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The role of inflation expectations in the path to 3%: understanding expectations formation and calibrating the models

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Abstract

This paper investigates the dynamics of inflation expectations in South Africa as the South African Reserve Bank transitions to a new inflation target of 3%, announced by the Minister of Finance in the 2025 Medium Term Budget Policy Statement. We examine how quickly expectations adjust, the role of forward- and backward-looking information, and the implications for the calibration of models, inflation dynamics and central bank communication. Drawing on the experience of the 2017 shift from a target of 6% to 4.5%, we highlight the influence of macroeconomic conditions and public attention on expectations formation. We find that prior beliefs typically play a dominant role in shaping the current expectations of survey respondents. While there is variation across groups and macroeconomic conditions, when respondents update their beliefs using new information, they tend to rely more heavily on information about the target than historical inflation. Empirical results for the most recent period (ending 2025Q1) suggest that financial analysts and trade unions have greatly increased their focus on the target, whereas firms rely on their prior beliefs and historical inflation to a greater extent. Given that inflation was 3.5% in November 2025, the factor most likely to delay the convergence of firms' inflation expectations towards 3% is the time taken for decision-makers to update their beliefs from those formed in response to post-COVID-19 inflation and a higher inflation target.

JEL classification

D01, D80, E52, D84

Keywords

Rational expectations, inattention, monetary policy, inflation expectations

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1. Introduction

While managing inflation expectations is always part of monetary policy (Woodford 2005), it becomes even more important during periods where inflation is far from the target or when the target has been shifted. This is central to the current position in South Africa where the South African Reserve Bank (SARB) needs to reduce inflation expectations to the new target of 3% with a 1% tolerance band, following the official announcement in the 2025 *Medium Term Budget Policy Statement* (MTBPS) (National Treasury 2025: 4). The change in the target suddenly widened the gap between prevailing inflation expectations and the revised target. An understanding of how quickly inflation expectations adjust and whether agents use forward- or backward-looking information can inform (i) the analysis of expectations formation and (ii) the calibration of models, enabling policymakers, through effective communication, to guide expectations towards 3%.

A natural starting point for this discussion is how quickly inflation expectations adjusted after the SARB announced in 2017 that it would target the 4.5% midpoint of the 3–6% band instead of the entire band. At the time, expectations were anchored around the upper end of the target band, but after the announcement, they shifted steadily towards 4.5% (SARB 2017a). However, it is not obvious that the disinflation experience would be similar this time as the SARB aims to guide inflation and inflation expectations closer to 3% (which was previously the lower end of the inflation target band). The literature shows that inflation expectations are sensitive to macroeconomic conditions (Dao et al. 2024; Gennaioli et al. 2024; Coibion and Gorodnichenko 2025) and that public attention to information about inflation and monetary policy can vary in response (Bracha and Tang 2025; Pfäuti 2025). In 2017 the South African economy experienced a series of favourable shocks that supported the moderation of inflation expectations to 4.5%.[1] The environment may not necessarily be similar during the transition to 3%. However, public attention to inflation and monetary policy appears to be heightened at

[1] The disinflation in 2017 was aided by four positive shocks: (i) an unwinding in food inflation as the effects of the drought in 2015–2016 on yields began to fade (positive base effects); (ii) Eskom tariff increases in 2017 amounted to 2.1%, after averaging 14.8% per year in the preceding decade; (iii) global oil prices remained subdued, resulting in moderate fuel inflation; and (iv) following periods of turbulence (e.g. after the firing of Minister of Finance Nhlanhla Nene), the rand stabilised on the back of stronger commodity prices and improved global sentiment in emerging markets. All these factors contributed positively to a decline in headline inflation.

present, which will speed up the transition if the SARB is viewed as credible (Van der Wath 2025b).

This discussion about how quickly expectations update is typically associated with the literature on rational expectations. Full rationality (as the label was originally used) assumes that agents have a complete understanding of how the economy operates and use all available information optimally when forming expectations. There is ample evidence that the stringent criteria required for full rationality is rarely achieved, but does the rejection of rationality mean that these expectations are 'irrational'? While the label 'irrational' is rarely used, it is common (especially in the public debate) to claim that expectations that fail the test of rationality are 'backward-looking' (Ball 2000). The terminology 'backward- or forward-looking' is linked to assumptions in the rational expectations literature about what information economic agents use to form their expectations (Bordalo, Gennaioli and Shleifer 2022). However, equating rationality with forward-looking behaviour is an oversimplification. Forecast errors are agnostic about what information agents actually use to form their expectations.

In addition, language used in the rational expectations literature can create an excessively binary view of the world that sometimes undermines real-world policy discussions. If empirical evidence shows that inflation expectations do not meet the conditions for rationality, it is often concluded that expectations are backward-looking. In reality, people form their expectations based on some combination of backward- and forward-looking information. The 'backward-looking' label suggests that they are relying more on backward-looking information than forward-looking information, without testing this information directly.

Evidence from survey data also shows that it is not just the type of information that decision-makers use that affects how quickly they update their expectations, but also how much attention they pay to this information (Bracha and Tang 2025; Weber et al. 2025). In this paper, we recognise the effect of inattention by explicitly considering the persistence of survey respondents' beliefs over time (i.e. the extent to which they rely on their prior beliefs rather than using new information to update their expectations).
We do this by first determining how quickly the inflation expectations of economic agents converged from 6% to 4.5% in 2017, following the SARB's announcement. We

find that it took financial analysts 4 quarters, trade unions 2 quarters and firms 7 quarters to achieve a 90% convergence. While this estimate is a reasonable starting point, we emphasise that the estimates for the firm-level data are particularly sensitive to outliers and small changes in the sample period used. Secondly, we calculate the level of attention of the different groups before and after the 2017 announcement and conclude that before the announcement all three groups focused mostly on the target, paying limited attention to inflation. After the announcement, all three groups paid attention to both inflation and the target but still placed greater weight on the target than historical inflation.

However, we recognise that the conditions under which the current (2025–26) transition is happening may differ from that of 2017, with implications for how attentive agents are and what information they use to update their expectations. To account for these potential differences, we determine the weight economic agents place on their prior beliefs compared to new information (the inflation target or historical inflation), using aggregate survey data for South Africa. A crucial question is whether these prior beliefs are backward-looking, adding to the persistence of inflation. To address this question, we use two-stage least squares to decompose the prior. Finally, using the disaggregated data from the three social groups, we analyse and compare subsamples of the sample period, confirming that the level of attention to information and the type of information are not invariant to economic conditions.

The rest of the paper is arranged as follows. A review of the relevant literature is presented in section 2. This is followed by a presentation of the data and methodology in section 3 and the results in section 4. Section 5 contains the main conclusions and policy implications of the research.

2. Inflation expectations: speed of adjustment

The public debate in South Africa on how quickly inflation expectations will adjust to a lower target and the cost of this adjustment mostly centres on how forward- or backward-looking expectations are. The underlying question is whether the sources of information that economic agents use to update their expectations are likely to add persistence to inflation or coordinate with policy actions and efficiently drive inflation to 3%. If the SARB has credibility, we would assume that the public would pay less

attention to small changes in recent historical inflation (Miyajima 2019; Honohan and Orphanides 2022).

2.1 Backward- versus forward-looking expectations

It is natural to turn to the academic literature on rational expectations first as this is where forward/backward-looking language gained prominence.[2] Before the rational expectations revolution of the 1970s, expectations were typically treated as adaptive (backward-looking) in the sense that expectations were updated based on historical forecast errors (Cagan 1956). The proponents of rational expectations argued that by relying only on historical information, adaptive expectations were not 'model consistent' (McCallum 1989). In other words, a decision-maker has some model of the world and is informed by all the information available to them at the time. This information includes views about the likely future path of monetary policy, for example, resulting in these expectations being labelled 'forward-looking'. According to rational expectations theory, decision-makers would on average form expectations that were consistent with their models and make efficient use of all the available information, so their forecast errors should be lower and should not be correlated with information they had available to them at the time (McCallum 1989).

However, full rationality requires such strict conditions to be met that most human behaviour ends up being described as biased. Research using micro survey data has provided overwhelming evidence that expectations deviate from rational expectations "in systematic and quantitatively important ways including forecast-error predictability and bias" (Coibion, Gorodnichenko and Kumar 2018: 1).[3] When researchers estimate the forecast errors of agents (the typical way of estimating rationality), they are testing the outcome of economic agents' model of the world, without specifying the information being used to generate those forecasts. The reality is that while the empirical literature relying on micro survey data has offered many recent insights into the determinants of inflation expectations (Coibion et al. 2020; D'Acunto and Weber 2024), we still have limited knowledge about the full range of information that is used by decision-makers.

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2 For a comprehensive review of the literature, see Coibion, Gorodnichenko and Kumar (2018).

3 It is therefore unsurprising that the concept of 'rationality' is being extended to include various forms of bias that can be modelled (Reid and Siklos 2023). The original rational expectations is now often referred to as 'full information rational expectations'.

Tests of rationality therefore do not map cleanly onto tests of whether expectations are forward- or backward-looking.

The rationality of inflation expectations has been extensively studied in South Africa already, enabled in part by good survey data (Ehlers and Steinbach 2007; Kabundi and Schaling 2013; Kabundi, Schaling and Some 2015; Pierdzioch, Reid and Gupta 2016; Reid and Siklos 2023). The South African literature finds that inflation expectations are almost never fully rational and that financial analysts tend to be relatively more rational than firms and trade unions (Crowther-Ehlers 2019). In line with the international literature (D'Acunto, Malmendier and Weber 2022), inflation expectations tend to be biased upwards, meaning that people often expect higher inflation than what occurs in practice (Reid and Siklos 2023).

However, the degree to which agents rely on sources of information that are backward-looking relative to sources that are forward-looking needs to be considered explicitly to make a statement about their relative weight. Kabundi and Schaling (2013) test if historical inflation influences inflation expectations in South Africa by testing whether it Granger-causes two-year-ahead inflation expectations. They find that, for the sample period 2000–2011, it does for firms and trade unions, but not for financial analysts. However, Granger causality is unconditional and therefore does not establish true causality.

The concept of anchoring is often studied alongside rationality. For example, when Kabundi and Schaling (2013) and Kabundi, Schaling and Some (2015) found that historical inflation Granger-caused inflation expectations in the period 2001Q1–2011Q4, they concluded that expectations were unanchored. Typically, if economic agents are focused on the inflation target, their expectations are said to be well anchored, whereas if they are sensitive to movements in historical inflation, their expectations are judged to be less well anchored.

2.2 Inattention

Recent developments in the expectations survey literature show that it is not only the type of information used by economic agents that matters but the degree to which they are paying attention to this new information relative to their prior beliefs (Bracha and

Tang 2025; Pfäuti 2025). There is evidence that the attention of economic agents to new information varies in response to changing economic conditions (Link et al. 2026). Some researchers suggest that heightened attentiveness to historical inflation can explain the post-pandemic inflation. For example, Gagnon and Collins (2019) use the change in the level of attention to inflation to motivate a bent Phillips curve. They find the data can be well captured by a bent Phillips curve in the sense that the slope steepens beyond some inflation threshold. In line with the international literature, South African research shows that the bent Phillips curve can fit the South African data reasonably well. Foresto, Reid and Rakgalakane (2025) estimate a threshold that separates high- and low-inflation regimes in South Africa. Shocks transmit more strongly to inflation expectations in a high-inflation regime than in a low-inflation regime, steepening the Phillips curve.

Inattention is consistent with the observation that economic agents often update their beliefs with a delay, so irrespective of what information is used it does not feed through to expectations immediately. Theoretical developments that offer ways to explain this observation and capture it in our models include concepts such as ‘sticky information’ (Mankiw and Reis 2002) and ‘rational inattention’ (Sims 2003).

2.3 Heterogeneity

Finally, it is important to acknowledge the heterogeneity across groups in the way that inflation expectations are formed. Central banks cannot target different interest rates at different groups, so studying the aggregate outcome will always be important. Nonetheless, heterogeneity of inflation expectations across groups deserves attention – both to understand the dynamics of inflation more fully and to enable more deliberate communication with these groups. Inflation expectations are determined by a variety of factors, including individual respondent characteristics (e.g. firm-level characteristics),[4] reliance on different sources of information (e.g. published inflation figures or salient prices like oil prices)[5] and macroeconomic conditions.

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4 See Van der Cruijsen, Jansen and de Haan (2015) for a summary of the international literature and Du Plessis, Reid and Siklos (2021) for the South African literature exploring the drivers of differences in inflation expectations of individuals in households. See Coibion, Gorodnichenko and Kumar (2018) for the international literature and Reid and Siklos (2025) for the South African literature exploring the drivers of differences in inflation expectations of firms and analysts.

5 For example, Coibion and Gorodnichenko (2015), Binder (2018) and Kilian and Zhou (2020).

In this paper, we need to describe the way people use information to form expectations. This concept is dealt with in macroeconomic theory but can be difficult to apply in practice. We acknowledge that the way it is applied is a simplification of reality, because the exact variables we choose do not capture all the information that might be used by decision-makers to form their expectations. We do this anyway for the practical reason that our models require calibration. Focusing on the SARB's 2017 announcement that it would shift the inflation target to the midpoint of the target band (4.5%) rather than the upper limit (6%), we also test the speed at which expectations adjusted after the announcement. In this case, we abstract from the sources of information that were used and just test how quickly the new de facto target was achieved.

3. Data

We focus on three determinants of inflation expectations – historical inflation (backward-looking information), the inflation target (forward-looking information) and prior inflation expectations (inattention to new information). We analyse the period 2009Q1–2025Q1, excluding the early part of the inflation-targeting period (2000–2008) for two reasons: (i) the official variable targeted by the SARB was changed from the consumer price index excluding mortgage interest rates to the headline consumer price index (CPI) in 2008; and (ii) the assumptions about what level of inflation was treated as the target in the pre-2009 models are more difficult to agree on.[6] We therefore begin our sample later in the inflation-targeting era to remove this uncertainty, but we believe the sample window is large enough to offer credible policy insights.[7]

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6 In the estimation, the researcher has to select one point to treat as the targeted level of inflation. There is general agreement that after the global financial crisis the SARB's de facto target was just below 6%, and from 2017 onward the SARB announced that it would target 4.5% (Kganyago 2025). However, in the early inflation-targeting period, this target is less clear. This was a period of learning, and the economy also experienced an exchange-rate crisis and the global financial crisis.

7 Including this early period would make the results more backward-looking on aggregate than the aggregate results we present in this paper. But, as we will argue, aggregation over such a long period with notable institutional and economic changes hides information anyway.

3.1 Historical inflation

Historical inflation is used to capture backward-looking information used to form expectations (Hubert and Mirza 2019). As our baseline, we use headline inflation from Statistics South Africa (Stats SA). However, we also consider alternative measures of backward-looking information, using core and non-core inflation to test if the supply shocks (from fuel and food) matter in the formation of expectations for agents in South Africa.

People appear to discount inflation numbers that are further in the past when forming forecasts of future inflation, so it is important to capture the most recent (salient) information set (Jácome et al. 2025). The inflation expectations survey is conducted quarterly, so past monthly inflation rates are aggregated to a quarterly value. There is also a lag between the date on which the survey is distributed to respondents and the date the data is released. For example, if the Q1 survey is released in March but the survey is conducted in February, respondents may, in reality, have access to at least the January CPI figure. If lagged quarterly inflation data is used, the number used would be average inflation for the fourth quarter of the previous year, omitting the January inflation from the information set. Timing and lagged values mean that the most recent historical values might be omitted from the information set.

To overcome this, we construct a real-time measure that matches the dates the survey is released with the latest inflation print available to survey respondents.[8] Using the dates when the Bureau for Economic Research (BER) distributes the survey to respondents, we identify the last CPI release that survey respondents are likely to have had access to.[9] This real-time historical inflation is therefore average inflation for one quarter, ending immediately before the survey is distributed.[10]

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8 By implication, the inflation information in our real-time measure is not balanced between quarters as it would be with a simple aggregation. This is because the inflation expectations survey is not evenly spaced throughout the year. In 2024, the survey for Q2 was sent to respondents on 10 June and the survey for Q3 was sent on 12 August. This suggests that only two inflation prints (for May and June) would capture the most recent past for Q3 of 2024.

9 We would like to thank Lisette IJssel de Schepper and Nicolaas van der Wath of the BER for providing the survey distribution dates.

10 The BER confirmed that historically well over half the survey respondents answer the survey within two days of it being distributed.

3.2 The inflation target

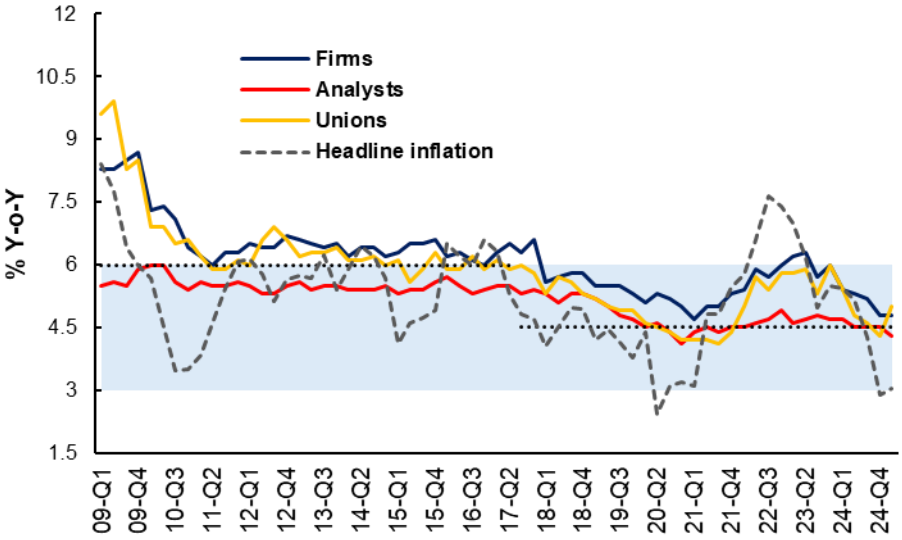
Our measure of forward-looking information is the SARB's inflation target. It is forward-looking in the sense that it communicates something about the likely future path of monetary policy given the SARB's commitment to the inflation target. As long as the inflation target is consistent, and economic agents believe that the central bank is both willing and able to achieve this target, these economic agents have information about future inflation just by maintaining confidence that inflation will return to the target.

While the inflation target has been 3–6% over the full sample period, for a significant portion of this period the SARB made no formal attempt to explicitly specify what point in the range it preferred.

For the period 2009Q1–2017Q2 (the *pre-announcement period*), we set the target to 6%, recognised as the 'de facto' target over that period. There was no explicit communication during that period that the SARB was targeting the upper band, but the stance of monetary policy implied a de facto target of just below 6%. This was confirmed at the time of the 2017 announcement, when the SARB acknowledged in the October 2017 *Monetary Policy Review* that the upper band had been the de facto target in the preceding period (SARB 2017b). The target variable is therefore treated as constant at 6% for the period 2009Q1–2017Q2 and constant at 4.5% following the 2017 announcement (SARB 2017a). Given that the target variable is constant in our subsamples, it does not suffer from the same timing issue as our backward-looking measure.

The behaviour of firms, analysts and unions reflects that the de facto target of about 6% was internalised by market participants before 2017. The inflation expectations of different economic agents were reasonably stable over the pre-announcement period (Figure 1), particularly from 2010 when the effects of the global financial crisis (GFC) had faded. After 2017, the point being used in the SARB's models (and the implied focal point of policymakers) was explicitly announced, so it is not difficult to motivate our assumption about the target.

Figure 1: Two-year-ahead inflation expectations of economic agents



Note: The light blue shaded region is the inflation target band; the dotted lines are the implied (de facto) target of 6% before 2017Q2 and the explicit Monetary Policy Committee preference from 2017Q3 onwards.

Source: BER and SARB

3.3 Inflation expectations (and lagged inflation expectations, or the prior)

We use data from BER surveys of inflation expectations. The BER conducts a survey of inflation expectations in four social groups (financial analysts, trade unions, firms and households) on a quarterly basis.[11] The sample for the firms has been shown to be a good representation of firms in the South African economy (Reid, von Fintel and Foresto 2024), and while the sample size has decreased over time (in line with international trends), it has remained above about 100 observations per quarter.[12] A separate question in the survey confirms that most of the survey respondents in the firm survey are senior decision-makers. The financial analyst sample size ranges between 25 and 40 respondents per quarter. However, this group is more homogenous in character, which is likely to slightly reduce the effect of the smaller sample. The trade union sample is the smallest (ranging between 10 and 15 respondents per quarter), and this survey also contains some questions about whether the respondent is a senior decision-maker within the institution (Reid and Siklos 2021b). However, Reid and

[11] For more detail on the survey see Kershoff and Smit (2005) and Reid and Siklos (2021b).

[12] Candia, Coibion and Gorodnichenko (2022) provide a detailed breakdown of inflation expectations surveys for firms for a range of advanced and emerging economies. They report that the sample of South Africa's firm survey is considered to be large (more than 350 respondents per year) and comparable to surveys done by central banks in advanced economies.

Siklos (2025) find that the forecasting performance of the trade unions remains slightly better than that of the firms, suggesting the continued value of the survey data.[13]

The BER's two-year-ahead inflation expectations horizon is used, which is consistent with the monetary policy horizon. This *aggregate expectations* variable is the simple average of three groups surveyed by the BER – firms, analysts and unions.[14] This is the measure of expectations used in the modelling and forecasting processes in the SARB's Quarterly Projection Model (QPM) (Reid and Siklos 2025). This makes the aggregated expectations a credible starting point or baseline and enables direct comparison with the calibrated parameters in the QPM's expectations equation.

In addition to this composite aggregate expectation, we compare the mean expectations of each of the three survey groups (firms, trade unions and financial analysts) separately, allowing us to test for differences in the responsiveness of these groups to new information (both backward- and forward-looking information) as well as their reliance on their own prior beliefs. Finally, we use individual-respondent-level data (microdata) for each of the three groups. Working with the microdata greatly increases the number of observations in our sample period, which allows us to break up our sample into smaller subsamples than we could with the aggregated data.[15]

Given evidence from the literature that attention to inflation can vary under different economic conditions, we divide the full sample into subsamples, as represented in Figure 2. The pre-announcement period analysed initially (2009–2017) is separated into recovery from the GFC (*GFC*) and a period of stability before the SARB announced its preferred 4.5% target (*pre-announcement*). We then separate the initial post-announcement period (2017–2025) into the transition towards 4.5% (*post-announcement*: 2017Q3–2020Q1), post-COVID inflation (*pandemic inflation*: 2021Q1–2023Q4) and recovery from the shock (*post-pandemic inflation*: 2024Q1–2025Q1).

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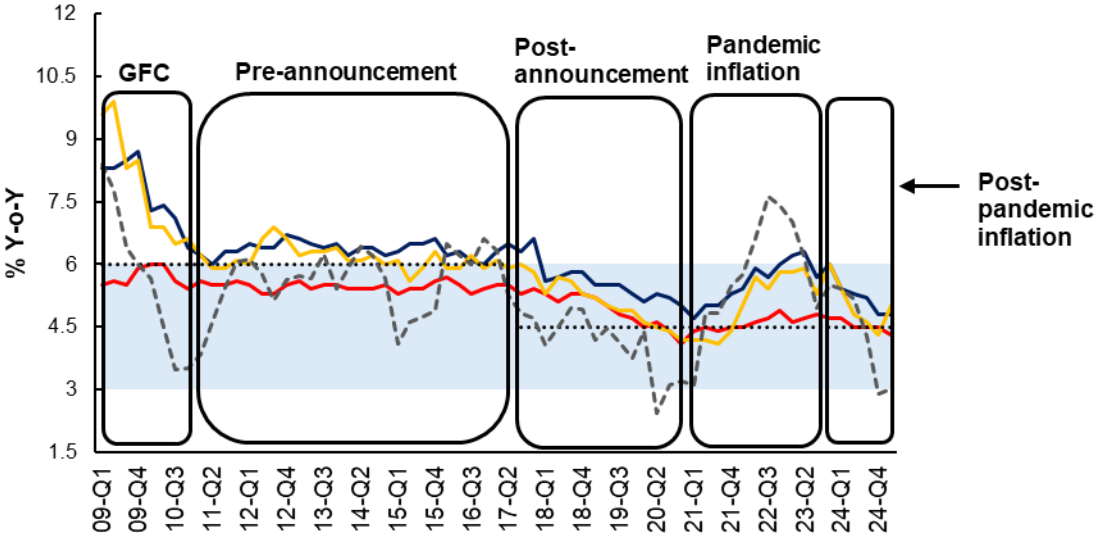
13 See Reid and Siklos (2021a) for more detailed information on the BER inflation expectations survey data.

14 The BER applied equal weights to combine the average survey results of the three separate groups.

15 For further details on the design and structure of the microdata for all three survey groups, see Reid and Siklos (2021a). The authors provide an extensive review of the BER's inflation expectations survey.

Our decision to exclude the lockdown period (2020Q2–2020Q4) when working with the microdata is informed by the lockdown's impact on Stats SA's ability to collect price information directly. To overcome the lockdown limitations, Stats SA relied on imputation techniques to account for missing items in the basket of goods and services (Stats SA 2020a, 2020b).[16] When working with the microdata we are less concerned with removing this period due to the large number of observations in our samples before and after this period. However, for applications using the mean expectations *(aggregate expectations* or the three groups separately) we do not have the same degree of freedom; therefore, we retain this period in our post-announcement sample.

Figure 2: Subsamples for microdata



Note: The subsamples in our data are divided as follows: GFC: 2009Q1–2010Q4 (8 quarters), pre-announcement: 2011Q1–2017Q2 (26 quarters), post-announcement: 2017Q3–2020Q1 (11 quarters), pandemic inflation: 2021Q1–2023Q4 (12 quarters), post-pandemic inflation: 2024Q1–2025Q1 (5 quarters).

Source: BER and SARB

4. Empirical analysis

In the analysis that follows, a set of regressions are presented that aim to estimate how quickly inflation expectations update and what proportion of the public's current inflation expectations are driven by backward- or forward-looking components. For this purpose, we use a range of specifications.

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16 This resulted in large swings in the reported headline number, reflecting the underlying limitations on data collection as opposed to the behaviour of price dynamics in the economy.

Firstly, we estimate the speed of adjustment of inflation expectations from 6% to 4.5% in 2017 and then estimate the attentiveness of economic agents to new information about either historical inflation or the inflation target in the expectations formation process (i.e. attentiveness to new information). Secondly, after deriving the weight of prior beliefs on inflation expectations, we use two-stage least squares with aggregate data to decompose this prior into attention to inflation and the target in previous periods. Lastly, we use a system generalised method of moments (SGMM) approach using microdata (i.e. individual-respondent-level data) to analyse shorter sample periods, because we believe that both people's level of attentiveness to new information and their choice of information to rely on is likely to differ under different economic conditions.

We also test the sensitivity of the results to variations in how some variables are measured. As per our description of each of the model variables in section 3, there is discussion in the literature about which historical source of information decision-makers would pay attention to (Coibion and Gorodnichenko 2015; Binder 2018; Kilian and Zhou 2020). The results are robust.

4.1 2017 target convergence

When commenting on the likely role of inflation expectations in the path from 4.5% to 3%, it is natural to refer to the 2017 experience, where the targeted level was lowered from 6% to 4.5%. We therefore begin by analysing how quickly economic agents adjusted their expectations towards the new target (speed of convergence) following the 2017 announcement.

We treat the Monetary Policy Committee's July statement announcing a preference for 4.5% as our 'event date' (SARB 2017a). The subsample before the event date is labelled the pre-announcement period (2011Q1–2017Q2) and the subsample after the event the post-announcement period (2017Q3–2020Q1). Our analysis compares the dynamics of expectations during these two periods. For this analysis we rely on the microdata as it increases the number of observations in each sample. When working with individual-respondent-level data, ordinary least squares (OLS) can produce

biased estimates.[17] For all our models using the microdata, we use the SGMM to handle bias caused by endogeneity and the unbalanced structure of the microdata (Blundell and Bond 1998).

The model we use to analyse convergence to the new target is represented by Equation (1). The change in the distance between agents' two-year-ahead inflation expectations and the SARB's target, on the left-hand side, is regressed on the distance between these same two variables in the previous period and the change in headline inflation ($\Delta\pi_t^{CPI}$). Intuitively, we are asking how the distance between inflation expectations and the inflation target evolves over time and if the publication of historical inflation itself influences this gap.

$$\Delta(\pi_t^e - \pi^{target}) = \alpha_{0,t} - (1 - \alpha_{1,t})(\pi_{t-1}^e - \pi^{target}) + \alpha_{2,t}\Delta\pi_t^{CPI} + \epsilon_t \quad (1)$$

Our model specification is analogous to an equilibrium correction model (ECM), where the second term is the speed of adjustment parameter.[18] Therefore, the closer our speed of adjustment coefficient is to -1 ($\alpha_{1,t}$, implying deviations are less persistent), the quicker economic agents close the gap and converge to the new target.

The coefficient on the change in headline inflation ($\alpha_{2,t}$) measures how responsive expectations are to incoming inflation information (historical inflation) during the transition to the new target. A positive and significant $\alpha_{2,t}$ implies that economic agents are highly responsive to incoming inflation information during the transition. This would result in bumps during the transition (deviations from the convergence path), and potentially increase the costs associated with lowering the target. In contrast, if the speed of adjustment is close to -1 and significant, and economic agents are unresponsive to changes in inflation following the Monetary Policy Committee's announcement, it suggests that agents viewed the announcement, and by extension

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17 OLS estimates of dynamic panels are biased for several reasons: (i) endogeneity and simultaneity, which arise when lags of the dependent variable are serially correlated with the error term, (ii) omitted variable bias, which occurs when unobserved respondent characteristics correlate with controls, (iii) attenuation bias, where coefficients in disaggregated data are biased towards zero, and (iv) the Nickell bias, which is the correlation between lags of the dependent variable and the errors after applying a fixed-effects transformation (Nickell 1981; Arellano 2003).

18 The term $(1 - \alpha_{1,t})$ can be denoted as lambda in the standard ECM specification. See Annexure A for details.

the actions of the SARB, as highly credible during this period. This would deliver a quicker transition to the new target, at a lower output cost.

Relying on Equation (1) and the microdata, the speed of adjustment estimates are represented by the orange dots in Figures 3a–c, where the bands around the dots indicate the 90% confidence intervals. We draw attention to two features of the speed of adjustment results: (i) the size of the speed of adjustment (how fast each group is adjusting) in each period; and (ii) differences in the speed of adjustment across the two periods (how the speed of adjustment of each group has changed from the pre-announcement period to the post-announcement period). When the speed at which decision-makers update their expectations (the speed of adjustment) is lower, it may be because they are paying attention to historical inflation.

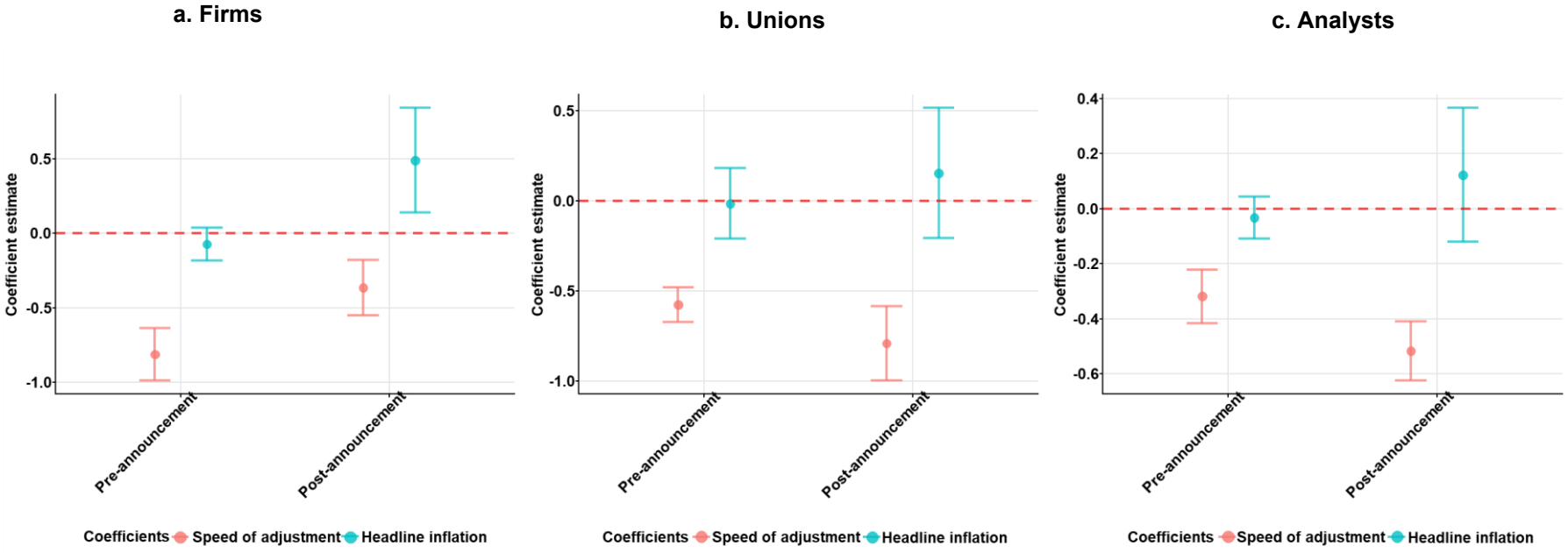
If we consider the size of the speed of adjustment estimates before the announcement, the estimates suggest that firms adjust quickest on average. The coefficient on historical inflation was indistinguishable from zero and the size of the speed of adjustment coefficient was large, suggesting a high degree of anchoring to the target. It is worth noting that a higher speed of adjustment does not mean that that group is necessarily closer to the target. A higher speed of adjustment coefficient implies that the group closes deviations from the target quickly; however, it does not tell us about their relative distance to the target or position in the initial period. After the announcement, unions adjust quickest, followed by analysts and then firms.

The change in this speed of adjustment after the 2017 announcement is considerable for the analysts, whereas it is potentially statistically indistinguishable for unions (overlapping confidence bands). What does not change for these two groups is that they remain stable on the transition path, paying little attention to changes in historical inflation (represented by the blue dots in Figures 3a–c). Analysts adjust their expectations far more quickly after the announcement than before it. This group was well informed about the change in the de facto target and appeared to trust the SARB's commitment to achieve the target. In contrast, the speed of adjustment of firms decreased from -0.81 to -0.36 after the announcement, implying that they became less

responsive to deviations from the target after the announcement.[19] Firms did become more responsive to changes in historical inflation numbers, suggesting that a track record of low inflation in addition to the announcement was needed to bring their expectations down. We will explore in the analysis below how large this increased focus on historical inflation is relative to information about the inflation target itself.

[19] We report the estimates for the median firm (50th percentile) in Figure 3a to provide a representative measure of the typical speed of adjustment. Unlike analysts and trade unions, firms show substantial heterogeneity in their adjustment speeds. The heterogeneity is likely due to differences in size, resources and sectoral characteristics that are not present in the other social groups. We find that firms closest to the target (better informed or attentive) adjust quickly, while firms furthest from the target (inattentive) have persistent beliefs, leading to sluggish adjustment.

Figure 3a–c: 2017 transition



Note: The bands on the coefficient estimates represent the 90% confidence interval.

Source: Authors' own calculations

Using a standard half-life equation,[20] these estimates suggest that a 95% convergence of expectations from 6% to 4.5% (i.e. reaching 4.575%) would take analysts 4 quarters, unions 2 quarters and firms 7 quarters.[21] Intuitively, after the announcement, deviations of expectations from the target were closed quickly in the case of analysts and unions. This implies that they were well informed and viewed the SARB as highly credible during this period. In contrast, firms became less responsive to deviations from the target following the announcement and placed greater weight on recent inflation information. If inflation were to suddenly reverse course due to an unanticipated shock, our results imply that firms' expectations would react more strongly, creating a bumpier transition to the new target, with greater costs.

4.2 Attentiveness to new information after the 2017 announcement

If agents pay more attention to historical inflation after the 2017 announcement, this alone would create persistence in inflation and raise the cost of disinflation. It may, however, be the case that economic agents also paid more attention to the target (i.e. they may have become more attentive to new information more generally because they were aware that things were changing).

$$\pi_t^e = \gamma_{1,t}\pi_{t-1}^e + \gamma_{2,t}(\pi_t^{CPI} - \pi_{t-1}^e) + \gamma_{3,t}(\pi^{target} - \pi_{t-1}^e) + \sigma_t \qquad (2)$$

$$\rho^{CPI,target} = \frac{\gamma_{i,t}}{\gamma_{1,t}}, where\ i\ \in (2,3)$$

We therefore next measure the attention of survey respondents to both backward- and forward-looking information on either side of the 2017 announcement. Equation (2), based on Pfäuti (2025), assesses whether agents update their forecasts in response to new information (about inflation or the target, γ_2 or $\gamma_{3,}$) or rely on their prior expectations (γ_1, representing a lack of updating). In the first line of Equation (2), inflation expectations are explained by the last period's inflation expectations (the prior,

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20 The half-life equation can be represented as follows:
$x_t = (\alpha_1)^t.x_0$. For a 95% closure we want to estimate $x_t = (1-\rho).(x_0)$, where $\rho = 0.95$. Substituting for x_t, $(\alpha_1)^t.x_0 = 0.1(x_0) \rightarrow (\alpha_1)^t = 0.1$. Taking logs and solving for t, we have $t = \frac{ln(0.1)}{ln(\alpha_1)}$.

21 We choose a high degree of closure (95%) as the standard half-life equation only approaches the target asymptotically; complete convergence is not achievable as zero represents the upper limit.

π_{t-1}^{e}) and the distances of inflation expectations from historical inflation ($\pi_t^{CPI} - \pi_{t-1}^{e}$) and the inflation target ($\pi_t^{target} - \pi_{t-1}^{e}$). In the second line of Equation (2), the attention measure is captured by taking a ratio of the weight on new information (about either historical inflation or the target) relative to the prior (where people leave their expectations unchanged). If agents are attentive, the ratio ($\rho^{CPI,target}$) should be positive.

The results for our parameters of attention to inflation ($\widehat{\rho^{CPI}}$) and the target ($\widehat{\rho^{target}}$) from the estimation of Equation (2) are captured in Table 1. The results in the pre-announcement period suggest that all three groups paid limited attention to inflation and focused more on the target. Following the announcement, all three groups began paying more attention to historical inflation. Analysts and unions paid more attention to new information in general (the combination of historical inflation and the target) relative to the pre-announcement period. Since these are the two groups that are likely to have more specialist knowledge of inflation and monetary policy, it is not surprising that they monitor new information during a period of transition. While the size of the parameter capturing attention to the target narrowed relative to the attention to inflation for all three groups, analysts still paid equal attention to the target and historical inflation, and the other two groups still paid more attention to the target than inflation.

In both sample periods analysts pay less attention to both sources of incoming information compared to firms and unions. This seems surprising. A possible explanation may be that their views of future price dynamics are formed using a wider range of economic indicators that they analyse independently (oil prices, exchange rates, asset markets, etc.), implying that the links to a narrow set of factors may be weaker. However, these factors are related to inflation itself, and when we tested the robustness of our findings using core and non-core inflation as alternative proxies for historical inflation, neither had an economically strong relationship with the inflation expectations of the analysts. An alternative explanation is that the behaviour of the analysts is more sensitive to changing economic conditions because they are more sophisticated users of the data. When using the aggregate data, we are unable to look at smaller subsamples because there would be too few observations in each. As a result, we cannot accurately identify whether their behaviour and use of incoming

information is being driven by the transition to the new target, the post-pandemic inflationary surge or the subsequent disinflation.

Table 1: Measure of attention before and after the 2017Q2 announcement

	Firms	Analysts	Unions
	Pre-announcement		
ρ^{CPI}	0.05	0.06	0.12
ρ^{target}	0.95	0.35	0.47
	Post-announcement		
ρ^{CPI}	0.19	0.21	0.34
ρ^{target}	0.59	0.26	0.41

Note: For the pre-announcement sample we used the period 2011Q1–2017Q2 (26 quarters), and for the post-announcement sample we used 2017Q3–2020Q1 (11 quarters), excluding the post-pandemic inflation surge. The values reported are based on the ratios using the estimated coefficients in Equation (5).

Source: Authors' own calculations

Now that we've analysed the 2017 adjustment to the preferred target point, the rest of the paper focuses on asking whether the responsiveness of inflation expectations would be similar after the SARB's announcement in 2025 of its preferred target of 3%. To achieve this, we ask how inflation expectations update in response to information about future and historical inflation and whether their reliance on these different sources of information (attentiveness to new information) varies under different conditions.

4.3 Two-stage least squares (TSLS)

Discussions about whether inflation expectations are forward-looking are often reduced to a choice between forward- and backward-looking information (Hubert and Mirza 2019; Kabundi and Schaling 2013). However, we know from the literature that inflation expectations are highly persistent, and typically, a lagged inflation expectations term is required to capture the behaviour of the actual data. We therefore start with the expectations equation taken directly from the SARB's QPM, specified by Equation (3) (Pirozhkova et al. 2023). The dependent variable (two-year-ahead inflation expectations) is regressed on headline inflation and the SARB's target. These controls capture the degree to which agents update their forecasts. Importantly, the equation also includes lagged inflation expectations, which we will call the *prior.* This term captures the degree to which agents' prior beliefs are persistent (they are inattentive to new information and do not update their inflation expectations).

$$\pi_t^e = \beta_{1,t}\pi_{t-1}^e + \beta_{2,t}\pi_t^{CPI} + \beta_{3,t}\pi^{target} + \varepsilon_t \quad (3)$$

However, recognising the role of the prior in inflation dynamics raises some important questions. How does the prior contribute to the persistence of inflation? Is the prior itself backward-looking? It is reasonable to assume that in the previous period, inflation expectations were also formed using the historical inflation and inflation target relevant at the time. If the target is constant, this component of the prior can in fact be treated as though it is forward-looking. It would also cause convergence of expectations to the target point – just as the forward-looking variable did.

We therefore used TSLS to try to decompose the information in this prior just as we decomposed the information in the current period (Imbens 2014). Using a TSLS approach also enables us to address the fact that including the prior raises endogeneity concerns, which could lead to biased estimates when using standard OLS (Stock and Watson 2003; Angrist and Pischke 2009). Using TSLS, we instrument the prior to handle any bias in our estimates. We use lags of headline inflation and the target as instruments.

The first-stage regression is represented by Equation (4) and captures how agents form their prior based on historical values of inflation, the target and lags of the prior (i.e. this equation captures the decomposition of the prior). We include three lags each of the prior, headline inflation and the target, which we believe adequately captures the stickiness in the dynamics of expectations.

$$\pi_{t-1}^e = \sum_{i=2}^{4} \theta_{i,t}\, \pi_{t-i}^e + \sum_{k=1}^{3} \theta_{k,t}(\pi_{t-k}^{CPI}) + \sum_{j=1}^{3} \theta_{j,t}(\pi_{t-j}^{target}) + \vartheta_t \quad (4)$$

The second stage of our TSLS is represented by Equation (5), where people form current forecasts of inflation based on their prior (fitted values from the first stage), the most recent backward-looking information and the target. Our first estimates using the TSLS focus on the *aggregated expectations* data (the composite of the three groups) and then the aggregate expectations of each agent group separately.

$$\pi_t^e = \hat{\beta}_{1,t}\pi_{t-1}^e + \beta_{2,t}\pi_t^{CPI} + \beta_{3,t}\pi^{target} + \varepsilon_t \quad (5)$$

The second-stage estimates from our TSLS model are presented in Table 2. For the aggregate results and all three subsamples, the prior absorbs most of the information, both before and after the 2017 announcement. The coefficients on the prior ranged between 0.62 and 0.81. Agents updated their expectations infrequently, contributing to greater inertia in the formation of their expectations (in line with international literature, including Mankiw and Reis (2002); Coibion, Gorodnichenko and Kamdar (2017); and Candia, Coibion and Gorodnichenko (2024)). As a comparison, in the SARB QPM, the weights on the prior, the target and historical inflation are 0.5, 0.34 and 0.16, respectively. So, the QPM places less weight on the prior, but the ratio between forward- and backward-looking expectations is close to 2:1 in both the QPM and our full sample estimates.

Table 2: TSLS second-stage regression estimates

Variables	Pre-announcement	Post-announcement	Full
Aggregated expectations			
Prior	0.81***	0.73***	0.77***
Headline inflation	0.05*	0.10***	0.09***
Target	0.14**	0.19**	0.15***
Firms			
Prior	0.79***	0.62***	0.75***
Headline inflation	0.07	0.14***	0.12***
Target	0.15*	0.30**	0.16**
Analysts			
Prior	0.09	0.88***	0.79***
Headline inflation	-0.00	0.04*	-0.01
Target	0.83***	0.08	0.20
Unions			
Prior	0.77***	0.67***	0.75***
Headline inflation	0.17	0.13**	0.15***
Target	0.08	0.22*	0.12

Note: The asterisks *, ** and *** denote significance at the 10%, 5% and 1% level, respectively. The significance is determined using robust standard errors. The pre-announcement sample covers the period 2009Q1–2017Q2 and the post-announcement sample covers 2017Q3–2025Q1. The estimates in the table are for the second-stage regression; we show the first-stage regression results in Figures 3–6.

Source: Authors' own calculations

The high degree of inattentiveness in the pre-announcement period is congruent with the remarkable stability in expectations observed in Figure 1, despite inflation being near the top of the band. When inflation is at a level the central bank is satisfied with, such inattention from the public is ideal. It suggests a high level of trust in the SARB before the 2017 announcement.

After the 2017 announcement, the weight on the prior decreased in the case of firms and trade unions. This suggests that these groups were updating their expectations with new information more frequently after 2017, in line with the attention results in section 4.2. In the case of the transition to a new target, it is necessary for agents to update their expectations, so a higher level of attentiveness is required. In this case, their prior consists of historical inflation that is higher than what is desired and reliance on the old target is not equivalent to our forward-looking variable, so it is necessary for them to update this information rather than rely on their prior beliefs.

The case of the analysts is again surprising, as the results suggest that analysts were less focused on the target and relied heavily on their prior. It does not seem believable that they searched less for incoming information during this period of transition. Again, we suspect that the variation over the period for this group is affecting the results. We cannot subset the aggregate data further as the number of observations is limited.

It is difficult to draw firm conclusions from the longer period under analysis because it includes a period of transition to a new target, a post-pandemic inflationary surge, subsequent disinflation and recent discussion by the SARB and National Treasury of potentially shifting the target to 3%. The results for the analysts using the aggregate data appear to be more sensitive to these changing economic conditions compared to the other social groups.

To the extent that agents do update their expectations with new information (using historical inflation and the target), where the results are significant, they consistently place greater weight on the target than historical inflation in all subsamples, suggesting that agents were moderately more forward-looking when updating. It is true that the weight on historical inflation increased by more than the weight on the target after the announcement, but this should be interpreted with caution. The period included in this post-2017 sample (2017Q3–2025Q1) includes both the transition from 6% to 4.5% and the pandemic inflation (when the economy was clearly in a high-inflation regime (Foresto, Reid and Rakgalakane 2025)). It is difficult to separate the effects of the transition from heightened attention in the face of high inflation.

Assessing the results for the separate survey groups (Table 2), we find that firms and unions behave similarly. In the pre-announcement period, both relied firmly on their priors (0.79 and 0.77, respectively), creating a strong degree of persistence in expectations. The coefficients on headline inflation and the target were insignificant for trade unions, implying they were inattentive. For firms, the coefficient on the target was significant, indicative of some forward-looking updating. Following the announcement, both groups updated their views more rapidly, relying less on their priors. The results with this aggregate data suggest that the behaviour of analysts is different to the other two groups. It suggests that they placed considerable weight on the target in the pre-announcement period and far more on the prior following the SARB's 2017 announcement.

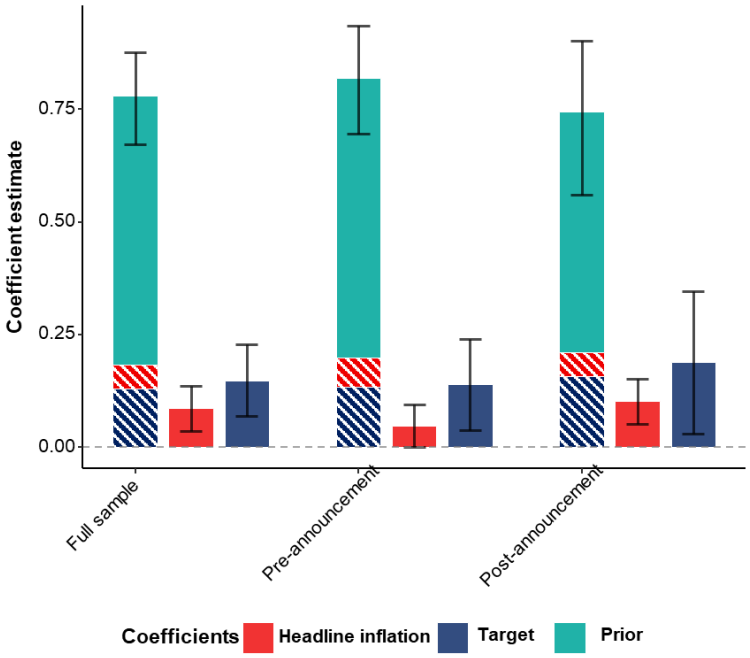
Again, considering estimates for longer time periods that span a range of economic conditions can be difficult to interpret because they might be masking responses that are quite different across different subperiods. These events collectively are likely to increase the attention of people to inflation, monetary policy and the economy more broadly (Bracha and Tang 2025; Pfäuti 2025). It appears that it is necessary to divide these periods into subsamples that isolate large changes in economic conditions. This is not possible with aggregate data due to the limited number of observations, but in section 4.4 we use the microdata to enable this.

Figure 3 represents both the TSLS second-stage results and the decomposition of the prior (from the first stage), estimated through Equation (4) using the aggregate data. The extent to which economic agents update their expectations based on new information (as described in the discussion of Table 2) is captured by the solid red and blue bars. The prior is also visually decomposed into components that focus on the most recent three lags of the target or historical inflation (represented by the striped portions of the prior).

Considering the three groups together first, we find that agents place a positive weight on both backward- and forward-looking information in the prior, but that historical inflation is discounted to a greater extent than the target. It is likely that people apply a larger discount to historical values further in the past, especially in a turbulent or high-inflation regime, because the historical data is then more quickly out of date.

Conversely, if the target (the forward-looking information) is constant, the timing of the information is irrelevant – either way people believe that any deviations from the target will be corrected over time. The rest of the prior must be explained by further lags of inflation and the target or other factors not adequately captured by these two sources of information.

Figure 4: TSLS decomposition (aggregated expectations)

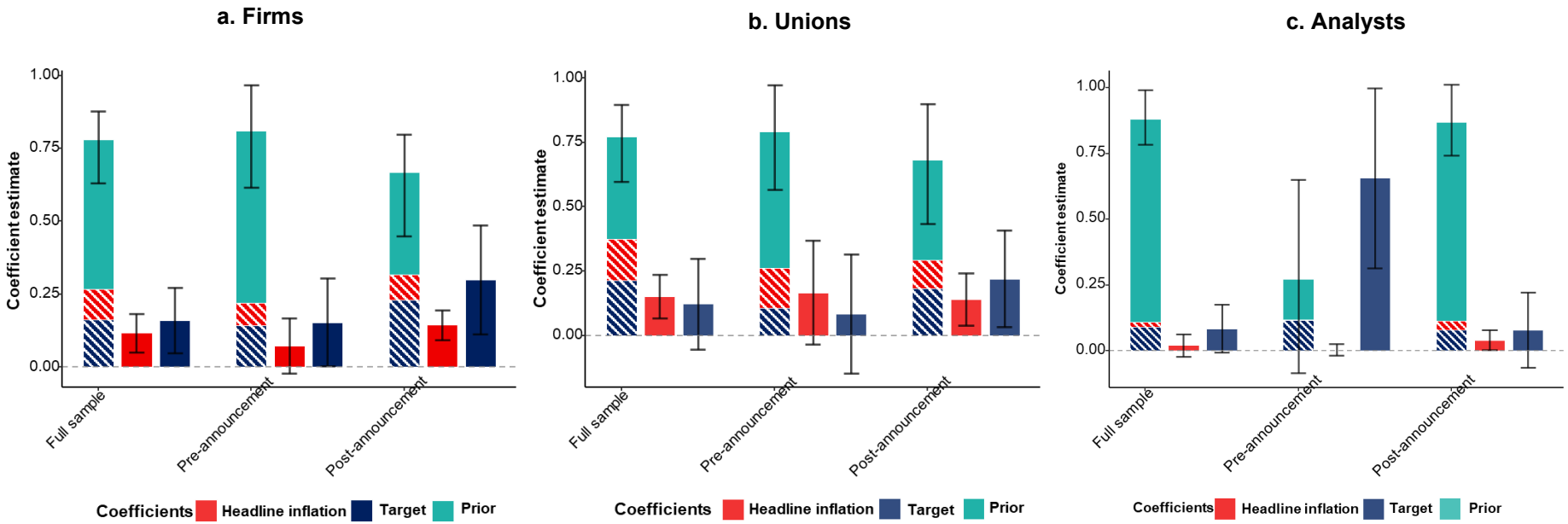


Note: The bands on the coefficient estimates capture the 90% confidence interval. Patterned blue and red bars in the prior are the implied contribution of headline inflation and the target from the first-stage regression.

Source: Authors' own calculations

It is important to note that there are differences across the three survey groups (Figures 5a–c). In the post-announcement period for firms and trade unions, a greater proportion of the prior is explained by the last three lags of inflation and the target. Not only are these agents paying more attention to new sources of information, they are also relying to a greater degree on the recent past. This reinforces the conclusion that they were more attentive post-2017. In contrast, the pattern of the analysts is different and surprising. In line with the level of attention results (Table 1), the results for the financial analysts suggest that they were relying strongly on the target before the 2017 announcement. In contrast with the convergence results, these results suggest that analysts' expectations would adjust more slowly than the other two groups, which is counterintuitive.

Figure 5a–c: TSLS decomposition (firms, unions and analysts)



Note: The bands on the coefficient estimates capture the 90% confidence interval. Patterned blue and red bars in the prior are the implied contribution of headline inflation and the target from the first-stage regression.

Source: Authors' own calculations

4.4 Subsample sensitivity

When working with the aggregate data, it becomes clear that the estimates are sensitive to the choice of sample period. In the case of the firms and trade unions, results are reasonably stable across methods, but the results for the analysts are not as robust and often counterintuitive. Therefore, we extend our analysis based on Equation (4) by using the microdata. This allows us to segment our sample period based on specific economic conditions – stability, transition and response to shocks – that influence inflation expectations in different ways.

We capture our choice of subsamples in Figure 2. We divide the pre-announcement period used in the analysis above into a post-GFC period (where inflation was still returning to the target band) and the pre-announcement period (where inflation expectations were stable at the top of the target band). Similarly, we isolate the post-2017 announcement period from the post-pandemic inflationary surge and the ensuing recovery. While the earlier periods provide enough observations to conduct a robust analysis for each of the agent groups, we acknowledge that the estimates for the trade unions and financial analysts may suffer from a small sample size in the last two periods (the pandemic inflation and post-pandemic inflation) (Reid and Siklos 2021b).[22] While these results should, therefore, be interpreted with greater caution, it is encouraging that the most recent survey results for 2025Q3 confirm the pattern that our model estimates predicted – the expectations of financial analysts and trade unions have decreased notably (Van der Wath 2025a).

Consistent with the target convergence analysis (section 4.1), we instrument for the prior and handle endogeneity concerns using an SGMM approach. Unlike the TSLS model, the SGMM does not allow us to decompose the sources of information driving the prior. As a result, we can comment on the weight put on the prior relative to historical inflation and the target, but we cannot decompose the prior.

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[22] For the firms, there are 1 897 observations in the pandemic and post-pandemic periods combined. The samples for analysts and trade unions are smaller. Combined over both periods, the number of observations for analysts is 269 and trade unions is 170, respectively.

We estimate Equation (1) with the microdata, using the SGMM approach. Variation is observable across groups and across different periods, as expected. The results in the pre-announcement period (that now excludes the tail end of the GFC) are interesting. All three groups placed an insignificant weight on inflation – a result that is consistent across all the approaches used in this paper. Instead, agents choose to rely on their prior and the target. This is particularly notable for the firms, a result that is also robust. During this period where their expectations were stable at the target, both the prior and the target have the effect of anchoring expectations. This is consistent with the stability of inflation expectations observed during the period, despite significant movements in inflation.

There are a few points to note about these results. Firstly, we confirm that the extent to which agents rely on different sources of information varies under different economic conditions, which should lead us to be cautious about automatically transferring conclusions from the 2017 experience to the current one. Secondly, across all subsamples, analysts place limited weight on historical inflation. They did, however, take it into account to some extent during the transition to 4.5% and the post-pandemic inflation period. This implies that while they might use this new information extensively to inform their shorter-horizon expectations, their two-year-ahead expectations are only affected to a limited extent by inflation. Unions and particularly firms place greater weight on historical inflation, but still generally less than they do on the target or their own prior beliefs. These results for the firms and trade unions are broadly in line with earlier analysis using the aggregate data, and the results for the analysts are now more reasonable.

Thirdly, the relative stability of the pre-announcement period is notable, particularly for firms and analysts. In no other period did firms weight the target as strongly. It would be reasonable to question whether many leaders of firms across South Africa truly do know what the target is, but the target may simply proxy a general belief that inflation will stay at that level rather than reflect a deeper understanding of the SARB's legal mandate.[23]

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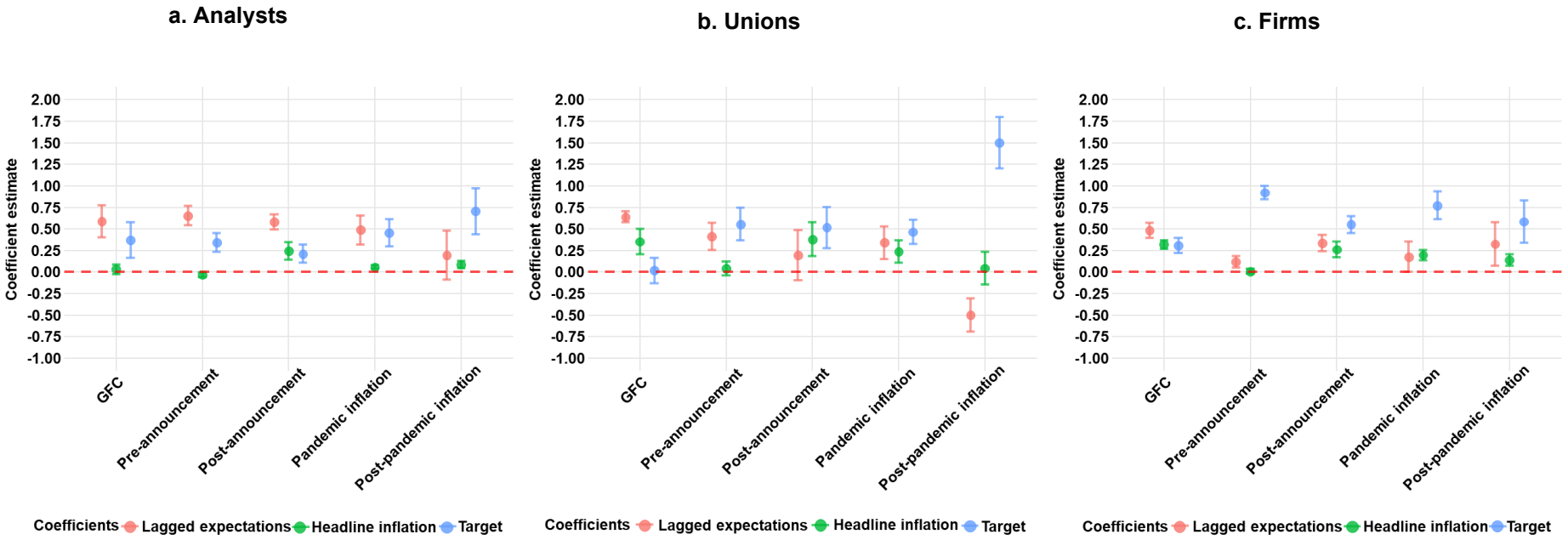
[23] For example, consultants placing multiyear tenders within an industry will tend to informally gravitate to a certain acceptable adjustment for inflation in their contracts.

Figure 6a–c: SGMM results for the three groups



Note: The bands on the coefficient estimates capture the 90% confidence interval.

Source: Authors' own calculations

Fourthly, during the pandemic inflation period none of the groups placed a huge weight on historical inflation, suggesting confidence in the willingness and ability of the SARB to return inflation to the target within the policy horizon. Firms still placed a surprisingly large weight on the target, but they do tend to incorporate information with a delay so they might have responded more slowly to rising inflation during that period.

Finally, in the most recent period, where inflation was again within the target range and there was a notable public discussion about the possibility of lowering the inflation target, the confidence intervals around our estimates for firms and unions are considerably wider than at other periods. This might partly be due to the smaller sample sizes in this period, but the analysts' data does not display this wider confidence interval. Rather, these wider confidence intervals might reflect uncertainty due to the discussion at the time between National Treasury and the SARB about whether it was appropriate to formally lower the inflation target. The well-informed analysts were likely to have felt more certain about the path ahead than trade unions and firms.

What is also notable during this period is that while the data suggests that all three groups are placing weight strongly on the target, the analysts and unions (who would both tend to be more informed about this debate) are paying more attention to the target than the firms. This would suggest that they believe the SARB is committed and able to achieve its preference to keep inflation at the lower end of the target range (3%). The firms also still place strong weight on the target (despite this weight decreasing slightly from the previous period), but they place a significant weight on their prior and historical inflation relative to the other two groups. Given that for a while their prior will contain the old target, this component will also slow the convergence of firms' expectations to the 3% target.

While the estimates for the post-pandemic inflation period are more volatile (wide confidence bands) due to the small sample size and elevated uncertainty, all groups are strongly reliant on the target. This is consistent with previous findings in South Africa, which suggest that economic agents become attentive to inflation, and by extension monetary policy, following inflationary shocks (Foresto, Reid and Rakgalakane 2025). Therefore, it could be reasoned that despite the low level of inflation in the most recent period, these agents remain attentive to inflation and the

actions of monetary policy. From these results, it would appear that trade unions and analysts bought into the 3% target shift before the official announcement in the 2025 MTBPS (National Treasury 2025: 4). In the first BER survey results after the formalisation of the 3% target, the expectations of the firms also responded quite strongly, although these results are not included in the samples used in this paper.[24]

Table 3: Post-pandemic measure of attention

	Firms	Analysts	Unions
	Pandemic inflation		
ρ^{CPI}	0.18	0.06	0.23
ρ^{target}	0.68	0.45	0.44
	Post-pandemic inflation		
ρ^{CPI}	0.14	0.09	0.04
ρ^{target}	0.56	0.71	1.43

Note: The sample period for the pandemic inflation covers 2021Q1–2023Q4 (12 quarters) and the post-pandemic inflation runs from 2024Q1–2025Q1 (5 quarters). The values reported are based on the ratios using the estimated coefficients in Equation (5).

Source: Authors' own calculations

5. Policy implications and conclusion

The dynamics of inflation expectations play a central role in reaching the 3% target consistently and at the lowest possible cost to the economy. The public discussion tends to focus on (i) the 2017 experience where the preferred point target was reduced to 4.5% and (ii) the extent to which expectations are forward- or backward-looking.

The lowering of the inflation target from 6% to 4.5% in 2017 provides a natural starting point for analysing the cost of transitioning from 4.5% to 3%. The analysis in this paper of the 2017 experience reveals that, at the time, 95% convergence (i.e. reaching inflation of 4.575% when starting at 6%) was achieved within 4 quarters for analysts, 2 quarters for unions and 7 quarters for firms. While the 2017 experience is a useful starting point, it is important to notice how the current economic context differs from that of 2017 and to consider the possible implications. In the period immediately prior to the 2017 announcement (2009–2017), inflation expectations in South Africa were surprisingly stable at the upper end of the band, with limited response to deviations of

[24] It would not be worth including these last data points as although they represent a large event that will change behaviour, there are not enough data points to analyse this newest subperiod separately.

inflation from the de facto point target at the time. In contrast, the current lowering of the target is taking place not long after a sizeable inflationary surge, where inflation expectations had also risen. We therefore also analysed how the public's attention to new information changes under different economic conditions.

To enable us to study differences in behaviour under different economic conditions, we used the microdata in certain subsamples of the full sample period with recognisable economic or institutional changes. A few conclusions were drawn from the results.

1. There is notable variation in behaviour across these periods.
2. Across all subsamples, analysts place limited weight on historical inflation, although this does increase a little in the post-2017 transition phase.
3. Trade unions and firms generally place more weight on historical inflation than analysts do, but they still place greater weight on the target than this historical inflation.
4. The relative stability in the pre-2017 period was notable, especially for firms and analysts.
5. None of the three groups placed a large weight on historical inflation during the pandemic inflation period.
6. In the period that followed the pandemic inflation (when inflation was back within the target range but discussion about lowering the target was in the media), the confidence intervals around the expectations of unions and firms were high (perhaps reflecting some uncertainty), but all three groups placed strong weight on the target. Firms did place more weight than the other two groups on their prior and historical inflation, suggesting that they again would be the slowest to adjust.

This focus on changing levels of attention to information by decision-makers is first captured in the analysis by focusing on the role of lagged inflation expectations. We then explicitly estimate attention to new information (both the target and inflation releases). The results show that inflation expectations have a high level of persistence

– a large weight on lagged inflation expectations is required to model inflation expectations well. When decision-makers rely heavily on their own past expectations rather than using new information to update their views, this can be described as inattention to the new information.

Our results show that during the transition from 6% to 4.5%, there was an increase in analysts' and unions' attention to new information about inflation and the target, and all three groups continued to pay more attention to the target than historical inflation numbers. When attention is estimated for the most recent period, the attention of analysts and unions to the target is higher than at any time in the sample. The attention of firms has dropped slightly from the pandemic inflation but also remains high. In all cases, attention to the target is higher than attention to inflation itself.

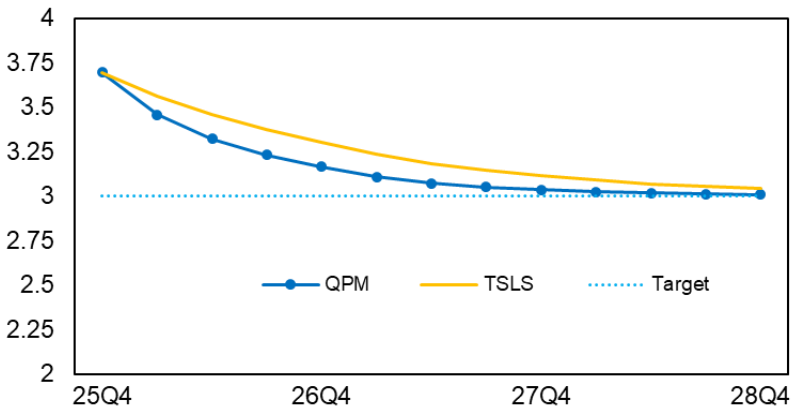
In addition to exploring the behaviour of expectations formation under different conditions, this paper also aimed to offer insights relevant for calibrating models. When analysing the period 2017Q –2025Q1, the results suggest that the weight on the prior, the target and historical inflation should be 0.73, 0.19 and 0.1, respectively.[25] Our results align reasonably closely with the weights in the QPM except that our estimates place far greater weight on the prior, while the QPM places relatively more weight on the target and historical inflation. Two questions therefore arise. Firstly, what impact does such a change have on the QPM's results? And, secondly, do these results suggest that there is reason to adjust the weights used in the QPM?

To answer the first question, we compare (unconditional) convergence of inflation expectations using the standard QPM weights with that of the adjusted weights from the TSLS estimates for 2017Q3–2025Q1 (Figure 7). The starting point is 2025Q4, where two-year-ahead aggregate expectations were 3.7%. In Figure 8, we show the QPM response to an oil price shock under these two parameterisations. As one would expect, the TSLS results – which place a larger weight on lagged inflation expectations – show a slightly slower convergence to the target and a more muted response to the oil price shock. So, if we assume that decision-makers are slower to update than is

[25] For the QPM simulation, the coefficients from the TSLS are scaled to sum to 1 to preserve long-run stability in the model. The re-scaled coefficients on the prior, the target and historical inflation are 0.716, 0.186 and 0.098, respectively.

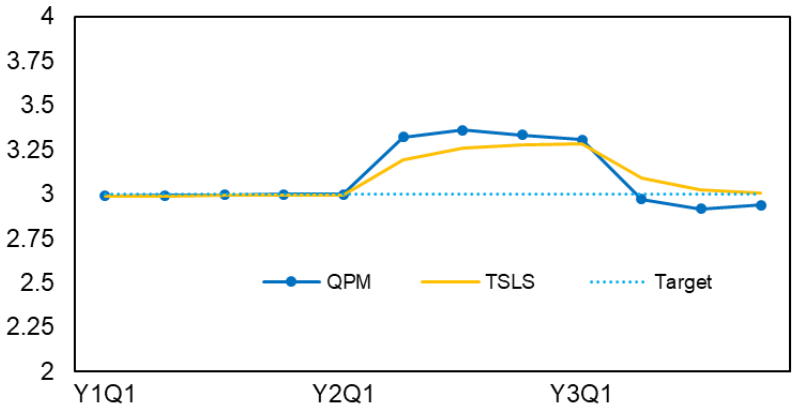
assumed by the QPM coefficients, the convergence will be slower. Importantly, the convergence and oil price simulations indicate that expectations under both parameterisations stabilise over roughly the same time frame, despite differing short-term dynamics.

Figure 7: Implied convergence from current level of inflation expectations



Source: Authors' own calculations

Figure 8: Response of expectations to an oil price shock



Source: Authors' own calculations

However, our analysis also shows that the level of attention varies over time and is currently high (decision-makers are updating their priors more regularly). An estimate of the coefficients over a long period can be viewed as a long-term trend, but at any time attention might be higher or lower than this trend. At the time of a change in conditions, where the data is limited, judgement will be required. Currently, the microdata suggests that attention is high and the QPM coefficients are likely to be closer to reality than this long-term trend from the TSLS estimates.

Annexure A: Equivalence of autoregressive distance model

Statement: Let us consider a model where deviations from a fixed point/constant follow an autoregressive process, where τ is a constant:

$$(y_t - \tau) = \mu_1(y_{t-1} - \tau) + \mu_2 x_t + \sigma_t$$

This representation is equivalent to an equilibrium correction model:

$$\Delta y_t = -(1 - \mu_1)(y_{t-1} - \tau) + \mu_2 x_t + \sigma_t$$

where the error correction is captured by the coefficient on the first term, $\lambda = 1 - \mu_1$. If we define deviations from the constant as $d_t \equiv y_t - \tau$, the original equation above becomes: $d_t = \mu_1 d_{t-1} + \mu_2 x_t + \sigma_t$.

Taking first differences and collecting like terms we have:

$$\Delta d_t = (\mu_1 - 1)d_{t-1} + \mu_2 x_t + \sigma_t$$

Since $d_t = (y_t - \tau)$, we also have $\Delta d_t = \Delta y_t$ and $d_{t-1} = (y_{t-1} - \tau)$.

Substituting $\lambda \equiv (1 - \mu_1)$, we have the final equation:

$$\Delta y_t = -\lambda(y_{t-1} - \tau) + \mu_2 x_t + \sigma_t$$

Economically, the coefficient λ measures the speed of adjustment towards the fixed point.

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