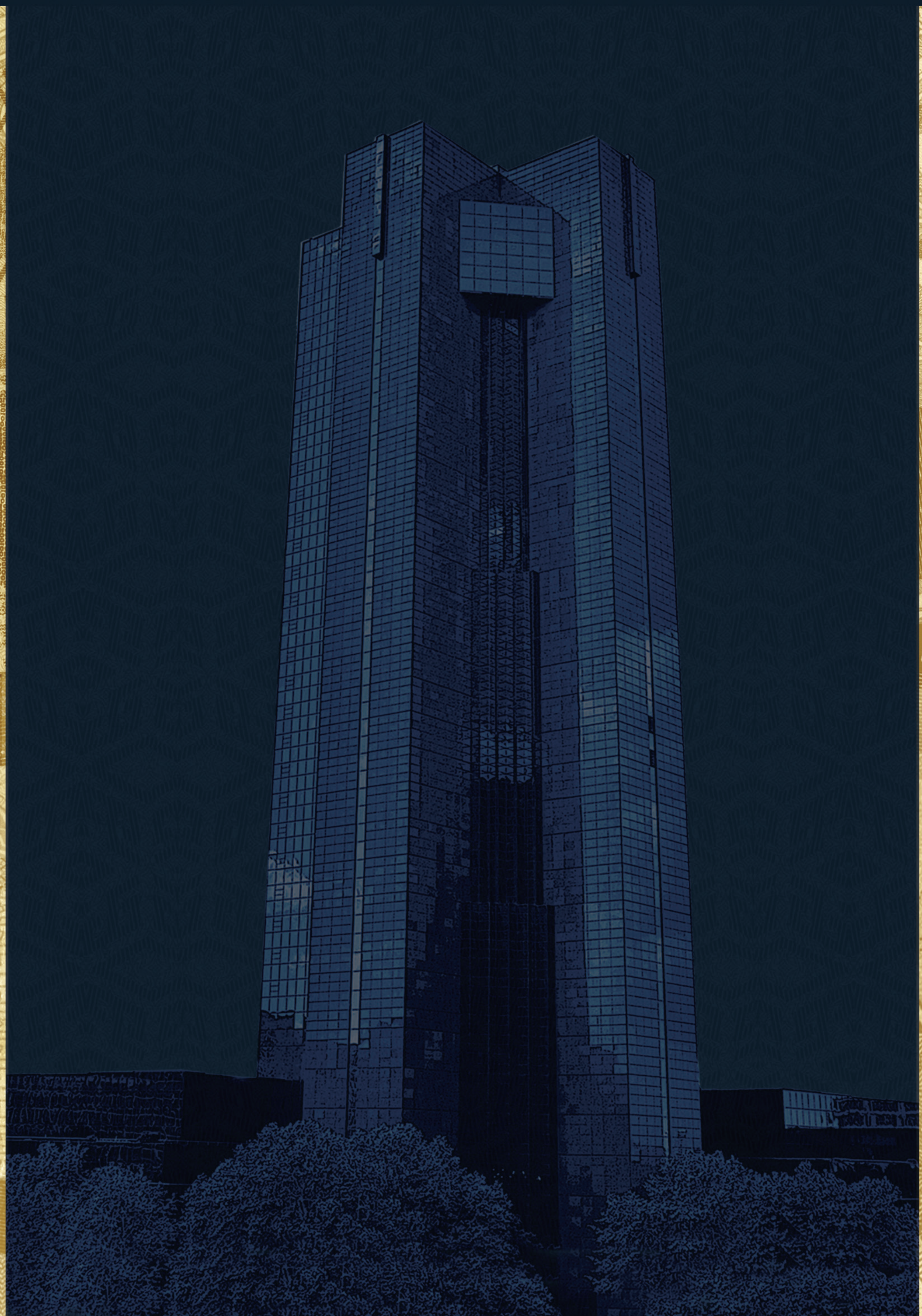
Monetary Policy Review

October 2017



South African Reserve Bank

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Preface

The primary mandate of the South African Reserve Bank (SARB) is to achieve and maintain price stability in the interest of balanced and sustainable economic growth. In addition, the SARB has a complementary mandate to oversee and maintain financial stability.

Price stability helps to protect the purchasing power and living standards of all South Africans. It provides a favourable environment for investment and job creation, and also helps to maintain and improve international competitiveness. The goal of price stability is quantified by the setting of an inflation target after consultation with the government. The SARB has full operational independence. Monetary policy decisions are made by the SARB's Monetary Policy Committee (MPC), which is chaired by the Governor and includes the deputy governors as well as other senior officials of the SARB.

The MPC conducts monetary policy to keep inflation within a target range of 3–6%. This inflation targeting-framework is flexible, meaning that inflation may be temporarily outside the target range, under certain circumstances. The MPC takes into account the time lags between policy adjustments and economic effects. This provides for interest rate smoothing over the cycle, and contributes towards more stable economic growth. The decision of the MPC, together with a comprehensive statement, is communicated at a media conference at the end of each meeting.

The *Monetary Policy Review (MPR)* is published twice a year and is aimed at broadening public understanding of the objectives and conduct of monetary policy. The *MPR* covers domestic and international developments that impact on the monetary policy stance. It is fundamentally a forward-looking document which focuses on the outlook for the South African economy, in contrast to the *Quarterly Bulletin* which records and explains recent economic developments. The *MPR* is presented by senior officials of the SARB at monetary policy forums in various centres across South Africa in an effort to develop a better understanding of monetary policy through direct interactions with stakeholders.

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Credibility and countercyclicality: monetary policy responses to lower inflation and low growth

Introduction

Inflation fell back to within the 3–6% target range in April and is expected to remain within the target range over the medium term. Inflation forecasts have improved during the year; headline inflation is now projected to average 5.3% in 2017, 5.0% in 2018 and 5.3% in 2019, while core inflation should be close to 5% for all three years. By contrast, the domestic growth outlook has deteriorated, despite a sustained acceleration in global growth. Lower inflation has created some space for monetary easing, permitting a reduction in the repurchase (repo) rate to 6.75% in July. Over the longer run, lower interest rates will require more sustained improvements in the inflation forecast.

The world economy has strengthened over the past year. The major advanced economies are experiencing synchronised recoveries: growth is running above potential in the euro area, Japan and the United States (US), and labour markets have tightened. Despite this reduced slack, inflation rates in these economies remain below targets. Monetary policy settings are therefore expected to remain broadly expansionary. Nonetheless, the degree of stimulus is likely to be reduced, with higher interest rates and balance sheet tapering in the US as well as a reduced pace of quantitative easing in the euro area.

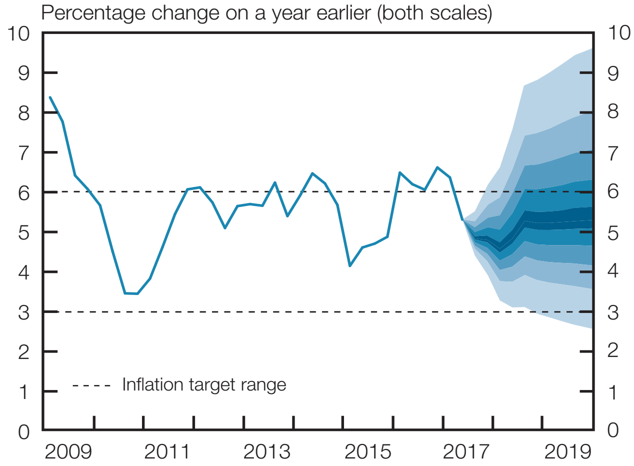
Emerging market growth has also improved. In particular, growth in China beat expectations in the first half of the year, interrupting a five-year deceleration trend. Other large emerging markets are also doing better, with Brazil and Russia out of recession and India rebounding from recent shocks (mainly demonetisation and uncertainty over a new tax system). Inflation rates have moderated significantly in most large emerging markets economies, permitting central banks to lower interest rates.

This environment has stoked a risk-on mood in global financial markets. Volatility has fallen to unusually low levels and the search for yield has intensified: equity valuations are high, bond yields remain low and capital flows to emerging markets have been robust. Exchange rates have also shifted. With the US no longer the sole major economy in recovery, the US Federal Reserve (Fed) is shedding its status as the only big central bank which is tightening policy. This change has already contributed to a less appreciated US dollar, with the Fed's broad dollar index down around 10% so far this year.

Despite this favourable combination of strong global growth and easy financing conditions, South Africa's economy remains stagnant. Output has been nearly unchanged over the past two years, and in per capita terms South Africans are poorer

Targeted inflation* forecast

Percentage change on a year earlier (both scales)

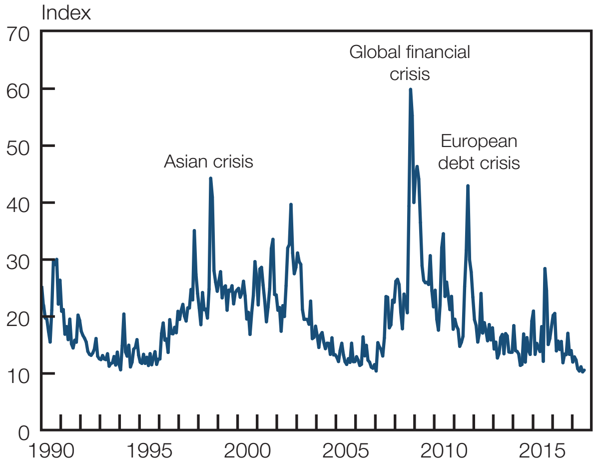


* CPI for all urban areas

Sources: SARB and Stats SA

VIX

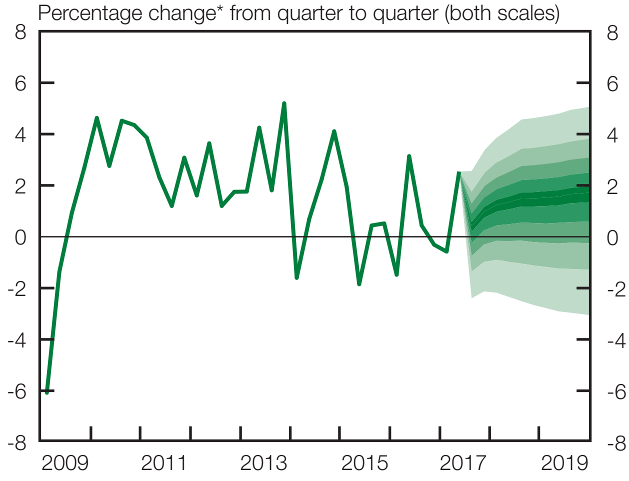
Index



Source: Bloomberg

Real GDP growth

Percentage change* from quarter to quarter (both scales)

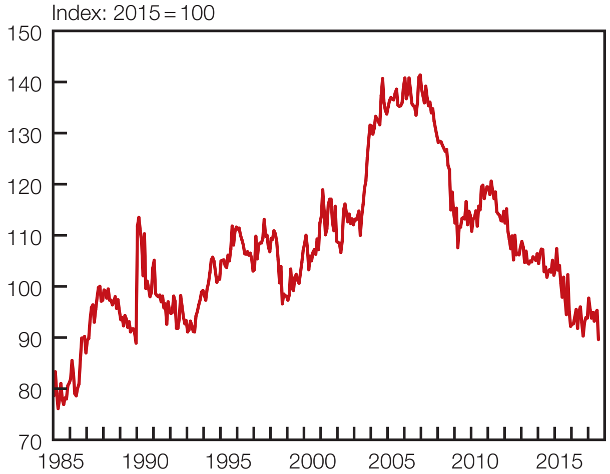


* At seasonally adjusted and annualised rates

Sources: SARB and Stats SA

Business confidence

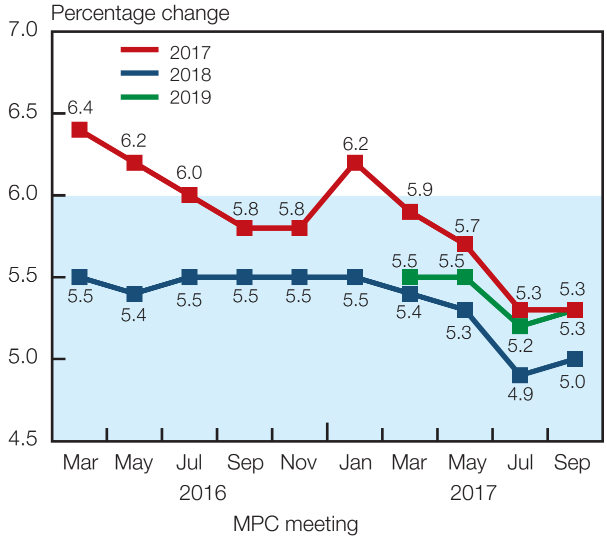
Index: 2015 = 100



Source: SACCI

Evolution of inflation forecasts

Percentage change



Source: SARB

than they were in 2014. The current account has narrowed sharply, mainly due to import compression. This has restored a degree of external balance to the economy, moderating South Africa's external vulnerability and contributing to a less volatile exchange rate. Yet reduced investment weakens the economy's growth potential: estimates now indicate trend growth has fallen below 1.5%, down from 3–4% in the 2000s. Furthermore, low growth has undermined National Treasury's fiscal consolidation plans. With public debt rising faster than planned, macroeconomic balance remains elusive.

Domestic growth has stalled because of political and policy uncertainty, which has depressed household and business confidence. Confidence indicators have been below longer-term averages since late-2015, when the serving finance minister was unexpectedly dismissed, and are currently about as low as they were during the global financial crisis. In these circumstances, investment has contracted and household consumption growth has slowed to a crawl. The forecast indicates a feeble recovery over the next two years, but even in 2019 expected growth barely exceeds 1.5%.

While the growth forecast has deteriorated over the course of the year, the outlook for consumer prices has improved. Inflation returned to within the target range in the second quarter of 2017, as forecast, and the extent of the deceleration has been somewhat better than first expected. The previous *Monetary Policy Review (MPR),* published in April 2017, anticipated inflation at 5.8% for the second quarter; in fact, inflation averaged 5.3%. The surprise was mainly due to exchange rate effects, with import prices falling abruptly. Inflation has also benefitted from reduced food price inflation and a temporary slowdown in electricity price increases.

The latest forecast suggests inflation will moderate to a low of 4.6% in the first quarter of 2018, before trending somewhat higher to average 5.3% in 2019. The uptick in inflation in the outer part of the forecast is explained by several factors. First, the electricity and oil price assumptions are higher for this period. Second, food and import prices are expected to normalise during 2018, following rapid increases in 2016 that have been largely reversed in 2017. Third, the forecast includes slightly stronger growth in 2018 and 2019, which narrows the output gap. Finally, persistently positive real wage gains put a floor under inflation, causing it to stabilise above 5% after the disinflationary shocks abate. Lower inflation over the next few quarters may help moderate inflation expectations, but the forecast already entails an historically low growth rate for unit labour costs (remuneration adjusted for productivity), and evidence for a stronger decline is still scarce.

Overview of the monetary policy stance

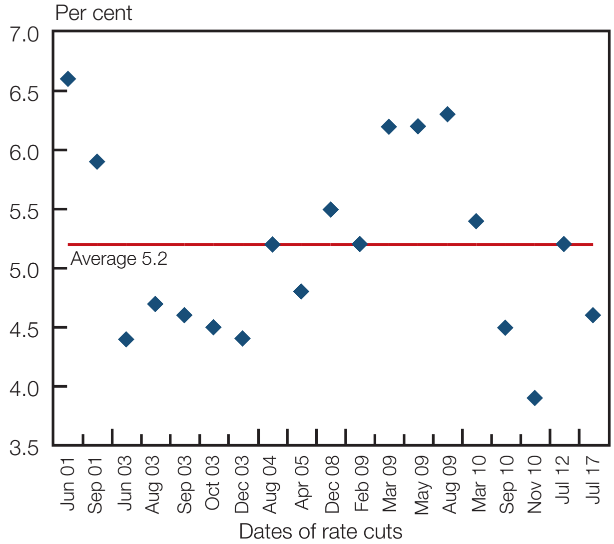
In recent years, monetary policy has confronted rising inflation alongside slowing growth. This dilemma has eased somewhat in 2017 because of lower inflation. However, the improvement in inflation has been repeatedly jeopardised by negative domestic shocks, such as downgrades by the ratings agencies as well as the Public Protector's proposed amendment to the South African Reserve Bank's (SARB) constitutional mandate. Furthermore, both inflation and inflation expectations have stayed well above the midpoint of the target range – even as global inflation rates have settled at historically low levels.

In these circumstances, successive Monetary Policy Committee (MPC) statements signalled first a pause, and then an end, to the policy tightening cycle. By July 2017, inflation had slowed enough to permit a quarter-point reduction in the repo rate – the first decrease since 2012. At this juncture, the four-quarter-ahead inflation forecast was down to 4.6%, close to the midpoint of the target range and below the average forecast at MPC meetings where rates have been cut historically. Additionally, because inflation rates had decelerated more rapidly than expected, real ex ante interest rates – defined as the nominal repo less projected inflation – had shifted abruptly higher. The July rate cut helped to moderate the real rate trajectory.

Inflation risks also looked more balanced in July, bolstering the case for lower rates. This judgement mainly reflected slower advanced economy inflation, implying major central banks could normalise policy more gradually than previously expected. Unfortunately, this favourable shift in the external environment was not matched by receding domestic risks. By the September MPC meeting, these risks had come more clearly into view. Forecast scenarios showed electricity price increases could add 0.2–0.3 percentage points to headline inflation, potentially prompting second-round effects. The exchange rate outlook also worsened, not least because disappointing fiscal revenues increased the probability of additional credit ratings downgrades. As a result, the overall inflation risk assessment skewed back towards higher inflation, curtailing space for another cut.

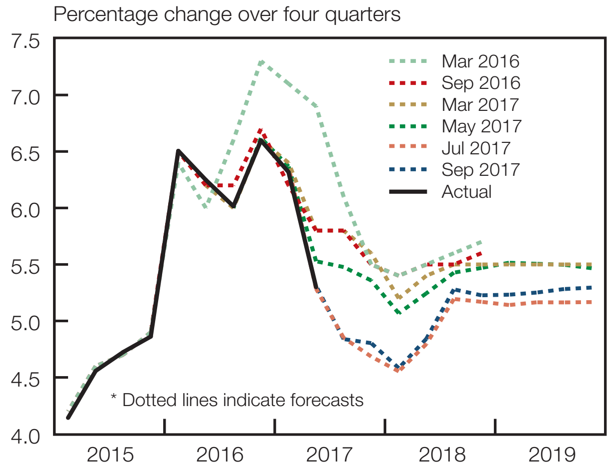
The medium-term challenge for monetary policy is to anchor inflation and inflation expectations more firmly within the inflation target. There are a range of costs to having inflation fluctuating at around 6%. One is that relatively high and volatile inflation keeps borrowing costs high; most other countries, including many of South Africa's peer emerging markets, enjoy lower interest rates as a result of having lower inflation. A related consideration is that South Africa's competitiveness suffers from relatively high inflation because local prices rise significantly faster than foreign prices. Advanced economies mostly target inflation of 2%, and emerging market targets are converging on targets in a range between 3–4%. This has made an implicit inflation target close to 6% increasingly uncompetitive. Finally, tolerating inflation around the upper

Four-quarter-ahead inflation forecasts for historical rate cuts



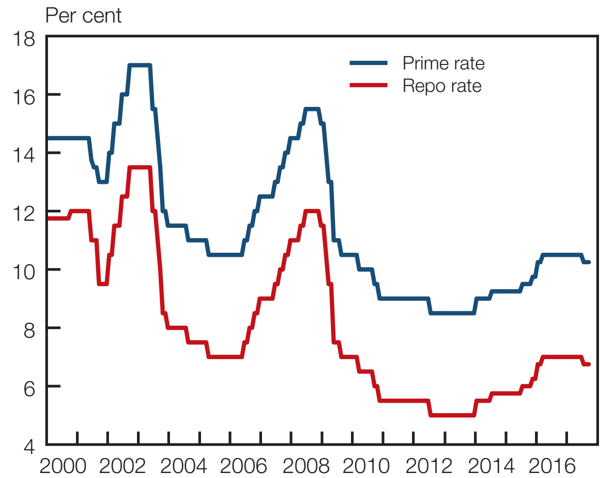
Source: SARB

Changes to the SARB's inflation forecast*



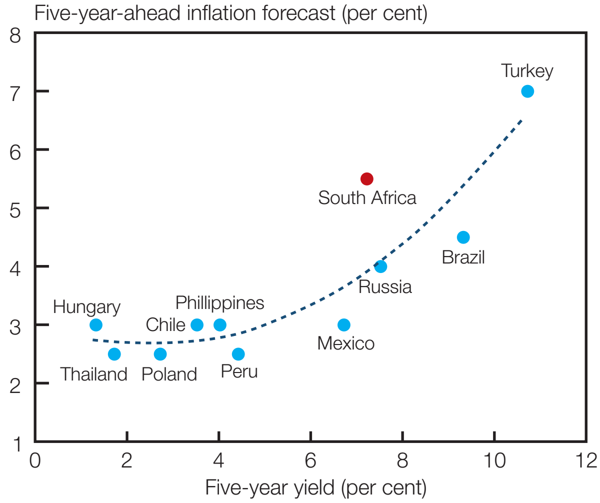
Sources: SARB and Stats SA

South African repo and prime rate



Source: SARB

Inflation expectations and borrowing costs



Sources: Bloomberg and IMF

end of the target range raises the probability of target misses, even though the target is already comparatively wide. These challenges can be overcome by lowering inflation towards the midpoint of the inflation target over time.

In the shorter term, monetary policy also has a countercyclical role to play. As the SARB has been communicating for some time, South Africa's economic stagnation over the past few years is largely due to a weak export response, high household debt stocks and falling investment caused by uncertainty. These problems have not been responsive to demand-side policies, including relatively low short-term interest rates. Yet some portion of the current slowdown is attributable to cyclical weakness, reflected in a negative output gap. The July interest rate cut is helping offset this demand shortfall, providing a measure of support to the economy at a difficult time.

The current monetary policy settings reflect these two objectives: lowering inflation so that it is securely anchored nearer the midpoint of the inflation target range, while exploiting available policy space to offset cyclical weakness in the economy. Together, these objectives serve the SARB's mandate to protect the value of the currency in the interest of balanced and sustainable growth.

Box 1 Introducing the Quarterly Projection Model

Inflation targeting is fundamentally forward-looking, and therefore requires forecasts. These forecasts are produced with the help of a suite of models. Since 2000, the Core Model[1] has served as the frontline model responsible for the headline growth and inflation forecasts. However, the Monetary Policy Committee (MPC) will soon be promoting the Quarterly Projection Model (QPM) to this position, while retaining the Core Model in a supporting role. This box provides an introduction to the QPM.[2]

At the heart of the QPM are four main 'gaps': output, inflation, the real exchange rate and the real interest rate. A shock to the economy will create gaps between the equilibrium and actual values of these variables.[3] In response, the model will produce a path that closes these gaps and brings the economy back into equilibrium. For example, if inflation rises above the target, the real interest rate will rise relative to its neutral level (following a Taylor rule – see Box 3). This appreciates the exchange rate and dampens domestic demand, widening the output gap. Inflation then falls back to the target, and the interest rate ultimately returns to its neutral value.

One virtue of the QPM is its simplicity. It is a popular misconception that econometric models are black boxes, with economists inputting data and relying on the models for the results. However, models are merely inputs into the forecasting process. They assist economists by ensuring consistency between various assumptions and interactions. Because judgement is also a significant input in forecasting, model simplicity supports clarity of thought and transparency.

Another advantage is that in the QPM, the exchange rate and the repurchase (repo) rate adjust endogenously to economic events. By contrast, the convention with the Core Model has been to keep the repo rate fixed at the level decided at the previous MPC meeting. Similarly, the real effective exchange rate is assumed to remain stable across the forecast. Because these variables do not respond to changes in the economic environment, forecasts from the Core Model do not always reflect the most likely outcomes. Rather, they provide an indication of economic developments in the absence of monetary policy changes. By contrast, the QPM has the repo rate follow a Taylor rule, while the exchange rate responds to an uncovered interest parity condition. This means the QPM should produce more accurate forecasts.

The QPM does, however, pose some communication challenges. In particular, the projected path for the repo rate should not be seen as a policy commitment, and at times the MPC may set rates differently (for instance, if the MPC believes there are skewed risks to the forecast). Exchange rate forecasts will also typically be wrong in the shorter term, simply because of market volatility. However, these challenges have been surmounted by the many other central banks that use QPM-style models, and should prove as manageable in South Africa.

1 D Smal, C Pretorius and N Ehlers, 'The core forecasting model of the South African Reserve Bank', *South African Reserve Bank Working Paper Series No. WP/07/02*, June 2007.

2 B Botha, S de Jager, F Ruch and R Steinbach, 'The quarterly projection model of the SARB, *South African Reserve Bank Working Paper Series No. WP/17/01*, September 2017.

3 Generally speaking, the economy is in equilibrium when supply equals demand. Equilibrium in the QPM is when output is at potential and inflation is on target.

Box 2 Interpreting estimates of the South African neutral real interest rate

The neutral real interest rate (NRIR) is a central concept in monetary economics. It is defined as the interest rate consistent with stable inflation and an economy operating at full potential. If policy is above the neutral rate, everything else being equal, inflation falls and growth slows, while a policy rate below neutral has the opposite effect. For this reason, the NRIR is the basis for characterising a given policy stance as expansionary, contractionary or neutral.

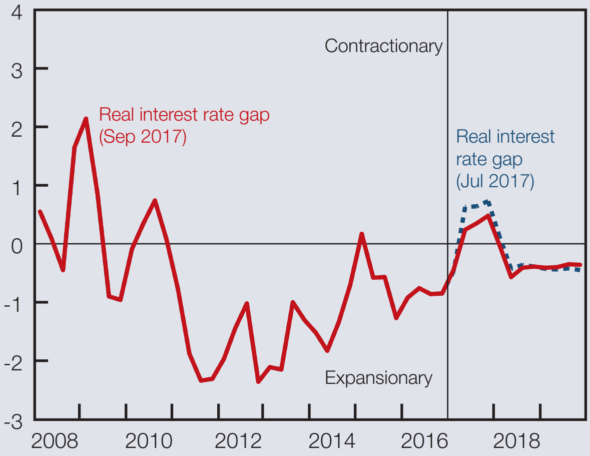
Unfortunately, the neutral rate is difficult to specify with much certainty. Unlike other indicators of economic activity, such as gross domestic product, unemployment or inflation, it is unobservable and therefore has to be estimated. There are various methods for doing this, ranging from simple historical averages or a Hodrick-Prescott filter to more complex econometric techniques. These methodologies yield a broad range of estimates; for instance, internal research has generated point estimates for 2015 that range from -1.5% to 2%. The South African Reserve Bank's Quarterly Projection Model (QPM) (described in Box 1) uses an estimate constructed from the global real neutral rate, a country risk premium and changes in the equilibrium real exchange rate. This approach suggests the NRIR is currently around 1.5%. More recent research applying the methods pioneered by Laubach and Williams yields similar conclusions.[1]

The imprecision of NRIR estimates means policymakers have to use them cautiously. However, the available research supports several substantive conclusions. First, over the course of inflation targeting, monetary policy has mostly been either neutral or expansionary. Different estimates generally concur that episodes of tight monetary policy have been few and short-lived (see figure). Second, the neutral rate in South Africa has fallen significantly in the post-crisis period, which is consistent with the experience of other countries. Third, as the inflation rate slowed in mid-2017, the real interest rate moved briefly above neutral. This helped motivate the Monetary Policy Committee's July rate cut.

1 L Kuhn, F Ruch and R Steinbach, 'Reaching for the (r)-stars: estimating South Africa's neutral real interest rate', paper presented at the biennial conference of the Economic Society of South Africa, 30 August–1 September 2017.

Real interest rate gap

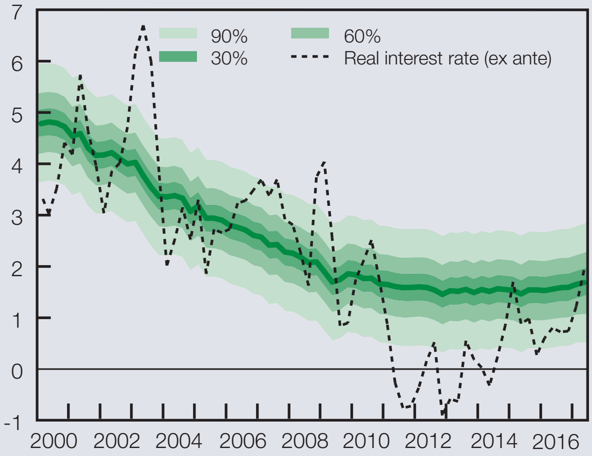
Per cent



Source: SARB

NRIR and its uncertainty

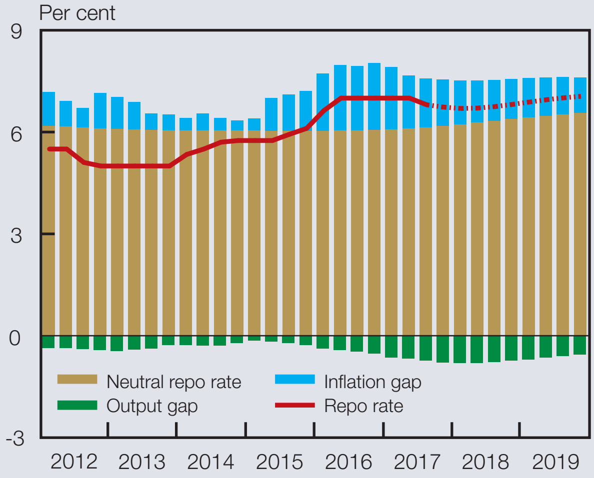
Per cent



Source: SARB

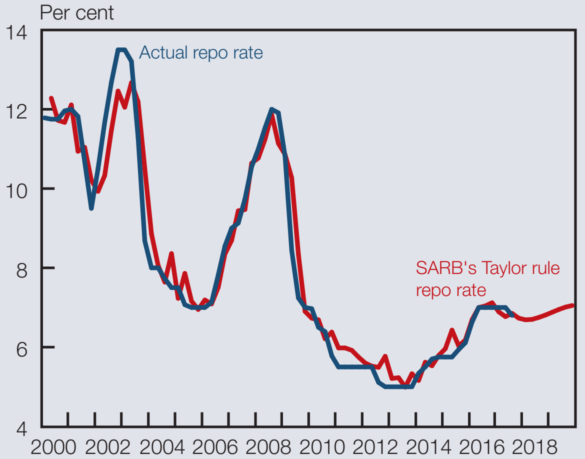
Box 3 The Taylor rule: 'look what you made me do'[1]

Decomposition of the Taylor rule repo rate



Source: SARB

Actual repo rate compared to Taylor rule guideline



Source: SARB

Taylor rules offer simple guidelines for monetary policy decisions. They are named after the economist John Taylor, who showed that interest rate decisions by the United States Federal Reserve usually followed a straightforward rule-of-thumb based on inflation and growth.[2] Taylor-type rules have since been developed for many countries, and are widely consulted by central banks, academic economists and analysts.

The South African Reserve Bank's Quarterly Projection Model (QPM – see Box 1) allows the policy rate to adjust to changing conditions following a Taylor-type rule.[3] This rule starts with a neutral rate of interest (described in Box 2). Policy then moves from the neutral rate based on how far expected inflation is from the target (inflation gap) and how far growth is from potential (the output gap).[4] The QPM Taylor rule also has a large smoothing parameter, which means previous interest rate decisions influence the future rate path. This reduces the volatility of the rate forecast, keeping it in line with actual policy behaviour.

The QPM Taylor equation is not necessarily the best guide to South African monetary policy. The weights assigned to the different variables in the rule may be contested. The equation also does not explicitly distinguish between supply- and demand-side shocks. Finally, estimates of the true neutral rate or the actual potential growth rate are uncertain. For these reasons, the Taylor rule is just one of many inputs into policy decisions.

Those caveats aside, assessing policy against the Taylor rule yields several points. One is that policy decisions do not focus exclusively on inflation; a Taylor rule with a zero weight for growth does not fit the data. Rather, monetary policy plays a countercyclical growth role, and it does this more firmly when inflation is well behaved. Second, if the smoothing parameter is relaxed, the Taylor rule indicates the actual repo rate was below the Taylor rule level through much of the post-crisis period. This may reflect overestimation of the output gap at the time. It also suggests monetary policy was making an unusually large effort to raise growth – albeit without much success. Finally, the Taylor rule predicted a decrease in the repo rate in the third quarter (although it smoothed the adjustment over the entire quarter, not being obliged to wait for MPC meetings or to move in discrete 25 or 50 basis point increments). Once this adjustment was achieved, the model saw no need for an additional cut. Indeed, over the forecast period, it shows rates rising again in 2019, which is due to the combination of a less negative output gap, a higher neutral rate (mainly given higher interest rates in advanced economies) and a persistent overshoot of the model's longer-run 4.5% target.

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1 Actually, we are responsible for our own actions. This is not a Taylor Swift rule.

2 J B Taylor, 'Discretion versus policy rules in practice', 1993, available at http://web.stanford.edu/~johntayl/Papers/Discretion.PDF.

3 The precise QPM Taylor rule is as follows:

$$i_t = 0.79 i_{t-1} + (1 - 0.79)\{i_t^* + 1.57\,[\tfrac{1}{3}\,(E\pi_{t+3} + E\pi_{t+4} + E\pi_{t+5}) - \pi^*] + 0.54(y_t - y_t^*)\} + \varepsilon_t$$

where the nominal repurchase rate (i_t) is modelled as the sum of the past nominal repurchase rate, lagged by one quarter (i_{t-1}); the neutral nominal repurchase rate (i_t^*); the forward-looking CPI inflation gap $(E\pi_{t+3} + E\pi_{t+4} + E\pi_{t+5}) - \pi^*$; and the output gap $(y_t - y_t^*)$.

4 In the QPM rule, the target is set at 4.5%, the midpoint of the 3–6% range. The model requires a point target because it cannot solve for an entire target range. For forecasting purposes, the MPC has chosen to use the middle of the target range as that point.

A global economic upswing

Global growth has accelerated since the previous MPR, making the current upswing the most sustained of the post-crisis period. Previously identified risks to the world economy have also receded: China, in particular, appears to have averted an abrupt slowdown. Yet the recovery is still missing two important pieces. First, inflation rates in advanced economies remain stubbornly below targets, delaying the process of monetary policy normalisation. Second, productivity growth continues to be very subdued, with long-run implications for living standards.

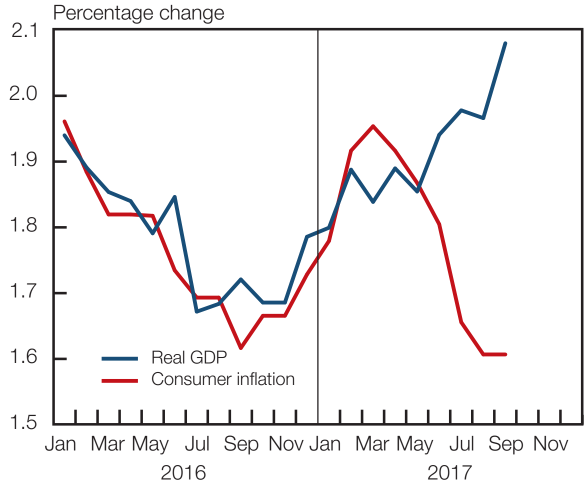
Advanced economies: more growth than inflation

At the beginning of 2017, advanced economy growth and inflation forecasts were more or less equally promising. Growth was running above potential and output gaps were nearly closed, while labour markets appeared to be near full employment. With little or no spare capacity remaining in these economies, inflation rates seemed likely to stabilise at targeted levels. This left the way open for central banks to normalise policy to prevent inflation from overshooting.

In recent months, growth projections have improved further, particularly in Japan, the euro area and Canada – but inflation forecasts have shifted down again. Lower inflation has been partly due to lower energy prices, yet inflation and wages are also not reacting as expected to full employment and higher growth. The historical relationships between these variables may yet re-emerge, producing upside inflation surprises. At this moment, however, advanced economy central bankers face the possibility that the normal transmission mechanism of monetary policy has weakened.

In the US, growth should exceed 2% annually for the 2017–2019 period, although substantial fiscal stimulus now appears unlikely. Unemployment remains very low, having fallen as low as 4.3% in July 2017 – below most estimates of the 'natural' rate of unemployment. Broader measures of labour market health are similarly encouraging: for instance, quit rates and job opening rates are back at pre-crisis levels. The US recovery since the global financial crisis has not been the fastest on record but it has been one of the longest, having so far lasted more than nine years. Although this suggests a recession is overdue, over the post-war period the duration of recoveries has not been an effective predictor of their remaining lifespan: expansion phases have not died of old age.[1]

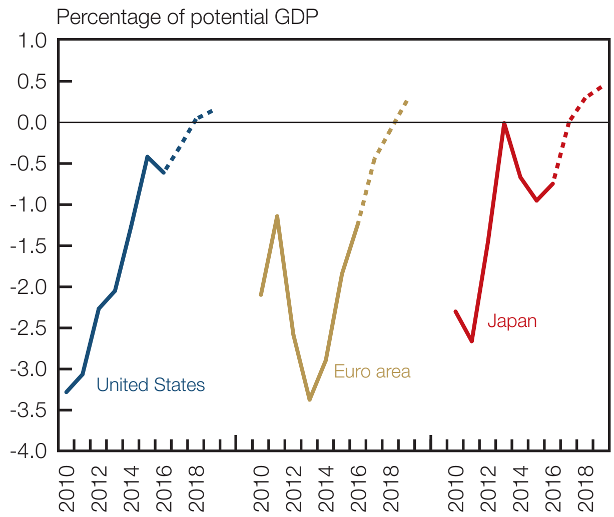
Evolution of forecasts for 2017 growth and inflation for G3 economies*



* Weighted using 2016 PPP GDP weights

Sources: Consensus Economics, IMF and SARB

Output gap

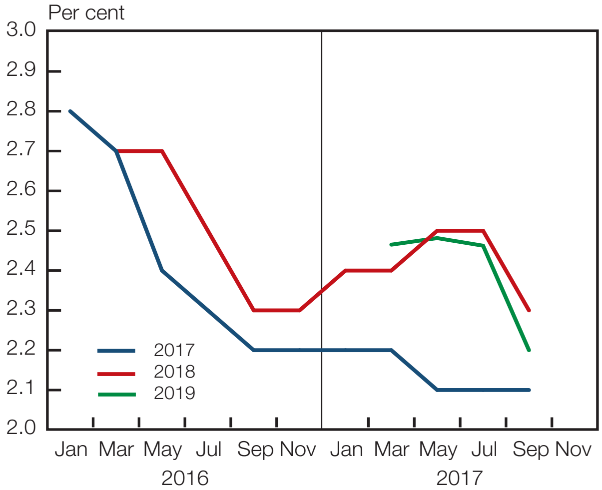


Source: SARB

1 G D Rudebusch, 'Will the economic recovery die of old age?', *FRBSF Economic Letter No. 2016-03*, 8 February 2016.

Evolution of US real GDP forecasts

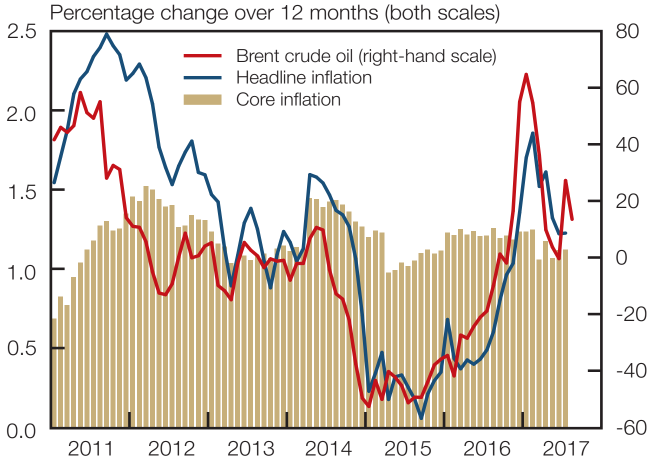
Per cent



Sources: IMF and SARB

G3 inflation* and energy prices

Percentage change over 12 months (both scales)

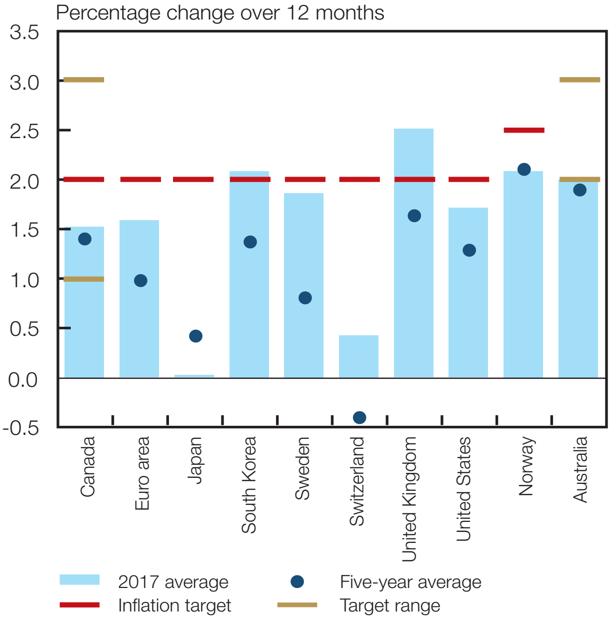


* Weighted by purchasing power parity

Sources: Bloomberg and SARB

Targeted inflation

Percentage change over 12 months



Sources: Haver and respective central banks

While the US has been the best-performing major advanced economy through much of the post-crisis period, Japan and the euro area have recently matched its performance. In both these cases, growth is now expected to peak this year at levels close to 2%, before reverting to trend levels in 2018 and 2019 (the International Monetary Fund (IMF) expects 1.6% for the euro area in both these years, and 0.6% and 0.9% for Japan). The Japanese economy is enjoying its longest expansion phase in more than a decade (and the third-longest in its post-war history), and unemployment has fallen to just 2.8% of the workforce, with the number of jobs available now exceeding applicants by 50%. Euro area growth has been stronger than Japan's, and the region has also outpaced the US over the past two years (with output up 4.1% since the middle of 2015, versus 3.5% in the US). Euro area unemployment, however, remains elevated at nearly 9%, although it has fallen from crisis-era peaks and is now back at 2005 levels (if not the 2007/08 trough of almost 7%).

Despite stronger growth, inflation rates in all these economies have slowed. In the US, personal consumption expenditure (PCE) inflation overshot the Fed's target in February, reaching 2.2%, but it has since shifted lower, to 1.4% in July. Similarly, core inflation peaked at 1.9% in January 2017, but has now slumped back to 1.5%; it has been more than five years since core inflation was above 2%. Inflation rates in the euro area have been lower still. Headline inflation also peaked in the first half of the year, reaching 1.9% in April (and 2.3% in Germany), but subsided to 1.4% in May. Japanese inflation remains close to zero, as it has for three decades.

Reflecting on these trends, it is clear a surge in oil prices was responsible for higher inflation in the first few months of the year. More broadly, supply shocks of one type or another explain most of the increases in advanced economy inflation over the post-crisis period. Japan's year of above-target inflation was caused by a value-added tax (VAT) increase; less idiosyncratically, super-loose monetary policies have transmitted to inflation mainly through exchange rates. This is an unreliable basis for achieving inflation targets. Not all countries can depreciate at the same time. Furthermore, supply shocks are necessarily temporary and will drop out of inflation measures after 12 months – unless they change broader wage and price-setting behaviour.

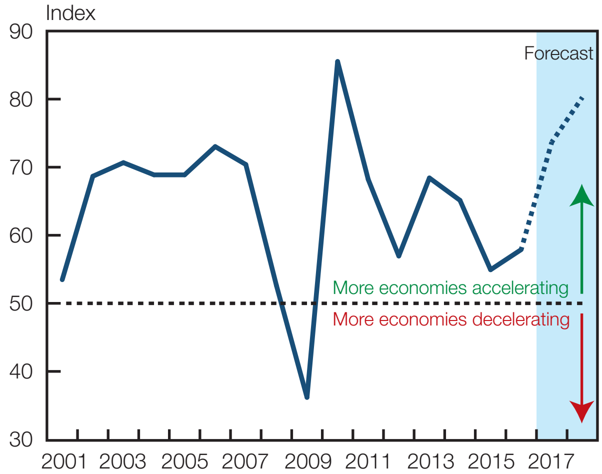
To achieve inflation targets more consistently, advanced economy central banks need wage growth and aggregate demand to generate stronger price pressures. There are several reasons why this may not be happening. As the Japanese example demonstrates, labour markets can become extremely tight without sparking inflation. This may be because additional labour demand is met with higher labour force participation, meaning the labour supply adjusts instead of the price. Alternatively, conditions of employment may improve instead of wages, for example, through a part-time post becoming permanent. More broadly, labour shares of output have fallen in many economies, so labour markets have less influence on economy-wide prices than they used to.[2] Furthermore, globalisation and other supply-side advances may be exerting enough disinflationary force to overwhelm demand-side factors.[3]

Although longer-term inflation expectations appear to be on or close to target in most advanced economies, central banks tend to be more pessimistic. The European Central Bank (ECB) staff forecast indicates inflation will be at 1.6% in 2019, while the Bank of Japan projects inflation at 1.5% by March 2019 (compared with targets of 2% in both cases). The Fed's 'dot plot' is an exception, with the median inflation projection at 2% for 2018 and 2019. Market participants, however, expect a markedly lower path for inflation and the federal funds rate.

Emerging market growth accelerating

Emerging market economic growth accelerated in the first half of 2017. The IMF's *World Economic Outlook* forecasts indicate further improvements in emerging market performance, with overall growth rising to 4.6% in 2018 and 4.8% in 2019, from 4.3% in 2016. India's economy appears to be returning to growth rates over 7%, following the demonetisation shock of late-2016 – in which almost 90% of the cash in circulation was declared invalid – as well as uncertainties over the new General Sales Tax system. China's economy has beaten expectations over the first two quarters of the year, with growth averaging 6.9%. Short-term indicators point to a slowdown in Chinese growth in the second half of 2017, explained by fading fiscal stimulus and new policy measures to slow debt accumulation and contain property prices. Over the medium term, growth is likely to be close to the government's 6.5% goal, although the sustainability of this growth depends crucially on debt stabilising.

Diffusion index of GDP growth in emerging market countries



Sources: IMF and SARB

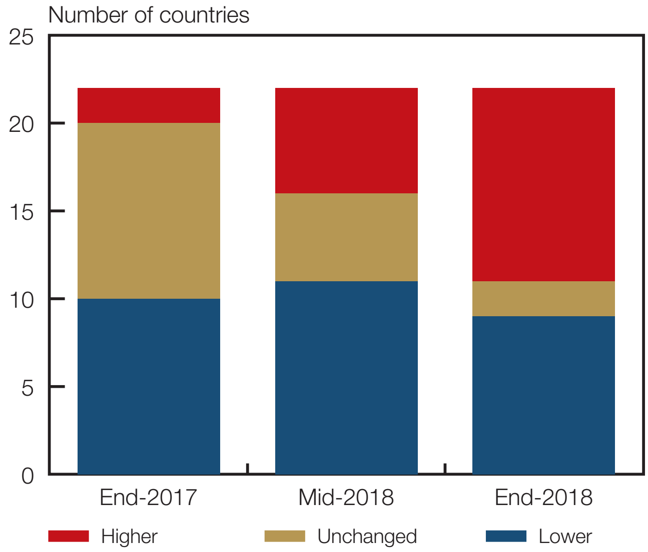
There are relatively few exceptions to the emerging market acceleration trend. One is Brazil: first-quarter data suggested the economy was finally recovering, but growth slowed again in the second quarter amid a resurgence of political uncertainty. Gross domestic product (GDP) is still about 8% below the 2014 peak. Another is Venezuela, which is experiencing the worst economic crisis in its history, with output down around 35% since 2013. Growth in sub-Saharan Africa appears to be picking up from 2016's long-term low (of 1.3%), but projections are still well below the longer-term trend (at 2.7% for 2017 and 3.5% for 2018, according to the IMF, versus a 2000–2015 average of 5.5%).

Inflation in major emerging markets has slowed this year, concluding a period in which many economies grappled with above-target inflation. For instance, inflation in Brazil decelerated from 6.3% in 2016 to just 2.7% as of July 2017. Indian inflation reached 2.4% in July, from 4.5% in 2016; and Russian inflation fell to 4.4% in June, from a 2016 average of 5.4%. With inflation rates now generally below targets, emerging market central

2 International Monetary Fund, *World Economic Outlook,* Chapter 3, April 2017.

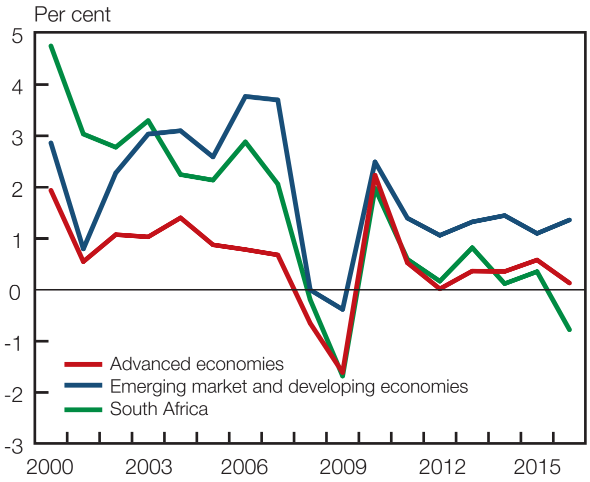
3 Bank for International Settlements, *Annual Report 2016/17*, 2017.

Consensus forecasts for changes in emerging market policy rates



Source: Bloomberg

Total factor productivity



Sources: IMF and SARB

banks have had room to cut rates. Analysts' forecasts suggest rates will, on balance, decline further until mid-2018, although the trend reverses course in the second half of that year with a plurality of central banks expected to raise rates again.

The productivity problem

For all the optimism engendered by the global upswing, there is still little evidence of rising productivity growth. Productivity represents how efficiently the factors of production are used. It is usually measured as the portion of growth left unexplained after accounting for changes in capital or labour, although it is also often discussed in terms of output per worker (i.e. labour productivity). Productivity growth matters because it is the most important determinant of long-run living standards. Furthermore, as demographic factors start to constrain labour force growth in most parts of the world, it will become increasingly difficult to achieve robust economic growth without a productivity recovery.

In advanced economies, productivity growth has slowed from about 1% annually in the pre-crisis era to just 0.2% since then. In emerging markets, productivity growth has also decelerated, from 2.8% between 2000 and 2007 to 1.1% post-crisis. It remains above advanced economy levels, however, due to emerging markets' distance from the productivity frontier. Chinese labour productivity, to take one example, is still less than a quarter of US labour productivity, despite several decades of rapid growth.

There are various explanations for lower productivity growth. One school of thought emphasises the lingering effects of the global financial crisis (so-called productivity hysteresis). For instance, the crisis may have left corporate balance sheets too weak to fund adequate research and development. Alternatively, capital may have been misallocated from its best uses, perhaps into unwanted houses, with lasting consequences. It is also possible that demand has been too feeble to elicit productivity-enhancing investments. A different class of explanations relies on longer-term trends, such as aging workforces, slowing international trade integration or a fading information technology boom.[4] One notable version of this argument holds that the productivity-enhancing inventions which transformed living standards between about 1870 and 1970 were simply superior to more recent technological gains: electricity and indoor plumbing helped more than Twitter and Siri.[5] The opposing view is that a fourth industrial revolution, based on robots and biotechnology, will still deliver transformative productivity gains.[6]

4 For details on slowing productivity see G Adler, R A Duval, D Furceri, S Kiliç Çelik, K Koloskova and M Poplawski-Ribeiro, 'Gone with the headwinds: global productivity', *International Monetary Fund Staff Discussion Note No. SDN/17/01*, April 2017.

5 R J Gordon, 'The rise and fall of American growth: the US standard of living since the civil war', 2016.

6 K Schwab, 'The fourth industrial revolution: what it means, how to respond', January 2016, available at https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/.

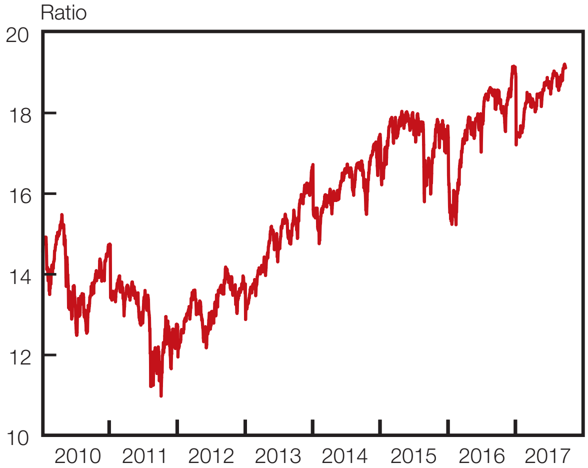
Global risks

There are a range of risks to the current global outlook. One of the most important is advanced economy inflation. Upside inflation surprises could shift policy expectations abruptly, affecting capital flows worldwide – a scenario discussed in more detail in the financial markets chapter of this *MPR*. A second major risk is China's growth trajectory. Better growth outcomes in the first half of the year were paid for with more debt and larger financial sector imbalances. The political cycle now favours stabilising the financial system, even at the price of somewhat lower short-term growth. This adjustment is likely to be carefully controlled, but long-standing fears of a 'hard-landing' remain valid. A third risk, which has intensified lately, is the possibility of conflict on the Korean peninsula, which would massively disrupt the fastest-growing part of the world economy.

Conclusion

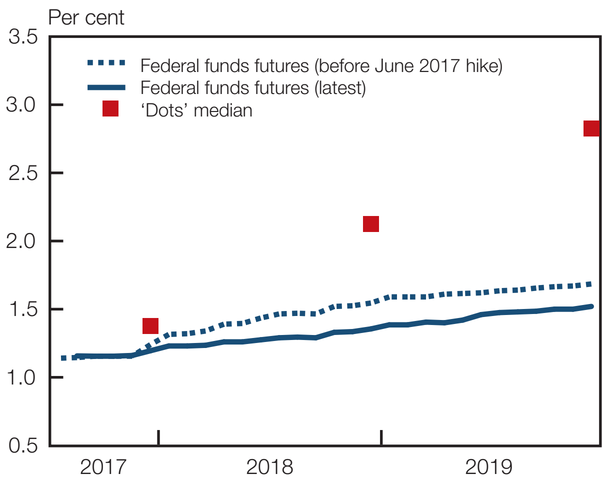
The SARB's forecasts anticipate global growth will peak this year, at 3.4%, before slowing marginally to 3.3% for 2018 and 2019. Inflation is projected to pick up in advanced economies, on average getting close to, but not above, targets. Short-term interest rates will therefore rise moderately, but remain below longer-term averages. This suggests global conditions will remain favourable, sustaining what has been the best and broadest world recovery since the global financial crisis.

Forward-looking price earnings ratio of the S&P 500



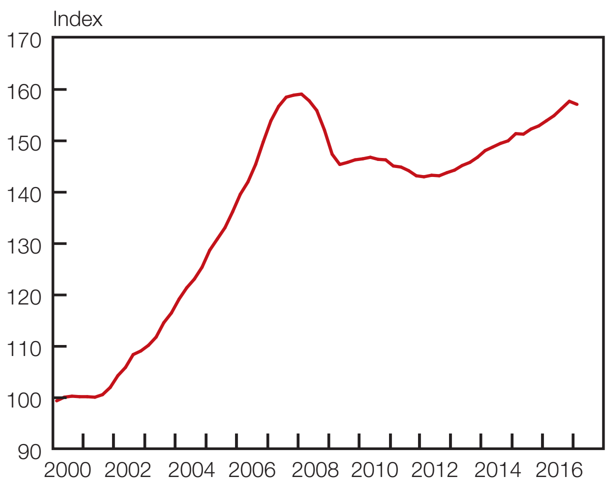
Source: Bloomberg

FOMC median forecast and implied market projections for the federal funds rate



Source: Bloomberg

Global house prices



Source: IMF

Favourable global financial conditions

The global financial backdrop remains favourable. Riskier assets – including emerging market assets – are benefitting from stronger global growth, muted volatility and very low advanced economy interest rates. These conditions have supported South African financial assets. Nonetheless, South Africa has not performed as well as its emerging market peers, reflecting adverse domestic factors.

Low volatility and low interest rates

Global economic growth has picked up, but inflation in advanced economies is still very low. Investors expect major central banks to keep policy expansionary for an extended period, which is fostering a mix of buoyant financial asset performance and unusually low levels of volatility (only briefly interrupted by shocks such as weapons tests by North Korea). These conditions may foment complacency; historically, periods of ultra-low volatility have preceded crises.[7] For the time being, however, the world financial environment is good for growth and uncommonly forgiving of domestic weaknesses.

In contrast to the 'taper tantrum' period of mid-2013, financial markets have confronted the prospect of advanced economy monetary policy normalisation with a degree of equanimity. In the US, market participants judge it unlikely that the Fed will hike interest rates more than twice by the end of 2018 – whereas the Fed's own median projections (the 'dots') still imply four more increases over this period. Similarly, interest rate futures indicate only even chances of a higher ECB deposit rate next year.

As a result, interest rates in advanced economies remain very low. Long-term US yields have declined again and the yield curve has flattened, helped by market expectations that the Trump administration is unlikely to deliver meaningful fiscal stimulus. Core eurozone bond yields are lower still, while peripheral spreads have narrowed. Other asset prices are also elevated. The US Standard & Poor's 500 (S&P 500) Index, for instance, reached an all-time high in September, with its cyclically-adjusted price earnings ratio above 2008 levels. Global house prices are also back at around 2008 levels – although evidence of excessive leverage is restricted to a few smaller economies.

Emerging market assets have outperformed their advanced economy counterparts this year. Local currency debt markets have mostly benefitted from lower inflation and corresponding monetary easing, while equities have narrowed their valuation gap (relative to expected earnings) with advanced markets. Emerging markets may yet prove vulnerable to a faster-than-expected pace of policy normalisation by major central banks.

7 J Danielsson, M Valenzuela and I Zer, 'Learning from history: volatility and financial crises', *Federal Reserve Board Finance and Economics Discussion Series No. 2016-093*, October 2016.

However, their fundamentals have improved markedly in recent years and asset valuations appear much less stretched than they were, for example, in 2013.

The euro has continued to strengthen in recent months, buoyed by a sustained economic recovery and market-friendly election outcomes. Meanwhile, stronger prices of raw materials have resulted in an outperformance of commodity currencies, while emerging market currencies have generally sustained early 2017 gains. Of course, for one currency to appreciate another must weaken. In recent months, much of the depreciation pressure has been absorbed by the US dollar, which has weakened by about 9% so far this year (measured against a broad basket of currencies).

Global factors supporting domestic markets

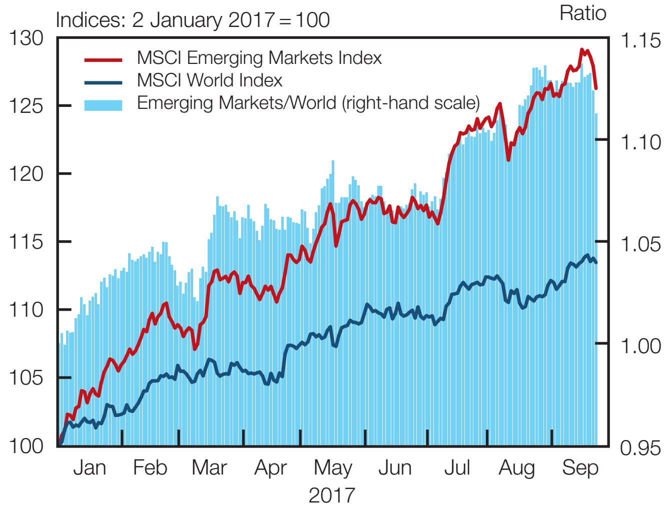
Favourable global conditions have helped limit the impact of domestic problems on South African financial markets. Despite a series of shocks over the past six months, the rand has followed a relatively stable trend, the sovereign yield curve has shifted lower and the JSE All-Share Index has gained around 6%. Nonetheless, South African assets have not performed as well as their emerging market counterparts.

In March 2017 the rand reached R12.30 to the US dollar, a substantial recovery from the January 2016 low-point of almost R17 to the dollar. It depreciated abruptly again following the cabinet reshuffle and subsequent credit ratings downgrade, falling close to R14 to the dollar in early April, but has since recovered some of these losses. However, the rand's gain of nearly 2% versus the US dollar since the start of the year has fallen short of a 6% rally in the JPMorgan Emerging Markets Currency Index over the same period.

Over this same six-month span, the South African sovereign yield curve has shifted lower. The curve has also steepened, with yields declining by around 80 basis points at the short end of the curve, but only about 40 basis points at the long end. These changes are partly explained by lower inflation, with more movement at the short end because near-term inflation projections have fallen more than longer-term expectations. Yet global influences have also been important. South Africa's long-term yields have been strongly correlated with their US counterparts this year, with South African fixed income securities attracting positive net portfolio inflows totalling US$3.96 billion in the first eight months of 2017 (according to the Institute of International Finance).

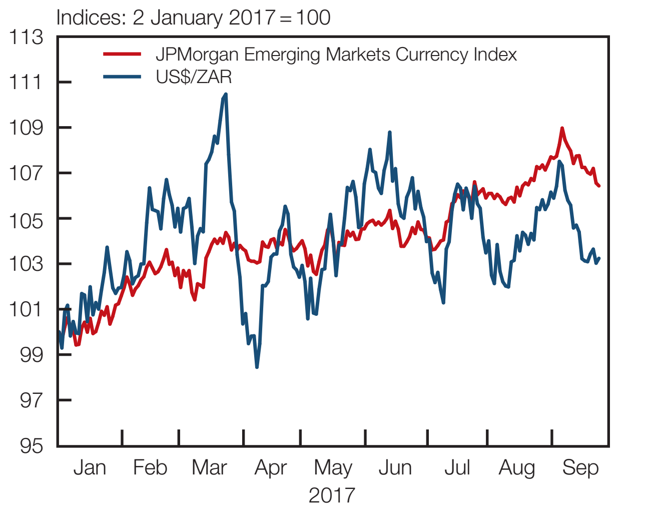
The JSE All-Share Index has rallied in the third quarter of 2017, helped in part by the more favourable interest rate environment. The index nonetheless continues to underperform emerging market peers (in US dollar terms). Furthermore, much of its gains are explained by a few large firms with significant foreign exposure; an adjusted version of the index which excludes these firms is more consistent with South Africa's weak growth outlook.

Emerging market equities versus global counterparts



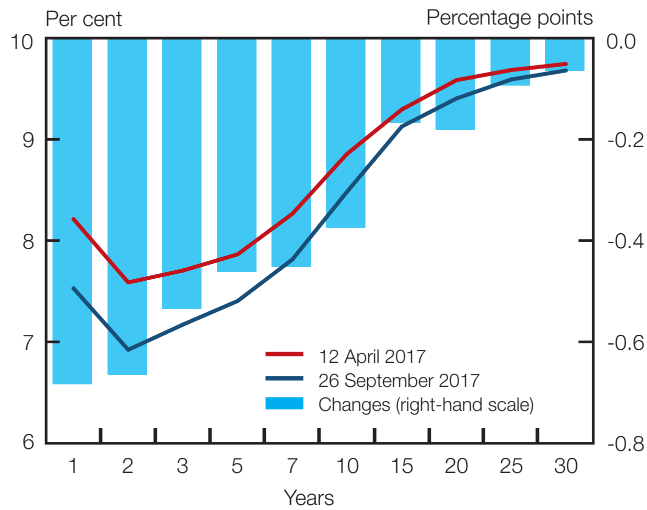
Source: Bloomberg

Currencies



Source: Bloomberg

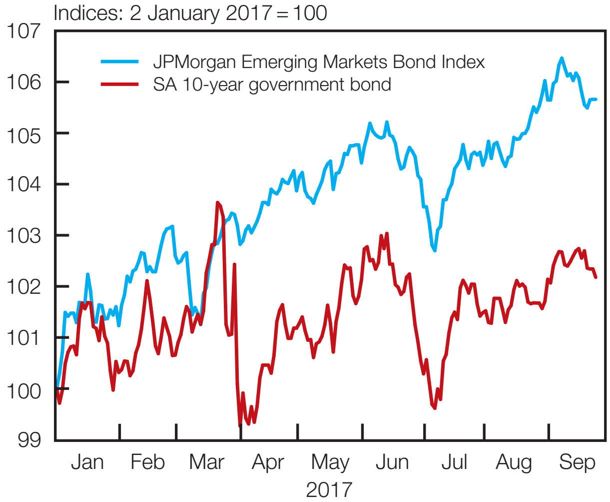
Yield curve



Source: Bloomberg

Bond prices

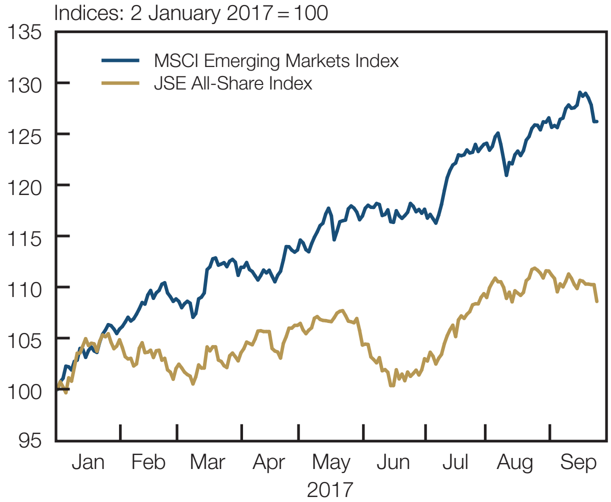
Indices: 2 January 2017 = 100



Source: Bloomberg

Equity prices

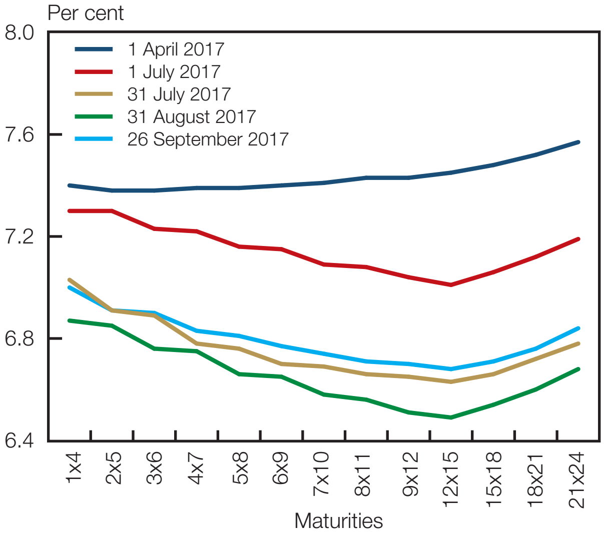
Indices: 2 January 2017 = 100



Source: Bloomberg

Forward rate agreements

Per cent



Source: Bloomberg

Market expectations for monetary policy

Market expectations for near-term interest rates have fallen steadily over the past six months. In April, following the downgrades, investors anticipated further rate increases over the next two years; three months later, they were pricing in cuts. This downward shift followed the data, with both inflation and growth surprising on the downside. The July repo rate cut prompted short-rate expectations to decline further, with forward rate agreements (FRAs) fully pricing in a 50 basis point reduction in the repo rate over the following 12 months – although about a quarter of this fell away following the September meeting. The FRA curve also angles back up for the period 12–24 months ahead, suggesting that investors do not see scope for a more extended cutting cycle.

Risks

Global asset prices remain vulnerable to the repricing of a variety of risks. On the global front, a reassessment of the prospective pace of monetary policy normalisation could easily steepen yield curves and raise risk premiums on a variety of assets. In addition, central banks' balance sheets are likely to shrink over the coming years, with the Fed leading the process. While the Fed has signalled its intent to proceed gradually and in a policy-neutral way, a process it hopes will be 'like watching paint dry', the consequences of balance sheet reduction for bond yields remain unknown.[8] Finally, while private sector leverage in advanced economies appears to be under control (with the exception of a few small economies), equities and corporate debt look expensive relative to fundamentals – especially in the US – and could sell off in response to disappointing growth or corporate profit developments.

Similarly, on the domestic front, asset prices appear vulnerable to both a repricing of global risk and a deterioration in South Africa's credit standing. The exchange rate has been relatively stable at levels markedly stronger than at the start of 2016. Local-currency bond yields – especially their inflation expectation component – do not appear to offer much of a buffer against potential upside inflation surprises. Furthermore, the forward-looking price-earnings ratio of the JSE All-Share Index remains well above long-run norms. The present stability, therefore, may prove brittle.

8 'Transcript of Chair Yellen's Press Conference', 14 June 2017, p17, available at https://www.federalreserve.gov/mediacenter/files/ FOMCpresconf20170614.pdf.

Real economy: a low growth trend

Over the past three years, the economy has adjusted away from unsustainable levels of foreign borrowing towards lower domestic expenditure and lower imports. However, this rebalancing has been achieved mainly through slower growth, with adverse consequences for living standards and fiscal consolidation. Despite volatility in the quarterly numbers, South Africa's underlying growth trend is likely to remain low over the forecast horizon. Moreover, potential growth has fallen further – a direct consequence of weak investment. Escaping these circumstances will require restoring business and household confidence and implementing reforms that raise potential growth.

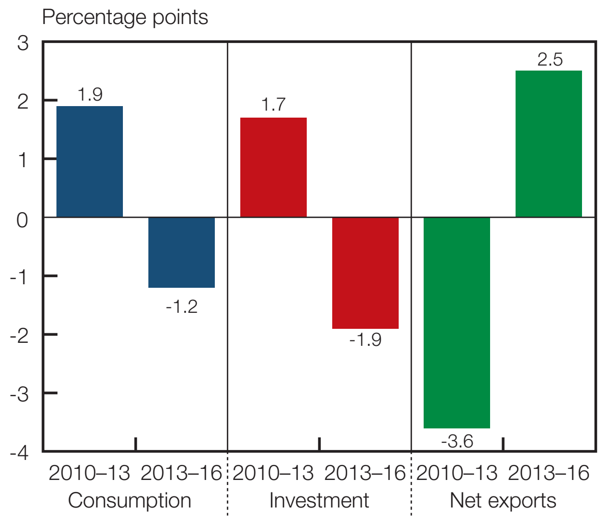
Post-crisis shifts in the composition of GDP

South Africa's post-crisis economic history divides neatly into two periods. Between 2010 and 2013, stimulatory fiscal and monetary policies bolstered demand. This absorbed all the locally available savings as well as large quantities of foreign capital. Both consumption and investment expanded as a share of total output, while net exports contracted as imports boomed. The growth response proved weak, however, with the current account and fiscal deficits becoming unsustainably large relative to output.

In the second period, which should probably be dated from the May 2013 'taper tantrum', it became clear that foreigners would not support this scale of borrowing indefinitely. Weakening capital inflows and currency depreciation prompted policy course corrections through fiscal consolidation and some monetary tightening. Shocks (such as the drought and leadership changes at the Ministry of Finance) also intensified during this second period, severely depressing confidence levels. In response, the composition of output shifted back towards lower shares for domestic consumption and investment, as well as higher net exports.

The burden of the adjustment was borne more by lower imports, not higher exports, and more by investment than consumption. The result was a low-quality, incomplete adjustment: the economy has not so much changed course as stalled. Given the current forecasts, the composition of output is likely to shift further away from investment and imports. This may keep the current account deficit under control, but a growing share for investment and exports would be altogether preferable.

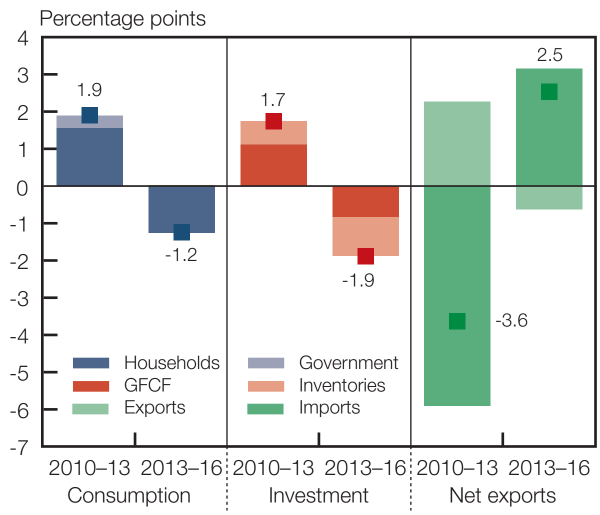
Changes* in the composition of total output



* These figures are calculated as follows: in 2010 consumption constituted 79.2% of total output, and by 2013 it was 81.1%, a 1.9 percentage point increase.

Sources: SARB and Stats SA

Breakdown of the compositional change in output



Sources: SARB and Stats SA

Box 4 Why is South Africa missing out on the global recovery?

South African output growth usually follows world growth, but the two have diverged in the post-crisis period. This box quantifies the drivers of South Africa's underperformance.[1] The most important factors have been subdued confidence and lower real commodity prices; had these variables instead followed their longer-run averages, 2016 domestic growth would have been about 2%. By contrast, fiscal and monetary policy settings do little to explain the slowdown.

Historically, there has been a relatively strong relationship between global and domestic growth: between 1996 and 2016, a 1% increase in global growth increased the level of South African output by 0.94%. Of course, various other factors affect local growth. This exercise considers five such variables: the real effective exchange rate (as a measure of competitiveness), commodity prices, fiscal and monetary policy settings and consumer confidence (as a proxy for confidence more generally).

It is possible to quantify the discrete impacts using a counterfactual scenario in which these variables are at their longer-run (1996–2013) averages. In this scenario, global growth is closer to 4%, commodity prices are higher in 2015 and 2016, the rand is stronger and confidence levels are neutral. Growth is therefore 2.1% in 2016 – as opposed to an actual outcome of 0.3%. Much of the gap is due to declining confidence: had this variable alone been at average levels, growth would have been 1.4% instead.

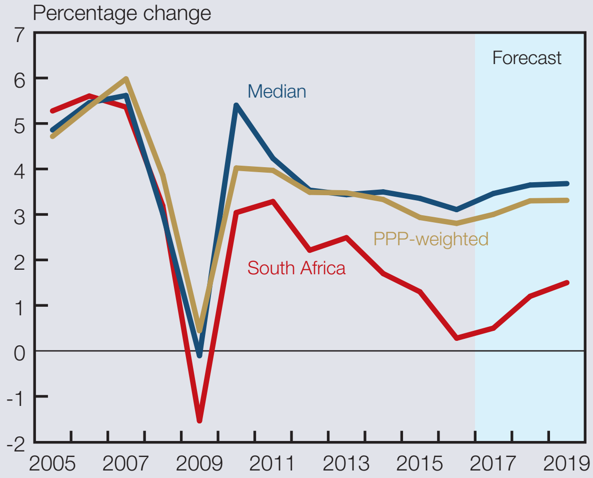
Impact on domestic growth over 2014–2016, with drivers at historical averages

Percentage change

	2014	2015	2016
GDP at market prices	1.70	1.30	0.28
Growth additions with the following variables at 1996–2013 averages:			
Global growth	0.14	0.15	0.37
Real commodity prices	-0.43	0.11	0.55
Real effective exchange rate	-0.05	0.13	-0.37
Confidence	0.43	0.99	1.15
Real interest rates	0.00	-0.04	-0.04
Fiscal balance	-0.02	-0.29	0.13
What total growth could have been	1.77	2.35	2.06

World growth versus South African growth

Percentage change



Sources: IMF, SARB and Stats SA

This exercise demonstrates the costs of policy uncertainty and the importance of restoring confidence. It also raises another problem. The model results suggest that 'normal' growth is around 2%, which is below the longer-run 3% trend and less than half the National Development Plan aspiration of 5% or more. Evidently, normalising confidence would not be enough to achieve healthy growth rates. Rather, this would require a structural reform agenda, including lowering prices in network industries and raising investment towards 25% of GDP.[2]

1 Based on a forthcoming Economic Note in the *South African Reserve Bank Occasional Bulletin of Economic Notes* by T Janse van Rensburg and E Visser titled 'Decoupling from global growth: is confidence becoming a scarce commodity?'.

2 See for instance D Faulkner, C Loewald and K Makrelov, 'Achieving higher growth and employment', *South African Reserve Bank Working Paper Series No. 13/03*, 2013, available at http://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/5806/WP1303.pdf; and F Groepe, 'Structural reform to promote economic growth', 2013, available at: https://www.resbank.co.za/Lists/Speeches/Attachments/380/Address%20by%20Deputy%20Governor%20%20Francois%20Groepe%20at%20the%20UNISA%20Economics%20Seminar.pdf.

South Africa's growth outlook

The previous edition of the *MPR* looked forward to a mild growth rebound over the 2017–2019 period. However, much of this recovery has been revised away. The original projections correctly anticipated a recovery in the primary sector, based on higher commodity prices and the end of the drought. However, they did not incorporate either the technical recession at the beginning of the year or the credit ratings downgrades that followed the March cabinet reshuffle. Given weaker confidence and a lower starting point, the latest growth forecast is lower by 0.6 percentage points for 2017 and 0.5 percentage points for both 2018 and 2019, relative to the March forecasts.

Expenditure components* of real GDP

Annual percentage change

Components	Actual		SARB forecast		
	2015	2016	2017	2018	2019
Household consumption.......	1.7	0.8	1.0	1.1	1.4
			1.4	*1.3*	*1.8*
Government consumption	0.5	2.0	0.5	1.0	1.0
			1.0	*1.0*	*1.0*
Investment...........................	2.3	-3.9	-0.4	0.6	1.1
			0.2	*1.6*	*2.0*
Exports................................	3.9	-0.1	2.2	4.0	4.1
			0.2	*3.8*	*3.8*
Imports................................	5.4	-3.7	3.8	3.2	3.1
			1.6	*2.7*	*2.8*
GDP	1.3	0.3	0.6	1.2	1.5
			1.2	*1.7*	*2.0*

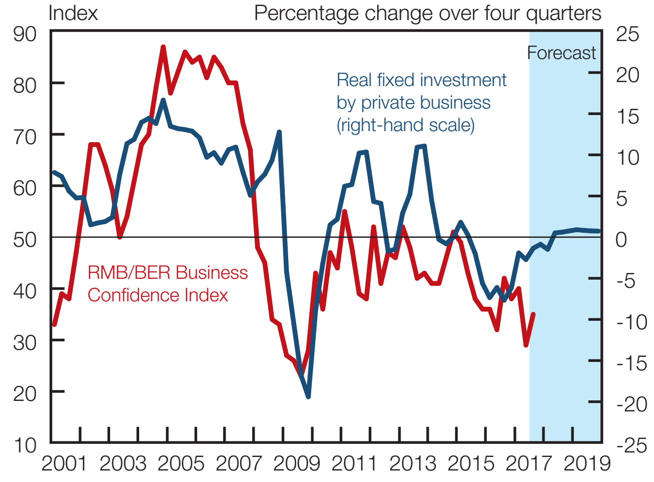
* Note: Previous estimates are in italics

Sources: SARB and Stats SA

According to the Bureau for Economic Research (BER), confidence readings for businesses have reached their lowest levels since the global financial crisis. In the most recent surveys, 65–70% of respondents expressed dissatisfaction with business conditions, with more than 50% of respondents expressing pessimism in every sector surveyed. The South African Chamber of Commerce and Industry (SACCI) Business Confidence Index provides starker results still, with confidence now at its lowest point since 1985. Consumer confidence is also subdued: the First National Bank/Bureau for Economic Research (FNB/BER) index is below global financial crisis levels, and has been since 2015.

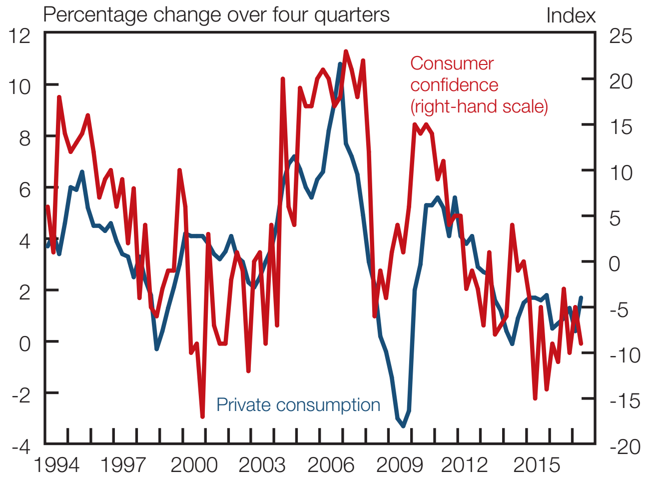
The ongoing weak confidence episode is mainly attributable to political uncertainty. The BER's manufacturing survey confirms this point: the share of respondents identifying the 'general political climate' as the biggest constraint to their business has been rising for several years. The proportion now stands at 87%, making political conditions the single greatest problem identified in the survey, above both weak demand and skills constraints. This is also the highest level of concern about the political environment in the survey's history.

Business confidence and investment



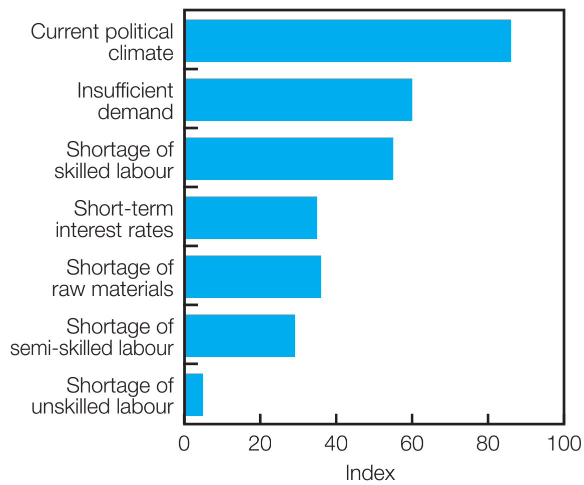
Sources: RMB/BER, SARB and Stats SA

Consumer confidence and private consumption



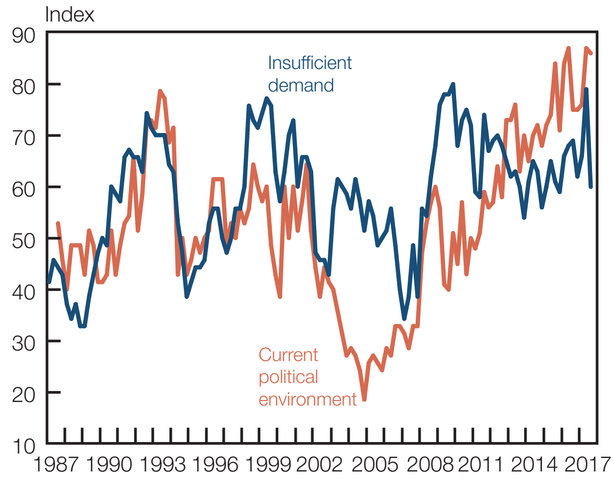
Sources: FNB/BER and Stats SA

Major constraints to the manufacturing sector in the third quarter of 2017



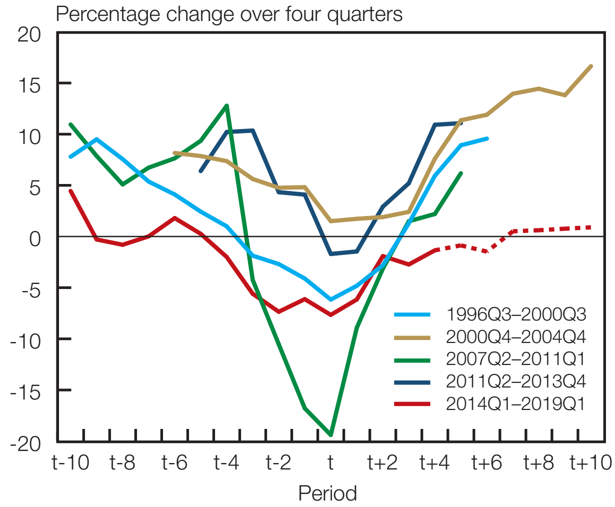
Source: BER

Evolution of major constraints to the manufacturing sector



Source: BER

Historical downturns in private investment



Sources: SARB and Stats SA

Investment

The historical evidence is clear that investment in South Africa is highly responsive to uncertainty.[9] Accordingly, total real fixed investment is expected to contract by 0.4% in 2017. Despite this low base, the recovery further out in the forecast is slight, with investment expanding by 0.6% in 2018 and 1.1% in 2019 – below the rate of GDP growth. If realised, this would be the most feeble investment recovery of the past two decades.

The private sector provides the largest portion of total investment, accounting for around two-thirds of the investment stock. It is also expected to remain the weakest component of investment growth over the forecast horizon, contracting for a third year in 2017 before returning to marginally positive growth in 2018 and 2019.

Investment by state-owned enterprises (SOEs) is also depressed. In recent years, SOEs have struggled to spend their investment budgets, leaving investment forecasts for this subsector too high. SOEs are now also encountering financing constraints; for example, Transnet experienced an undersubscribed bond auction this year. Finally, major investment projects (such as Eskom's new power stations) are nearing completion, and there are no new projects of comparable size to replace them. Given these considerations, SOE investment is projected to contract again in 2017, before expanding slightly in 2018 and 2019 (with 0.5% and 1% growth in those years respectively).

General government is expected to provide the one source of positive investment growth for 2017. National and provincial investment budgets have been protected from fiscal consolidation measures, leaving scope for additional investment.

Gross fixed capital formation

Annual percentage change

	Actual		SARB forecast		
	2015	2016	2017	2018	2019
General government	13.4	1.1	6.0	2.0	2.0
Public corporations	6.0	0.7	-2.0	0.5	1.0
Private business enterprises	-1.4	-6.8	-1.7	0.1	0.8
Total	2.3	-3.9	-0.4	0.6	1.1

Sources: SARB and Stats SA

9 See T Ajam and J Aron, 'Fiscal renaissance in a democratic South Africa', *Centre for the Study of African Economies Working Paper Series No. 10,* 2007, available at http://EconPapers. repec.org/ RePEc:csa:wpaper:2007-10; and J W Fedderke, 'Sustainable growth in South Africa', *Economic Research Southern Africa Policy Paper No. 20*, November 2010, available at https://econrsa. org/system/files/publications/ policy_papers/pp20.pdf.

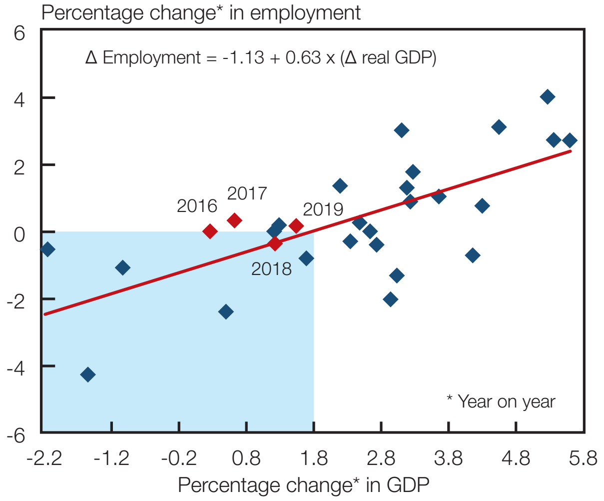
The 2016 starting point is also unusually low.[10] This should permit general government investment to expand by 6.0% in 2017 – and the year did in fact begin strongly, with this category growing 6.3% in the first half of the year compared with the same period in 2016.

Household consumption

Household consumption growth dipped to 0.8% in 2016, but is expected to average 1% this year, followed by 1.1% growth in 2018 and 1.4% in 2019. The improvement from 2016 is mainly due to lower inflation as well as some real wealth gains. The main story, however, is that consumption growth is likely to be very weak across the forecast horizon – well below the post-1994 average of 3.4%. There are several reasons for this disappointing outlook.

Disposable incomes are being squeezed by tax increases – both from a higher top tax rate and from bracket creep. Furthermore, unemployment is likely to increase. The recent rise in unemployment recorded by Statistics South Africa (Stats SA) is due to rising labour force participation and not net job losses; employment has actually risen over the same period. Yet the private sector typically only employs more people when GDP growth is roughly 2% or more, while government hiring remains frozen. The outlook for employment therefore remains bleak. Finally, household consumption remains constrained by high debt levels. Lending growth is also suffering from weak consumer confidence as households defer borrowing for larger purchases (such as cars and houses).

Private sector employment and real GDP



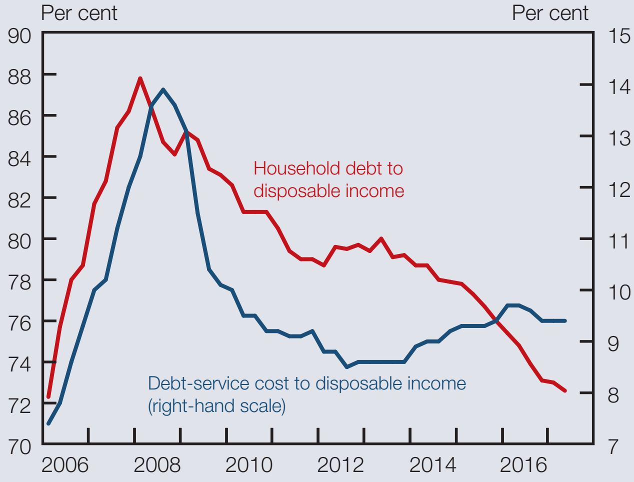
Intercept is -1.1 which suggests that if real GDP growth is zero, annual private sector employment could decline by 1.1%. This suggests annual real GDP growth must grow by more than 1.8% to generate positive private sector employment growth.

Sources: SARB and Stats SA

10 It is not completely clear why government investment slowed abruptly in 2016, but the single biggest contribution seems to have come from a contraction in general government grants made to provinces for building social infrastructure (such as schools).

Box 5 Household deleveraging by income groups

Household debt and debt service costs



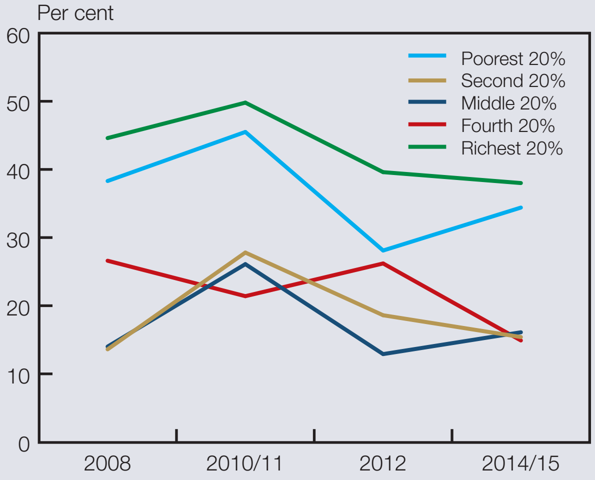
Source: SARB

Household debt grew rapidly before the global financial crisis, peaking in 2008 at around 90% of disposable incomes. Since then, households have been deleveraging. As a result, debt ratios are now back at 2006 levels of around 70% of incomes – although they remain well above longer-run averages.

The debt hangover from the boom has been an important contributing factor to the post-crisis slowdown. Although it is unlikely that borrowing will resume in the present low-confidence environment, at some point the credit cycle will turn – with significant consequences for growth, inflation and the monetary policy transmission mechanism. Yet our understanding of debt dynamics is based on high-level data, which provide only a superficial account of deleveraging behaviour. New research gives us a better sense of which income quintiles are reducing debts and also improves our understanding of policy impacts.[1]

Data from the National Income Dynamics Study (NIDS),[2] a survey that follows individuals over time, show the top two income quintiles have deleveraged the most, relative to 2008. From 2010/11, some deleveraging becomes visible among all income groups. Debt outstanding is, predictably, very different across the income quintiles. Conditional on having formal debt, the average (median) outstanding loan for the richest 20% was R118 293 (R32 115) in 2014/15, while that of the poorest 20% was R7 426 (R2 000) in 2014/15. The debt ratios of the top and bottom quintiles are nonetheless the highest: the ratio for the richest 20% was 45% in 2014/15, against 38% for the poorest. (These levels are not comparable with those described at the start of this box given the usual problem of surveys not reaching a representative sample of wealthier people. The trends are nonetheless similar.)

Average formal debt to income ratios



Sources: SALDRU and SARB

According to the NIDS data, the share of households with debt has increased during the post-crisis period. Nonetheless, for indebted households the average outstanding formal debt has fallen from R80 460 in 2008 to R54 719 in 2014/15 (in nominal rands). This implies that more households are borrowing, but they are borrowing smaller amounts. The mix of more loans but smaller overall debts means the overall deleveraging trend is not broad-based, but rather a consequence of reduced big-ticket loans.

This pattern is explained by the disproportionately slow growth of mortgages in the post-crisis period.[3] Because new mortgages have been relatively scarce, the stock of mortgage debt is still dominated by pre-crisis loans. Given that the value of these debts is fixed in nominal terms, whereas incomes have roughly matched inflation, deleveraging has occurred almost automatically over the ensuing

1 Based on a forthcoming paper by A Bosch and M Günther titled 'Debt deleveraging in post-crisis South Africa'.

2 Southern Africa Labour and Development Research Unit (SALDRU), 'National Income Dynamics Study 2014–2015', 2017, available at http://www.nids.uct.ac.za/ (accessed 9 June 2017).

3 This also fits the fact that richer households have deleveraged most: just 5.5% of all households in the NIDS data hold a mortgage loan, compared to nearly 25% in the top quintile.

decade.[4] As a result, the ratio of mortgage debt to incomes has fallen from nearly 70% in 2008 to under 50% in 2014/15. This suggests a new upswing of the credit cycle could be led by mortgage lending.

The data also offer insight into the contribution of monetary policy to deleveraging. In theory, the link is ambiguous. Lower interest rates could facilitate deleveraging by lowering interest burdens. However, cheap money should also incentivise demand for credit. By this logic, higher rates would encourage deleveraging. The data indicate that a higher repurchase (repo) rate has indeed promoted deleveraging, but only for the upper income quintiles. This may be because poorer households have less scope to reallocate income to debt repayment. Alternatively, poorer households likely borrow at larger spreads over the repo rate, so the incentive effect could be diluted. These findings are consistent with other studies, which have found that monetary policy pass-through differs between income groups.[5] The effect on deleveraging is nonetheless small, and much less significant than the decline in real mortgage debt stocks since the crisis.

4 The NIDS data show that average incomes have increased from R104 228 to R120 461 between 2008 and 2014/15.

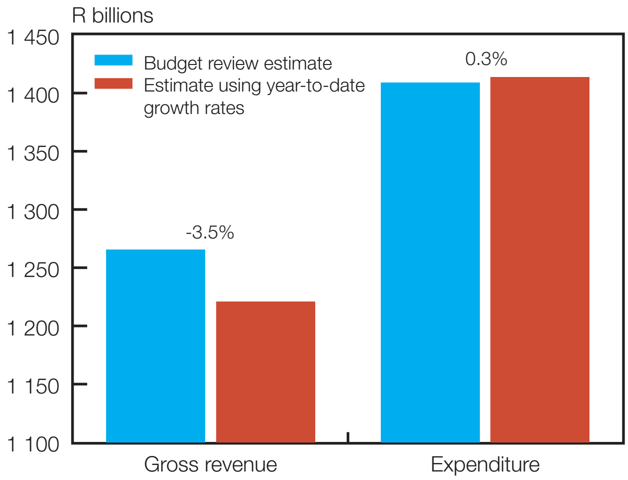
5 See, for example, R Ramcharan, A Kermani and M Di Maggio, 'Monetary policy pass-through: household consumption and voluntary deleveraging', *Meeting Papers No. 256: Society for Economic Dynamics*, 2015.

Government and fiscal consolidation

National treasury has committed to a fiscal consolidation programme to stabilise debt levels, which have already doubled from their pre-crisis starting point. Consolidation has slowed the growth rate of government spending: having expanded by an annual average real rate of 4.5% between 2000 and 2007, and 3.1% between 2010 and 2013, government consumption has grown by just 1.0% annually since 2014. The SARB's forecast indicates narrowly positive growth this year (0.5%) followed by 1.0% growth in 2018 and 2019.

Although spending has remained on target, revenue collection has been undermined by low economic growth and weakening tax compliance, causing repeated misses of deficit targets. Should revenue continue to grow as it has in the first four months of the fiscal year, it would be about 4% (more than R40 billion) lower than Budget 2017 estimates. The fiscal deficit would therefore likely widen by over 1% of GDP (to around 4.5%, from a Budget 2017 goal of 3.5% of GDP in 2017/18). This presents a range of unappealing choices. Larger spending cuts may further weaken growth, yet the scope for increased taxation is limited. Furthermore, additional borrowing would take debt ratios closer to unsustainable levels and divert even more expenditure into interest payments. The 2017 *Medium Term Budget Policy Statement (MTBPS)*, which will be presented by the finance minister on 25 October 2017, will provide more clarity on the fiscal path in these difficult conditions.

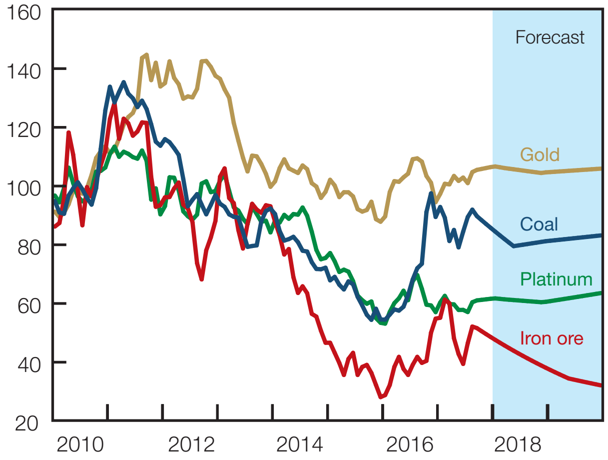
Government revenue and expenditure (2017/18)



Sources: National Treasury and SARB

Commodity prices

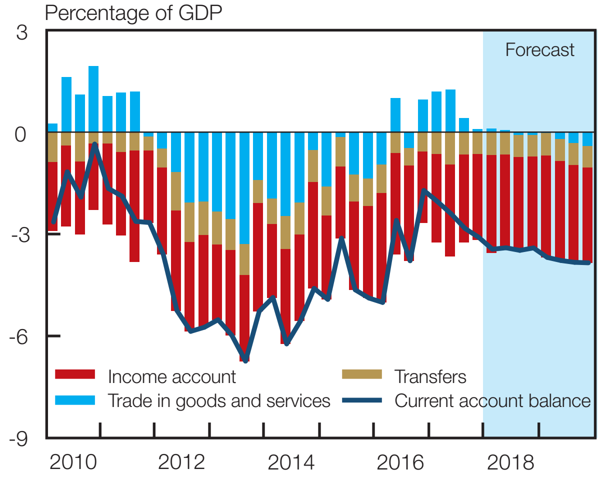
Indices: 2010 = 100



Sources: SARB and World Bank

Current account

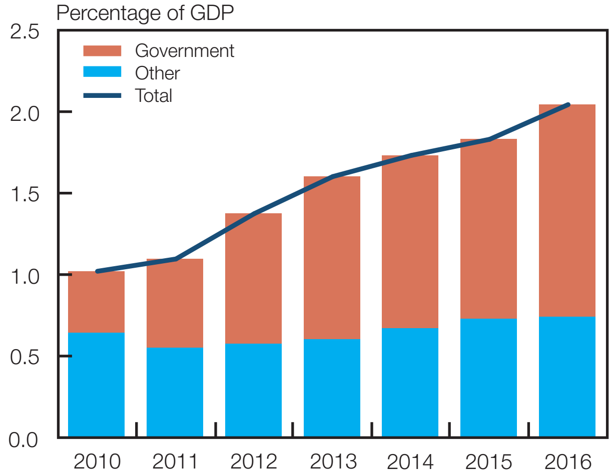
Percentage of GDP



Source: SARB

Interest payments

Percentage of GDP



Source: SARB

The external sector and the current account

Although net exports are detracting slightly from growth this year – owing to a high 2016 base – their contribution to growth will be positive again in 2018 and 2019. This is due to exports growing faster than imports, reflecting a gap between low local growth and stronger world growth which constrains imports and favours exports.

The current account deficit has narrowed sharply over the past few years, from almost 6% of GDP in 2013 to 3.3% in 2016 (and 2.4% in the most recent quarter). Over the forecast period it is expected to widen somewhat, reaching nearly 4% of GDP by 2019. These trends are mostly explained by the trade balance of the current account. In recent years, South Africa's terms of trade have benefitted from lower oil prices and a rebound in export commodity prices. Furthermore, weak domestic investment has curtailed demand for capital imports. Both these factors reverse course in the forecast: South Africa's terms of trade are expected to decline moderately, and positive investment growth should increase imports of capital goods. The projected deterioration of the current account deficit is nonetheless less marked than in previous forecasts, which once envisioned the deficit reaching 5% again. The change is chiefly because of a lower oil price trajectory and slower investment growth over the next two years.

Although the trade balance explains much of the change in the deficit, the scale of the deficit – at between 3% and 4% of GDP – continues to be explained by the large services, incomes and transfers (SIT) deficit. Although this deficit has been fairly stable for an extended period, its composition has changed over time. In particular, dividend payments abroad have contracted, which is probably explained by weaker profitability of locally listed firms.[11] The narrower dividends deficit, however, has been offset by higher interest payments to foreigners, mainly because non-residents have purchased large quantities of government debt. Net foreign interest payments are now at their highest levels since 1999 – a year of emerging market crises in which the repo rate averaged almost 15%. As government continues to run deficits, and capital continues to flow in from abroad to finance them, interest payments to foreigners are expected to rise further – contributing to a widening current account deficit.

Lower potential, larger output gap

Since the release of the previous *MPR*, potential growth – the rate of growth possible without accelerating inflation – has been revised down by an average of 0.3 percentage points for 2017, 2018 and 2019, to just above 1%. This leaves potential

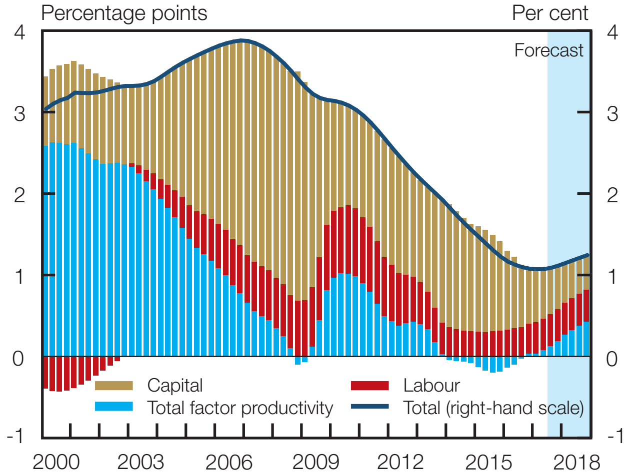
11 South African Reserve Bank, *Quarterly Bulletin*, 'Box 3: Dividend payments to non-residents and real economic growth', March 2017, p 42, available at https://www.resbank.co.za/Lists/News %20and%20 Publications/Attachments/7745/20160331Dividend%20payments%20 to%20non-residents%20and%20real% 20economic %20growth.pdf.

growth below population growth across the forecast horizon. Disaggregating the potential growth estimate shows the decline is due to lower capital formation and weaker productivity growth – two related factors, because new investments would help narrow the gap with the global productivity frontier. By contrast, labour force growth has remained relatively constant.

Despite lower potential growth, the output gap has widened – meaning actual output has been below the economy's capacity, even though that capacity is lower. Most of the output gap comes from 2016 and 2017, with the gap reaching a trough of nearly -2% of potential GDP this year. It is projected to narrow gradually over 2018 and 2019, although it remains negative at the end of the forecast period. As usual, output gap quantifications must be treated with caution: this is an unobserved variable and historical estimates of its value have been revised substantially.

Potential growth and productivity

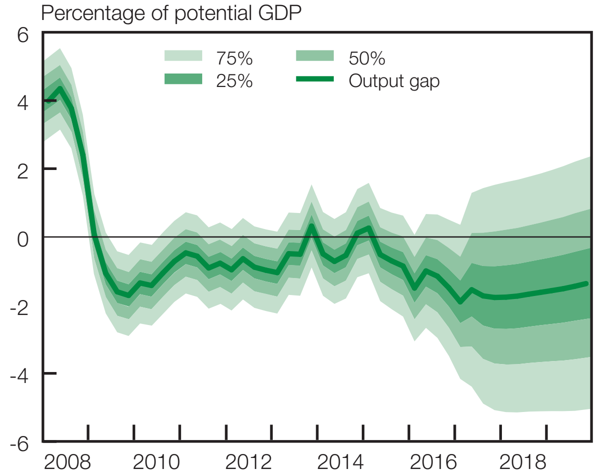
Percentage points | Per cent



Sources: SARB and Stats SA

Output gap with confidence bands

Percentage of potential GDP



Source: SARB

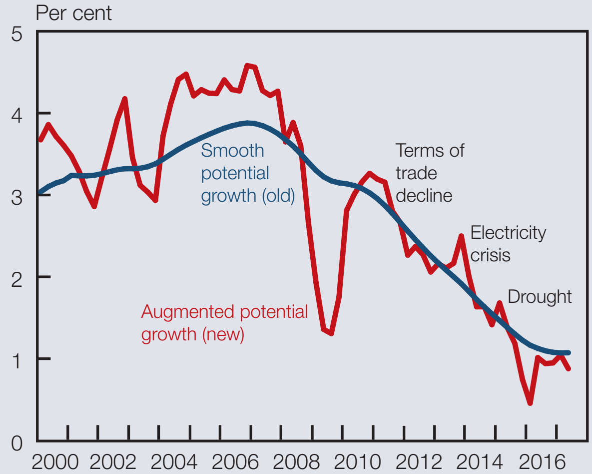
Box 6 The output gap, potential growth and supply shocks

Output gaps are used to gauge whether or not an economy is overheating. A positive gap means demand is too strong, causing inflation to accelerate. By contrast, a negative gap means demand is too weak, implying a role for stimulus. This makes the output gap a useful input into forecasting models. Unfortunately, output gap estimates are notoriously unreliable. This box describes a method for improving these estimates through a more sensitive treatment of supply-side shocks.[1]

An output gap is calculated as the difference between an economy's potential level of output and actual production. The South African Reserve Bank's published output gap estimates are derived from a model that does not account for short-term fluctuations in growth caused by supply shocks.[2] This yields a very smooth, slow-moving measure of potential. As a side effect, this method misdiagnoses short-term supply shocks as demand phenomena.

Potential growth

Per cent



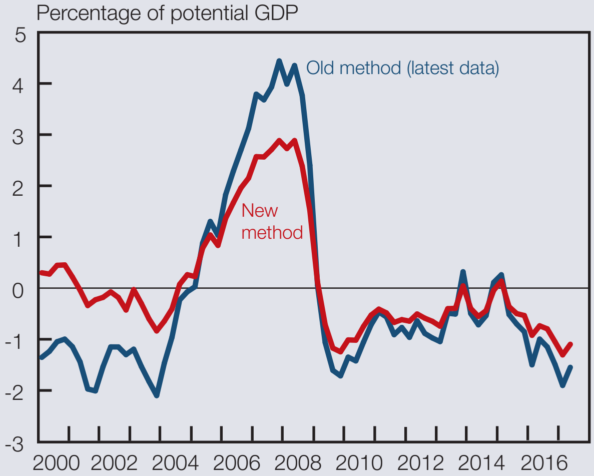
Source: SARB

1 See B Botha, F Ruch and R Steinbach, 'Updating the SARB's potential growth model', *SARB Working Paper Series,* forthcoming.

2 See V Anvari, N Ehlers and R Steinbach, 'A semi-structural approach to estimate South Africa's potential output', *South African Reserve Bank Working Paper Series No. WP/14/08*, November 2014.

Output gap

Percentage of potential GDP



Source: SARB

The recent drought is a good example. A drought tends to depress production temporarily. The necessary labour and capital for productive activity is on hand, but without rainfall, these resources are unproductive – and there is nothing extra demand can do to make them productive until water becomes available. However, if the potential growth measure treats the problem as a demand shortfall it will encourage two further mistakes. First, it will generate a more negative output gap that will incorrectly predict lower inflation. Supply shocks have some disinflationary effects by squeezing incomes, but these tend to be dominated by scarcity effects that raise prices. Second, a more negative output gap will in turn justify a more expansionary policy stance, everything else being equal. Yet macroeconomic stimulus can only compensate for demand shortages, not supply-side constraints. Lower interest rates cannot bring rain.

These problems can be overcome by augmenting the model so that transitory supply shocks affect potential growth for the duration of the shock.[3] The results show the same declining potential growth trend following the financial crisis, but there are now shorter-run variations that align with supply-side disruptions. The new method captures, for example, the effects of platinum sector strikes, electricity shortages and the 2015–16 drought. It also narrows output gaps, both now and historically, including when the economy was overheating: a more volatile potential growth measure yields a less volatile output gap. The result is a more accurate input into policy debates.

3 For earlier examples of such adjustments, see for instance P K Clark, 'The cyclical component of US economic activity', *Quarterly Journal of Economics* 102 (4), 1987, pp 797–814; and A Alichi, 'A new methodology for estimating the output gap in the United States', *IMF Working Paper Series No. WP/15/144*, July 2015.

Conclusion

Ultimately, the South African economy has a small demand-side problem and a large supply-side problem. With near-zero growth and a negative output gap, there is some limited scope for lower interest rates to have positive countercyclical effects in the short term. In an environment of low confidence and weak investment, however, there is relatively little that monetary policy can do to restore growth to historical trends (around 3%) – let alone the National Development Plan goal of 5% or more. Rather, monetary policy's chief contribution to growth is long term and centres on containing borrowing costs by maintaining credibility. This means inflation expectations and risk assessments stay low, permitting long-term borrowing at viable rates. Although this is clearly not a sufficient condition for sustainable growth, it is necessary.

Inflation developments: below 6% but above 4.5%

Headline inflation moved back within the 3–6% target range in April 2017, and it is expected to stay within the target for the rest of the forecast period. Inflation is currently close to the target midpoint and is projected to remain there into early 2018, mainly due to positive shocks affecting import prices, electricity and food. As the effects of these shocks fade, inflation is likely to accelerate somewhat, reaching 5.3% in 2019.

Lower core inflation

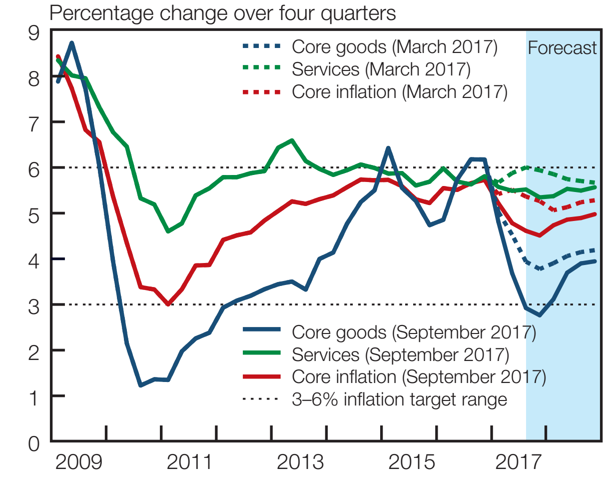
In recent years, there have been substantial gaps between headline and core inflation. In 2015 the difference was mostly due to a favourable oil price shock. In 2016 it was a drought-induced food price shock. This year, however, the gap between the two has narrowed sharply. Although the SARB targets headline inflation, in these circumstances the most interesting information affects core inflation. This section therefore starts with a discussion of core inflation and concludes with the extra categories that are added in to headline inflation (food, petrol and electricity).

Core inflation has been trending down since the beginning of the year, falling from a peak of 5.9% in December 2016 to 4.6% in August 2017. Core is expected to reach its lowest point in the final quarter of 2017, at 4.5%, before edging up again in early 2018 and ultimately stabilising at around 5% in 2019.

The decline in core inflation is overwhelmingly due to goods, not services, even though services make up two-thirds of the core category. Services inflation has slowed marginally but remains well within the upper half of the target range at 5.6% in August 2017 (against 5.7% in January and a five-year average of 5.9%). By contrast, core goods inflation has dropped from 5.3% in January 2017 to 2.6% in August.

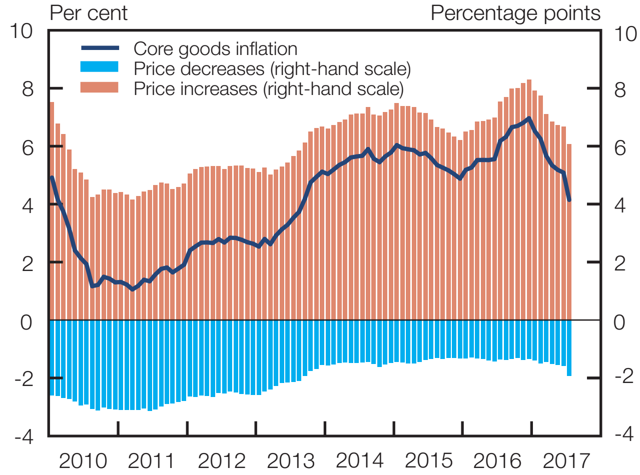
The deceleration in core goods is closely linked to the exchange rate, with major contributions from the rand-sensitive categories of household contents (such as fridges or televisions) and vehicles. Household contents inflation is expected to average -0.4% in 2017, down from 1.8% in 2016. Similarly, vehicles inflation is projected to average 4.7% in 2017, from 7.6% in 2016. It is not surprising that the core goods category has responded to rand appreciation: these prices have long tracked the exchange rate. Yet the SARB forecasts from earlier in the year did not fully anticipate the extent of the inflation slowdown in these categories. One reason for this is that the exchange rate assumption was too weak (as discussed below). There were also some changes in pricing behaviour. An analysis of the core goods micro-price data from Stats SA – the individual price details that go into the consumer price index (CPI) – show slowdowns in both the *frequency and scale* of price changes. The most important effect was the scale of changes, with smaller price increases and larger price cuts than previously. This was complemented by a reduced frequency of

Core inflation and its components



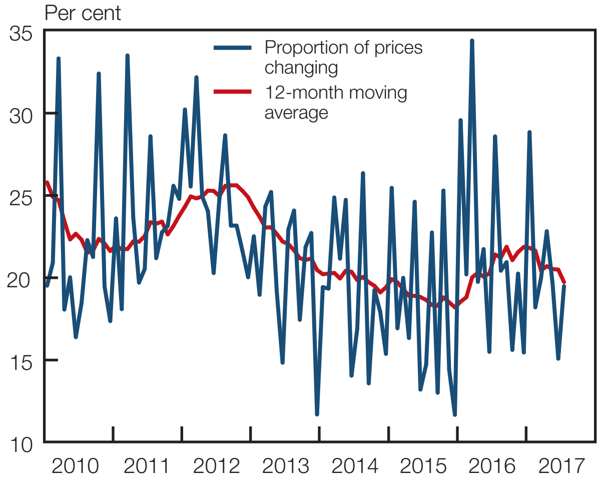
Sources: SARB and Stats SA

Decomposing core goods inflation into price increases and decreases



Sources: SARB and Stats SA

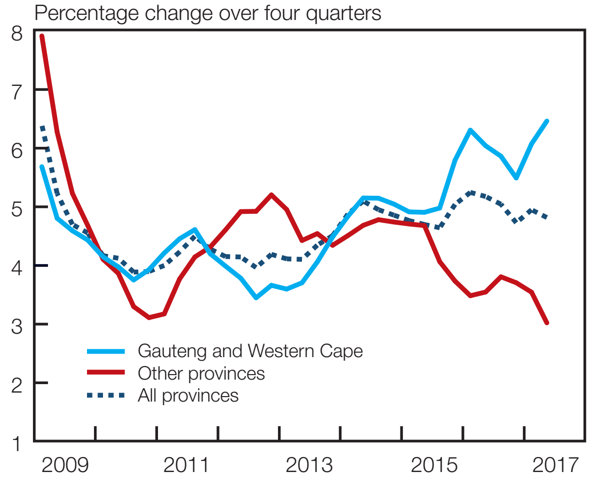
Proportion of core goods prices changing



Sources: SARB and Stats SA

Owners' equivalent rent inflation

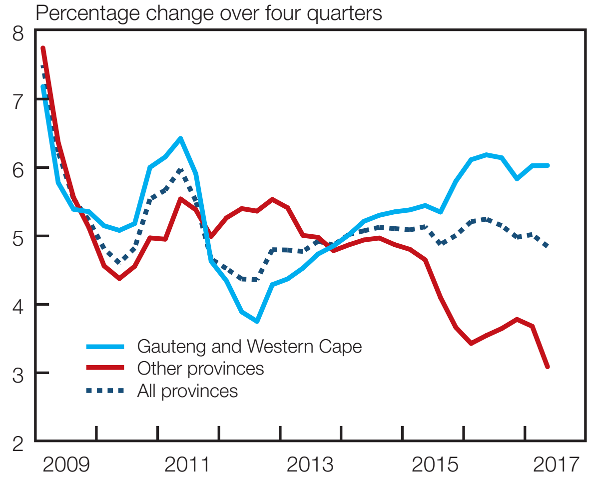
Percentage change over four quarters



Sources: SARB and Stats SA

Actual rental inflation

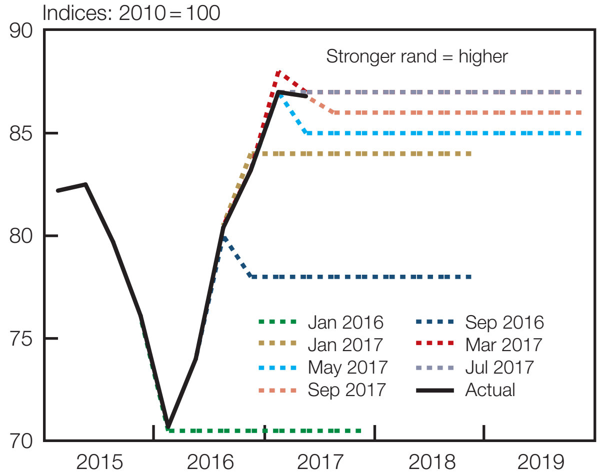
Percentage change over four quarters



Sources: SARB and Stats SA

Evolution of real effective exchange rate assumptions

Indices: 2010 = 100



Source: SARB

changes, meaning more prices were left unchanged. Simply put, firms eased up on the price accelerator as the exchange rate appreciated, causing core goods inflation to slow.

For services prices, the forecast surprise is that inflation for this category has not been higher. Forecasts from earlier in 2017 projected an acceleration in services price inflation, which was based largely on higher housing costs (combining rentals and owners' equivalent rent) as well as insurance – categories with large weights in the CPI. Housing costs have instead edged down slightly. This reflects divergence between the provinces. While housing inflation has accelerated in Gauteng and the Western Cape, which account for roughly two-thirds of expenditure, this has been offset by a sharp slowdown in the other provinces, leaving the aggregate quite stable. As for insurance, warnings from medical insurance companies of larger cost increases have not materialised this year, leaving insurance inflation very close to its longer-run average (around 8%).

A stable exchange rate trend

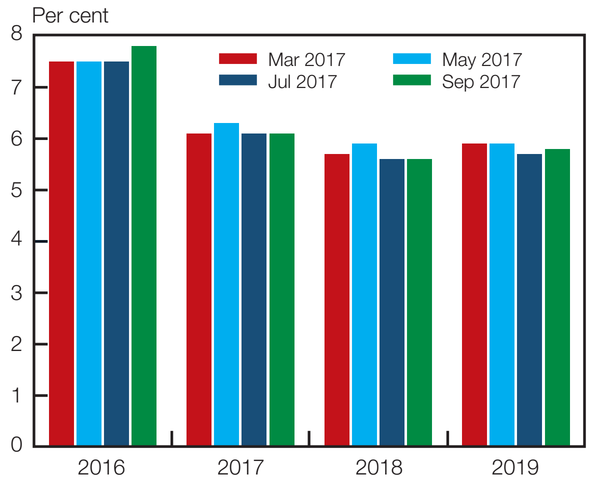
The exchange rate has followed a relatively flat trend thus far in 2017. There have been episodes of volatility following shocks, such as the credit ratings downgrades earlier in the year. Yet these effects have been cushioned by other factors, including a significantly smaller current account deficit and a weaker US dollar. Accordingly, the overall trade-weighted exchange rate is down just 2% for the year to date, and up almost 9% from the same period a year ago. Given South Africa's positive inflation differential with most of its trading partners, the real effective exchange rate has therefore appreciated by about 4% in 2017 and 13% year on year. Relative to estimates of the equilibrium real exchange rate, it has been close to fair value through most of the year, following a period of extreme undervaluation during late 2015 and much of 2016.

For much of the past two years, the SARB's assumptions for the exchange rate have been too depreciated. This chiefly reflects a methodological problem. The exchange rate assumption usually starts with the average value prevailing in the quarter before the MPC meeting. For the rest of the forecast, the exchange rate adjusts following inflation differentials. South Africa has higher inflation than most of its peers, so in the forecast the nominal exchange rate is always depreciating. This becomes a problem when the rand stabilises and the real exchange rate begins to appreciate, as it has since early 2016. The problem is exacerbated by volatility, meaning the forecast assumption can be quite different to the market value at the time of the meeting. For this reason, MPC statements have repeatedly warned that the exchange rate implicit in the forecast is out of line with the current exchange rate. This has also required a series of upward adjustments to the assumed real exchange rate path. Although exchange rate forecasts are invariably inaccurate, the SARB's forecast are likely to become less so with the adoption of a different methodology as part of the Quarterly Projection Model (see Box 1).

Offsetting influences on unit labour costs

Much as exchange rate effects explain recent developments in core goods prices, so labour costs mostly explain the relative stability of services inflation. Unlike goods, services are generally not traded across borders. This means domestic labour costs are more important for these prices than the exchange rate. To gauge labour cost pressures, wage gains alone are inadequate because they do not capture improvements in productivity. (Higher pay for higher output does not raise costs.) For this reason, the MPC pays close attention to unit labour costs (ULC), meaning the overall labour cost per unit of economic output in the economy. These costs grew 7.8% last year, well above the upper limit of the inflation target range.[12] However, ULC growth has moderated this year, to 6.1%, and is expected to fall below 6% for 2018 and 2019 (at 5.6% and 5.8% for these years respectively).

Evolution of unit labour cost forecasts



Source: SARB

Targeted inflation (September 2017 forecasts)

Percentage change over 12 months, March 2017 forecasts in italics

		Actual		Forecast		Actual		Forecast					
	Weight	2009–16	2016	2017	2018	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4
Targeted inflation	100.00	5.6	6.3	5.3	5.0	6.4	5.3	4.8	4.8	4.6	4.8	5.3	5.2
Core inflation*	74.43	5.2	5.6	4.8	4.9	5.2	4.8	4.6	4.5	4.7	4.9	4.9	5.0
				5.4	*5.2*	*5.4*	*5.5*	*5.4*	*5.3*	*5.1*	*5.1*	*5.2*	*5.3*
Rentals**	16.84	4.7	5.1	4.9	4.8	5.0	4.8	5.0	5.0	4.8	4.9	4.8	4.8
				5.2	4.9	5.1	5.1	5.3	5.3	5.0	4.9	4.9	4.8
Insurance	10.06	7.7	7.6	8.0	8.0	8.0	8.0	8.0	7.9	8.0	8.1	8.1	8.1
				8.4	*8.4*	*8.1*	*8.4*	*8.5*	*8.5*	*8.7*	*8.3*	*8.3*	*8.3*
Education	2.53	8.7	5.3	6.6	7.8	5.4	7.0	7.0	7.0	7.4	8.0	8.0	8.0
				7.2	*8.0*	*5.7*	*7.7*	*7.7*	*7.7*	*7.8*	*8.0*	*8.0*	*8.0*
Vehicles	6.12	2.7	7.6	4.7	3.7	7.5	5.2	3.3	2.7	3.1	3.8	3.8	4.1
				5.2	*3.8*	*7.7*	*5.8*	*3.8*	*3.4*	3.5	3.7	3.9	4.1
Fuel	4.58	5.0	1.6	6.9	6.4	10.3	5.2	4.8	7.6	3.9	6.3	9.4	5.9
Previously petrol				*7.8*	*6.9*	*10.4*	*4.6*	*8.3*	*8.0*	*4.6*	*8.0*	*7.6*	*7.6*
Electricity	3.75	15.0	9.2	4.7	5.1	7.5	7.5	2.1	2.1	2.1	2.1	8.0	8.0
				7.7	*8.0*	*7.4*	*7.4*	*8.0*	*8.0*	*8.0*	*8.0*	*8.0*	*8.0*

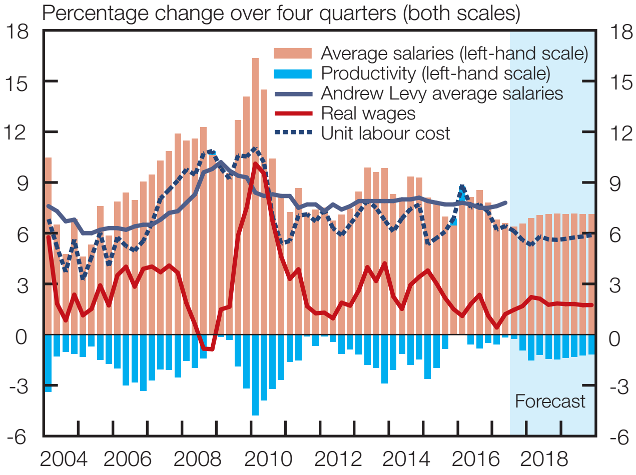
* CPI excluding food, non-alcoholic beverages, fuel and energy

** Combines actual rentals and owners' equivalent rent, from 2009

Sources: SARB and Stats SA

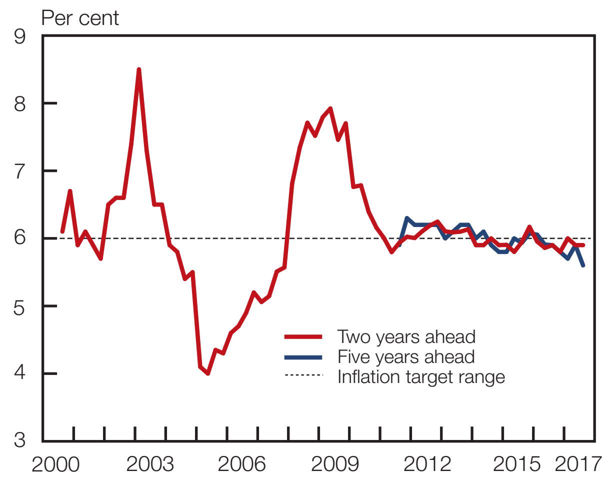
12 These figures reflect slightly different data to those published in the *Quarterly Bulletin*. The salary measure used for forecasting purposes includes agricultural workers. Normally the two measures give similar results, although they diverged during 2015 and 2016.

Unit labour cost and its components



Sources: Andrew Levy Employment Publications, SARB and Stats SA

Survey-based inflation expectations*



* Total, combining expectations of labour, business and analysts

Source: BER

Inflation expectations*

* Total, combining expectations of labour, business and analysts

Source: BER

The forecast trajectory for ULCs is shaped by opposing developments. In the near term, ULCs are decelerating because wage growth has come down from a spike last year – even though productivity growth is near zero in the context of a stagnant economy. Further out in the forecast, productivity picks up slightly as growth starts moving again – yet wages recover from their current trough, offsetting some of the disinflationary effects of productivity gains. It is, of course, possible to imagine different ULC outcomes. Historically, wage settlements have not been very sensitive to unemployment rates or productivity changes. However, wage moderation may finally take hold with unemployment close to 28% and no productivity growth. It is also possible that inflation expectations could moderate, reducing wage demands. The current ULC forecast is nonetheless already low in an historical perspective.

Inflation expectations

Inflation expectations are crucial drivers of longer-run inflation. Although popular discussions of inflation are usually about supply shocks (such as petrol prices or food), these cannot tell us where inflation will be in the medium term, or why comparable countries can have markedly different inflation rates. (For instance, Argentina has inflation of over 20% while its neighbour, Chile, has inflation of under 3%.) Rather, these phenomena reflect expectations of inflation, which become self-fulfilling prophecies when they feed into wage deals and price setting.[13]

During the SARB's 2014–2016 tightening cycle, monetary policymakers paid close attention to inflation expectations to help ascertain whether temporary shocks to specific prices (such as food) would have long-lasting effects on prices in general. Were expectations coming unmoored? During the subsequent disinflation phase, the focus has shifted to lowering expectations.

The first-resort measure of inflation expectations used by the MPC is the BER's survey, which incorporates the views of union leaders, business people and financial analysts. According to the two most recent surveys, average expectations have fallen for one, two and five years ahead across all survey groups. Nonetheless, longer-term expectations remain fairly close to 6%. As is usual for this survey, most of the volatility comes from analysts, with the average inflation expectation for this category now down to 5.0% for 2018 and 5.3% for 2019. By contrast, expectations of trade unionists and business people in the BER survey are higher – at or just above 6% for both 2018 and 2019.

Break-even inflation rates provide an alternative, market-based measure of inflation expectations, based on the gap between yields for nominal bonds and inflation-protected securities.

13 To reprise the Argentinean example, public school teachers in Buenos Aires won a 24% pay increase in 2017. See Reuters business news, 'Argentina 2017 inflation seen at 21.6 percent, above central bank target', 5 July 2017, available at https://www.reuters.com/article/us-argentina-inflation/argentina-2017-inflation-seen-at-21-6-percent-above-central-bank-target-idUSKBN19P2K9?il=0 (accesed on 22 August 2017).

They show that expectations have adjusted lower at both the five- and ten-year horizons: ten-year-ahead expectations have moved from almost 8% at the start of 2016 towards 6%, while five-year-ahead expectations have fallen below 5.5%, from about 7.5% in 2016. As usual, break-even inflation rates provide some interpretative challenges. They are not strictly comparable to expectations surveys, because they incorporate both a projection for inflation and a risk premium (if investors believe inflation risks are skewed one way or the other). Furthermore, they are sensitive to market idiosyncrasies affecting the underlying instruments from which they are calculated (mainly because inflation-protected securities are less frequently traded than ordinary government bonds). Despite these challenges, these measures do at least show a clear disinflation trend, consistent with other inflation forecasts and with inflation outcomes. They do not, however, show inflation expectations moving much below 6%.

Inflation expectations have not always been at 6%. There was a period, between 2005 and 2006, when expectations were concentrated close to the midpoint of the target range.[14] However, expectations drifted upwards as the global boom intensified and commodity prices skyrocketed, peaking well outside the target range. The global financial crisis brought expectations down again, but only as far as the top of the target range, and they have been in that vicinity ever since. This is undesirable. Lower expectations would help reduce inflation and interest rates. Furthermore, having expectations close to 6% leaves little room for absorbing shocks. Accordingly, the MPC's stated preference is for expectations to be anchored closer to the midpoint of the 3–6% target range.

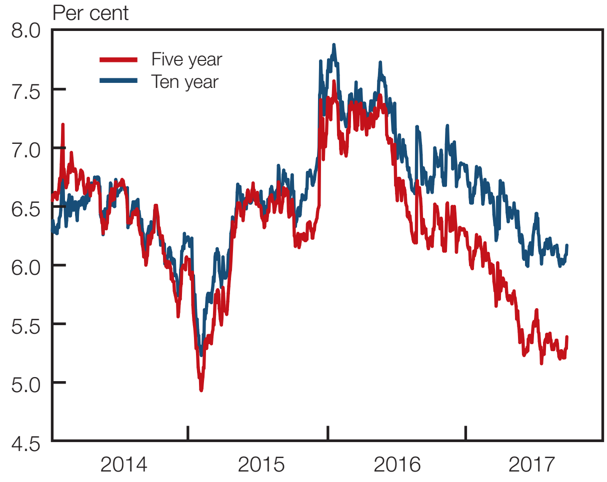
The available data support two conclusions relevant to the problem of lowering expectations. First, inflation expectations are largely backward-looking: many respondents will need to see lower inflation before changing their views. As such, we should expect lower inflation to moderate expectations. Second, longer-term expectations have been nearly immune to short-lived disinflations. For instance, inflation was close to the midpoint of the target range in 2015 because of the collapse in world oil prices. Inflation was similarly subdued through much of 2010/11, with oil prices again low and the exchange rate near R7 to the US dollar. Although surveyed expectations for the current year fell during these episodes, longer-term expectations remained stable near 6%. This suggests it will take both careful communication, and a longer period of lower inflation, to moderate longer-term inflation expectations.

Slowing food price inflation

Last year's drought pushed food and non-alcoholic beverages (NAB) inflation sharply higher, to 10.6% in 2016 from 5.1% the year before. Food and NAB inflation is forecast to average 7.3% in 2017 and 5.2% in 2018 as the drought effects dissipate,

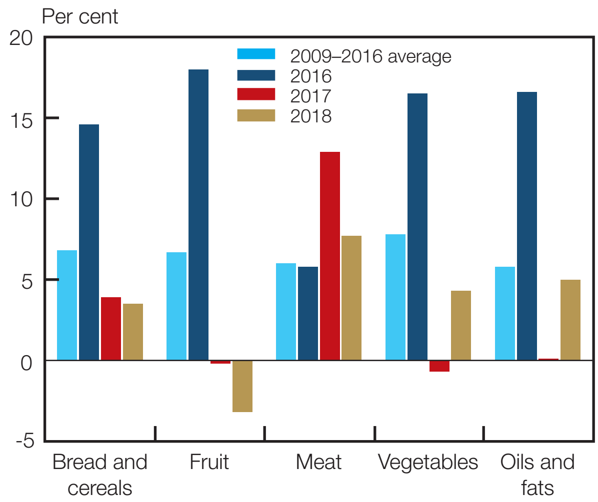
14 See S Hassan and S Redford, 'Dispersion of inflation expectations', *South African Reserve Bank Occasional Bulletin of Economic Notes*, June 2017, available at https://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/7851/OBEN%201702.pdf.

Break-even inflation rates



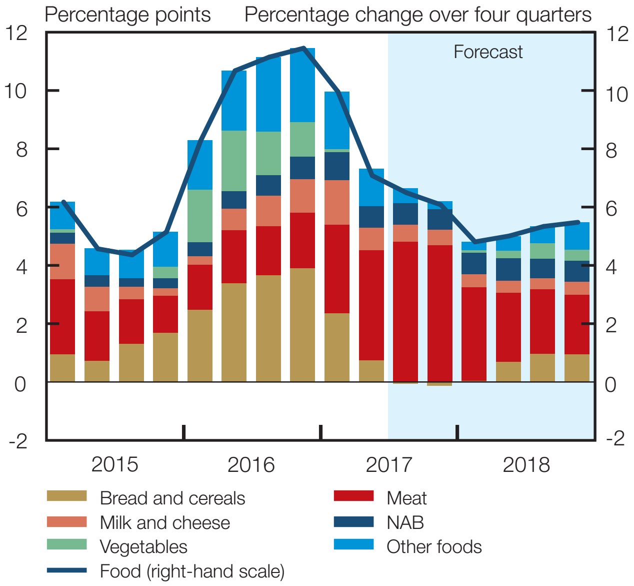
Source: Bloomberg

Main food drivers



Sources: SARB and Stats SA

Food inflation contributions



Sources: SARB and Stats SA

contributing 1.3 and 0.9 percentage points respectively to headline inflation compared with 1.6% in 2016. By 2019, conditions are expected to normalise, leaving food and NAB inflation at 5.6%, in line with long-term averages.

The food price forecast has fluctuated over the course of the year. Higher poultry prices prompted an upward revision of the food price trajectory between the March and May MPC meetings – but food prices were marked back down again for the July meeting due to downward movements in other food categories (mainly dairy, vegetables, and bread and cereals). In September the forecast was adjusted slightly higher again, once again due to higher meat inflation. Despite this volatility, the underlying food price dynamic remains about the same. The categories where harvests were affected by drought in 2016 are now disinflating, led by maize with a record 16.7 million tonne commercial harvest expected in 2016/17 (according to the Crop Estimates Committee). Yet meat prices are partly offsetting this effect.

Meat prices rose more rapidly than anticipated in the second half of 2016 and the first half of 2017, owing mainly to surging poultry and beef prices. Meat price inflation is now forecast to average 12.9% this year, well above the longer-term average. Poultry prices have been affected by avian influenza (bird flu) outbreaks, both abroad and locally. Meanwhile, domestic brining regulations have also lifted chicken prices. The other important driver of higher meat prices is herd-rebuilding effects, reflected in lower cattle slaughter figures. As these shocks abate, poultry inflation is forecast to ease from 14.9% in 2017 to 7.6% in 2018, while beef prices moderate from 13.8% to 7.7%.

Consumer food price inflation (September 2017 forecasts)

Percentage change over 12 months, March 2017 forecasts in italics

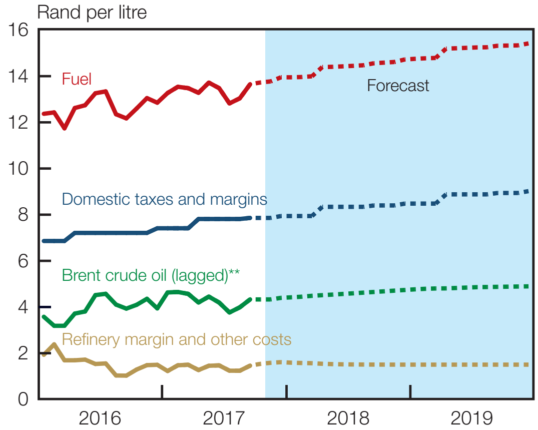
		Actual		Forecast		Actual		SARB forecast					
	Weight	2009–16	2016	2017	2018	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4
Food and non-alcoholic beverages.................	17.24	6.8	10.6	7.3	5.2	10.0	6.9	6.5	6.0	4.8	5.0	5.3	5.5
				7.4	*5.2*	*9.7*	*7.0*	*6.9*	*6.0*	*5.1*	*5.2*	*5.3*	*5.3*
Bread and cereals.....................................	3.21	6.8	14.6	3.9	3.5	12.7	4.0	-0.4	-0.7	0.2	3.7	5.1	5.1
				5.5	*4.8*	*12.6*	*5.8*	*2.6*	*1.1*	*1.9*	*4.7*	*6.2*	*6.3*
Meat	5.46	6.0	5.8	12.9	7.7	9.6	12.0	15.2	14.8	10.1	7.4	7.0	6.4
				10.1	*4.7*	*9.2*	*9.8*	*11.4*	*10.0*	*5.0*	*4.2*	*4.6*	*5.1*
Beef..	1.44	6.6	8.3	13.8	7.7	8.1	12.7	16.9	17.5	12.8	6.4	6.0	5.6
				9.4	*4.9*	*7.6*	*7.7*	*11.1*	*11.3*	*6.4*	*4.6*	*4.1*	*4.6*
Poultry	2.12	4.9	3.1	14.9	7.6	12.3	14.0	17.8	15.4	8.1	7.7	7.4	7.0
				12.7	*4.5*	*12.1*	*12.7*	*14.5*	*11.4*	*4.0*	*4.0*	*4.7*	*5.4*
Vegetables	1.30	7.8	16.5	-0.7	4.3	1.3	-3.1	-1.2	0.0	1.4	3.5	7.2	5.0
				2.3	*6.9*	*1.1*	*-1.1*	*4.1*	*5.2*	*6.8*	*7.0*	*7.9*	*6.0*

Sources: SARB and Stats SA

Fuel price developments

The Brent crude oil benchmark has been stuck below US$60 per barrel for most of the past three years, and has been closer to US$50 for much of 2017. Production cuts by the Organization of the Petroleum Exporting Countries (OPEC) and Russia helped lift prices back towards US$60 in the early parts of this year. Yet these cuts were ultimately too small to maintain prices at those levels, in part because they did not constrain OPEC members that had previously suffered production disruptions (Nigeria and Libya), and in part because OPEC's monopoly power has been weakened by new North American producers. The long-term outlook for oil demand is also unfavourable, given improvements in electric car technology and regulatory shifts in favour of cleaner technologies. (Both France and the UK, for example, have banned the sale of new petrol and diesel cars from 2040 onwards.) For these reasons, it is very unlikely that oil prices will rise to the triple-digit levels last seen in 2014. They are nonetheless likely to remain volatile within a range of roughly US$50–US$60. Indeed, at the time of the September MPC meeting they were back close to US$60, apparently due to evidence of stronger global demand as well as potential supply disruptions related to an independence referendum in Iraqi Kurdistan.

Fuel price and its components*



* Petrol price prior to January 2017, combined petrol and diesel price thereafter

** Movements of the Brent crude oil price (in rand) in August 2017 contributed to the fuel price rise in September 2017

Sources: Department of Energy and SARB

The oil price assumptions used in the forecast tend to follow pricing in futures markets as well as private sector forecasts. The latest oil price assumption is US$52 per barrel for 2017, US$55 for 2018 and US$56 for 2019. This is somewhat below the March 2017 assumptions, which were US$57 per barrel for 2017, US$60 for 2018 and US$62 for 2019.

Lower oil prices have, in turn, fed into domestic fuel price forecasts. Rand-denominated Brent crude oil prices are now expected to increase by 7.3% in 2017 and 2018, before moderating to 5.2% in 2019 – well below the March 2017 forecasts of 20.7%, 9.2% and 7.0% for these years respectively. Accordingly, fuel price inflation is now forecast to average 6.9% in 2017, 6.4% in 2018 and 5.6% in 2019. As before, the full benefits of lower international oil prices are not reaching consumers because of domestic taxes and margins, which have risen by around 10% annually since 2003 and are expected to maintain roughly these growth rates.

Electricity inflation: less now and more later

Electricity inflation has fallen to 2.1% – the lowest rate of electricity prices inflation since 2006. However, the slowdown will almost certainly be short-lived. Electricity prices have decelerated because of a decision by the National Energy Regulator of South Africa (NERSA) affecting the Regulatory Clearing Account (an account used to align electricity prices with production costs). NERSA's decision was set aside by the High Court, but it has since been upheld by the Appeals Court, clearing the way for a much larger electricity price increase in

Electricity inflation

Source: Stats SA

2018/19. The current SARB assumption is for an 8% increase, but Eskom has requested a double-digit adjustment, and there are risks the 8% number may prove to be too low.

For this reason, the SARB has also modelled a scenario in which electricity prices rise 20% for one year, starting in July 2018. The result is an extra 0.2 percentage points on inflation for 2018 and 0.3 percentage points for 2019, counting both the direct and indirect effects of costlier electricity. In terms of the Taylor rule in the Quarterly Projection Model (described in Box 3), this would prompt an interest rate response, reversing the July MPC rate cut.

Conclusion

The outlook for inflation has improved steadily over the course of 2017. Headline inflation has fallen back below 6% and is currently close to the midpoint of the 3–6% target range. The drop in inflation reflects declines across the major inflation categories: food, petrol, electricity and core. Yet the drivers of lower inflation – especially the exchange rate and the end of the drought – are likely to be temporary. Furthermore, services inflation has been quite stable and inflation expectations remain close to the top of the target range, especially for the longer-term outlook. Accordingly, inflation is projected to pick up again next year, ultimately stabilising at around 5.3% for the remainder of the forecast period.

Box 7 Comparing the SARB's forecasts with those of other central banks

The South African Reserve Bank (SARB) regularly evaluates the accuracy of its forecasts and reports the results in the *Monetary Policy Review (MPR*). For instance, the April 2017 *MPR* compared the SARB's inflation forecasts with those of private sector analysts. The October 2016 *MPR* assessed the reliability of the core inflation forecasts. This box takes a different approach. How good are the SARB's forecasts of South African inflation compared with other central banks' forecasts of their own national inflation rates?

We test the forecasts for both overall accuracy and bias. The data are inflation forecasts[1] for 2011 to 2016, from 12 emerging market inflation-targeting central banks.[2] We use January forecasts for the current-year, one-year-ahead and two year-ahead forecasts.[3]

To measure accuracy, we use root mean square errors (RMSE), with a low (high) score indicating a small (large) average error over the sample period. South Africa ranks second for the current-year forecast and first for the other forecast horizons. Although this result is encouraging, South African inflation has also been less volatile than that of most other countries, with a standard deviation under 1 percentage point versus, for example, 1.5 percentage points in Brazil and more than 3 percentage points in Russia. It is, of course, easier to forecast a more stable variable.

To evaluate the bias of forecasts, we use two measures: an average forecast error and a tracking signal. The first measure is the standard test of bias. However, it can be misleading when used to compare forecast performance across countries with very different inflation rates. It also allows a few large errors to cancel out many smaller ones. The tracking signal remedies these shortcomings by counting the direction of misses. For instance, if a central bank forecast is too high four times, and too low twice, it will get a score of two. Zero – the best score – indicates either that the forecasts were perfect or that misses were evenly scattered above and below the actual outcomes.

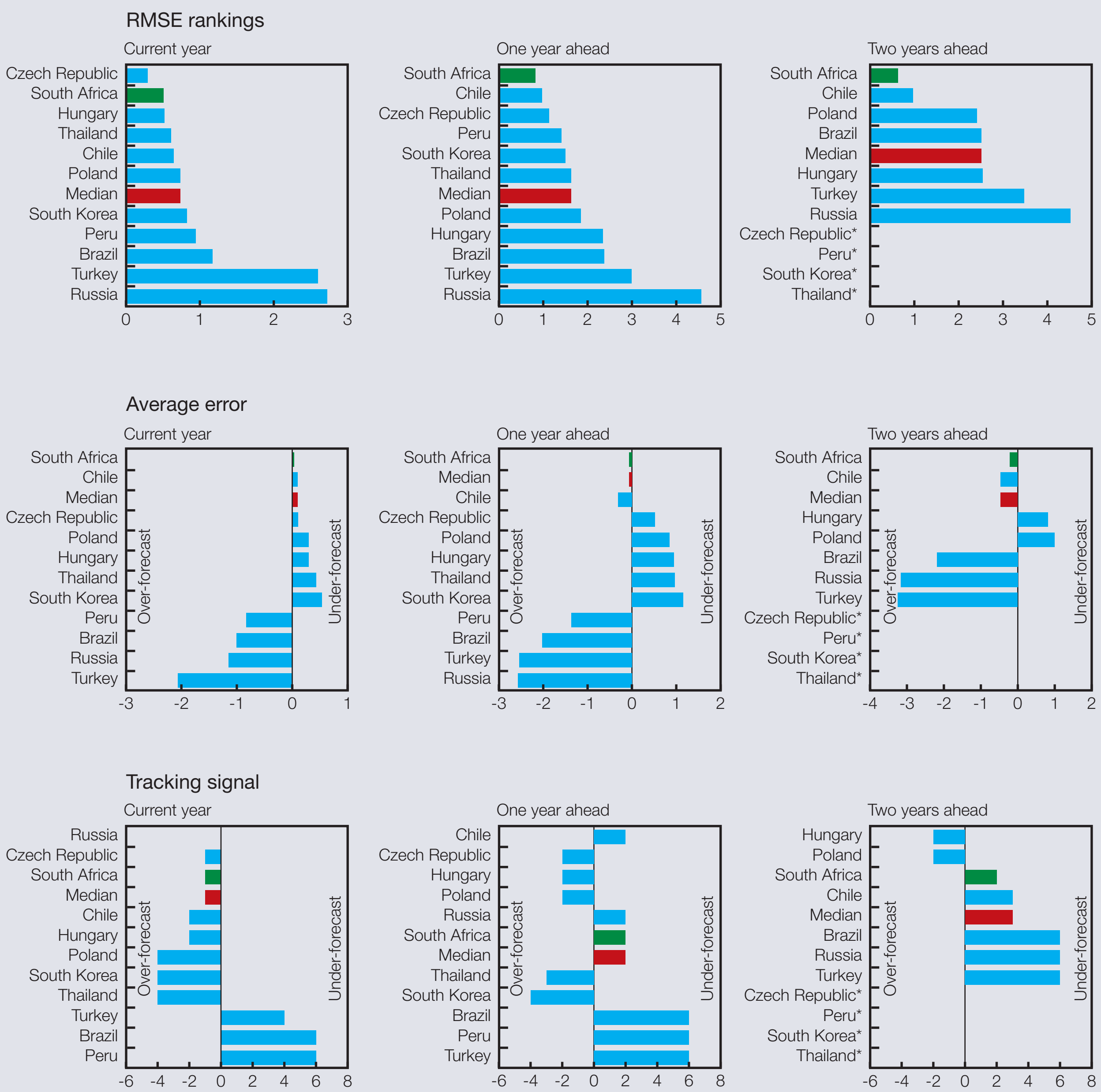
In terms of average errors, the SARB's scores are the best over all three time horizons. The tracking signal results are not quite as good: the SARB ranks near the middle of our sample. However, the bias changes over the different forecast horizons, which suggests the forecasts do not systematically lean one way or the other. Furthermore, in comparative perspective, the scale of the SARB's biases is small for both measures. Our sample indicates other emerging markets where biases have been much more marked, which is consistent with large inflation overshoots in these specific cases.

1 Inflation forecasts are for calendar years, except for Russia and Turkey. Both central banks set their inflation targets as a year-end target and forecast year-end inflation.

2 Mexico, Colombia and Indonesia are obvious omissions; they were excluded because they do not publish model-based inflation forecasts. India was also excluded as the central bank only adopted inflation targeting in February 2015.

3 Where two-year-ahead forecasts were not available in January, we used the earliest available published forecast.

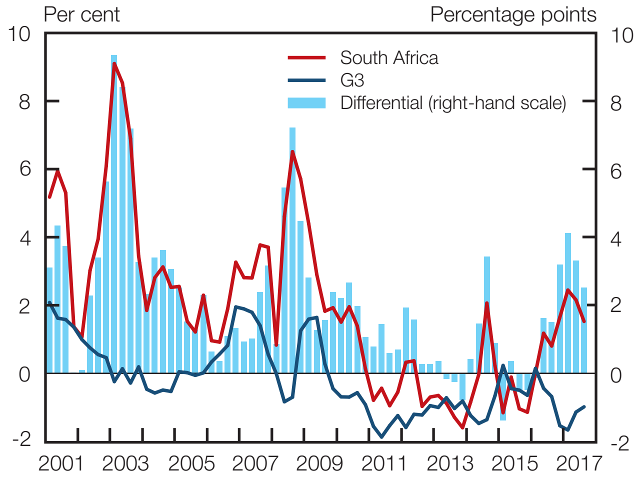
Forecast accuracy and bias measures



* Two-years-ahead forecasts are not available for the Czech Republic, Peru, South Korea and Thailand

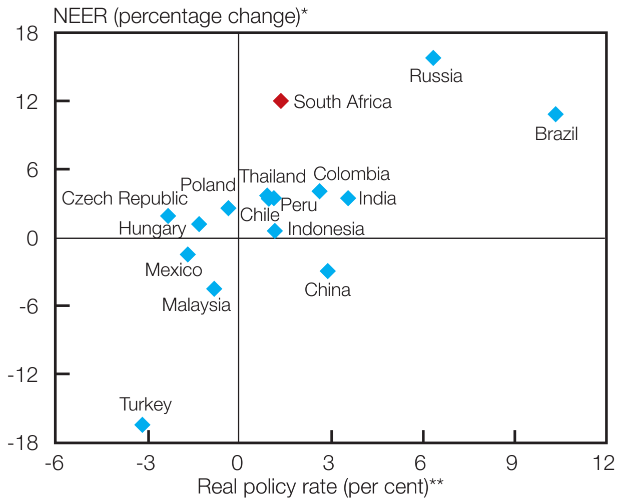
Sources: Bloomberg, SARB and other central banks

Real interest rate differential



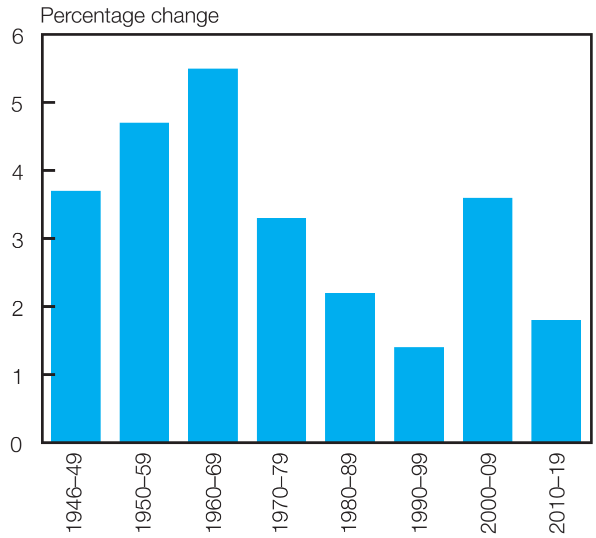
Sources: IMF and SARB

Emerging market policy rates and exchange rates



* Average 2017 year-to-date change from 2016 average
** Average 2016 nominal policy rate less CPI 2017 year-to-date
Sources: BIS and Bloomberg

South African real GDP growth rates



Sources: SARB and Stats SA

Summary

The hiking cycle of 2014–2016 achieved its desired effects, helping guide inflation back within the target range and keeping it there. With hindsight, it is clear the main transmission mechanism was the exchange rate, aided by more marginal contributions from the negative output gap and inflation expectations. By raising the repo rate from 5% to 7%, the MPC concluded an extended period of unusually low, often negative, real rates. This reinstated a clear positive gap with interest rates in the major advanced economies, reviving capital inflows and appreciating the exchange rate.

Of course, monetary policy was not solely responsible for these developments. The global context was important. In particular, stimulus in China eased fears of a rapid and potentially uncontrolled slowdown in that economy, which calmed financial markets while boosting global growth and commodity prices. Furthermore, advanced economy monetary policies proved looser than previously anticipated, chiefly due to downside inflation surprises, which supported capital flows to emerging markets. Falling oil prices also helped narrow South Africa's current account, reducing external borrowing requirements. Combined, these circumstances have helped lower inflation to below 5% in the third quarter of 2017 – a faster and more complete return to target than initially anticipated.

South Africa's recent experience of policy tightening and disinflation echoes that of peer emerging markets, including major players such as Brazil, Russia and India. Furthermore, in the counterfactual cases where real rates did not get to positive levels, exchange rates have weakened further and inflation has accelerated. A prominent example is Turkey, where inflation is now over 10%, versus a target of 5%. These emerging market experiences testify to the power of central banks to lower inflation if they so choose, and the costs of neglecting this role.

By contrast, the growth implications of monetary tightening during this period have almost certainly been small. South Africa's interest rate adjustment was relatively limited, and the relationship between interest rates and credit extension has in any case been unusually weak in the post-crisis period. Furthermore, the rand has not appreciated beyond estimates of fair value.

Nonetheless, domestic growth has slowed almost to a standstill over the past two years and is unlikely to recover significantly over the two years of the forecast, making this one of the worst growth periods in South Africa's history. (If the forecasts prove correct, the 2010s will be the second-worst growth decade in South Africa's post-war economic history.) The outstanding problem at present is depressed confidence. As a result, investment is contracting and potential growth is therefore very low.

Stimulus only works if it elicits a positive response from the rest of the economy, creating a virtuous circle of stronger investment and stronger demand. With confidence held down by factors other than demand, investment is unlikely to follow. This means the benefits of stimulus would be largely temporary, while the costs would be more permanent.

Nonetheless, growth outcomes have been very low over the past two years or so, below even revised estimates of potential growth. This leaves some scope for countercyclical policy in the short term. Monetary policy's chief contribution to growth, however, is keeping inflation low and stable, which facilitates long-term planning and moderates borrowing costs. For this reason, near-term demand support must be balanced by policies to reduce long-term inflation expectations, thereby lowering borrowing costs. Inflation targeting provides an effective framework for reconciling these short- and long-term goals, ultimately delivering growth in line with potential as well as price stability.

Statement of the Monetary Policy Committee

25 May 2017

Issued by Lesetja Kganyago, Governor of the South African Reserve Bank, at a meeting of the Monetary Policy Committee in Pretoria

Headline inflation has now returned to within the target range as expected, with outcomes in March and April surprising on the downside. While the inflation outlook has improved over the near term, the longer-term forecast trajectory is unchanged and uncomfortably close to the upper end of the target range. The rand exchange rate and domestic bond yields benefitted from increased global capital inflows to emerging markets which largely offset the impact of the sovereign credit ratings downgrade. With further ratings decisions imminent, risks remain for a further depreciation against the backdrop of continued global and domestic political uncertainty.

Domestic economic growth prospects have deteriorated, as the impact of the ratings downgrade is expected to weigh on domestic investment and consumer sentiment over the forecast period. The output gap is estimated to have widened and consumer demand has weakened. However, the trajectory of the growth forecast is still positive and the growth rate for this year is expected to exceed that recorded in 2016.

The year-on-year inflation rate as measured by the consumer price index (CPI) for all urban areas moderated to 6.1% and 5.3% in March and April respectively. Food price inflation was the main contributor to the downside surprise in April when it measured 6.6%. The contribution of the category of food and non-alcoholic beverages to the overall inflation outcome declined from 1.5 percentage points in March to 1.1 percentage points in April. The South African Reserve Bank's (SARB) measure of core inflation, which excludes food, fuel and electricity, measured 4.8% in April, down from 4.9% in March.

Producer price inflation for final manufactured goods also surprised on the downside at 4.6% in April compared with 5.2% in March. The further moderation in food prices was also reflected in the producer price index with the category of food products, beverages and tobacco products decelerating for the sixth consecutive month to 6.4%.

The inflation forecast of the SARB has improved over the near term, but is unchanged in the outer quarters. In line with the previous forecast, headline consumer price inflation is expected to remain within the range for the rest of the forecast period. Inflation is expected to average 5.7% this year compared with 5.9% previously, while the forecast for 2018 has moderated by 0.1 percentage point to 5.3%. The forecast average for 2019 is unchanged at 5.5%.

The improvement is driven by downward revisions to international oil price and domestic electricity tariff assumptions. In the latter case, a tariff increase of 4.0% with effect from July 2017 is assumed – down from 8.0%. These revisions have been offset to some extent by a less appreciated exchange rate assumption and a slower decline in food price inflation. A continued moderation of food prices is expected over the medium term given the favourable agricultural outlook and significant upward revisions to the maize crop estimates. Food price inflation is expected to average 7.7% and 5.4% in 2017 and 2018 respectively, compared with 7.4% and 5.2% previously, and to remain unchanged at 5.5% in 2019.

The forecast for core inflation in 2017 is 0.4 percentage points lower at 5.0%, partly due to the lower starting point of 0.2 percentage points following the sizeable downside surprise in March. The forecast for 2018 declined by 0.1 percentage points to 5.1%, and is unchanged at 5.3% in 2019.

Market-based inflation expectations have remained largely unchanged since the previous meeting of the MPC, with the median forecasts in the latest Reuters Econometer survey similar to those of the SARB. The median expectation for 2017 declined marginally to 5.7%, and is unchanged at 5.5% and 5.4% for the next two years respectively. Expectations implicit in the break-even inflation rates in the bond market have also moderated since the previous meeting. Break-even inflation rates for shorter-dated maturities are below 6% but higher than this level for longer-dated maturities.

The global growth outlook continues to show signs of sustained recovery amid rising world trade volumes. Nevertheless, the trend growth rate is expected to be lower than that experienced before the global financial crisis. The current recovery is characterised by downward revisions to potential output growth in numerous countries, and generally low levels of productivity and wage growth. Despite a weak first quarter, growth in the United States (US) is expected to average above 2.0% this year, although further policy uncertainty could undermine investor and consumer confidence. Growth rates in the euro area and Japan are expected to be sustained at around 2016 levels, supported by accommodative monetary policies.

The outlook for emerging markets is also generally positive. Concerns about Chinese growth have dissipated somewhat following policy intervention, but high leverage in the financial sector remains a risk. While Russia has emerged from recession, the expected recovery in Brazil may be undermined by current political uncertainty. The outlook for commodity producers may be tempered by recent weaker commodity price trends, particularly those of iron ore and coal.

Global inflation remains relatively benign, although country experiences differ. Inflation is below target in most of the advanced economies, apart from the United Kingdom, and the risk of deflation is low, except in Japan. Where high inflation rates are being experienced in a number of emerging markets, these are generally driven by exchange rate shocks rather than underlying global price pressures.

Monetary policies are also likely to remain divergent. The US Federal Reserve (Fed) is expected to maintain its moderate pace of tightening, dependent to some degree on the size and nature of possible fiscal reforms. Policy rates are expected to remain low in most other advanced economies, but a reduction in quantitative easing is possible in the near future in the euro area. In general, emerging market economies have displayed a loosening bias, particularly in those countries where previous policy tightening had resulted in improved inflation prospects. The high yield differentials of emerging markets have persisted, sustaining capital flows to these economies.

At the time of the previous meeting of the MPC, the rand was trading at around R13.00 against the US dollar. It then depreciated following the domestic cabinet reshuffle and the consequent sovereign credit ratings downgrades by two ratings agencies. Having reached a weak point of almost R14.00 against the US dollar in April, the rand subsequently recovered some of these losses in line with improved sentiment towards emerging markets in general. Some of these gains were reversed by spillover effects of recent political uncertainty in Brazil. Since the previous MPC meeting, the rand has appreciated by 0.4% against the US dollar and depreciated by 1.6% on a trade-weighted basis. At current levels, the rand is still more appreciated relative to rates prevailing at this time last year.

Despite the recent weakening, the rand has been supported by a more favourable current account outlook following a significant narrowing of the deficit in the final quarter of last year. A further positive trade balance was recorded in the first quarter of this year, but a moderately wider current account deficit is expected over the forecast period, due in part to a recent deterioration in the terms of trade.

Non-residents remained net buyers of domestic government bonds in April and May to date, to the value of R23.2 billion, despite the recent ratings downgrades. This may change should further downgrades occur, particularly with respect to domestic currency ratings. The rand therefore remains vulnerable to this prospect as well as to changes in global risk sentiment towards emerging markets.

The domestic growth outlook has deteriorated amid weak business and consumer confidence. The SARB's forecast for GDP growth has been revised down for the entire forecast period, by 0.2 percentage points for 2017 and 2018, and by 0.3 percentage points for 2019. Annual growth rates of 1.0%, 1.5% and 1.7% for the forecast years are now expected. This downward revision is due in part to the expected impact of the sovereign credit ratings downgrade on domestic private sector gross fixed capital formation in particular. The downgrade is also likely to weigh on public sector investment through higher funding costs and more difficult access to funding.

At the sectoral level, a strong near-term improvement is expected in the agricultural sector, and mining output has also rebounded. By contrast, the manufacturing sector outlook remains constrained, with a third consecutive quarterly contraction expected in the first quarter of this year. In line with this, the latest Absa Purchasing Managers' Index showed a sharp decline. Growth in the trade sector also appears to have moderated somewhat.

A slower but positive pace of household consumption expenditure growth is forecast for this year. Real retail and wholesale trade sales contracted in the first quarter of this year. While domestic sales of passenger motor vehicles improved, the outlook for the sector remains subdued. Factors such as low consumer confidence, higher tax burdens, the absence of significant wealth effects and stagnant employment growth have contributed to these weaker consumption trends.

In addition to these factors, credit extension to the household sector in particular remains weak, and is reflected in further household deleveraging. Although credit extension to the corporate sector is still relatively robust, the downward growth trend has persisted. There may, however, be some relief to consumers from moderating inflation, while increases in real disposable income over the forecast period are also expected to provide some support to consumption, but to a lesser extent than previously.

Nominal salary and wage increases have continued to show signs of moderation but are still at levels that contribute to the persistence of inflation at higher levels. While continued moderation of nominal unit labour costs are expected over most of the forecast period, the trajectory has been revised slightly upwards, largely due to the weaker economic growth projections.

International oil prices have firmed since the previous MPC meeting, having declined to levels below US$50 per barrel at one stage. The recovery was a response to indications that the Organization of the Petroleum Exporting Countries (OPEC) agreement to curtail output would be extended for a further six months. However, the fragility of this agreement and the increase in shale production in the US is expected to cap increases going forward. The international oil price assumption has been revised down by US$2 per barrel for each forecast year, but the moderate upward trend has been maintained. Domestic petrol prices increased by around 50 cents per litre in May due to the weaker exchange rate and higher international product prices. The current over-recovery on the petrol price indicates that a reduction of around 20 cents per litre is likely in June, mainly due to international price movements.

The short-term inflation outlook has improved further since the previous meeting of the MPC. Headline inflation in April was lower than expected, largely related to the pace of food disinflation. The MPC notes, however, that there have been broad-based downside surprises in core inflation as well. The current forecast does not incorporate the most recent outcomes, and further downside surprises in the coming months could have an impact on the starting point of the forecast and lower the entire trajectory. However, in the absence of such revisions, the MPC remains concerned about the persistence of the longer-term forecast trend at elevated levels within the target range. This gives very little scope to absorb the impact of possible adverse shocks.

The rand remains a key upside risk to the forecast. The rand has, however, been surprisingly resilient in the face of recent domestic developments. This is partly due to offsetting factors, particularly positive sentiment towards emerging markets and the improved current account balance. The current level of the exchange rate, at below R13.00 against the US dollar, is slightly stronger than at the time of the previous MPC meeting and stronger than that implicit in the starting point for the real exchange rate assumption.

The outlook for the rand, and therefore the risks to the inflation outlook, will be highly sensitive to unfolding domestic political uncertainty as well as decisions by the credit ratings agencies. The rand could weaken significantly in the event of a worst-case ratings downgrade scenario that could result in South African government bonds falling out of the global bond indices.

A downside risk may come from electricity tariffs. The increases from July may be lower than the 4.0% now assumed, given the 1.8% guideline for municipalities published by the National Energy Regulator of South Africa (NERSA). However, there is a great deal of uncertainty with regard to this assumption for next year, when a new application from Eskom is likely. Currently, an 8.0% increase is assumed from July next year.

The MPC assesses the risks to the inflation outlook to be more or less balanced. Domestic demand pressures remain subdued and, given the continued negative consumer and business sentiment, the risks to the growth outlook are assessed to be on the downside.

In light of these developments, the MPC has decided to keep the repurchase (repo) rate unchanged at 7.0% per annum. Five members preferred an unchanged stance while one member preferred a 25 basis point reduction.

The MPC remains of the view that the current level of the repo rate is appropriate for now and that we are likely at the end of the tightening cycle. A reduction in rates would be possible should inflation continue to surprise on the downside and should the forecast over the policy horizon be sustainably within the target range. However, in the current environment of high levels of uncertainty, the risks to the outlook could easily deteriorate and derail the current favourable assessment.

Summary of assumptions: Monetary Policy Committee meeting on 25 May 2017*

1. Foreign sector assumptions

Percentage changes (unless otherwise indicated)	Actual			Forecast		
	2014	2015	2016	2017	2018	2019
1. Real GDP growth in South Africa's major trading-partner countries	3.3%	3.2%	2.9%	3.2%	3.4%	3.3%
				(3.1%)	(3.3%)	
2. International commodity prices in US$ (excluding oil)	-10.5%	-18.7%	-3.6%	15.5%	-5.0%	2.5%
					(-4.0%)	
3. Brent crude (US$/barrel)	99.2	52.5	43.6	54.0	58.0	60.0
				(56.0)	(60.0)	(62.0)
4. World food prices (US$)	-3.8%	-18.7%	-1.5%	7.0%	2.7%	3.4%
5. International wholesale prices	-0.1%	-3.5%	-0.8%	4.0%	2.0%	2.0%
				(3.0%)		
6. Real effective exchange rate of the rand (index 2010 = 100)	79.17	80.08	77.08	85.50	85.00	85.00
				(87.25)	(87.00)	(87.00)
7. Real effective exchange rate of the rand	-3.3%	1.1%	-3.7%	10.9%	-0.6%	0.0%
				(13.2%)	(-0.3%)	

2. Domestic sector assumptions

Percentage changes (unless otherwise indicated)	Actual			Forecast		
	2014	2015	2016	2017	2018	2019
1. Real government consumption expenditure	1.1%	0.5%	2.0%	1.0%	1.0%	1.0%
2. Administered prices	6.7%	1.7%	5.3%	6.3%	6.4%	6.5%
				(6.7%)	(6.7%)	(6.4%)
– Petrol price	7.2%	-10.7%	1.6%	8.6%	7.7%	6.3%
				(7.8%)	(6.9%)	(6.0%)
– Electricity price	7.2%	9.4%	9.3%	5.7%	6.0%	8.0%
				(7.7%)	(8.0%)	
3. Potential growth	1.7%	1.5%	1.3%	1.4%	1.5%	1.6%
4. Repurchase rate (per cent)	5.57	5.89	6.91	7.00	7.00	7.00

The figures in brackets represent the previous assumptions of the Monetary Policy Committee.

* For an explanation of foreign sector assumptions and domestic sector assumptions, see pages 51 and 52.

Selected forecast results: Monetary Policy Committee meeting on 25 May 2017

* Figures below the forecast in parentheses represents the previous MPC forecast

Year-on-year percentage change	Actual					Forecast														
	1	2	3	4	2016	1	2	3	4	2017	1	2	3	4	2018	1	2	3	4	2019
1. Headline inflation............................	6.5	6.2	6.1	6.6	6.3	6.4	5.5	5.5	5.4	5.7	5.1	5.2	5.4	5.5	5.3	5.5	5.5	5.5	5.5	5.5
						(6.4)	(5.8)	(5.8)	(5.6)	(5.9)	(5.2)	(5.4)	(5.5)	(5.5)	(5.4)	(5.5)	(5.5)	(5.5)	(5.5)	(5.5)
2. Core inflation..................................	5.5	5.5	5.7	5.7	5.6	5.2	5.0	5.0	4.9	5.0	5.0	5.0	5.1	5.2	5.1	5.3	5.3	5.3	5.3	5.3
						(5.4)	(5.5)	(5.4)	(5.3)	(5.4)	(5.1)	(5.1)	(5.2)	(5.3)	(5.2)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)

The figures in brackets represent the previous forecasts of the Monetary Policy Committee.

* Figures below the forecast in parentheses represents the previous MPC forecast

Per cent	Actual			Forecast		
	2014	2015	2016	2017	2018	2019
1. Real gross domestic product (GDP) growth	1.7%	1.3%	0.3%	1.0%	1.5%	1.7%
				(1.2%)	(1.7%)	(2.0%)
2. Current account as a ratio to nominal GDP.............................	-5.3	-4.4	-3.3	-3.1	-4.1	-4.4
				(-3.2)	(-3.9)	(-4.0)

The figures in brackets represent the previous forecasts of the Monetary Policy Committee.

Statement of the Monetary Policy Committee

20 July 2017

Issued by Lesetja Kganyago, Governor of the South African Reserve Bank, at a meeting of the Monetary Policy Committee in Pretoria

Since the previous meeting of the Monetary Policy Committee (MPC), the inflation outlook has improved. Food price inflation has moderated faster than expected, domestic demand pressures remain subdued, and international oil prices have declined. Despite a degree of volatility, the rand exchange rate has been relatively resilient in the face of expected monetary policy tightening in some advanced economies as well as domestic political risks and uncertainties. Risks to the inflation outlook still remain.

At the same time, domestic growth prospects have deteriorated further following the surprise contraction of gross domestic product (GDP) in the first quarter of 2017. The economy has now recorded two successive quarters of negative growth, and although a near-term improvement is expected, the outlook remains challenging. A number of sentiment indicators and data points have reached levels last seen during the 2009 recession, at the height of the global financial crisis.

The year-on-year inflation rate as measured by the consumer price index (CPI) for all urban areas measured 5.4% and 5.1% in May and June respectively, in line with the South African Reserve Bank's (SARB) short-term forecast. Food and non-alcoholic beverage inflation measured 6.9% in both months, with the contribution to the overall inflation outcome unchanged at 1.2 percentage points. Meat prices continued to accelerate, and at 13.0% contributed to the downside stickiness of food price inflation. The SARB's measure of core inflation, which excludes food, fuel and electricity, measured 4.8% in both months.

Producer price inflation for final manufactured goods measured 4.6% in April and 4.8% in May. The further moderation in food prices was reflected in the producer price index with the category of food products, beverages and tobacco products decelerating for the seventh consecutive month to 5.8%. The divergent trends between the subcategories of 'products of crops and horticulture' and 'live animals' persisted, with year-on-year changes of -24.4% and 21.4% respectively.

The SARB's forecast for headline CPI inflation has shown a marked improvement since the previous MPC meeting. The annual average forecast has been revised down by 0.4 percentage points for both 2017 and 2018, and by 0.3 percentage points for 2019 to 5.3%, 4.9% and 5.2% respectively. A lower turning point of 4.6% is expected in the first quarter of 2018 (previously 5.1%) and an average of 5.2% is forecast for the final quarter of 2019.

The main drivers of the improved forecast were the lower starting point; revised assumptions regarding international oil prices, domestic electricity tariffs and the real effective exchange rate; and a wider output gap. These assumptions are set out in the annexure to this statement. Food price inflation is also expected to be more subdued due to a lower starting point and more favourable domestic crop estimates. Despite a persistent upward trend in meat price inflation, the forecast for food price inflation has been revised down from 7.7% to 7.3% for this year, and from 5.4% to 5.1% in 2018. The forecast for 2019 is unchanged at 5.5%.

The improvement is also evident in the core inflation outlook, with average forecasts of 4.8% for 2017 and 2018, and 4.9% for 2019. This compares with previous forecasts of 5.0%, 5.1% and 5.3% for these years. This improvement is driven in part by lower unit labour costs, in addition to the exchange rate and output gap developments.

Inflation expectations as reflected in the survey conducted by the Bureau for Economic Research show a marginal improvement, with average expectations slightly below 6% in all three years. The decline was most marked among analysts, particularly over the first two survey years, and to a lesser extent among labour unionists. Both these categories of respondents expect inflation to be within the target range over the forecast period. The expectations of business respondents are largely unchanged and remain above 6% for all three years. By contrast, average five-year expectations of all groups edged up from 5.7% to 5.9%, and ranged between 5.5% for analysts and 6.3% for business respondents.

Median inflation expectations of market analysts improved over the near term. According to the Reuters Econometer survey conducted in July, expected inflation declined by 0.2 percentage points to 5.5% in 2017 and to 5.3% in 2018 compared with the May survey. However, the longer-term trend is reversed with an expectation of 5.5% in 2019. Expectations implicit in the difference between nominal bonds and inflation-linked bonds have also declined slightly since the previous MPC meeting, with the five-year break-even rate at 5.3%.

The global growth backdrop remains positive, with sustained upswings evident in most regions. This is despite continued uncertainty regarding economic policy reforms in the United States (US). Nevertheless, growth rates and potential output estimates are still generally lower than those in the pre-crisis period. While there are lingering concerns about financial stability risks from the shadow banking sector in China, the recent strong performance of the economy has contributed to the favourable environment for emerging markets.

Underlying global inflation trends remain benign, with inflation below target in most of the advanced economies, notwithstanding the positive growth prognosis and tightening labour markets. An exception is the United Kingdom (UK) where inflation has accelerated in the wake of the Brexit-induced depreciation of the pound sterling. The subdued global inflation outlook is reinforced by generally slow wage and productivity growth in developed economies.

Despite the absence of inflationary pressures, central banks in a number of advanced economies have signalled their intentions to move from highly accommodative monetary policy stances. These countries include the US, the UK, the euro area and Canada. This process is unlikely to be smooth or perfectly synchronised and could generate bouts of uncertainty. In the US, expectations of further near-term rate increases by the US Federal Reserve (Fed) have been scaled down following a succession of downside inflation surprises. The gradual nature of the planned balance sheet contraction by the Fed has also been well communicated and appears to have been largely priced in by the markets.

While changing expectations regarding European Central Bank and US monetary policy in particular have impacted on a number of emerging market currencies and bond yields, the reaction has been relatively muted, and a repeat of the 2013 so-called taper tantrum episode is not expected. Those economies that were most sensitive to that episode have much improved macroeconomic balances, and their currencies are less vulnerable to possible spillover effects from gradual monetary tightening in the advanced economies.

The rand has also been affected by these changing expectations as well as by domestic political developments, including concerns about a proposal to change the SARB's monetary policy mandate. While the rand has remained more or less unchanged since the previous meeting of the MPC, it has been relatively volatile, having fluctuated in a range between R12.60 and R13.60 against the US dollar.

The rand's relative resilience had been underpinned by the generally positive sentiment towards emerging markets as well as by sustained trade surpluses. The current account deficit is still expected to widen over the forecast period, but the degree of widening has been revised down. The rand remains vulnerable to increased global risk aversion, domestic political shocks, and to the possibility of further ratings downgrades.

The domestic growth outlook remains a concern following the surprise broad-based GDP growth contraction in the first quarter of this year. With the exception of the primary sector, all sectors recorded negative growth. While positive growth is expected in the second quarter, the SARB's annual growth forecasts have been revised down further. The forecast for 2017 has been adjusted down from 1.0% to 0.5%, and the forecast for 2018 is down from 1.5% to 1.2%. Growth of 1.5% is expected in 2019, compared with 1.7% previously.

As a result of these trends, the output gap has widened somewhat despite a further downward revision to potential output growth by 0.3 percentage points for each year, to 1.1% in 2017 and to 1.3% in 2019. The weak outlook is consistent with the decline in the Rand Merchant Bank/Bureau for Economic Research (RMB/BER) Business Confidence Index to levels last seen during the recession following the global financial crisis. The SARB's composite leading business cycle indicator has also moderated somewhat since January.

Monthly data for both the mining and manufacturing sectors in April and May suggest that, in the absence of a sharp contraction in June, these sectors are likely to contribute positively to growth in the second quarter, along with the continued rebound in the agricultural sector. The recovery is nevertheless expected to be modest, particularly in the light of a sharp fall in the Absa Purchasing Managers' Index in June, which returned to below the neutral level of 50 index points. The construction sector also remains under pressure following the marked fall in building plans passed in the first quarter of this year, with the negative trend continuing into April.

The continued poor performance of gross fixed capital formation contributes to the weak state of the economy. Although private sector investment recorded positive growth after five consecutive quarters of contraction, at a growth rate of 1.2% it remains very subdued. Given the extremely low level of business confidence, a near-term improvement is unlikely. Policy uncertainty, a recent example being in the mining sector, is likely to constrain investment.

As a consequence, employment growth has been minimal and the prospects are unfavourable. Given the need for fiscal consolidation, a continued decline in government's contribution to employment creation is expected. The official unemployment rate increased to 27.7% in the first quarter of this year.

Consumption expenditure by households contracted in the first quarter of this year amid a further deterioration in consumer confidence. Although the monthly retail sales data suggest a more positive outcome for the second quarter, this improvement is likely to be offset in part by a decrease in new vehicle sales in the quarter. The outlook for consumption expenditure is expected to remain weak amid employment uncertainty and higher tax burdens.

These consumption trends are mirrored in the continued moderation in credit extension to households. Growth in mortgage advances and instalment sales credit finance remained subdued, reflective of the difficult conditions in the housing and vehicle markets. General loans to households increased moderately in May, but off a low base. By contrast, credit extension to the corporate sector remains relatively buoyant, if on a downward trend.

Wage trends have been an important contributor to the persistence of inflation at higher levels. There are, however, indications of some moderation in average salaries and related unit labour costs which are expected to remain below the 6% level over the forecast period. The outcome of a number of multi-year wage agreements that are due for renewal in 2017 will be closely watched as they could pose a risk to the inflation trajectory.

The persistent global oil supply glut, along with increased shale gas production in the US, has undermined efforts by the Organization of the Petroleum Exporting Countries (OPEC) and other producers to support prices through output restrictions. Since the beginning of June, Brent crude oil prices have traded at levels below US$50 per barrel, and the SARB's oil price assumptions have been revised down over the forecast period. These recent oil price trends, along with the stronger exchange rate, contributed to a 69 cents per litre reduction in the petrol price in July. Following a weakening of the rand and a partial recovery in crude oil prices, a moderate petrol price increase is expected in August.

The inflation outlook has improved significantly since the previous meeting of the MPC and has been fairly broad-based. The lower core inflation outlook is indicative of weaker underlying inflation pressures at a time when the impact of exogenous shocks on headline inflation has been dissipating. These shocks include drought-induced food price inflation and, to a lesser extent, international oil price increases earlier this year that have since been reversed.

A number of risks to the inflation outlook persist and the MPC assesses the risks to the inflation outlook to be broadly balanced. Although the rand has been relatively resilient, it remains vulnerable to heightened political uncertainty, global monetary policy developments and possible further credit ratings downgrades. On the positive side, it is supported by a sustained narrowing of the current account deficit and positive investor sentiment towards emerging markets.

A further upside risk relates to the possible supply side shock of a large electricity tariff increase from July next year. Eskom has approached the National Energy Regulator of South Africa (NERSA) for an increase of around 20%, but the current forecast assumes an increase of 8%. This assumption will be adjusted in line with any new determinations made by NERSA.

The MPC also remains concerned that inflation expectations remain sticky at the upper end of the target range. To the extent that these expectations are formed adaptively, they should adjust downwards if the lower inflation trajectory is sustained. The MPC would prefer expectations to be anchored closer to the midpoint of the target range.

The underlying demand in the economy is extremely weak and the MPC is concerned about the deterioration in the growth outlook over the forecast period. This decline is broad-based. It is unclear where the drivers of accelerated growth will come from in the absence of credible structural policy initiatives that will reduce uncertainty and increase business and consumer confidence. The MPC assesses the risks to the revised growth forecast to be slightly on the downside.

Given the improved inflation outlook and the deteriorated growth outlook, the MPC has decided to reduce the repurchase rate by 25 basis points with effect from 21 July 2017, to 6.75% per annum. Four members preferred a reduction, while two members preferred an unchanged stance.

As has been emphasised on numerous occasions, the MPC does not view monetary policy as the solution to the structural growth constraints in the economy, nor does it believe that a reduction in interest rates will provide a significant stimulus to growth in the current environment of low confidence and political uncertainty. It will, however, provide some relief at the margin.

In this highly uncertain environment, future policy decisions will be dependent on data outcomes and our assessment of the balance of risks. We remain vigilant and would not hesitate to reverse this decision should the inflation outlook and risks deteriorate.

Summary of assumptions: Monetary Policy Committee meeting on 20 July 2017*

1. Foreign sector assumptions

Percentage changes (unless otherwise indicated)	Actual			Forecast		
	2014	2015	2016	2017	2018	2019
1. Real GDP growth in South Africa's major trading-partner countries...	3.3%	3.3%	2.9%	3.3%	3.4%	3.3%
		(3.2%)		(3.2%)		
2. International commodity prices in US$ (excluding oil)..........................	-10.5%	-18.7%	-3.6%	14.0%	-5.0%	2.5%
				(15.5%)		
3. Brent crude (US$/barrel)	99.2	52.5	43.6	52.0	55.0	56.0
				(54.0)	(58.0)	(60.0)
4. World food prices (US$)	-3.8%	-18.7%	-1.5%	7.0%	2.7%	3.4%
5. International wholesale prices...	-0.1%	-3.5%	-0.8%	4.0%	2.0%	2.0%
6. Real effective exchange rate of the rand (index 2010 = 100)	79.17	80.08	77.08	87.01	87.00	87.00
				(85.50)	(85.00)	(85.00)
7. Real effective exchange rate of the rand...	-3.3%	1.1%	-3.7%	12.9%	0.0%	0.0%
				(10.9%)	(-0.6%)	

2. Domestic sector assumptions

Percentage changes (unless otherwise indicated)	Actual			Forecast		
	2014	2015	2016	2017	2018	2019
1. Real government consumption expenditure	1.1%	0.5%	2.0%	0.5%	1.0%	1.0%
				(1.0%)		
2. Administered prices..	6.7%	1.7%	5.3%	5.5%	5.7%	6.2%
				(6.3%)	(6.4%)	(6.5%)
– Petrol price	7.2%	-10.7%	1.6%	6.6%	6.2%	5.5%
				(8.6%)	(7.7%)	(6.3%)
– Electricity price...	7.2%	9.4%	9.3%	4.6%	5.0%	8.0%
				(5.7%)	(6.0%)	
3. Potential growth...	1.7%	1.3%	1.1%	1.1%	1.2%	1.3%
		(1.5%)	(1.3%)	(1.4%)	(1.5%)	(1.6%)
4. Repurchase rate (per cent)..	5.57	5.89	6.91	7.00	7.00	7.00

The figures in brackets represent the previous assumptions of the Monetary Policy Committee.

* For an explanation of foreign sector assumptions and domestic sector assumptions, see pages 51 and 52.

Selected forecast results: Monetary Policy Committee meeting on 20 July 2017

Forecast results (quarterly)

Year-on-year percentage change	Actual						Forecast													
	1	2	3	4	2016	1	2	3	4	2017	1	2	3	4	2018	1	2	3	4	2019
1. Headline inflation.............................	6.5	6.2	6.1	6.6	6.3	6.4	5.3	4.8	4.7	5.3	4.6	4.8	5.2	5.2	4.9	5.1	5.2	5.2	5.2	5.2
							(5.5)	(5.5)	(5.4)	(5.7)	(5.1)	(5.2)	(5.4)	(5.5)	(5.3)	(5.5)	(5.5)	(5.5)	(5.5)	(5.5)
2. Core inflation...................................	5.5	5.5	5.7	5.7	5.6	5.2	4.8	4.6	4.5	4.8	4.7	4.8	4.8	4.9	4.8	4.9	4.9	4.9	4.9	4.9
							(5.0)	(5.0)	(4.9)	(5.0)	(5.0)	(5.0)	(5.1)	(5.2)	(5.1)	(5.3)	(5.3)	(5.3)	(5.3)	(5.3)

The figures in brackets represent the previous forecasts of the Monetary Policy Committee.

Forecast results (annual)

Percentage changes	Actual			Forecast		
	2014	2015	2016	2017	2018	2019
1. Real gross domestic product (GDP)...	1.7%	1.3%	0.3%	0.5%	1.2%	1.5%
				(1.0%)	(1.5%)	(1.7%)
2. GDP output gap	-0.4	-0.5	-1.3	-1.9	-1.9	-1.7
	(-0.1)	(-0.3)		(-1.6)	(-1.6)	(-1.4)
3. Current account as a ratio to nominal GDP	-5.3	-4.4	-3.3	-2.7	-3.4	-3.8
				(-3.1)	(-4.1)	(-4.4)

The figures in brackets represent the previous forecasts of the Monetary Policy Committee.

Statement of the Monetary Policy Committee

21 September 2017

Issued by Lesetja Kganyago, Governor of the South African Reserve Bank, at a meeting of the Monetary Policy Committee in Pretoria

The South African economy recorded positive growth during the second quarter of 2017 following two consecutive quarters of contraction. Growth prospects, however, remain subdued as domestic fixed investment contracted further amid low business confidence. The inflation forecast has increased marginally since the previous meeting of the Monetary Policy Committee (MPC), with increased uncertainty regarding a number of the main drivers.

The global economy is on a recovery path. Inflation has moderated in the emerging economies and remains benign in most advanced economies. The statement released by the Federal Open Market Committee (FOMC) yesterday confirmed the gradual pace of reduction of its balance sheet and normalisation of its policy rate. Along with continued accommodative policies by the European Central Bank (ECB), this is expected to contribute to the continuation of favourable prospects for capital flows to emerging economies.

The year-on-year inflation rate as measured by the consumer price index (CPI) for all urban areas increased to 4.8% in August, up from 4.6% previously, marginally below the South African Reserve Bank's (SARB) short-term forecast. Food and non-alcoholic beverage inflation surprised on the downside, moderating from 6.8% to 5.7%. Meat prices continued to accelerate in August, having measured 15.0%, but the lower cereal prices contributed to the slowing momentum. The SARB's measure of core inflation, which excludes food, fuel and electricity, measured 4.7% in July and 4.6% in August, in line with the short-term forecast.

Year-on-year producer price inflation for final manufactured goods declined from 4.0% in June to 3.6% in July. Food products price inflation moderated further to 3.3% in July, but the divergent trend of manufactured meat prices continued with an increase of 17.8%. This trend was also evident in agricultural prices, where the subcategory of 'live animals' increased by 31.7%, while 'products of crops and horticulture' declined by 26.9%.

The SARB's forecast for headline CPI inflation is unchanged at an annual average of 5.3% for 2017, and revised up by 0.1 percentage point to 5.0% and 5.3% for 2018 and 2019 respectively. A lower turning point of 4.6% is still expected in the first quarter of 2018. The same pattern is observed in the forecast for core inflation which is unchanged at 4.8% for 2017, but adjusted up to 4.9% and 5.0% for the next two years. These forecasts do not incorporate the most recent inflation outcome.

The main drivers of these changes are a lower repurchase rate, a less appreciated exchange rate assumption, a slightly narrower output gap and a marginal adjustment to the food price forecast as meat prices continue to surprise on the upside. Food price inflation is forecast to reach a low turning point of 4.8% in the first quarter of 2018 and to average 7.3% in 2017, and 5.2% and 5.6% in 2018 and 2019 respectively. There may be some downside risk to this forecast in light of the August food inflation outcomes. The electricity tariff assumption remains unchanged at 8% from July next year, but there may be some upside risk to this assumption, given Eskom's recent application to the National Energy Regulator of South Africa.

Inflation expectations as reflected in the survey conducted by the Bureau for Economic Research at Stellenbosch University in the third quarter of 2017 continue to be relatively anchored at the upper end of the target range. Despite a decline of 0.2 percentage points in the average expected inflation for 2017 to 5.7%, expectations remain unchanged at 5.8% and 5.9% for the next two years. Expectations of analysts and business people moderated – although the latter remains above the target range – while those of trade unionists increased marginally. A welcome development is that average five-year inflation expectations declined from 5.9% to 5.6%. This is the lowest level recorded since long-term expectations were first surveyed in 2011. Expectations implicit in the difference between nominal bonds and inflation-linked bonds are more or less unchanged since the previous meeting, with the five-year break-even rate at 5.2%.

Global conditions remain generally favourable despite some geopolitical risks. The upswing appears to be synchronised with increased world trade volumes. Growth in the Unites States (US) is forecast to remain above potential in the short to medium term, with the devastation caused by the recent hurricanes expected to have only a limited and short-lived impact on growth. The improved growth performance in the euro area also appears to be sustained and region-wide, while the Japanese economy has experienced moderate growth in the past few quarters. By contrast, growth in the United Kingdom has slowed following weak investment in the face of the Brexit headwinds. The outlook for emerging markets is also relatively positive amid generally improving fundamentals.

Despite the improved growth outlook, global inflation pressures remain benign, particularly in the advanced economies. These trends are likely to contribute to the persistence of accommodative monetary policy stances in Japan and the euro area, where the recent appreciation of the euro is likely to dampen inflation pressures further. As expected, the US Federal Reserve (Fed) yesterday announced a gradual reduction of its balance sheet. The process had been communicated previously and was largely priced in by the financial markets. The pace of policy rate normalisation is also expected to remain measured as inflation continues to surprise on the downside, despite tightening labour market conditions. The stance of US fiscal policy is a source of uncertainty. Although tax reductions could lead to a faster pace of monetary tightening, the prospect of significant tax reforms has receded over time.

The rand exchange rate has traded in a range of between R13.54 and R12.74 since the previous meeting of the MPC, driven in part by movements in the major currencies. Over this period, the rand depreciated by 2.8% against the US dollar, by 6.2% against the euro, and by 4.5% on a trade-weighted basis. The rand remains sensitive to political developments, weak economic growth prospects and the risk of further sovereign ratings downgrades. However, it has been supported by persistent trade account surpluses and associated narrowing of the current account deficit.

The rand has also been supported by the relatively accommodative global monetary policy settings. These have contributed to sustained demand for high-yielding emerging market bonds. Net purchases by non-residents of South African government bonds have amounted to R63 billion in the year to date. The domestic yield curve relative to other peer emerging market economies remains attractive to non-residents despite a decline in the curve across all maturities. However, longer-term bond yields and the rand remain vulnerable to a large non-resident sell-off in the event of further credit ratings downgrades, which would result in South Africa falling out of the global bond indices.

The domestic economic growth outlook remains constrained despite the higher-than-expected growth outcome of 2.5% in the second quarter of this year. This broad-based improvement, while welcome, is not expected to have a significant impact on the annual growth outcome. The SARB's forecast for growth in the gross domestic product for 2017 has been revised up marginally from 0.5% to 0.6%, while the forecasts for 2018 and 2019 have remained unchanged at 1.2% and 1.5% respectively. This outlook is consistent with the SARB's leading business cycle indicator which has been weakening since the beginning of the year, indicative of muted growth prospects. Business confidence also remains at very low levels, despite the slight improvement in the Rand Merchant Bank/Bureau for Economic Research (RMB/BER) Business Confidence Index during the third quarter.

All the major sectors, apart from construction, recorded positive growth in the second quarter of 2017, with a particularly strong performance in the agricultural sector. The recovery in the manufacturing sector followed three successive quarterly contractions, while the tertiary sector reversed its one-quarter contraction. The limited monthly data for the third quarter present a mixed picture at this stage. Mining sector output contracted in July while manufacturing recorded positive growth. However, the Absa Purchasing Managers' Index averaged 43.5 index points in the first two months of the quarter, suggesting continued headwinds for the sector.

The underlying weakness in the economy is evident in the 2.6% contraction in gross fixed capital formation during the second quarter. Of particular concern is the 6.9% decline in private sector fixed investment, reflecting the low levels of business confidence. This subdued outlook is expected to persist against a backdrop of continued political and policy uncertainty.

These investment trends do not bode well for employment creation in the economy. Total employment declined in the second quarter of 2017 and the unemployment rate remained unchanged at 27.7%. The public sector, previously the main source of employment growth in the economy, is likely to continue to shed jobs as fiscal constraints intensify.

Consumption expenditure by households rebounded strongly in the second quarter following the sizeable contraction in the previous quarter. Spending on all three major goods components recovered, but expenditure on services contracted. Despite the improved outcome, the outlook for consumption expenditure growth remains subdued, although positive, amid very low levels of consumer confidence. Month-on-month retail trade sales decreased in July, but motor vehicle sales remained relatively strong in July and August. The SARB expects household consumption growth to be in the region of 1% for this year.

The underlying drivers of household consumption expenditure remain unchanged. Lower inflation, lower interest rates and higher real income growth are expected to provide some support for consumption. Offsetting effects include depressed consumer confidence, weak employment growth, the absence of significant wealth effects and the prospect of further tax increases in the wake of fiscal revenue shortfalls.

In addition, growth in credit extension to the private sector has declined steadily over the past few months, as corporate demand for mortgage finance and general loans in particular moderated. Growth in credit extension to households remains weak and negative in real terms. These trends are also reflected in continued household deleveraging, with household debt to disposable income declining further to 72.6% in the second quarter – its lowest level since the beginning of 2006.

International oil prices have increased by about US$5 per barrel since the previous meeting, with Brent crude oil currently trading at around US$55 per barrel. Nevertheless, the MPC does not expect a further sustained acceleration in prices as the flexibility of US shale oil production is expected to provide a ceiling to prices. The previous oil price assumptions therefore remain unchanged. The domestic price of 95 octane petrol has increased by a cumulative 86 cents per litre since August, mainly due to higher international product prices. A further moderate increase is expected in October.

The MPC expects inflation to remain within the target range over the forecast period, closer to the midpoint than was the case early in the year. Core inflation has remained relatively stable, indicative of the absence of significant demand pressures. However, a number of risks to the inflation outlook have increased and the MPC assesses the risks to the inflation outlook to be somewhat on the upside.

The rand remains a key upside risk to the inflation outlook. Furthermore, some of the event risks, particularly those of a political nature, are now more imminent but with no greater degree of clarity regarding the outcome. The prospect of a further ratings downgrade persists, particularly given the increased fiscal challenges and political uncertainty. The narrower current account deficit and the global environment remain supportive of the rand. However, should inflation and/or growth surprise on the upside in Europe and in the US in particular, we could see a faster pace of monetary tightening, which could impact on capital flows and the rand exchange rate. At this stage, markets appear to be pricing a high probability of an increase in the Federal funds rate in December, and three further increases next year.

A further upside risk relates to the possibility of a large electricity tariff increase than is currently assumed in our forecast from July next year. A tariff increase of 20% could raise the headline inflation forecast by between 0.2 and 0.3 percentage points, and the MPC will continue to assess the possible second round effects of these increases.

The MPC remains concerned that inflation expectations of business people and trade unions remains above or close to 6% for the next two years, even though our own forecast and those of most analysts expect inflation to be much closer to 5%. Lower inflation expectations among key price setters are an important element in reducing inflation in the future, thus enabling lower nominal interest rates.

Until August, food price inflation had been moderating at a slower pace than expected, mainly due to the continued acceleration in meat prices. However, the August year-on-year outcome surprised significantly on the downside. Should this lower trajectory continue there could be a downside risk to the food price forecast and to the overall inflation outlook, particularly in the short term.

Although household consumption expenditure rebounded strongly in the second quarter, the MPC does not view this as indicative of the longer-term trend of expenditure, which is expected to remain constrained. The second-quarter growth outcome, while positive, does not change our growth forecast significantly, and the outlook remains weak. The MPC assesses the risks to the revised growth forecast to be slightly on the downside.

In light of these developments and the deteriorating assessment of the balance of the risks, the MPC has decided to keep the repurchase rate unchanged at 6.75% per annum. Three members preferred an unchanged stance and three members preferred a 25 basis point reduction. Ultimately, the Committee decided to keep the rate unchanged.

Given the heightened uncertainties in the economy, the MPC felt it would be appropriate to maintain the current monetary policy stance at this stage, and reassess the data and the balance of risks at the next meeting.

Summary of assumptions: Monetary Policy Committee meeting on 21 September 2017*

1. Foreign sector assumptions

Percentage changes (unless otherwise indicated)	Actual			Forecast		
	2014	2015	2016	2017	2018	2019
1. Real GDP growth in South Africa's major trading-partner countries...	3.3%	3.2%	2.9%	3.4%	3.3%	3.3%
		(3.3%)		(3.3%)	3.4%	
2. International commodity prices in US$ (excluding oil)..........................	-10.2%	-22.7%	4.1%	14.0%	-2.5%	2.5%
	(-10.5%)	(-18.7%)	(-3.6%)		(-5.0%)	
3. Brent crude (US$/barrel)	99.2	52.5	43.6	52.0	55.0	56.0
4. World food prices (US$)	-3.8%	-18.7%	-1.5%	7.0%	2.7%	3.4%
5. International wholesale prices	-0.1%	-3.5%	-0.8%	3.5%	1.8%	2.0%
				(4.0%)	(2.0%)	
6. Real effective exchange rate of the rand (index 2010 = 100)	79.17	80.08	77.08	86.40	86.00	86.00
				(87.01)	(87.00)	(87.00)
7. Real effective exchange rate of the rand...	-3.3%	1.1%	-3.7%	12.1%	-0.5%	0.0%
				(12.9%)	(0.0%)	

2. Domestic sector assumptions

Percentage changes (unless otherwise indicated)	Actual			Forecast		
	2014	2015	2016	2017	2018	2019
1. Real government consumption expenditure	1.1%	0.5%	2.0%	0.5%	1.0%	1.0%
2. Administered prices...	6.7%	1.7%	5.3%	5.5%	5.7%	6.2%
– Petrol price	7.2%	-10.7%	1.6%	6.9%	6.4%	5.6%
				(6.6%)	(6.2%)	(5.5%)
– Electricity price..	7.2%	9.4%	9.3%	4.7%	5.1%	8.0%
				(4.6%)	(5.0%)	
3. Potential growth...	1.7%	1.3%	1.1%	1.1%	1.2%	1.3%
4. Repurchase rate (per cent)..	5.57	5.89	6.91	6.89	6.75	6.75
				(7.00)	(7.00)	(7.00)

The figures in brackets represent the previous assumptions of the Monetary Policy Committee.

* For an explanation of foreign sector assumptions and domestic sector assumptions, see pages 51 and 52.

Selected forecast results: Monetary Policy Committee meeting on 21 September 2017

Forecast results (quarterly)

Year-on-year percentage change	Actual							Forecast													
	1	2	3	4	2016	1	2	3	4	2017	1	2	3	4	2018	1	2	3	4	2019
1. Headline inflation............................	6.5	6.2	6.1	6.6	6.3	6.4	5.3	4.8	4.8	5.3	4.6	4.8	5.3	5.2	5.0	5.2	5.3	5.3	5.3	5.3
								(4.8)	(4.7)	(5.3)	(4.6)	(4.8)	(5.2)	(5.2)	(4.9)	(5.1)	(5.2)	(5.2)	(5.2)	(5.2)
2. Core inflation..................................	5.5	5.5	5.7	5.7	5.6	5.2	4.8	4.6	4.5	4.8	4.7	4.9	4.9	5.0	4.9	5.0	5.0	5.0	5.1	5.0
								(4.6)	(4.5)	(4.8)	(4.7)	(4.8)	(4.8)	(4.9)	(4.8)	(4.9)	(4.9)	(4.9)	(4.9)	(4.9)

The figures in brackets represent the previous forecasts of the Monetary Policy Committee.

Forecast results (annual)

Per cent	Actual			Forecast		
	2014	2015	2016	2017	2018	2019
1. Real gross domestic product (GDP) growth	1.7%	1.3%	0.3%	0.6%	1.2%	1.5%
				(0.5%)		
2. GDP output gap	-0.4	-0.5	-1.3	-1.7	-1.7%	-1.5
				(-1.9)	(-1.9)	(-1.7)
3. Current account as a ratio to nominal GDP	-5.3	-4.4	-3.3	-2.6	-3.4	-3.8
				(-2.7)		

The figures in brackets represent the previous forecasts of the Monetary Policy Committee.

Foreign sector assumptions

1. Trading-partner gross domestic product (GDP) growth is determined broadly via the International Monetary Fund's (IMF) Global Projection Model (GPM), which is then adjusted to aggregate the GDP growth rates of South Africa's major trading partners on a trade-weighted basis. Individual projections are done for the four largest trading partners (euro area, China, the United States (US) and Japan), while the remaining trading partners are grouped into three regions: emerging Asia (excluding China), Latin America and the Rest of Countries bloc. The assumption takes account of country-specific 'consensus' forecasts as well as IMF regional growth prospects.

2. The commodity price index is a weighted aggregate price index of the major South African export commodities based on 2010 prices. The composite index represents the total of the individual commodity prices multiplied by their smoothed export weights. Commodity price prospects generally remain commensurate with global liquidity as well as commodity demand/supply pressures as reflected by the pace of growth in the trading-partner countries.

3. The Brent crude oil price is expressed in US dollars per barrel. The assumption incorporates the analysis of factors of supply, demand (using global growth expectations) and inventories of oil (of all grades) as well as the expectations of the US Energy Information Administration (EIA), the Organization of the Petroleum Exporting Countries (OPEC) and Reuters.

4. World food prices are the composite food price index of the United Nations Food and Agriculture Organization (FAO) in US dollars. The index is weighted using average export shares and represents the monthly change in the international prices of a basket of five food commodity price indices (cereals, vegetable oil, dairy, meat and sugar). World food price prospects incorporate selected global institution forecasts for food prices as well as imbalances from the anticipated trend in international food supplies relative to expected food demand pressures.

5. International wholesale prices refers to a weighted aggregate of the producer price indices of South Africa's major trading partners, as per the South African Reserve Bank's (SARB) official real effective exchange rate calculation. Although individual country consumer price index (CPI) inflation forecasts provide a good indication for international wholesale price pressures, the key drivers for the assumed trend in global wholesale inflation are oil and food prices as well as expected demand pressures emanating from the trends in the output gaps of the major trading-partner countries. Other institutional forecasts for international wholesale prices are also considered.

6. The real effective exchange rate is the nominal effective exchange rate of the rand deflated by the producer price differential between South Africa and an aggregate of its trading-partner counties (as reflected in the *Quarterly Bulletin* published by the SARB). Although the nominal rate is a weighted average of South Africa's 20 largest trading partners, particular focus is placed on the rand outlook against the US dollar, euro, Chinese yuan, British pound and the Japanese yen. The assumed trend in the real effective exchange rate remains constant from the latest available quarterly average over the projection period. However, due to the time delay in the calculation of the real effective exchange rate, the most recent trend in the nominal effective exchange rate is adjusted with the assumed trend for the domestic and foreign price differential for the current quarter. This may result in a technical annual adjustment over the current and next forecast year that differs from zero.

Domestic sector assumptions

1. **Government consumption expenditure** (real) is broadly based on the most recent National Treasury budget projections. However, since these projections take place twice a year, the most recent actual data points also play a significant role in the assumptions process.

2. **Administered prices** represent the total of regulated and non-regulated administered prices as reflected by Statistics South Africa (Stats SA). Their weight in the CPI basket is 16.17% and the assumed trend over the forecast period is largely determined by the expected pace of growth in petrol prices, electricity tariffs, school fees, and water and other municipal assessment rates.

   The **petrol price** is an administered price and comprises 4.58% of the CPI basket. The basic fuel price (which currently accounts for roughly half of the petrol price), is determined by the exchange rate and the price of petrol quoted in US dollars at refined petroleum centres in the Mediterranean, the Arab Gulf and Singapore. The remainder of the petrol price is made up of wholesale and retail margins as well as the fuel levy and contributions to the Road Accident Fund (RAF). Since most taxes and retail margins are changed once a year, the assumed trajectory of the petrol price largely reflects the anticipated trend in oil prices and the exchange rate.

   The **electricity price** is an administered price measured at the municipal level with a weight of 3.75% in the headline CPI basket. Electricity price adjustments generally take place in July and August of each year, and the assumed pace of increase over the forecast period reflects the multi-year price determination (MYPD) agreement between Eskom and the National Energy Regulator of South Africa (NERSA), with a slight adjustment for measurement at municipal level.

3. The pace of **potential growth** is derived from the SARB's semi-structural potential output model. The measurement accounts for the impact of the financial cycle on real economic activity and introduces economic structure via the relationship between potential output and capacity utilisation in the manufacturing sector *(South African Reserve Bank Working Paper Series No. WP/14/08).*

4. The **repurchase rate** (repo rate) is the official monetary policy instrument and represents the interest rate at which banks borrow money from the SARB. Although the rate is held constant over the forecast period, this assumption is relaxed in alternative scenarios where, for instance, the policy rate responds to deviations of output from its potential and the gap between future inflation and the inflation target, that is, via a stylised 'Taylor rule'; one that is based on market expectations of the future path of the policy rate, and other paths as requested.

Glossary

Advanced economies: Advanced economies are countries with high levels of gross domestic product per capita. These countries are sometimes described as industrialised. With further growth, however, they have tended to diversify, with particular emphasis on services sectors.

Balance of payments: This is a record of transactions between the home country and the rest of the world over a specific period of time. It includes the current and financial accounts. See also 'current account' below.

Budget deficit: A budget deficit indicates the extent to which government expenditure exceeds government revenue (a budget surplus occurs when revenue exceeds expenditure).

Business and consumer confidence: These are economic indicators that measure the state of optimism about the economy and its prospects among business managers and consumers.

Commodity prices: Commodities can refer to energy, agriculture, metals and minerals. Major South African-produced commodities include platinum and gold.

Consumer price index (CPI): The CPI provides an indication of aggregate price changes in the domestic economy. The index is calculated using a number of categories forming a representative set of goods and services bought by consumers.

Core inflation: Core generally refers to underlying inflation, excluding volatile elements (e.g. food and energy prices). The SARB's forecasts and discussions refer to headline CPI excluding food, non-alcoholic beverages, fuel and electricity prices.

Crude oil price: This is the US dollar price per barrel of unrefined oil (Brent crude refers to unrefined North Sea oil).

Current account: The current account of the balance of payments consists of net exports (exports less imports) in the trade account, as well as the services, income and current transfer account.

Emerging markets: Emerging markets are countries with low to middle income per capita. They are advancing rapidly and are integrating with global (product and capital) markets.

Exchange rate depreciation (appreciation): Exchange rate depreciation (appreciation) refers to a decrease (increase) in the value of a currency relative to another currency.

Exchange rate pass-through: This is the effect of exchange rate changes on domestic inflation (i.e. the percentage change in domestic CPI due to a change in the exchange rate). Changes in the exchange rate affect import prices, which in turn affect domestic consumer prices and inflation.

Flexible inflation targeting: This refers to inflation-targeting regimes that consider changes in inflation and other variables affecting the real economy in the short term. Under strict inflation targeting only inflation matters, but flexible inflation-targeting takes into account other variables, such as output.

Forecast horizon: This is the future period over which the SARB generates its forecasts, typically between two and three years.

Gross domestic product (GDP): GDP is the total market value of all goods and services produced in a country. It includes total consumption expenditure, capital formation, government consumption expenditure and the value of exports less the value of imports.

Gross fixed capital formation (investment): The value of acquisitions of capital goods (e.g. machinery, equipment and buildings) by firms, adjusted for disposals, constitutes gross fixed capital formation.

Headline consumer price index (CPI): Headline CPI refers to CPI for all urban areas that is released monthly by Statistics South Africa. Headline CPI is a measure of price levels in all urban areas. The 12-month percentage change in headline CPI is referred to as 'headline CPI inflation' and reflects changes in the cost of living. This is the official inflation measure for South Africa.

Household consumption: This is the amount of money spent by households on consumer goods and services.

Inflation (growth) outlook: This outlook refers to the evolution of future inflation (growth) over the forecast horizon.

Inflation targeting: This is a monetary policy framework used by central banks to steer actual inflation towards an inflation target level or range.

Median: This is a statistical term used to describe the observed number that separates ordered observations in half.

Monetary policy normalisation: This refers to the unwinding of unusually accommodative monetary policies. It could also mean adjusting the economy's policy rate towards its real neutral policy rate.

Nominal effective exchange rate (NEER): A NEER is an index that expresses the value of a country's currency relative to a basket of other (trading partner) currencies. An increase (decrease) in the effective exchange rate indicates a strengthening (weakening) of the domestic currency with respect to the selected basket of currencies. The weighted average exchange rate of the rand is calculated against 20 currencies. The weights of the five major currencies are as follows: euro (29.26%), Chinese yuan (20.54%), US dollar (13.72%), Japanese yen (6.03%) and the British pound (5.82%). Index: 2010 = 100. See 'Real effective exchange rate'.

Output gap/potential growth: Potential growth is the rate of GDP growth that could theoretically be achieved if all productive assets in the economy were employed in a stable inflation environment. The output gap is the difference between actual growth and potential growth, which accumulates over time. If this is negative, then the economy is viewed to be underperforming and demand pressures on inflation are low. If the output gap is positive, the economy is viewed to be overheating and demand pressures are inflationary.

Producer price index (PPI): This index measures changes in the prices of goods at the factory gate. Stats SA currently produces five different indices that measure price changes at different stages of production. Headline PPI is the index for final manufactured goods. PPI measures indicate potential pressure on consumer prices.

Productivity: Productivity indicates the amount of goods and services produced in relation to the resources utilised in the form of labour and capital.

Purchasing power parity (PPP): PPP is based on the law of one price, assuming that in the long run, exchange rates will adjust so that purchasing power across countries is approximately the same. It is often used to make cross-country comparisons without the distortionary impact of volatile spot exchange rates.

Real effective exchange rate (REER): The REER is the NEER adjusted for inflation differentials between South Africa and its main trading partners. See 'Nominal effective exchange rate'.

Repurchase (repo) rate: This is the policy rate that is set by the Monetary Policy Committee (MPC). It is the rate that commercial banks pay to borrow money from the SARB.

Real repo rate: This is the nominal repo rate, as set by the MPC, adjusted for expected inflation.

Taper tantrum: The term 'taper tantrum' is widely used to describe the strong reaction of global financial markets to comments by the US Federal Reserve (Fed) chairman in May 2013 that the Fed would likely start to reduce (or 'taper') the pace of its asset purchases later that year.

Terms of trade: This refers to the ratio of export prices to import prices.

Unit labour costs: A unit labour cost is the labour cost to produce one 'unit' of output. This is calculated as the total wages and salaries in the non-agricultural sector divided by the real value added at basic prices in the non-agricultural sector of the economy.

Abbreviations

BER	Bureau for Economic Research
BIS	Bank for International Settlements
CPI	consumer price index
ECB	European Central Bank
Fed	United States Federal Reserve
FNB	First National Bank
FOMC	Federal Open Market Committee
FRA	forward rate agreement
G3	Group of Three
GDP	gross domestic product
GFCG	gross fixed capital formation
IMF	International Monetary Fund
MPC	Monetary Policy Committee
MPR	*Monetary Policy Review*
MTBPS	*Medium Term Budget Policy Statement*
NAB	non-alcoholic beverage
NERSA	National Energy Regulator of South Africa
NIDS	National Income Dynamics Study
NRIR	neutral real interest rate
OPEC	Organization of the Petroleum Exporting Countries
PCE	personal consumption expenditure
PPP	purchasing power parity
QPM	Quarterly Projection Model
repo (rate)	repurchase (rate)
RMB	Rand Merchant Bank
RMSE	root mean square error
S&P	Standard & Poor's
SACCI	South African Chamber of Commerce and Industry
SALDRU	South African Labour and Development Research Unit
SARB	South African Reserve Bank
SOE	state-owned enterprise
Stats SA	Statistics South Africa
UK	United Kingdom
ULC	unit labour cost
US	United States
VAT	value-added tax
VIX	Chicago Board Options Exchange Volatility Index
ZAR	South African rand