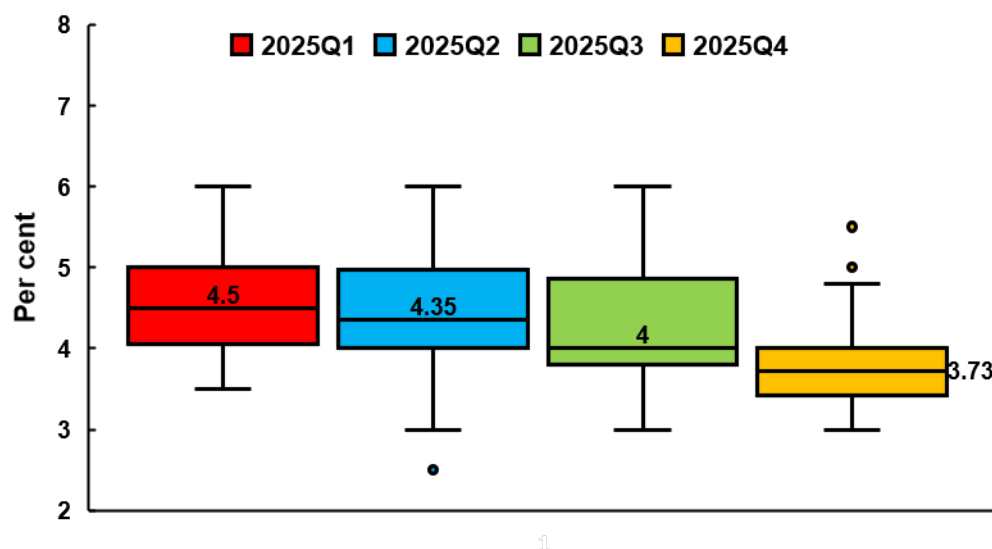
Figure 5: Two-year-ahead expectations for group 1¹⁴



Note: * The expectations reported are for firms that responded to the survey in each quarter of 2025.

Source: Own construction using text from the BER special question (2025Q4).

Figure 6: Two-year-ahead expectations for group 2*



Note: * The expectations reported are for firms that responded to the survey in each quarter of 2025.

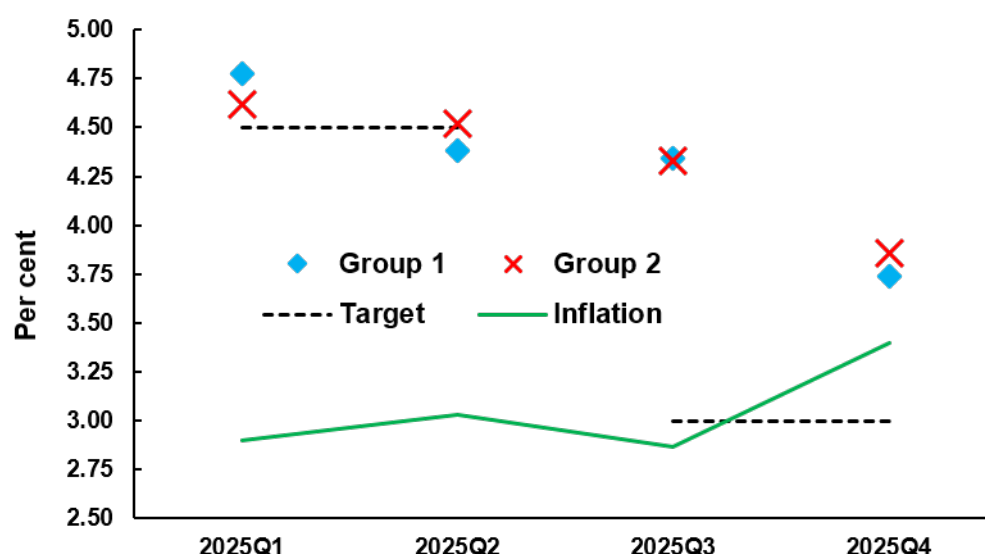
Source: Own construction using text from the BER special question (2025Q4).

It is worth noting that revisions of expectations could have been affected either by new information about the lower target or new information about the consumer price index, which was low at the time (Figure 7). Under conditions at the time the survey was conducted, if attention to the historical inflation figures was high, this would also cause downward revisions. These results suggest that, irrespective of the source of information, both sets of respondents are updating their beliefs either directly (target) or indirectly (track record). This is encouraging

¹⁴ There were 31 respondents who answered the survey in each quarter of 2025 for group 1 and a further 26 in group 2.

for policymakers as it suggests that the risk from inattention (lack of updating) creating drag on the path to 3% is not present in the data at this point in time.

Figure 7: Mean two-year-ahead expectations for both groups*



Note: * Mean expectations are calculated using firms that responded in each quarter of 2025.

Source: Own construction using text from the BER special question (2025Q4).

4. Conclusion

The findings from the BER special question reveal that nearly half of the respondents are aware of the new 3% inflation target (48%). Despite firms historically being less informed than the other social groups (financial analysts and trade unions) (Crowther-Ehlers 2019), the recent high inflation experience and heightened public discourse about the formalisation of the target appear to have increased attention. Convergence of expectations to the new target could be driven by respondents who update their beliefs about the future path of inflation, given the lower target (forward-looking). Alternatively (or in addition), respondents could rely on historical inflation (backward-looking). Under conditions of high attention and low levels of inflation, using this second source will also result in large downward revisions.

The results indicate that firms directly informed about the target and those deducing a change from economic conditions have consistently revised their inflation expectations downward throughout 2025, suggesting that attention to new information, irrespective of the source, has supported the convergence of inflation expectations towards 3%. These results discount the risk that inattention by decision makers would present a drag in the convergence to 3%. The survey results support evidence from SARB research (Amaral, Foresto and Mosoma 2026) that a combination of communication about a major policy shift and the build-up of a track record plays a role in anchoring expectations at the new target.

Annexure

Table A1: Results for groups 1 and 2 based on Equation (2)

Variables	Group 1	Group 2
<i>Lagged inflation expectations</i>	0.54***	0.59***
<i>Historical inflation</i>	0.37	0.45**
<i>Target</i>	0.21*	0.05

Note: The asterisk symbolises significance at the 10% (*), 5% (**) and 1% (***) level. We rely on the real-time historical inflation measure from Foresto et al. (2026).

Source: Authors' own calculations based on BER data.

The regression results in Table A1 suggest that respondents in group 1 are revising more using the inflation target, placing a larger weight on beta 3, while group 2 places a significant weight on historical inflation (beta 2). The inflation expectations of both groups remain persistent (large beta 1), but the weight placed on past expectations (inattention) is lower than the estimates from Foresto et al. (2026) for the period 2009–2025. This supports the idea that attention is presently higher than the long-term trend.

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De-dollarisation and emerging markets: more policy space or less?

Chris Loewald and Manisha Morar

Abstract

As the global order fragments, a key question arises: can de-dollarisation – that is, the gradual reduction of reliance on the US dollar in trade, finance and reserves – help restore policy autonomy in emerging markets (EMs), or will it constrain them further? This note reviews the evolution of EMs' integration with the global financial system, analyses the impact of geoeconomic fragmentation on capital flows, and assesses the role of the US dollar in EM policy choices. On balance, integration is supportive of both growth and macroeconomic policy space, despite cyclical pressures and widespread dollarisation of borrowing. In South Africa's case, the constraint posed by financial integration lies primarily in the weak comparative efficiency in using capital to finance increases in potential growth. De-dollarisation will neither resolve macroeconomic instability nor increase policy sovereignty.

1. Introduction

While the global economy proved resilient to the massive shock of the COVID-19 pandemic, deep faults lie beneath the surface, and political and economic tremors are now more or less continuous. The tectonic plates of the postwar global order continue to shift, pushed by demographics, state fragilities and renewed great-power rivalry, making volatility a near-constant feature of the international landscape.

As the global order adjusts, a key question arises: can de-dollarisation – that is, the gradual reduction of reliance on the United States (US) dollar in trade, finance and reserves – increase policy autonomy in emerging markets (EMs), or will it constrain them further?

In this note, we review the evolution of EMs' financial integration, analyse the impact of geoeconomic fragmentation on capital flows, assess the structural centrality of the dollar compared with other currencies and systems, and finally turn to domestic considerations. Overall, the analysis highlights the complex trade-offs involved – de-dollarisation will neither resolve macroeconomic instability nor allow for a straightforward route to policy sovereignty.

* The views expressed in these economic notes are those of the author(s) and should not be attributed to the South African Reserve Bank (SARB) or its policy. While every precaution is taken to ensure the

accuracy of information, the SARB shall not be liable to any person for inaccurate information, omissions or opinions contained herein.

2. How EMs got here: integration, dollar dependence and vulnerabilities

The deepening of EM dependence on the dollar occurred in the era of rapid financial and trade integration that began in the 1990s. As global capital account restrictions were dismantled and markets liberalised, cross-border assets and liabilities expanded at an unprecedented pace. The theoretical logic was compelling: in an integrated world, capital would flow from capital-abundant economies – where returns were low – to capital-scarce EMs – where returns were high. This ‘allocative efficiency’ was expected to narrow global income gaps and finance rapid development.¹

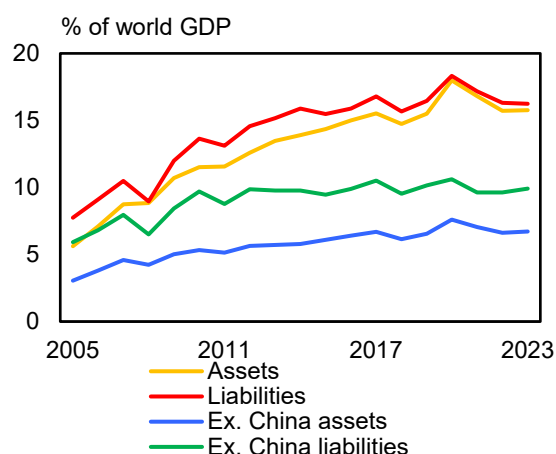
In practice, the surge in integration was driven by both external ‘push’ factors and domestic ‘pull’ factors. Externally, large global savings pools and rapid financial innovation (including decreasing information asymmetries) channelled liquidity towards higher-yielding EM assets. Domestically, many EMs implemented wide-ranging reforms to attract and retain foreign capital. This included trade liberalisation, the privatisation of state enterprises, fiscal consolidation and the opening of domestic bond and equity markets to non-resident investors. Such efforts were often underpinned by a strategic shift in macroeconomic thinking, from inward-looking demand management to frameworks that emphasise external balance, market discipline and institutional credibility.

Yet EM financial integration remains limited relative to advanced economies (AEs). External assets and liabilities across 14 large EMs have rarely exceeded 20% of world gross domestic product (GDP) (Figure 1). The pattern of integration reflects the degree of participation in global value chains, the depth of local capital markets and lingering regulatory constraints. Those EMs which paired macroeconomic stabilisation with structural and microeconomic reforms (such as deregulation of product and labour markets, infrastructure investment and export diversification) achieved deeper integration and higher growth (Prasad et al. 2009).² Concurrently, an area where EMs have outperformed in recent years has been trade (Figure 2), albeit with China accounting for most of the gains.

¹ See, for instance, BIS (2021).

² Examples include previously centrally planned Central and Eastern European economies (e.g. Poland, Czech Republic and Estonia), East Asian reformers (Vietnam, China post-World Trade Organization and Malaysia), and selected Latin American cases such as Chile and Colombia.

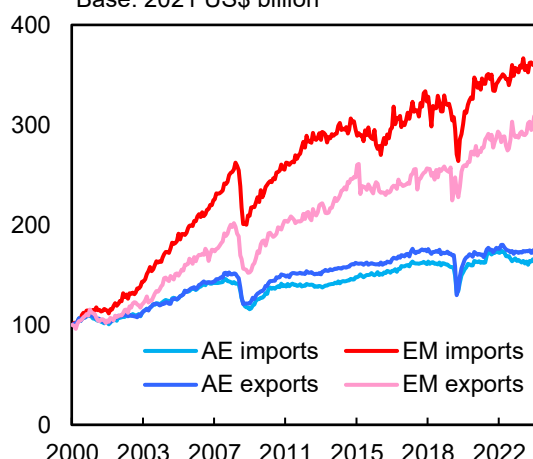
Figure 1: EM external financial assets and liabilities



Source: IMF, World Bank and SARB.
Calculated for a sample of 13 EM economies.

Figure 2: Trade volumes

Base: 2021 US\$ billion



Source: CPB Netherlands.

South Africa's reintegration into global markets after the end of apartheid coincided with the 1990s wave of financial globalisation. The country's large investment-savings gap made access to foreign capital essential, while strong domestic institutions and a sophisticated financial system helped attract portfolio inflows (Khetsi and Mongale 2015). But the failure to sustain reform momentum has resulted in 'incomplete integration', that is, openness to volatile financial flows without the productivity and competitiveness gains that anchor long-term resilience (Faulkner, Loewald and Makrelov 2020). These dynamics define the starting point for understanding the constraints and trade-offs of de-dollarisation.

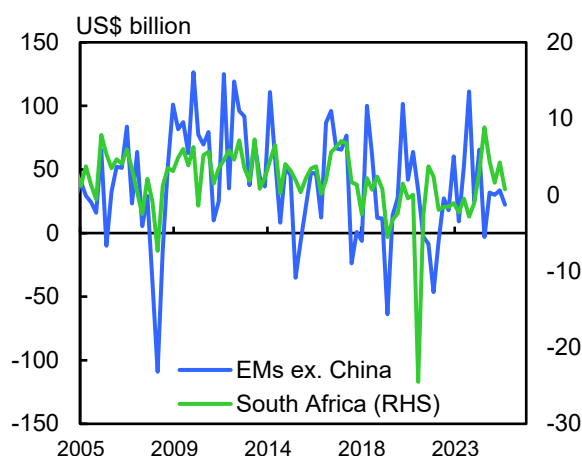
3. Fragmentation and capital re-alignment

Today's tensions play out in a world that is more financially interwoven than before, implying that the potential economic consequences of fragmentation are both broader and deeper (Solomons, Mjandana and Mercier 2024). Increasing geopolitical 'distance' appears to be reshaping global capital flows. Divergence in United Nations General Assembly voting patterns – a proxy for political alignment – significantly reduces bilateral portfolio investment, while cross-border bank lending and investment exhibit regional biases (Aiyar et al. 2023). This introduces a new, non-market risk premium where investors increasingly price political compatibility alongside conventional indicators such as debt sustainability or inflation performance.

The potential for politically driven risk premiums would mark a significant change from recent conditions of asset-class-defined risk. Historically, portfolio flows to South Africa (both equity and bond) have tended to move in step with those to other EMs. Since 2005, total non-resident portfolio flows to South Africa showed a 67% correlation with flows to EMs excluding China, with bond flows displaying an even closer alignment.³ Close co-movement underscored how South Africa was long influenced by the broader cycle in global capital flows. While this pattern held until the COVID-19 pandemic, the correlation weakened into 2025, suggesting that domestic factors weighed, and were further reflected by a consistent risk premium over other EMs (Figure 4).

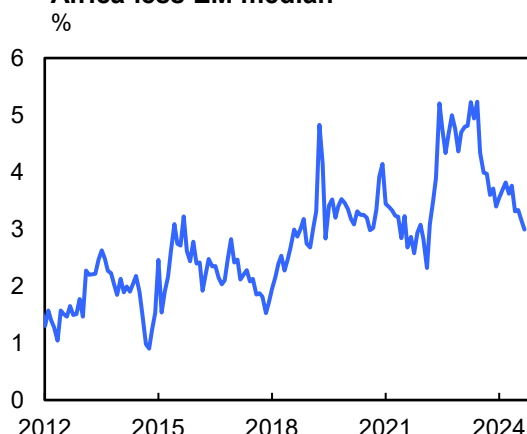
³ Based on calculations using data from the Institute of International Finance (IIF).

Figure 3: Non-resident portfolio investment



Source: IIF and SARB.

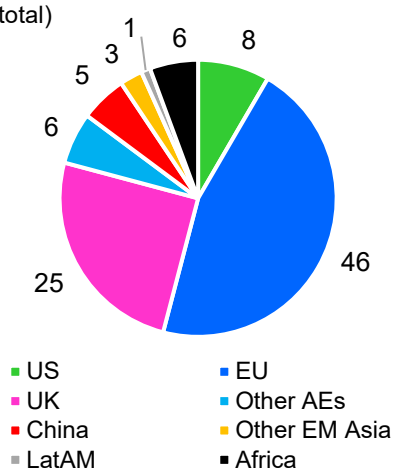
Figure 4: 10-year spread — South Africa less EM median



Source: Bloomberg and SARB. The median yield uses a sample of 12 medium to large EMs.

Figure 5: Split of foreign direct investment liabilities

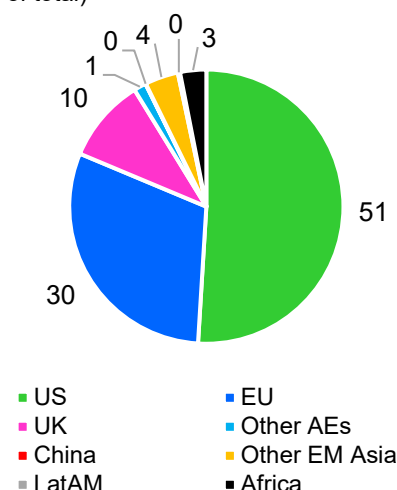
(% of total)



Source: SARB, as of December 2024.

Figure 6: Split of portfolio liabilities

(% of total)



Source: SARB, as of December 2024.

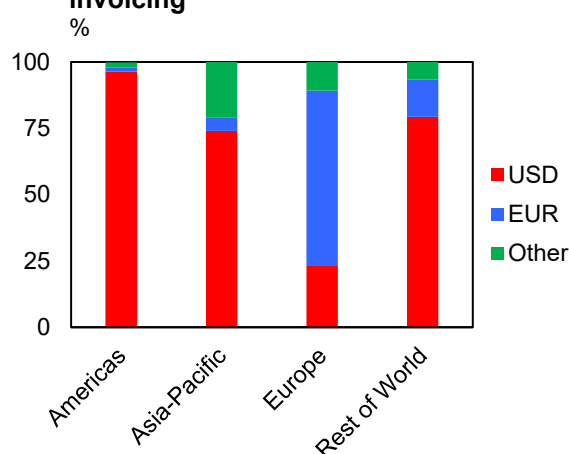
A shift in global flow dynamics would affect the evolution of EM external balance sheets and net international investment positions (NIIP) – which reflects the cumulative effect of sustained inflows, outflows and valuation shifts. While South Africa has maintained a positive NIIP since 2015, its external liabilities are heavily concentrated in investors from the US and Western Europe (Figures 5 and 6). This implies that, in the event of financial fragmentation, dollar-based investors could scale back their allocations, posing financial stability risks and exerting upward pressure on the country's risk premium.

4. Peak dollar?

The role of the dollar has attracted renewed attention in the post-pandemic era, driven not only by the intensification of US sanctions on Russia, but also by China's gradual internationalisation of the renminbi and by a broader move towards multipolar financial arrangements. The propensity of the US to run current account deficits on a continuous basis, irrespective of GDP growth cycles, generates sustainability concerns for debt. These dynamics prompt unease over the dollar's dual role as a global public good and a potential source of systemic risk through policy and geopolitical channels – and, with a sharp increase in potential tariffs on US imports, led to significant US dollar depreciation in 2025.

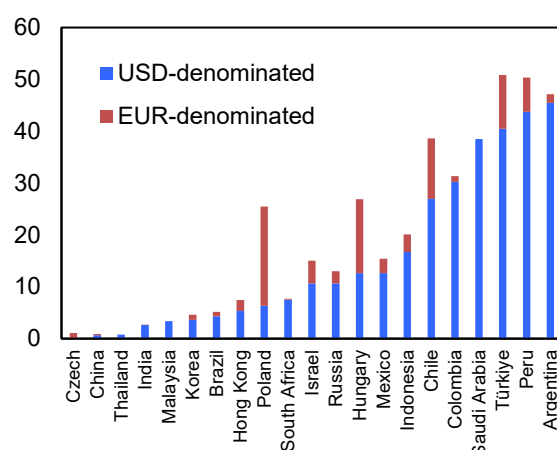
Even as the dollar cyclically weakened in 2025, EMs remain structurally exposed to it.⁴ Most external borrowing remains denominated in dollars, alongside the majority of international trade (Figure 7), regardless of exchange-rate regimes (Boz et al. 2020; Obstfeld and Zhou 2023). This 'dollar trap' can limit the policy autonomy that flexible exchange rates provide by increasing marginal debt costs and existing debt service burdens.

Figure 7: Share of global export invoicing



Source: FEDS Notes, July 2025.

Figure 8: EM external debt issuance
% of total government debt



Source: IIF and SARB.

South Africa's foreign currency debt forms only a small share of total public borrowing, especially when compared with peers (Figure 8). Reliance on local currency funding has helped contain external vulnerabilities and currency-mismatch risks. Relatedly, the share of dollar deposits in the domestic banking system is limited, unlike EMs such as Türkiye and Argentina.⁵ This also reduces downside risks to the rand as the likelihood that residents would aggressively swap domestic currency deposits for foreign-denominated ones is low. Rather, periods of non-resident capital outflows generally coincide with repatriation of offshore assets

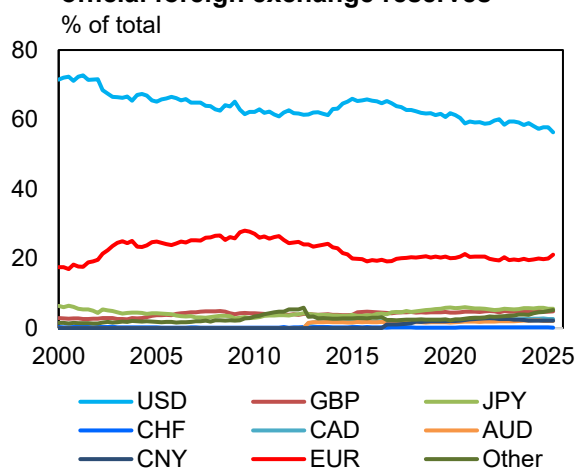
⁴ For South Africa, the 2025 episode has produced both benefits and asymmetries. The rand appreciated by around 13%, reflecting and reinforcing improved investor sentiment while easing imported inflation pressures. But the rally may also reflect temporary external dynamics rather than structural strength. Because a large share of South Africa's external financing is via portfolio inflows rather than stable foreign direct investment, shifts in investor appetite tend to transmit rapidly through the exchange rate and domestic asset prices.

⁵ Here, the use of foreign exchange savings accounts is high as holders compensate for low or negative real interest rates and a loss of domestic purchasing power.

by residents, in part because prudential limits on offshore investments are exceeded when the rand depreciates.⁶

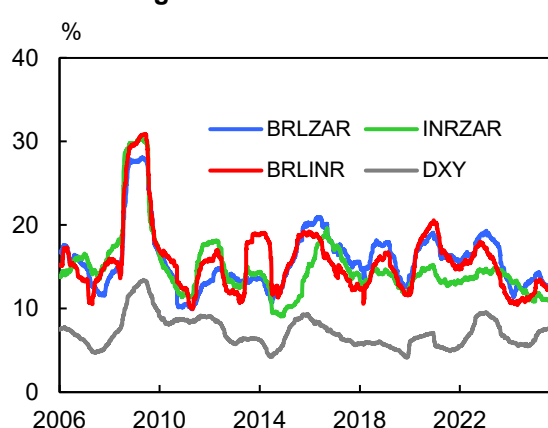
The dollar also still plays a central role in reserve holdings. At the official sector level, its share of global foreign exchange reserves has declined from over 70% in the early 2000s to about 57% by end-2025 (Figure 9). However, this has not been solely the result of declining demand for dollar assets. Changes in the size of individual countries' reserve portfolios – especially when those countries hold more or fewer dollars than average – can mechanically shift the overall global dollar share, even without a change in preferences (Goldberg and Hannaoui 2024). Aside from geopolitical factors, proximity to the euro area in trade and debt continues to tilt some portfolios away from dollars (for example, Switzerland). Reserve managers have also added a wider range of smaller currencies to their portfolios as liquidity and depth in some of these markets improved, initially against a backdrop of low yield pick-up in many AEs. Given South Africa's relatively modest reserve holdings of about US\$75 billion, any shift away from the dollar would be precautionary rather than a move of systemic global importance.

Figure 9: Currency composition of official foreign exchange reserves



Source: IMF COFER.

Figure 10: Volatility for selected exchange rates



Source: SARB and Bloomberg.
Volatility is monthly annualised.

Whether driven by a weakening perception of the dollar as the dominant safe asset or by geopolitical developments, the direction of travel is slowly towards portfolio diversification and less dollar concentration. This raises the prospect of a future international monetary system less centred on the dollar, a possibility mooted by some BRICS countries. Advocates for a common currency posit that it would reduce exposure to exchange-rate volatility and facilitate intra-bloc trade. Yet the practical obstacles are significant. Member states collectively fail nearly every test of an optimal currency area, and currency volatility of BRICS pairs is generally higher than that of the dollar (Figure 10).⁷ Establishing a supranational central bank requires agreement on governance structures, fiscal backstops and crisis-management frameworks, and these challenges remain unresolved even in the euro area despite its long history of institutional integration (Loewald and Wörgötter 2019).

⁶ See, for instance, Goel and Miyajima (2021).

⁷ Labour and capital mobility are limited, business cycles are poorly synchronised and fiscal coordination mechanisms are absent (Mundell 1963).

Within the BRICS group, China has made the greatest strides towards renminbi internationalisation. Supported by a network of clearing banks, bilateral swap lines and the Cross-Border Interbank Payment System, the renminbi's global use has expanded gradually. Russia's post-sanctions pivot accelerated renminbi invoicing for trade in energy and commodities, and its share of global reserves and payments has edged higher. Even so, progress has been slow. China's capital controls and limited financial transparency restrict foreign investor participation, meaning that the renminbi's reach remains regionally concentrated and policy-driven, rather than organically market-led.

Indeed, a shift towards more regional rather than dollar-centric circulation of capital may increase the volatility of EM financial assets. Although fragmentation could modestly weaken the transmission of US financial conditions, regional investor bases are typically smaller, more pro-cyclical and more exposed to correlated shocks (IMF 2023; Broner et al. 2013). As a result, fragmentation does not meaningfully expand policy autonomy; instead, it raises the need for stronger buffers, deeper local capital markets and credible macroeconomic anchors. It also complicates external financing. Limited access to deep, dollar-funded markets raises risk premiums and elevates rollover risks, particularly in regions such as Africa and Latin America that lack sufficient domestic savings to substitute for the global capital that fragmentation may make harder to access (UNCTAD 2024).

As Ilzetzi, Reinhart and Rogoff (2020) note, attempts to rival the Bretton Woods system typically falter because newer institutions lack the liquidity, legal depth and investor participation that anchor confidence in the International Monetary Fund and the US Federal Reserve. The New Development Bank (NDB) and the Contingent Reserve Arrangement (CRA) provide supplementary support mechanisms for BRICS members at this stage.⁸ Ultimately, the power of the dollar rests not just on inertia but on network effects that cannot be replicated quickly without matching the institutional depth and scale embedded in US markets.⁹

A further, potentially underappreciated, source of support for the dollar system comes from the growing expansion of dollar-backed stablecoins. These instruments function as 'digital eurodollars', that is, they facilitate cross-border payments, store value in dollar terms and allow residents in many EMs to bypass domestic financial frictions. As such, their use could reinforce global demand for dollar-denominated assets such as Treasuries, despite lacking the institutional safeguards that underpin traditional bank-based dollar claims (Miran 2025; Aldasoro et al. 2025).

⁸ The NDB and CRA form the backbone of BRICS' financial architecture. Established in 2015, the NDB was envisioned as a development-finance alternative to the World Bank, with a focus on infrastructure and sustainability. While it has expanded its portfolio to include private projects and some non-member borrowers, its operational scale remains modest. The CRA, also launched in 2015, was designed as a shared liquidity safety net to help members manage balance-of-payments shocks. In practice, it has not been activated.

⁹ Even at the onset of the COVID-19 pandemic, investors quickly turned risk-averse and moved to strengthen their cash positions. Market dysfunction deepened as leveraged non-bank investors and foreign holders sold US Treasuries, yet the scramble for dollar liquidity far exceeded available supply and highlighted the global financial system's reliance on the dollar during periods of acute stress. See Financial Stability Board (2020).

5. Conclusion

De-dollarisation is neither linear nor a guaranteed path to greater macroeconomic autonomy. The tectonic plates of the global economic order may be shifting, but the structural foundations of the dollar system – deep markets, institutional strength and powerful network effects – remain in place. A gradual move towards a more multipolar system may broaden financial inclusion, yet meaningful alternatives to the dollar require institutional depth that most EMs have not yet achieved. Reducing foreign exchange mismatches and balance-sheet vulnerabilities is prudent; however, the gains from lowering dollar usage are often overstated relative to the central importance of sound domestic fundamentals. In a more fragmented world, where capital flows respond as much to political alignment as to macroeconomic performance, the coherence of the domestic policy mix becomes even more critical, in large part because of the potential shrinkage of the pool of capital available to borrowers. While some diversification away from the dollar will continue, these shifts are likely to be gradual.

For South Africa, the implications of de-dollarisation hinge more on domestic policy credibility than on changes in the global currency order. Recent evidence shows that past surges in capital inflows were not always channelled towards productive ends: non-resident bond inflows in the 2010s helped finance higher current expenditure rather than investment (Amaral, Knox and Mercier 2024), while fiscal multiplier studies indicate that rising public debt now yields diminishing growth returns (Faulkner, Loewald and Makrelov 2020; Janse van Rensburg, de Jager and Makrelov 2021). These findings underscore a central lesson: greater financial integration enhances macroeconomic autonomy only when paired with disciplined fiscal frameworks, a supportive investment climate and a credible macroeconomic policy mix. South Africa's constraint is therefore not the currency in which its liabilities are denominated, but the effectiveness of its domestic institutions in converting capital – foreign or domestic – into lasting improvements in productivity and potential growth.

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Running on empty? South Africa's refinery closures and their macroeconomic impact

Mathias Manguzvane, Palesa Mnguni, Mapule Mofokeng and Nkhetheni Nesengani¹

Abstract

South Africa's refining capacity has halved over the past decade, marking the end of near self-sufficiency in liquid fuels. Imported refined products now supply more than half of domestic fuel demand, raising exposure to global price shocks and shipping disruptions. This dependence also increases South Africa's vulnerability to rand volatility. The refinery closures have cut petroleum-related manufacturing output by roughly 20% since 2019, displaced an estimated 5 400 direct and indirect jobs, and prompted firms to defer investment. In contrast, global and regional peers are expanding capacity through new mega-refineries, leaving South Africa increasingly reliant on imports and underscoring the need for a coordinated policy response to rebuild resilience in the energy system.

1. Introduction

Crude oil is widely regarded as the single most important global commodity, as it remains the dominant source of global energy and the most heavily traded commodity by both volume and value (Carnegie 2025). However, few emerging markets have been able to establish significant refining industries due to a lack of technical expertise, infrastructure and capital required to build and maintain refineries. South Africa has historically been a notable exception, developing one of the largest refining bases in the Global South and meeting nearly all of its domestic demand for refined petroleum and liquid fuels through local facilities.

As of 2024, South Africa has an installed crude oil refining capacity of 525 000 barrels per day (b/d) (FTI Consulting and SAPIA 2024). In addition, coal-to-liquid and gas-to-liquid facilities add 150 000 and 45 000 b/d respectively, bringing total installed capacity to about 720 000 b/d – well above national consumption of about 601 000 b/d in 2022 (US Energy Information Administration 2024). Table 1 summarises existing facilities, capacities and operational status.

* The views expressed in these economic notes are those of the author(s) and should not be attributed to the South African Reserve Bank (SARB) or its policy. While every precaution is taken to ensure the accuracy of information, the SARB shall not be liable to any person for inaccurate information, omissions or opinions contained herein.

¹ The authors would like to thank Lesego Chanza for his valuable inputs.

Table 1: Refineries in South Africa

Name	Location	Capacity (b/d)	Status	Owner
Astron	Cape Town	100 000	Operational	Astron Energy
Enref	Durban	135 000	Import terminal	Engen
SAPREF	Durban	180 000	Shut down	Central Energy Fund
Natref	Sasolburg	110 000	Operational	Sasol and Total
Secunda	Secunda	150 000	Operational	Sasol
PetroSA	Mossel Bay	45 000	Shut down	PetroSA

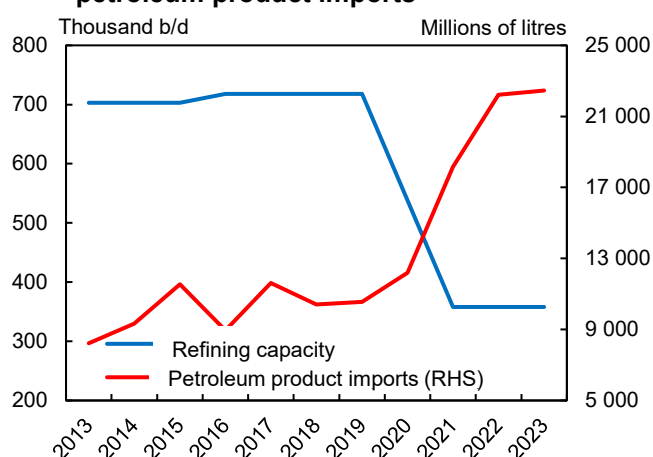
Source: Department of Mineral Resources and Energy (now known as the Department of Mineral and Petroleum Resources and the Department of Electricity and Energy).

South Africa's refining capacity has declined sharply over the past decade as several plants were decommissioned and/or repurposed.² Now, its operational capacity is only at about 250 000 b/d, less than half the installed base, forcing heavier reliance on imported refined fuels. Operational output is now concentrated at two sites, Sasol's Secunda refinery (150 000 b/d) and Astron Energy's Cape Town refinery (100 000 b/d). Other facilities have exited the market: SAPREF was shut down and acquired by the Central Energy Fund, Enref was converted into an import terminal, Natref remains offline after a major fire, and PetroSA's Mossel Bay plant closed in 2020 amid feedstock and cost pressures. As a result, imports now supply over half of daily fuel demand, heightening exposure to global price swings and shipping bottlenecks, and raising the risk of rand volatility.

South Africa's trajectory diverges sharply from global and regional trends (Figures 1 and 2). Global refining capacity has continued to expand, driven by large projects in China, the Middle East and Africa, including Kuwait's Al-Zour, Saudi Arabia's Jazan, Nigeria's 650 kb/d Dangote, and Egypt's MIDOR upgrade. Over the same period, South Africa's capacity has halved and its reliance on imported refined products has doubled.

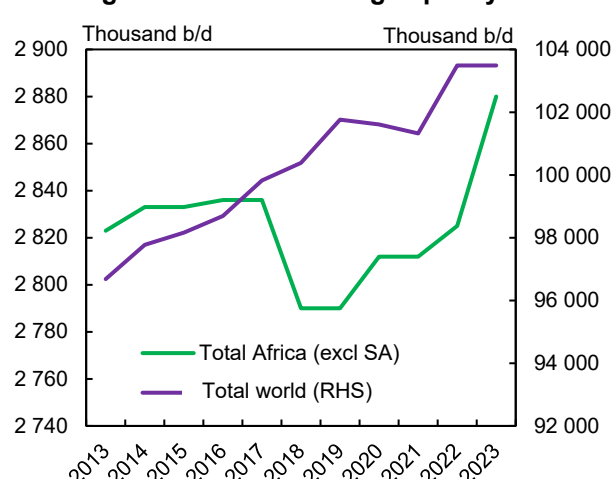
² The closure of the SAPREF refinery in Durban after the March 2022 floods removed South Africa's largest crude oil refinery from operation due to severe damage to core infrastructure and environmental contamination, which made repairs both costly and time-consuming. Although later acquired by the Central Energy Fund, its future is uncertain. This event followed the closure of PetroSA's Mossel Bay plant in 2020, which became unviable because of declining gas reserves, high costs and lack of feedstock. Around the same time, Engen closed its Enref refinery after a fire and converted it into an import terminal, citing the high cost of upgrades. The Natref refinery in Sasolburg now faces severe financial and operational strain, worsened by a major fire in early 2025. If Natref closes, South Africa will be almost entirely reliant on imported refined petroleum products.

Figure 1: SA's refining capacity and petroleum product imports



Source: SAPIA and SARS.

Figure 2: Global refining capacity



Source: Energy Institute.

This structural shift carries broad macroeconomic and developmental consequences. Beyond the immediate output losses in refining, the effects extend through downstream links in manufacturing, agriculture and construction, while higher imports strain the trade account, raise logistics and storage costs, and narrow energy-security buffers. Together, these dynamics underscore the urgency of assessing the economic implications of South Africa's decline in refining capacity.

2. Declining commercial viability of domestic refining

South Africa's decline in refining capacity reflects persistent cost disadvantages and long-running tensions around cleaner-fuel regulation, with temporary operational shocks acting as catalysts rather than primary causes. Domestic refineries are generally old, relatively small and costly to operate by international standards, leaving them structurally disadvantaged compared with the large, integrated facilities that dominate global refining capacity. These underlying constraints weakened the commercial viability of continued operation and reinvestment well before individual facilities experienced acute disruptions.

In several cases, temporary shocks – including fires, unplanned outages and feedstock interruptions – precipitated shutdowns. However, these events occurred in an environment where the economic case for rebuilding or reinvesting had already deteriorated. A central factor was prolonged uncertainty surrounding the Clean Fuels II (CF2) programme.³ Although first envisaged in the early 2010s, CF2 implementation timelines were repeatedly revised – initially to 2017, then to 2023, and later to 2027 – creating sustained uncertainty about compliance timing and cost recovery. Meeting CF2 standards would have required substantial capital outlays at facilities already operating on thin margins. Refiners consistently indicated that such investments were not commercially viable without mechanisms to recover compliance costs, which remained unresolved over time. Mandatory stockholding

³ CF2 is a government policy in South Africa that sets stricter standards for fuel quality, requiring local refineries to produce cleaner, lower-emission fuels. It aims to reduce pollution and improve air quality by aligning fuel specifications with international best practices. However, its implementation has been delayed due to high compliance costs and uncertainty within the industry.

requirements further increased operating costs and tied up working capital, reinforcing disincentives to reinvest.

These regulatory pressures interacted with broader commercial constraints. Refining margins were depressed for extended periods, limiting the scope for internally funded upgrades, while ageing capital stock raised maintenance costs. In this environment, several firms opted to exit refining and convert assets into import or storage terminals rather than commit new capital. Enref formally transitioned to an import terminal pathway in 2021, while SAPREF was placed on care and maintenance in 2022 before being sold to the Central Energy Fund (bp 2024; Roelf 2024). The principal outlier is Astron Energy's Cape Town refinery, where up to R6 billion has been committed to CF2 upgrades by 2027 (Turner and Malicier 2022). More broadly, multinational operators have gradually exited South Africa's downstream sector, reflecting a reassessment of risk-return expectations and a reallocation of capital towards lower-capex logistics and import infrastructure.⁴

Taken together, the withdrawal of private investment reflects persistent cost, scale and policy constraints rather than isolated operational failures. While temporary shocks affected individual plants, these occurred against a backdrop of weakened investment incentives, where rebuilding or upgrading facilities was no longer commercially attractive. The resulting contraction in refining capacity therefore represents a structural shift in investment behaviour, shaped by long-running regulatory uncertainty, rising costs and limited economies of scale.

3. Impacts on sectors and employment⁵

3.1 Manufacturing sector

Manufacturing is the primary avenue through which these changes affect the real economy. In manufacturing, *petroleum, chemical products, rubber and plastic products* is the largest subsector by weight, accounting for 24.4% of total manufacturing production (see Stats SA 2026). Within it, refining activities – the *coke, petroleum and nuclear fuel* component – represent 11.6% of total output, making them an important player in overall manufacturing output.⁶

When operational, refineries import crude oil and process it into a variety of petroleum products, which are vital across many sectors of the economy. These include petrol, which is used for transportation, diesel for both transportation and electricity generation, jet fuel for aircraft engines, and illuminating paraffin for lights and cooking. The production of petroleum products also results in several by-products that have links to other economic activities.⁷

⁴ In 2024, Shell announced its intention to withdraw from South Africa's downstream operations; bp and Shell jointly sold their stakes in SAPREF, while TotalEnergies divested its minority interest in Natref to the Prax Group in 2023. See Reuters (2025).

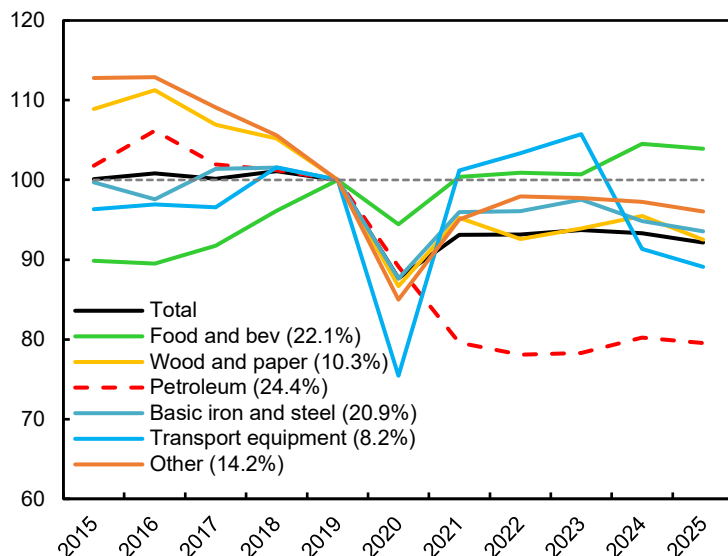
⁵ The impacts outlined in this section are those that can be clearly identified. Nonetheless, additional indirect effects associated with industries referenced here may exist.

⁶ The refinery process is represented by the coke, petroleum and nuclear fuel subcomponent of the petroleum subsector.

⁷ These by-products include liquid petroleum gas used for heating and cooking and in various industrial processes, bitumen for the construction of roads, and nitrogen fertilisers used in the agricultural sector.

Figure 3: Manufacturing production by subsector

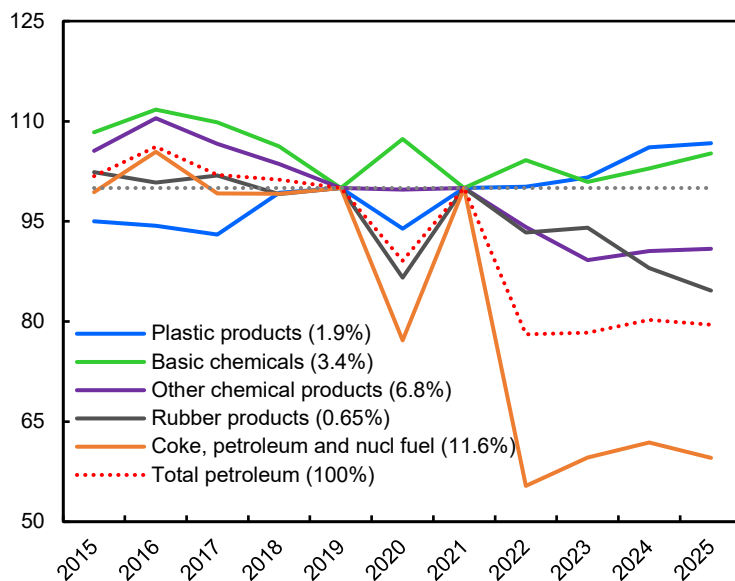
Index: 2019=100



Source: Stats SA.

Figure 4: Subcomponents of the petroleum subsector

Index: 2019=100



Source: Stats SA.

The loss of refinery capacity has negatively affected manufacturing production, with the downturn in the petroleum subsector being consistent with the closure of several refineries since 2020.⁸ The share of petroleum production to total manufacturing production has declined

⁸ Other subsectors of manufacturing recovered after the 2020 contraction induced by COVID-19; however, food and beverages was the quickest to bounce back, recovering just after a year. See the annexure for the evolution in each subsector's contribution to the manufacturing production sector.

notably from its 27% peak in 2013 to about 20% in the past four years, contributing to a pronounced slowdown in overall manufacturing growth after 2015.⁹

3.2 Construction and agriculture

Supply disruptions have indirectly extended beyond manufacturing to other industrial sectors dependent on refinery by-products as critical intermediate inputs. One such example is bitumen, a key material in the construction sector.¹⁰ Prior to 2020, domestic bitumen requirements were met by four operational refineries. The share of crude oil converted into bitumen ranged from 1% to 4%, depending on local demand and export dynamics. Imports were minimal, typically limited to periods of refinery maintenance or the need for specialised formulations.

Table 2: Bitumen manufacturing pre-2020

	Location	Capacity (tons of bitumen per year)	Status
Astron	Cape Town	54 000	Operational with no bitumen production
Enref	Durban	198 000	Import terminal
SAPREF	Durban	80 000	Shut down
Natref	Sasolburg	100 000	Operational with bitumen production until September 2025
PetroSA	Mossel Bay	45 000	Shut down

Source: SABITA.

Since 2020, however, South Africa has undergone a structural shift from being a net exporter to a net importer of bitumen. The country now relies entirely on imports to meet demand.¹¹ The transition to being a net importer has introduced several challenges for the construction industry, including supply reliability, quality assurance and logistics.¹²

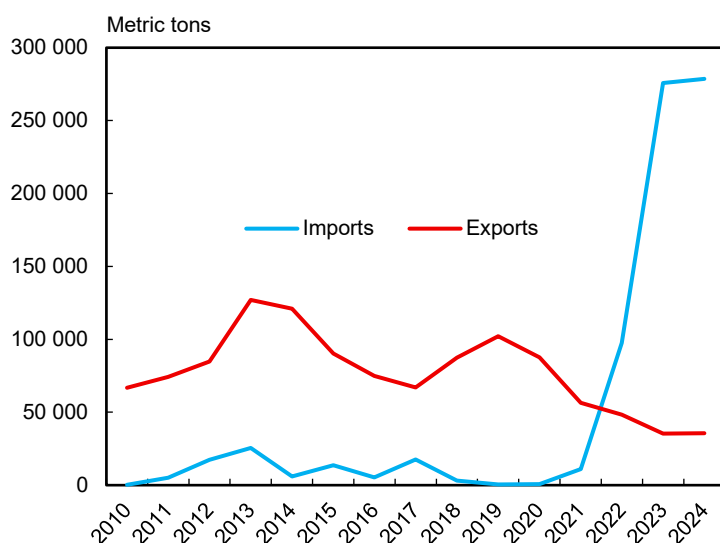
⁹ See the annexure for more on the subsectors. The subsequent recovery in manufacturing production following the 2009 global financial crisis was insufficient for output to return to pre-crisis levels. This underperformance was compounded by several other supply shocks, including the COVID-19 pandemic, the unrest in July 2021, the KwaZulu-Natal floods, increased load-shedding, and ongoing logistical challenges in rail and port operations, which had a significant adverse impact on the sector. See Stats SA (2016) and Khoza et al. (2024).

¹⁰ Manufacturing and construction are closely intertwined and growth in the gross value added of both sectors tends to be positively correlated, with an estimated correlation of 0.91. This suggests that a stagnant manufacturing sector can create a spillover effect, potentially affecting the construction industry's ability to grow.

¹¹ Natref was the sole bitumen producer until it halted production in September 2025, ending all domestic refinery output of the product. South Africa now is ranked 20th globally in bitumen imports; in 2019 it was ranked 123rd.

¹² Importers must navigate intricate sourcing dynamics while ensuring consistent quality from various refineries. Moreover, logistical hurdles such as port coordination and vessel delays add further strain. See Southern African Bitumen Association (2024).

Figure 5: South Africa's imports and exports of bitumen



Source: Department of Trade, Industry and Competition.

Likewise, the agricultural sector, along with downstream industries such as plastics manufacturing, derives value from by-products generated through the refinery process. For example, Sasol's Secunda refinery produces key inputs including plastic feedstock and ammonia, an essential component in fertiliser production for agricultural use. A substantial portion of the plastic raw materials produced at Secunda is channelled into end-products that support a wide range of sectors. These value chains play a critical role in sustaining industrial and economic activity. However, with the Secunda refinery facing a significant risk of scaling down or closure, the potential disruption to these supply chains could impose additional strain on both sectoral output and the broader economy.¹³

3.3 Employment

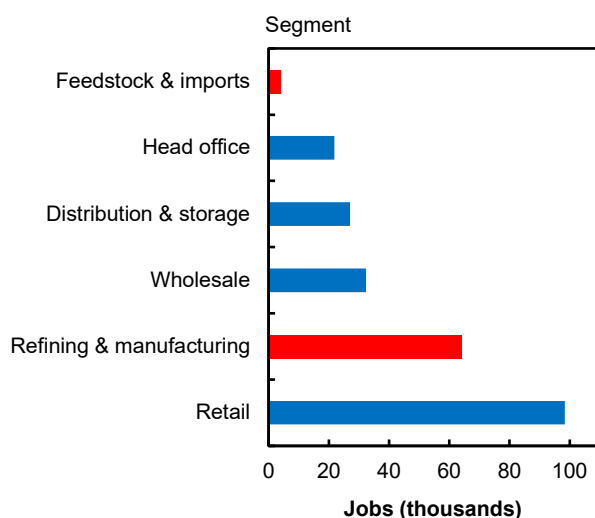
The employment effects of refinery closures extend beyond simple headcounts, reflecting changes in both job quantity and quality. South Africa's refining industry historically supported some of the country's most skilled and best-paid industrial occupations and sustained a large supplier ecosystem. In 2019, the downstream oil industry employed just under 250 000 people, roughly 1.5% of national employment, with jobs concentrated in *retail* (39.7%) and *refining and manufacturing* (25.9%). Each direct job generated an estimated 1.52 additional jobs in contracting, logistics and local services (Figure 6) (FTI Consulting and SAPIA 2021).

Measured at the point of refinery closures, direct job losses are estimated at 2 150, including about 650 at Enref, 650 at SAPREF and 850 at PetroSA's Mossel Bay plant, with an additional 3 300 indirect jobs at risk through supply chains. In total, about 5 400 jobs were jeopardised, disproportionately affecting skilled technicians, engineers and operators (see Figure 7).¹⁴

¹³ The Sasol Secunda refinery facility faces possible closure due to ageing infrastructure and escalating financial pressures, mostly attributable to tightening environmental regulations. See Crompton and Young (2024).

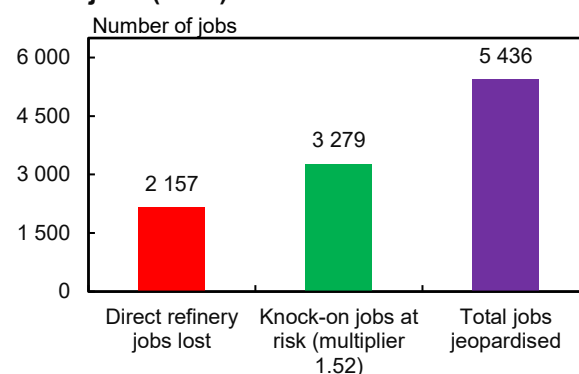
¹⁴ Because retrenchment disclosures are patchy, we size impacts using the workforce at the point of closure/conversion, netting out any confirmed transfers, and – where only an 'idled' share is disclosed – treating that share as a conservative proxy for jobs lost/idle. On that basis: Enref had ≈650 employees at decision. SAPREF had ≈700 employees at the 2023 retrenchment announcement, minus 48 confirmed

Figure 6: Employment by value-chain segment (2019)



Source: SAPIA.

Figure 7: Refinery closure impact on jobs (2025)*



Source: SAPIA and SARB.

* Impacts are calculated using 2019 numbers and multiplier applied from SAPIA approximations. The direct jobs include closure estimates from SAPREF, PetroSA and Enref.

The composition of activity amplifies these losses. Closures shift work from labour-intensive refining to import/storage operations that employ far fewer people. For example, in 2019, there were 64 121 jobs in refining compared to 4 167 in feedstock/imports. As import reliance rises, the sector's overall employment footprint shrinks and high-skill roles in plants decline, with regional impacts concentrated in KwaZulu-Natal's South Durban Basin, where refinery-linked employment previously anchored local economies (Government of South Africa 2020). Re-employment to date has been limited. While the literature highlights potential transition pathways for refining workers, practical reskilling and redeployment initiatives remain limited in scale, suggesting that employment losses are unlikely to be quickly reversed through re-employment in related sectors.

4. Impact on inflation and trade balance

The shift to refined fuel imports does not materially alter South Africa's inflation dynamics, as the basic fuel price already benchmarks domestic pump prices to international refined-product quotes, including refinery margins.¹⁵ Thus, refinery closures have no mechanical or first-round effect on fuel inflation.

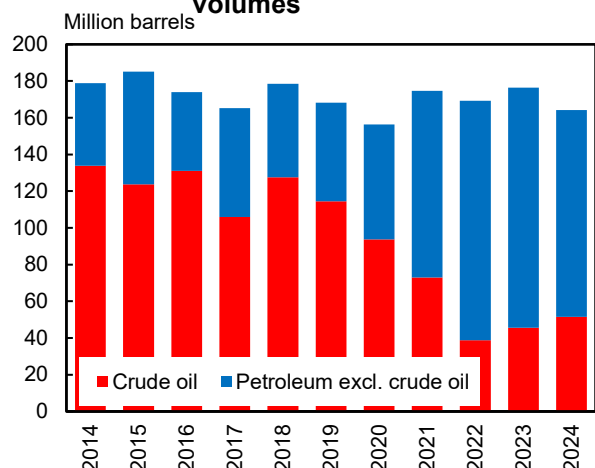
Instead, the macroeconomic effects arise indirectly through the external account. The use of petroleum products declined in 2020 as COVID-19 hit the global economy, significantly

transfers (≈652), and PetroSA (Mossel Bay gas-to-liquid) had 1 424 employees, with ≈60% idled (≈855). These sum to ≈2 157 direct jobs removed. Applying the validated 2019 jobs multiplier (× additional 1.52 jobs created from 1 job) implies ≈3 279 additional jobs at risk, for ≈5 436 jobs jeopardised in total across contractors, suppliers, logistics and local services. See Le Guern (2020).

¹⁵ Benchmark accuracy has always influenced South Africa's regulated fuel price, but its relevance is greater now that refined products make up most of domestic supply. The basic fuel price continues to use reference markets and cost allowances that were calibrated more than a decade ago, and some no longer align with current import routes or freight conditions. As a result, benchmark misalignment can widen or narrow the gap between the basic fuel price and the actual landed cost of imported fuel. A 2018 Department of Mineral Resources and Energy review identified several parameters that could be updated, including reference-market weights, freight premiums and allowances for losses and demurrage, although the extent of subsequent adjustments varies across components.

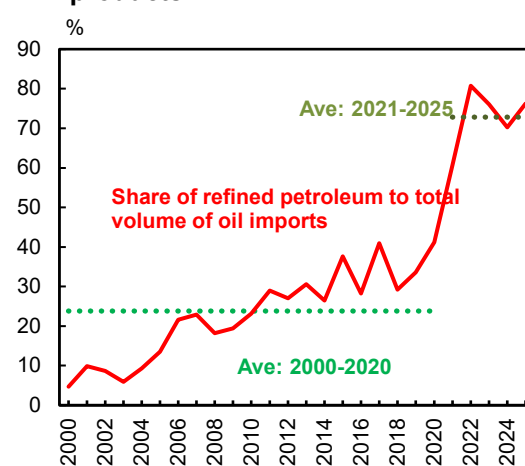
reducing South Africa's demand for crude oil. However, a pattern of South Africa substituting imported crude oil for refined petroleum products is apparent (Figures 8 and 9). The positive difference between crude oil and petroleum product imports turned negative from about 90 billion barrels in 2014 to roughly -92 billion barrels in 2022.¹⁶

Figure 8: Total oil imports in volumes



Source: SARS.

Figure 9: Share of petroleum products



Source: SARS and own calculations.

Refined petroleum products inherently attract a higher price per unit than crude oil because of the added production costs, causing the import bill to rise faster than if crude were processed domestically. The share of refined petroleum products in total oil imports has remained above the 21-year average since 2011. It reached a historical high of 81% in 2022 (Figure 9).

The shift towards refined-fuel imports has heightened South Africa's vulnerability to external shocks. When global oil prices rise, the import bill increases more sharply than when crude oil was processed domestically, worsening the trade balance and the current account.¹⁷ The inflationary impact is indirect: larger external deficits weaken the rand and raise the domestic cost of all imports. With refined products now dominating the fuel mix, South Africa has less ability to absorb global price shocks through domestic production, reducing its terms-of-trade buffer.¹⁸

Using the available import volumes and values for both crude oil and refined products, we derive the implied unit costs. These costs fluctuate for various reasons, so we use the average

¹⁶ South Africa's 2020 decline in crude oil imports was compounded when two refineries had to be shut down.

¹⁷ This exposure is reflected in the scale of fuel imports: in 2022, crude and refined fuel imports reached roughly 6% of gross domestic product (GDP). Higher energy-import bills are widely associated with greater sensitivity to terms-of-trade shocks, exchange-rate volatility and balance-of-payments pressures in oil-importing economies. See IMF (2008; section IIIA) for how higher fuel import bills weaken balance-of-payments positions and reserves in oil-importing economies.

¹⁸ Because refined petroleum products incorporate additional value through processing, they are imported at higher prices than crude oil, which in turn places additional pressure on the trade balance.

values for the period 2014–2024.¹⁹ Over this period, imported refined petroleum products were, on average, 12% more expensive than crude oil.²⁰

A straightforward way to estimate changes in the oil import bill is to adjust the share of crude oil and refined petroleum products within the total imported volume for a given year, while keeping the overall number of barrels constant. For instance, in 2021 the combined import volume of crude oil and petroleum products was 175 million barrels, split into 73 million barrels of crude oil and 102 million barrels of refined products. If one instead assumes an import mix of 75% crude oil and 25% refined products, the corresponding quantities would be 131 million barrels of crude oil and 44 million barrels of refined petroleum products. The total import bill can then be calculated using the simple formula:

$$\text{Oil import bill} = (Q^{\text{crude oil}} \times P^{\text{crude oil}}) + (Q^{\text{petroleum products}} \times P^{\text{petroleum products}})$$

Here, Q denotes the import volume (in barrels) and P represents the price per barrel of each product category.

Table 3 shows (A) import volumes for the two quantities (crude oil and petroleum products), (B) the ratio of the two oil products, (C) respective prices, (D) total oil import bill, and (E) import liability that could have been avoided by having the crude oil import staying at 75% of total oil imports.

Table 3: The oil import composition: actual and counterfactual

Year	A			B		C		D	E	
	Quantity (million barrels)			Product ratios		Implied price		Oil import bill (R million)	Could have been saved Bill with 75% crude share	
	Crude oil	Petroleum products	Total oils (Volume)	Crude oil	Petroleum products	Crude oil	Petroleum products		(R million)	%
2014	134	45	179	75	25	1 313	1 407	239 149		
2015	124	61	185	67	33	796	966	157 747		
2016	131	43	174	75	25	733	881	133 820		
2017	106	59	165	64	36	807	1 000	144 810		
2018	128	51	178	71	29	1 140	1 178	205 310		
2019	115	54	168	68	32	1 126	1 213	193 988		
2020	94	62	156	60	40	884	929	141 020		
2021	73	102	175	42	58	1 097	1 221	204 278		
2022	39	131	169	23	77	1 857	2 310	373 644		
2023	46	131	176	26	74	1 939	2 153	369 910		
2024	51	113	164	31	69	1 842	1 987	318 700		
Fixing the share of imported crude oil to 75% and potential benefits										
2021	131	44	175	75	25	1 097	1 221	197 075	7 202	3.7
2022	127	42	169	75	25	1 857	2 310	333 689	39 955	12.0
2023	132	44	176	75	25	1 939	2 153	351 448	18 462	5.3
2024	123	41	164	75	25	1 842	1 987	308 276	10 423	3.4
Cumulative potential reduction in import bill for South Africa									76 043	6.1
Sources: SARB and SARS										

¹⁹ For example, demand and supply factors play a role in the price of crude oil, and the demand and supply of the refinery costs face input costs as well. This period coincides with the rise in imports of petroleum products.

²⁰ The average price difference between imported crude oil and petroleum products for the period 2014 to 2024 was R156 per barrel.

Between 2021 and 2024, the oil import bill could have been R76 billion lower if the cap to the import of refined petroleum products was at 25%.²¹ The oil import bill could have been reduced by an average of 6.1%.

5. Supply security

Rising import dependence has elevated energy-security risks. In February 2025, the Department of Mineral and Petroleum Resources told Parliament that South Africa urgently needs a large-scale refinery to reduce dependence on imported fuels (Ensor 2025). Although storage capacity and import sources have expanded, inland infrastructure remains inadequate to ensure reliable supply during disruptions.

Analysts argue that strategic crude oil stockpiles are a cost-effective safeguard, since crude is cheaper and easier to store than refined products (Nkomo 2009). Yet the usefulness of stockpiles depends on domestic refining capacity: without it, stockpiled crude cannot be processed, forcing continued reliance on costly refined imports.

Further risks stem from regulatory constraints in the Customs and Excise framework, which permits fuel exports only from licensed refineries and restricts jet-fuel imports to refinery sites. These rigidities were exposed during the April 2022 floods in KwaZulu-Natal and again after the 2025 Natref outage, when shortages at OR Tambo International Airport required emergency rerouting via Matola, Mozambique (Parker 2025).

These incidents reveal the fragility of South Africa's fuel logistics network, where rigid rules and limited capacity heighten exposure to external shocks. Even with operating refineries, the country remains structurally dependent on imported crude, making it vulnerable to global price swings and shipping disruptions. Refining capacity thus represents only one pillar of energy security – alongside diversified sourcing, strategic stockholding, regulatory reform and targeted infrastructure upgrades to build a more flexible and resilient supply system.

6. Conclusion

South Africa's decline in refining capacity represents a structural shift in its energy and industrial sectors. Ageing plants, persistent cost disadvantages and prolonged regulatory uncertainty have discouraged reinvestment, reducing domestic refining capacity and increasing reliance on imported refined fuels. This transition weakens segments of the manufacturing base, disrupts downstream supply chains and reduces high-skill industrial employment. At the macroeconomic level, greater dependence on imported refined products raises the oil import bill and increases exposure to global price volatility, with potential spillovers to the trade balance and exchange rate and indirectly to inflation under adverse conditions. As the country becomes more reliant on imports, resilient fuel logistics, storage infrastructure and supply-security mechanisms will become increasingly important to maintain macroeconomic and energy-system stability.

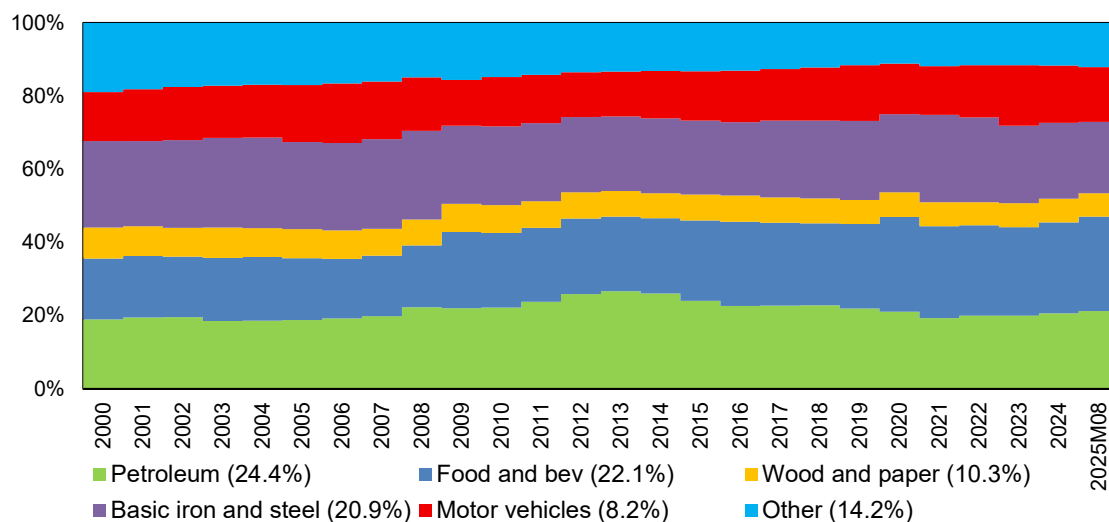
²¹ This translates to about R19 billion per year or 0.3% of GDP.

Annexure

1. Performance of petroleum production relative to other subsectors

The purpose of this annexure is to show how the petroleum subsector performed relative to the food and beverages, basic iron and steel, wood and paper, and motor vehicles subsectors. Petroleum production's share averaged 22% between 2000 and 2019, with a peak of 27% in 2013.

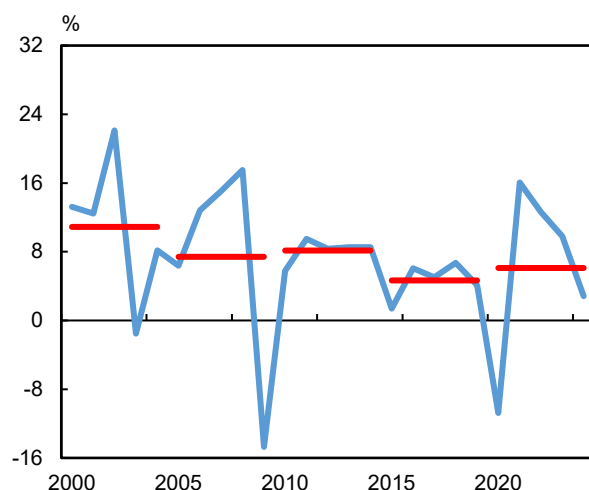
Figure A1: Share of subsectors to total manufacturing production



Source: Stats SA.

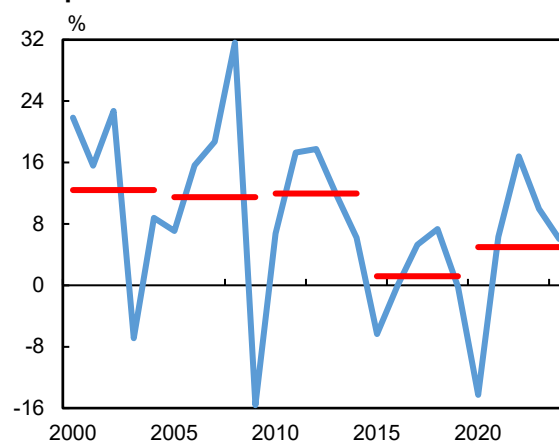
2. Growth rates in the value of manufacturing production: total and subsectors

Figure A2: Manufacturing – total*



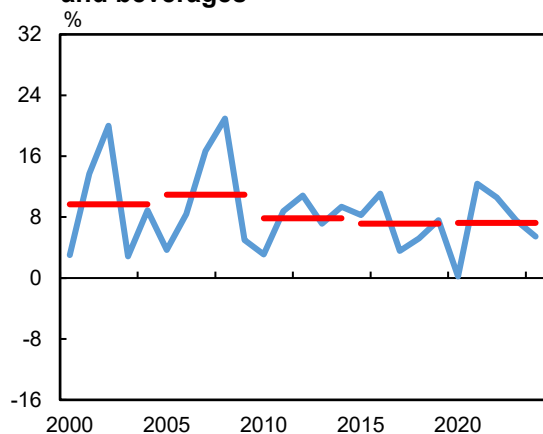
* The red line is for the five-year averages.
Source: Stats SA and SARB.

Figure A3: Manufacturing – petroleum*



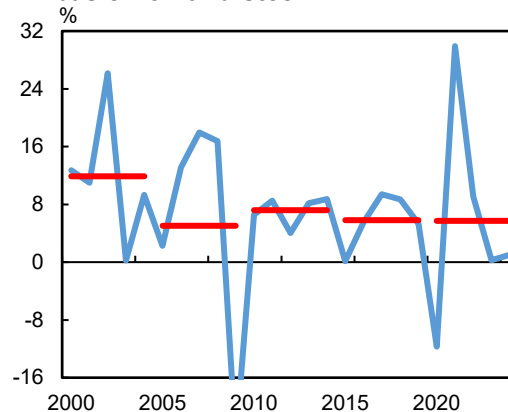
* The red line is for the five-year averages.
Source: Stats SA and SARB.

Figure A4: Manufacturing – food and beverages*



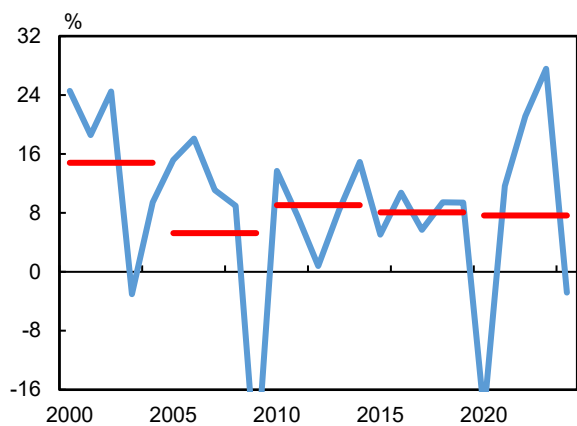
* The red line is for the five-year averages.
Source: Stats SA and SARB.

Figure A5: Manufacturing – basic iron and steel*



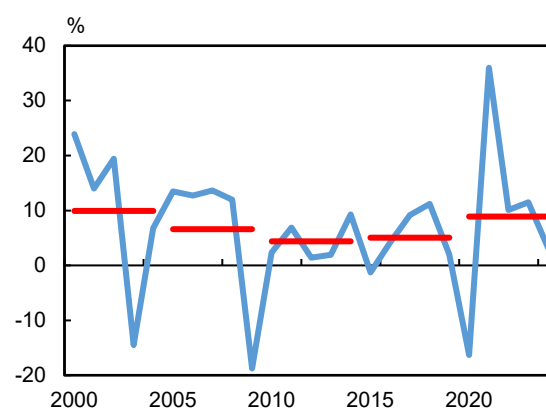
* The red line is for the five-year averages.
Source: Stats SA and SARB.

Figure A6: Manufacturing – motor vehicles*



* The red line is for the five-year averages.
Source: Stats SA and SARB.

Figure A7: Manufacturing – motor vehicles*



* The red line is for the five-year averages.
Source: Stats SA and SARB.

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