MONETARY POLICY REVIEW

OCTOBER 2020

SOUTH AFRICAN RESERVE BANK

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 supports international competitiveness. The goal of price stability is quantified through an inflation target, which is set in consultation with government. The target is a range of 3–6%, which has been in place since 2000.

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 and other senior officials of the SARB.

The inflation-targeting framework is flexible, meaning that policymakers will seek to look through temporary shocks, thereby avoiding excessive volatility in interest rates and economic output. The MPC takes a forward-looking approach to account for the time lags between policy adjustments and economic effects. MPC decisions are communicated at a press conference at the end of each meeting, accompanied by a comprehensive statement.

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 affect the monetary policy stance. In normal circumstances, the *MPR* is presented by senior officials of the SARB in major centres across South Africa. However, due to COVID-19, this *MPR* will be launched virtually. Questions about the document may be directed to Marlene Hugo at Marlene.Hugo@resbank.co.za.

Errata: subsequent to online publication, two errors were identified on page 37, a literature review table, which have now been corrected in this version of the *MPR*.

Contents

The road to recovery

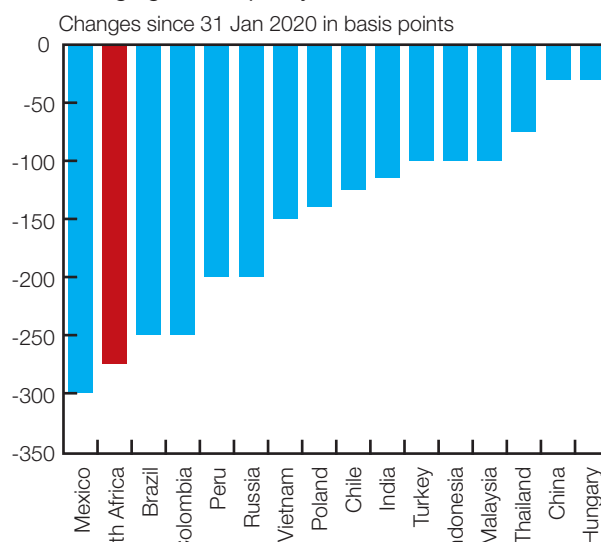## Executive summary and overview of the policy stance

The Monetary Policy Committee (MPC) has cut rates by 275 basis points since the start of the COVID-19 crisis, one of the largest responses in the emerging market sphere. This easing was implemented early on in this crisis to support rapid policy transmission to the real economy. Inflation, having fallen below the 3–6% target range during May and June, is now back inside the target, and is projected to return to the 4.5% midpoint over the next two years, with the help of low interest rates. This stimulus is also serving to boost growth. The recovery is likely to be protracted, however, given both the severity of the shock and pre-existing constraints, with the economy only returning to 2019 levels of output in early 2023.

The COVID-19 pandemic has caused a deep global recession. The world economy is likely to contract by around 3.9% in 2020, mostly due to sharp downturns in the second quarter of the year. At the time of writing, the majority of economies were rebounding, with the data flow tending to produce upside surprises. Consumption has picked up from lockdown-enforced pauses, aided by exceptionally supportive macroeconomic policies. Global output nonetheless remains well below 2019 levels. The economic effects of COVID-19 are likely to be persistent, with permanent changes to consumer tastes and business methods, and the recovery may be interrupted by subsequent waves of infections.

The global downturn has been highly synchronised, but recoveries are likely to be more divergent. Some economies, especially those with high potential growth rates, will surpass the 2019 levels of output this year. Many countries, perhaps more than half, will make up this lost ground by 2022. About a quarter will likely take longer, based on their weak macroeconomic fundamentals and low underlying growth rates. A small number of countries have already been thrown into macroeconomic crisis by the COVID-19 shock, with Lebanon perhaps the most prominent example. More are likely to follow, given pre-existing weaknesses which have been exacerbated by the stress of the pandemic. As always, the triggers of future crises are difficult to forecast, but some economies are now clearly in a fragile state.

Most countries are experiencing lower inflation this year, given the COVID-19 shock to global demand. This has facilitated widespread monetary policy easing. While South Africa has long had somewhat higher inflation rates than its

Emerging market policy rates

Changes since 31 Jan 2020 in basis points

Sources: Haver and SARB

GDP levels

Trillions of rand (constant 2010 prices)

Jan 2020

Sep 2020

2007Q2: 2.606

2020Q2: 2.816
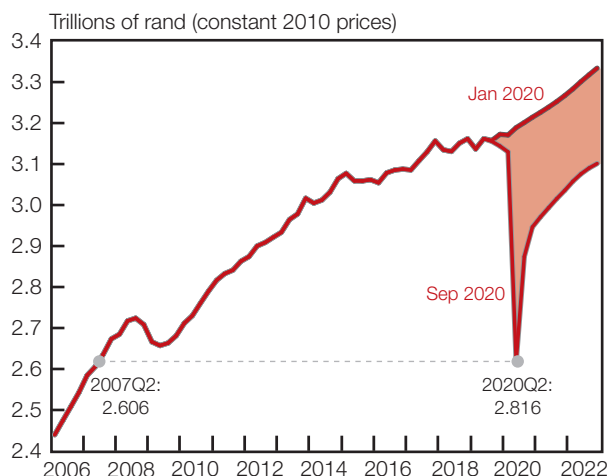
Seasonally adjusted and annualised
Sources: Stats SA and SARB

When will countries return to 2019 GDP levels?

Percentage share of 88 countries
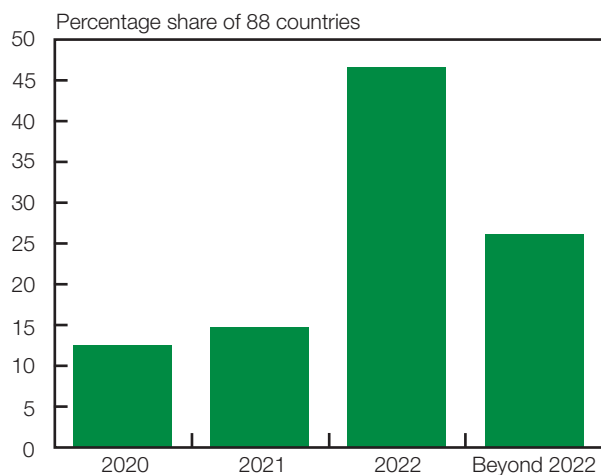
Sources: Bloomberg and SARB

Emerging market inflation*

Percentage change
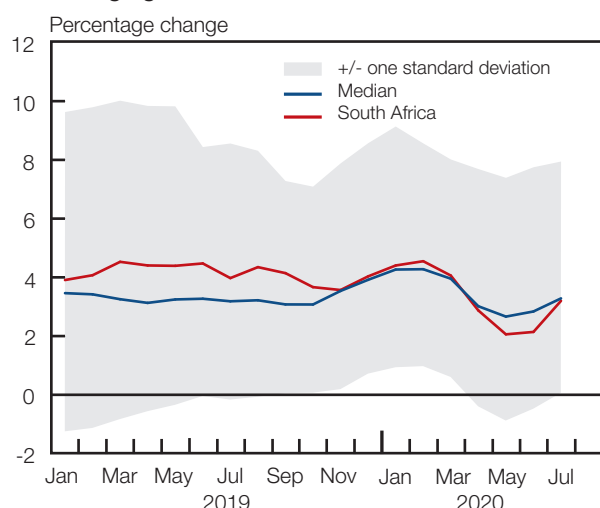
* Sample includes Bangladesh, Brazil, China, Colombia, Egypt, India, Indonesia, Malaysia, Mexico, Nigeria, Pakistan, Philippines, Poland, Russia, Saudi Arabia, South Africa, Thailand, Turkey, UAE and Vietnam

Sources: Haver and SARB

Contributions to headline inflation

Percentage points
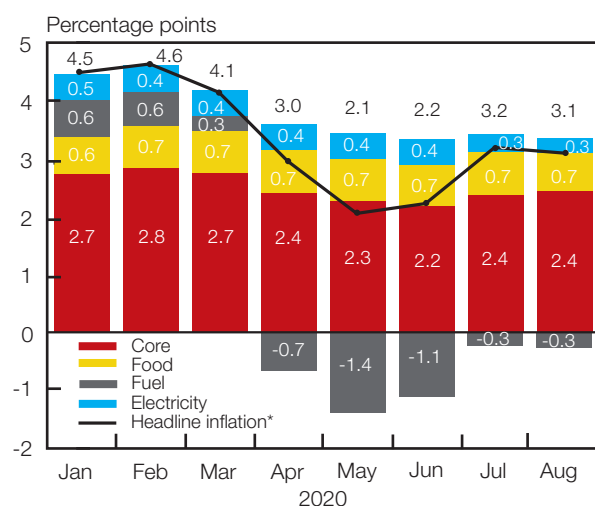
* Percentage change over 12 months
Sources: Stats SA and SARB

Targeted inflation forecast*

Percentage change over four quarters
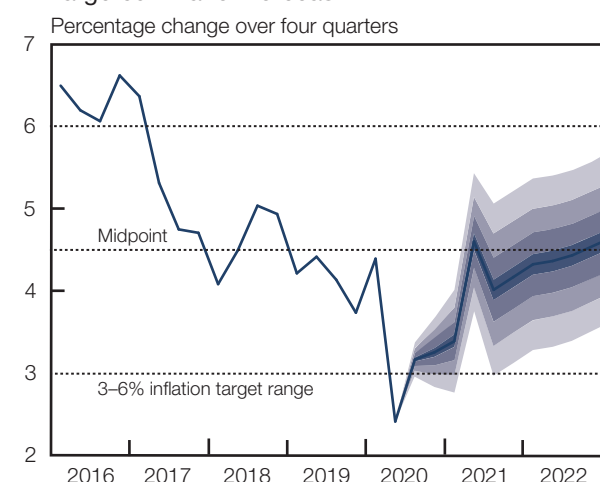
* The bands around the central projection show confidence intervals of 10%, 30%, 50% and 70%

Sources: Stats SA and SARB

peer group,[1] domestic inflation has decelerated comparatively rapidly this year, and it is now almost exactly at the emerging market median, just above 3%.

Domestic inflation was below target in May and June, at 2.1% and 2.2% respectively. The two-month undershoot of the 3–6% inflation target range was driven by fuel price deflation, which single-handedly detracted 1.4 percentage points from the headline consumer price index (CPI) in May and 1.1 percentage points in June. These two months represent the first time the target has been missed from below since its introduction in 2000. (While the CPI was sometimes below 3% in the mid-2000s, at the time the targeted measure of inflation was the CPIX – measured as the consumer price index for metropolitan and other urban areas, excluding the interest cost on mortgage bonds – which bottomed out at 3.1% in February 2005.)

Inflation has since moved back into the target range, given higher fuel prices. As fuel price deflation fades, headline inflation is expected to accelerate, peaking slightly above 4.5% in the second quarter of 2021. This effect is temporary, however, with inflation subsequently easing again, remaining in the bottom half of the target range until the final quarter of 2022. On average, inflation is expected to average 4.0% in 2021 and 4.4% in 2022, up from 3.3% this year.

Core inflation is well-contained, within the target range, across the forecast horizon. The forecasts indicate that core inflation will average 3.4% this year, followed by 3.7% in 2021 and 4.0% in 2022. Recent weakness in core inflation is partly attributable to missing data, with Statistics South Africa (Stats SA) unable to record prices for goods that were banned during the lockdown, such as alcohol and tobacco, leaving these prices to be imputed using (low) headline inflation numbers. Over the medium term, however, core inflation is likely to stay subdued. In part, this reflects weak demand in the economy, with the disinflationary effect especially strong in housing inflation (which is based on rentals, not mortgage costs). The forecast also takes the view that exchange rate depreciation will not generate substantial or sustained inflationary pressure. Finally, inflation expectations are now close to the centre of the target range, having been sticky at around 6% previously.

The South African economy is now expected to shrink by 8.2% in 2020. Output contracted by a record 51% in the second quarter, in quarter-on-quarter, seasonally adjusted, annualised terms, or 17.1% in year-on-year terms. Economic data for the second quarter were almost universally bleak, with tourism activity falling to zero; only 574 vehicles being sold (against 43 297 in February); and key industries, including factories and mines, being required to close or operate at

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1   From 2000 to 2016, the average inflation differential between South Africa and the emerging market median was 1.1 percentage points. It was 1.6 percentage points between 2016 and 2019.

fractions of capacity. Agriculture expanded, although this was off a low base, but all other sectors of the economy contracted. The economy shed 2.2 million jobs in the second quarter, reducing the number of employed workers to just 14.1 million out of 39 million working-age people.

The lockdown constituted a massive supply-side shock, which macroeconomic policy would have been powerless to prevent: there is no amount of stimulus that can sell a car if vehicle dealerships are closed, or sell a house if the deeds office is not processing transfers. But this shock is, in turn, giving rise to demand-side problems, as lost incomes and widespread uncertainty prompt spending cutbacks throughout the economy. Recognising these dynamics, the forecast has a negative potential growth rate for 2020 (of -3.2%). The rest of the contraction is attributed to the output gap, however, which therefore widens to -6.5% of potential gross domestic product (GDP) for the year – a record low.

Output is on course to rebound off this very low base, with the third-quarter GDP figure now tracking 45.2% (once again relative to the preceding quarter, seasonally adjusted and annualised). Some high-frequency data are back to pre-crisis levels, including electricity demand and truck traffic. Others are below but near this mark, such as small business turnover and the composite Google Mobility Index. There are also some industries that remain significantly constrained, such as tourism, which are unlikely to recover to pre-crisis levels in the foreseeable future. Confidence levels remain subdued, and private sector investment has contracted sharply.

Over the medium term, growth is expected to average 3.9% and 2.6% for 2021 and 2022 respectively. Although these growth rates are above recent averages, and therefore appear optimistic, they are flattered by the low starting point, with total output still below 2019 levels in each of these years. The most prominent obstacles to a faster recovery are electricity shortages and record-high government debt levels. Load-shedding restarted in July, despite lower levels of economic activity, and Eskom has warned it will persist throughout 2021, interrupting economic activity and disincentivising new investment. Meanwhile, high debt levels are likely to affect the recovery through several channels. These include confidence effects and uncertainty, inasmuch as debt sustainability is in doubt, as well as crowding out via high long-term interest rates, a lower country credit rating, and reduced access to foreign savings. The major supports to growth are record-low short-term interest rates and extensive opportunities for structural reforms. The terms of trade are also very favourable at the moment. Furthermore, while South Africa has had a large number of COVID-19 infections, the death rate has been unusually low, even when adjusting for undiagnosed cases.

Headline and core inflation*
Percentage change over four quarters
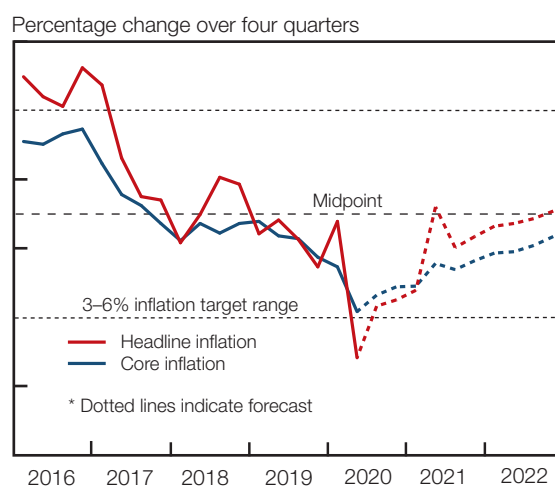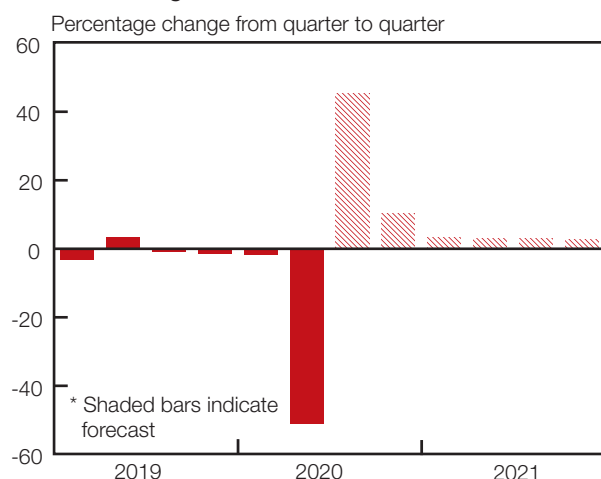
Sources: Stats SA and SARB

Real GDP growth*
Percentage change from quarter to quarter

Seasonally adjusted and annualised

Sources: Stats SA and SARB

Real GDP growth*
Percentage change over four quarters
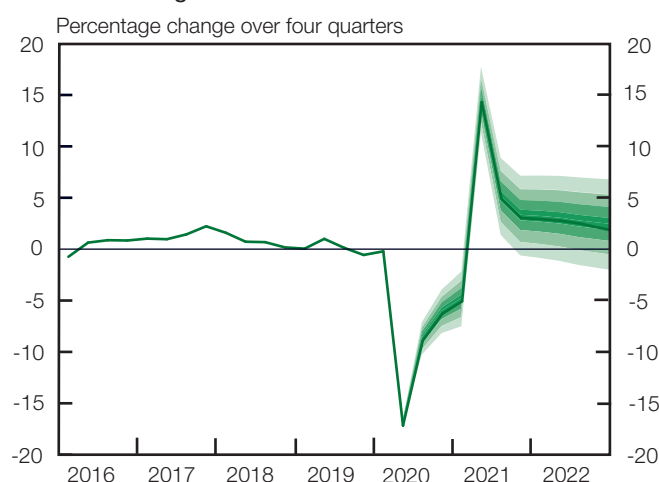
* The bands around the central projection show confidence intervals of 10%, 30%, 50% and 70%.
This chart shows seasonally-adjusted data, as used in the QPM

Sources: Stats SA and SARB

Terms of trade*

Index: 2010 = 100

Dotted lines indicate forecasts

Actual

Sep 2020

Mar 2020

Sources: Stats SA and SARB

South African repo rate

Per cent

Source: SARB

Speed of COVID-19 rate cuts

Percentage of total cuts

Half of EM
cuts by
30 Mar 2020

90% of EM cuts by
22 Jun 2020

EM average
South Africa

2020

Sources: Haver and SARB

Overview of the policy stance

The monetary policy committee has cut rates sharply this year, bringing the repurchase (repo) rate to an all-time low. The prime rate, which has a longer history, is now at a 54-year low. Given that monetary policy takes some time to transmit to the real economy, the MPC opted to cut rates before the full force of the shock appeared in the data, so as to provide maximum support to the economy early on. The same trend is visible elsewhere in emerging markets: since the start of the COVID-19 crisis, on average 70% of all rate cuts recorded to date had already been implemented by the end of April, with this rising to 90% by late June.

While this stimulus had limited effects in the first stages of the lockdown, given the restrictions on most forms of economic activity, it has supported the subsequent recovery. In particular, low rates have increased household demand for credit, with mortgage applications and grants, for instance, now at 10-year highs. Low short-term rates have also helped corporates through a period of stress, while allowing government to fund emergency spending via cheap short-term debt.

Following the large repo cuts of March, April and May, the MPC has shifted to a 'wait and see' strategy, with rates either cut by smaller increments (July) or left unchanged (September). While the initial COVID-19 shock clearly justified a forceful response, given much lower inflation and growth, it also created uncertainty over the medium-term outlook. With incoming data staying close to earlier forecasts so far, it has not been necessary to make large course corrections. There are, however, many unsettled questions, such as the shape of the economic recovery (options include a V, a U, an L, and even a K)[2] as well as the outlook for price drivers, including oil, the exchange rate and housing market dynamics. In contrast to the first few months of the crisis, where backward-looking data were still reflecting pre-lockdown conditions and therefore were of limited value, policy is now once again more data-dependent, as a response to this uncertainty.

This approach of moving fast and pre-emptively, and then slowing to assess new information, has at times surprised markets. Forward rate agreements (FRAs), for instance, underestimated rate cuts through March and April, but then overstated cuts in May, July and September. Some analysts and commentators also expected the South African Reserve Bank (SARB) to cut rates further once inflation fell below the target range. However, the fact that inflation dipped below 3% in May and June was not in itself a reason to ease policy further. These low inflation rates were already anticipated in the April and May forecasts, so they did not come as surprises. Near-term inflation outcomes are also of limited relevance for monetary policy decisions, except where they provide new

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2   A V-shaped recovery implies a quick rebound; a U-shape implies
    a slow one. An L-shape means more lasting weakness. A K-shaped
    recovery is one where outcomes for richer and poorer people diverge.
    See P Atwater, 'The gap between the haves and the have-nots
    is widening sharply', *Financial Times*, 10 June 2020.
    https://www.ft.com/content/0ebfb7ca-a681-11ea-a27c-b8aa85e36b7e
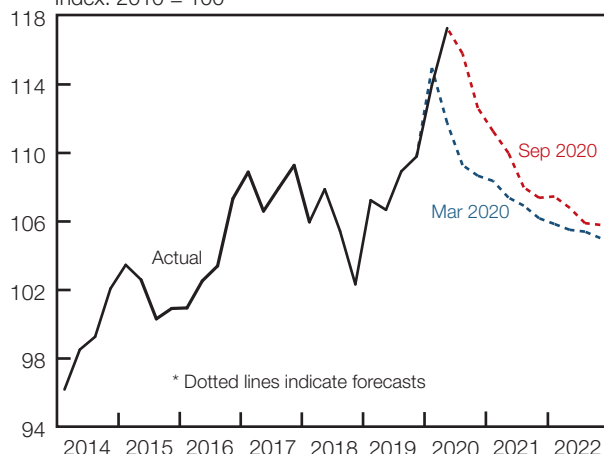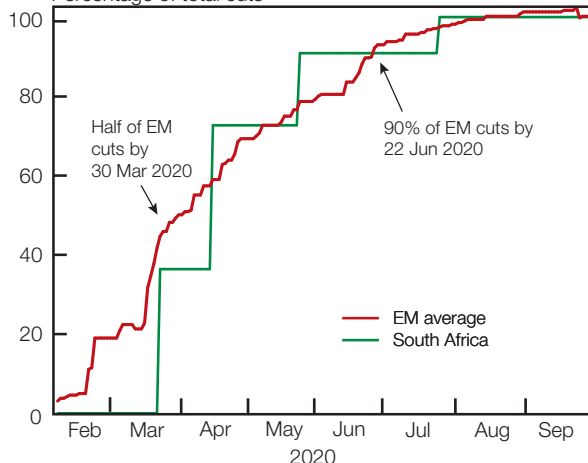
information about the medium-term outlook. Monetary policy changes transmit to the economy with lags and therefore must be forward looking.

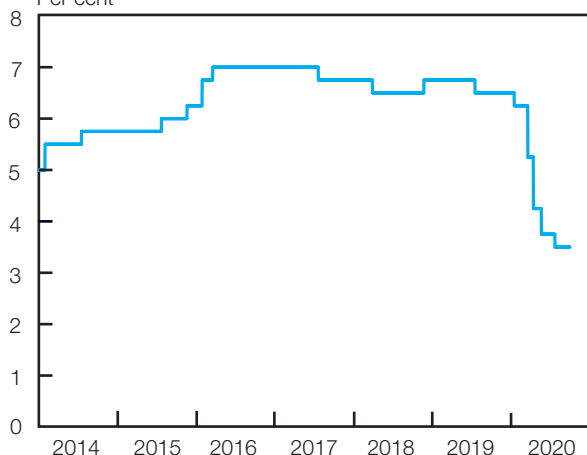This *Monetary Policy Review (MPR)* covers the six-month period from April to September, a period which normally encompasses three MPCs, but this time includes four, counting the unscheduled meeting in April.

The April MPC meeting took place just 26 days after the March decision to cut rates by 100 basis points, which had been a response to the global spread of COVID-19. That decision had not incorporated the domestic lockdown, however, which was only announced on 23 March, the week after the March MPC meeting. This development prompted substantial forecast revisions, with the 2020 growth projections, for instance, declining from -0.2% to -6.1% between March and April. Although, in general, economic conditions do not change fast enough to warrant more than six MPC meetings a year, these developments merited a more rapid response. The MPC therefore met on the Tuesday after the Easter long weekend, reviewed new forecasts and announced an additional 100 basis point reduction in the repo rate.

This adjustment was consistent with the Quarterly Projection Model (QPM) repo projections, but the forecast spread the repo rate change over four quarters, whereas the MPC chose to frontload the response. As with the March MPC, where the repo action was also frontloaded, the MPC's decision reflected the emergency circumstances brought about by the COVID-19 pandemic. In more normal conditions, monetary policy tends to move incrementally, but this approach makes less sense in the context of a sudden, deeply negative shock. The MPC decision also anticipated some of the downside data surprises that would lower the starting points for subsequent forecasts.

Between April and May, the outlook deteriorated further, although the revisions were smaller than for the preceding two MPC meetings. The 2020 growth forecast dropped to -7.0%, from -6.1% in April, which was mostly due to the lockdown being extended beyond the initial 21-day period. The inflation outlook was also marked down marginally, by an average of 0.1 percentage points for each forecast year. Given these shifts, the endogenous repo rate projection indicated a further 50 basis points of cuts over the second half of 2020, which the MPC again implemented directly. In contrast to the previous 2020 repo decisions, which were all unanimous, this move was not the first preference of all the MPC members, with two favouring a 25 basis point cut instead.

The July meeting featured relatively little new information. The inflation forecast was adjusted slightly, mainly to accommodate Stats SA's methodology for imputing CPI items which were banned under the lockdown (such as alcohol). Growth for 2020 was also reduced further, to -7.3%, based on high-frequency data showing a deeper dip in the second quarter of the year than had been previously estimated. The QPM rate path proposed an additional 25 basis point cut in the fourth quarter of the year, which a majority of MPC members chose to implement immediately, although two preferred no change.

Short-term rates: market expectations versus actual outcome

Per cent

Sources: Bloomberg and SARB
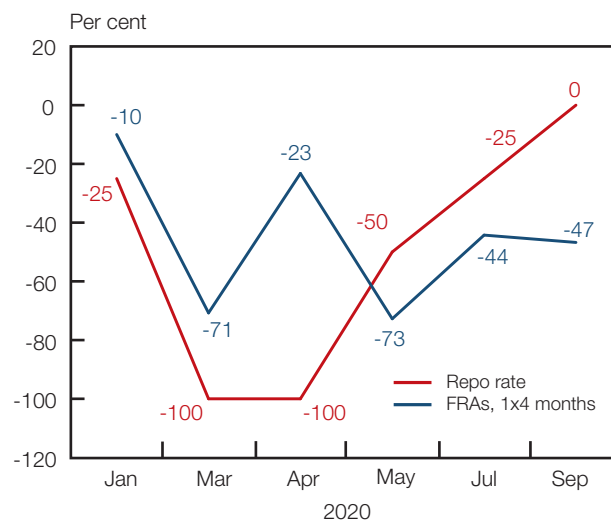
Evolution of repo rate forecasts*
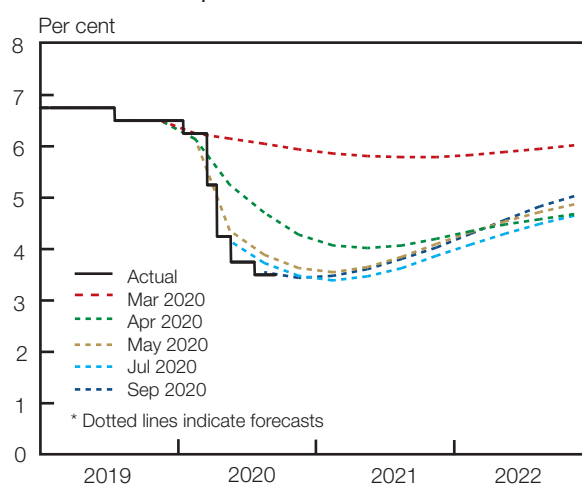
Per cent

* Dotted lines indicate forecasts

Source: SARB

Real GDP growth*

Percentage change over four quarters

* Dotted lines indicate forecasts

This chart shows seasonally adjusted data, as used in the QPM

Sources: Stats SA and SARB

Headline inflation*

Percentage change over four quarters

3–6% inflation target range

Midpoint

* Dotted lines indicate forecasts

Legend:
- Mar 2020
- Apr 2020
- May 2020
- Jul 2020
- Sep 2020
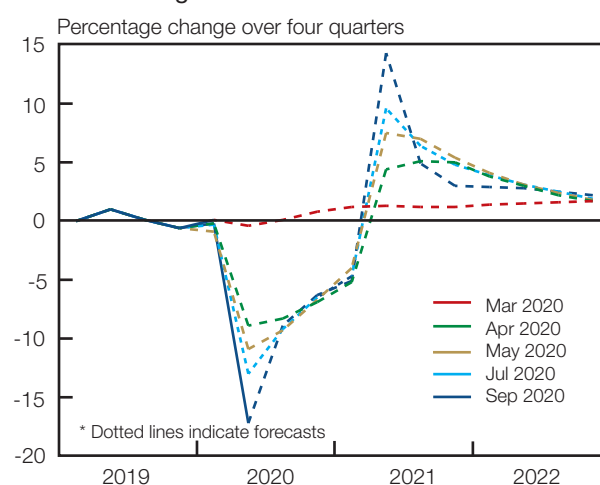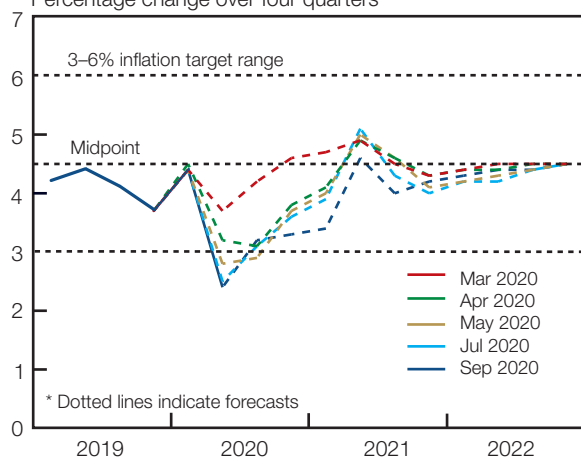
Sources: Stats SA and SARB

Domestic r*, G3 r* and risk premium

Per cent

- Equilibrium Country Risk Premium
- G3 r*
- Domestic r*
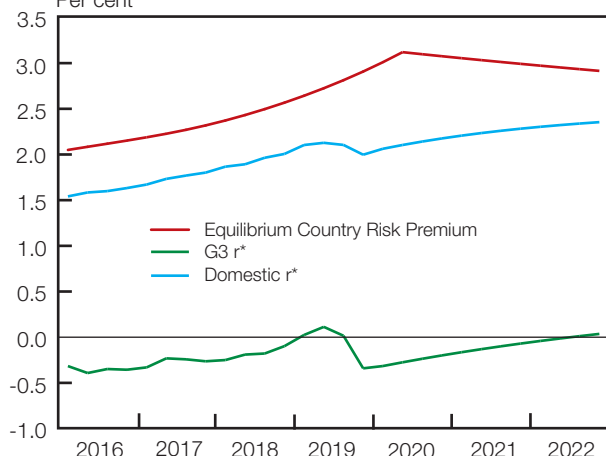
Source: SARB

Repo rate forecasts

Per cent

- Actual
- QPM (Sep 2020)
- Bloomberg (29 Sep 2020)
- Reuters (Sep 2020 survey)
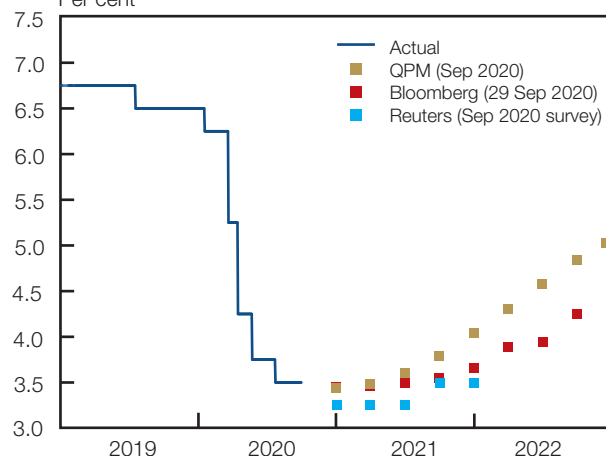
Sources: Bloomberg, Reuters and SARB

The September meeting followed the publication of the second-quarter GDP data, which showed a deeper-than-expected contraction under lockdown. However, high-frequency data indicated a faster subsequent recovery in output than had been previously expected. The QPM, having previously indicated a fourth-quarter repo cut, now had that cut built in from the third quarter, per the MPC's July decision, and saw no further repo change for the year. Two of the three MPC members preferred an additional 25 basis cut, but three favoured keeping the repo at 3.5%.

With domestic interest rates at record lows, and inflation apparently having bottomed out, it is likely that the repo rate will move somewhat higher in future. However, this normalisation of repo is likely to be gradual, with rates staying at low levels for an extended period. While the MPC has not committed to any specific path for interest rates, the QPM projections suggest that the first upward movement in the repo will occur towards the end of 2021, with rates still not back to pre-crisis levels by the end of 2022 (the outermost part of the forecast period). This outlook has the same basic inflection point as market pricing, from the FRA curve, and analysts' expectations, as captured in the Bloomberg survey.

The QPM's projected repo increases are based on a narrower output gap and inflation moving closer to the 4.5% target, as well as a moderate increase in the neutral rate (which rises from 2.1% this year to 2.2% in 2021 and 2.3% in 2022). This expected rise in neutral is premised on a slightly higher global neutral rate. By contrast, the other key driver of the QPM neutral rate,[3] the domestic risk equilibrium,[4] is expected to subside somewhat over the forecast period, from 2020 highs. This assumption implies some rebuilding of fiscal credibility, without which there would be more upward pressure on interest rates, everything else being equal. The neutral rate has been unchanged over the past four MPC meetings, so while it remains an important component of the QPM repo path, it has not been a source of changes for the period covered by this *MPR*.

Monetary policy is calibrated to give the economy significant stimulus over the forecast period, with a repo rate that is negative in inflation-adjusted terms and well below the QPM's neutral rate. In a strictly short-term sense, the real repo rate remained unchanged between February and March: the slowdown in inflation, from 4.6% to 2.1%, kept pace with repo cuts. (In both cases, the change was 250 basis points.) However, inflation has since begun to accelerate, in line with forecast expectations, and the repo rate has moved moderately lower. The real repo was just above zero in the third quarter of the year, and it is likely to fall further as inflation accelerates.

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3   Foreign neutral is a weighted average of the neutral rate estimates for the US, the euro area and Japan.

4   In the QPM, this is derived from the JPMorgan Emerging Markets Bond Index Plus (EMBI+) spread and incorporated into the neutral rate as a filtered equilibrium estimate of country risk.

Using a longer-term view of inflation, such as one-year-ahead inflation forecasts or the Bureau for Economic Research (BER) inflation expectations, the real repo rate is now around 50–100 basis points below zero, and is likely to remain negative throughout the coming year (even assuming the projected increases in the nominal repo rate).
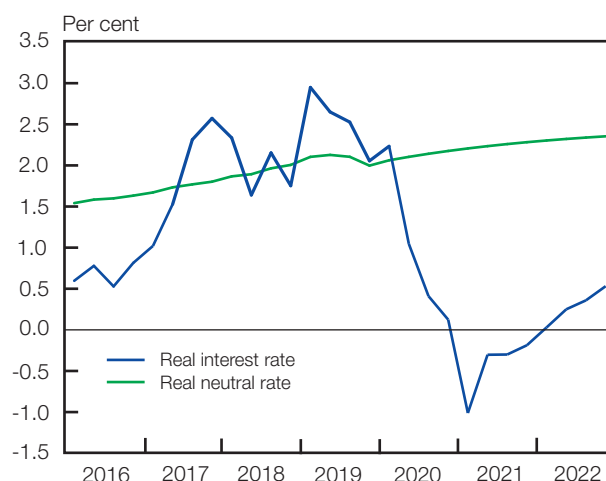
It is also worth considering the beneficial effects of rate cuts, even in purely nominal terms. Although economists usually focus on real interest rates, a lower nominal rate directly improves the affordability of debt. For instance, a household with a nominal monthly income of R30 000 will spend R9 650 (32.2%) of that amount paying off a R1 million mortgage bond with the prime rate at 10%, but only R7 753 (25.8%) with the prime rate at 7% (assuming a 20-year repayment period).

During the early stages of lockdown, monetary policy transmission was impaired by business restrictions, so the benefits of lower interest rates mostly accrued to existing borrowers through lower debt-service costs. As these restrictions have loosened, however, monetary policy stimulus has begun to transmit more widely. In particular, housing credit has rebounded, with the number of new mortgages granted at 10-year highs in July and August, and realtors reporting unprecedented demand. (The same pattern is visible in other economies as a response to very low interest rates.) Similar dynamics are also visible in installment sale credit, which funds durable goods, especially cars.

Households are better positioned to take on new leverage than either government or corporates, making them better prospects for credit growth. Government has never had such a high debt-to-GDP ratio, while corporate leverage has also crept higher in recent years. Households, by contrast, have reduced indebtedness quite steadily over the past decade, leaving them relatively better positioned to capitalise on low interest rates.

In summary, monetary policy confronts inflation that is well below 4.5%, the midpoint of the target range, as well as a negative output gap. Historically, the SARB has rarely experienced low inflation and low growth simultaneously. Instead, the modern record mostly consists of low growth and stubbornly elevated inflation, punctuated with a few boom-time episodes of simultaneously high growth and high inflation. A distinctive aspect of the current crisis is the extra scope available to monetary policy, given lower inflation, which has permitted a forceful rate-cutting response. In turn, lower interest rates will help return inflation to the middle of the target range, over time, while supporting the economy's recovery. The strength of that recovery, however, will also depend on factors outside the control of monetary policy, including sovereign debt sustainability and structural reforms to raise the economy's potential growth rate. Monetary policy can provide low and stable inflation and support demand, but it cannot single-handedly deliver prosperity.

Domestic real interest rate

Per cent

Source: SARB

Debt burdens

Percentage of GDP
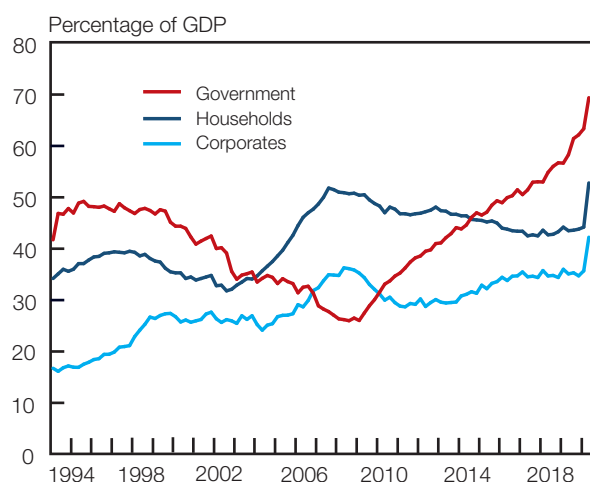
Source: SARB

Growth and inflation over the inflation-targeting era

Output gap (percentage of potential GDP)

Inflation rate (percentage change over 12 months)

Sources: Stats SA and SARB

Box 1   Is monetary policy transmitting?

Short-term interest rates have fallen significantly, and average lending rates have declined with them. It has been argued that this stimulus is not transmitting to the real economy, however, because firms and households are too worried about their prospects to borrow, and banks are too conservative to lend.[1] The headline number for growth in private sector credit growth has also slowed, bolstering the view that monetary policy is not transmitting effectively.

These arguments contradict other sources, however, which indicate clear and robust responses to monetary policy. Realtors, for instance, have reported their best-ever months post-lockdown, primarily due to first-time buyers capitalising on low interest rates to buy homes. Mortgage lenders have confirmed additional demand, and even though rejection rates have risen, the total number of mortgages granted has increased. Indeed, both mortgage applications and mortgage grants hit 10-year highs in August. A similar pattern appears for installment sales, which mostly comprises vehicle financing. Engagements with the affected sectors confirm that demand is exceeding expectations and that interest rate cuts are important for these outcomes, suggesting this is not simply pent-up demand from the lockdown.

While private sector credit growth has slowed in recent months, from 7.7% in March to 3.9% in August, there is more to this series than the headline numbers. Private sector credit consists of two broad categories: lending to businesses and lending to households. In the initial months of the lockdown, corporates raised borro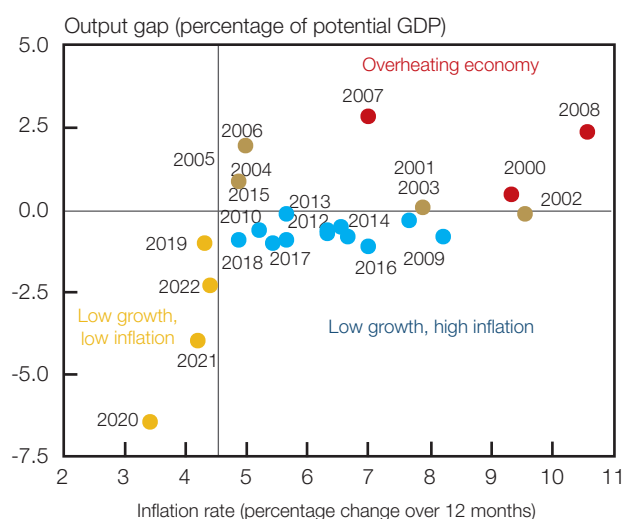wing, mostly to get through lockdown disruptions.[2] This credit growth has slowed since (from 9.3% in March to 4.6% in August).

By contrast, households cut back on borrowing in March and April, mostly because of lockdown restrictions which made it difficult to purchase credit-sensitive items such as cars and houses. Credit growth has since rebounded, but the year-on-year changes continue to be affected by the lockdown pause. The month-on-month growth numbers, by contrast, show a V-shaped recovery. The credit slowdown is more a function of the year-on-year change than recent developments.

It is also worth considering how monetary policy is affecting government's borrowing costs. Government borrowing has increased sharply this year, and although National Treasury plans to reduce spending later to stabilise debt, for now government is a major source of credit demand. In normal times, the fiscus mostly finances itself with long-term debt. In turn, monetary policy affects these borrowing costs indirectly, by shaping expectations for future short-term rates as well as inflation. This year, however, National Treasury has shifted a larger share of borrowing to the short end of the yield curve, with around a quarter of new issuance maturing in three years or less, and the average maturity of debt declining accordingly, to its lowest level in about six years. In these circumstances, given that monetary policy works by controlling the short end of the yield curve, cuts in the repurchase (repo) rate are now being transmitted more directly to government. This helps explain why government's interest-to-debt ratio, a proxy for the effective interest rate, has declined this year, despite a large increase in long-term rates.[3]

In summary, low interest rates are supporting household credit growth. Government borrowing is also benefitting from low short-term interest rates. The outlook is uncertain, and more borrowing – especially by corporates – will require greater certainly about future conditions. Current data are strong enough, however, to conclude that the credit channel of monetary policy transmission is functional.

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1   For instance, see L Donnelly, 'Reserve Bank's efforts to boost borrowing are still to bear fruit', *Business Day*, 31 August 2020. https://www.businesslive.co.za/bd/economy/2020-08-31-reserve-banks-efforts-to-boost-borrowing-are-still-to-bear-fruit/

2   There was also a multinational transaction involving the purchase of a local company underway at the time, but excluding this amount from the series does not substantively change its level or trend.

3   Interest payments as a share of revenue have increased significantly this year, but a large part of this effect is due to a collapse in revenue.

Mortgage advances applied for
Actual number (thousands)

Source: SARB
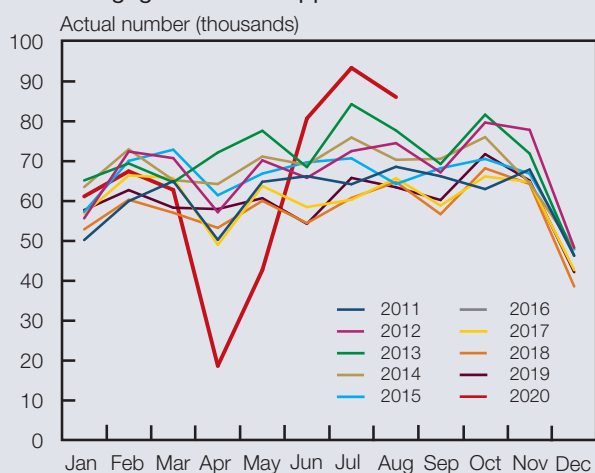
Mortgage advances granted
Actual number (thousands)

Source: SARB
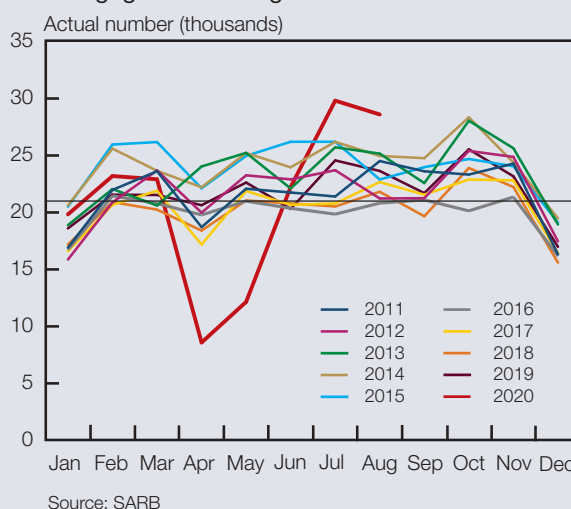
Instalment sale agreements applied for

Actual number (thousands)

Legend: 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020

Source: SARB
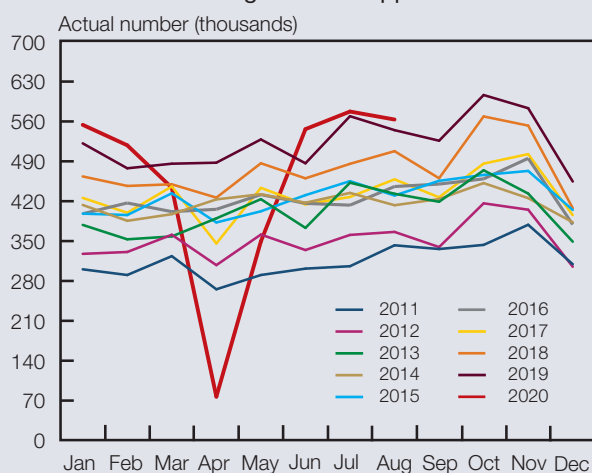
Instalment sale agreement granted

Actual number (thousands)

Legend: 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020

Source: SARB

Private sector credit extension

Percentage change over 12 months

Total — Corporates — Households

Jan 2019 – Aug 2020 | Jan 2019 – Aug 2020 | Jan 2019 – Aug 2020

Source: SARB

Private sector credit extension

Month-on-month percentage change

Total — Corporates — Households

Jan 2019 – Aug 2020 | Jan 2019 – Aug 2020 | Jan 2019 – Aug 2020

Source: SARB
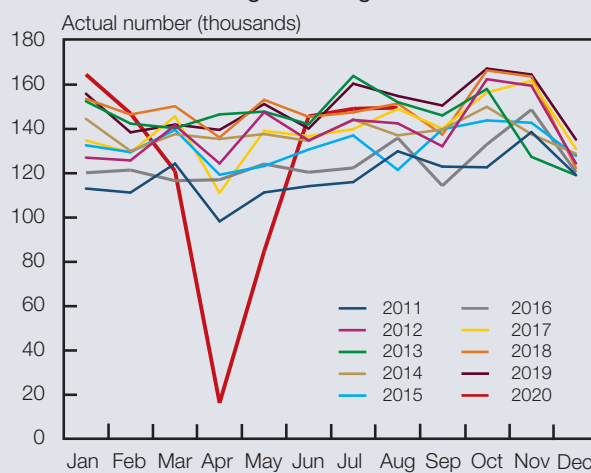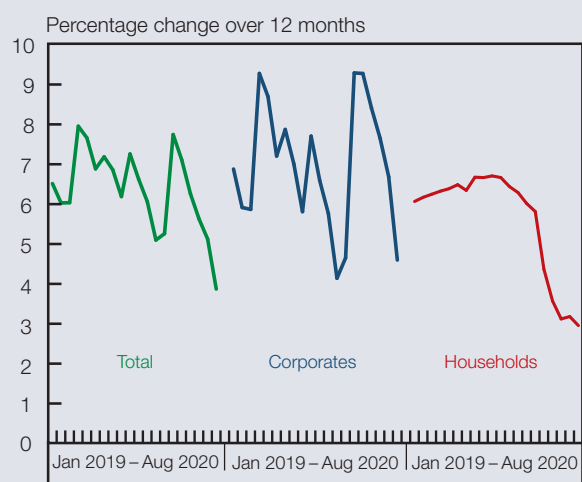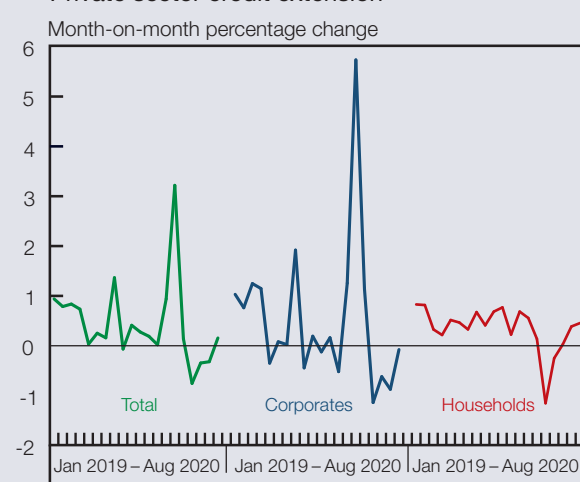
Repo rate and government bond yields

Per cent

Legend: Repo rate, 0 to 3 years, 3 to 5 years, 5 to 10 years, 10 years and over

Sources: Bloomberg and SARB
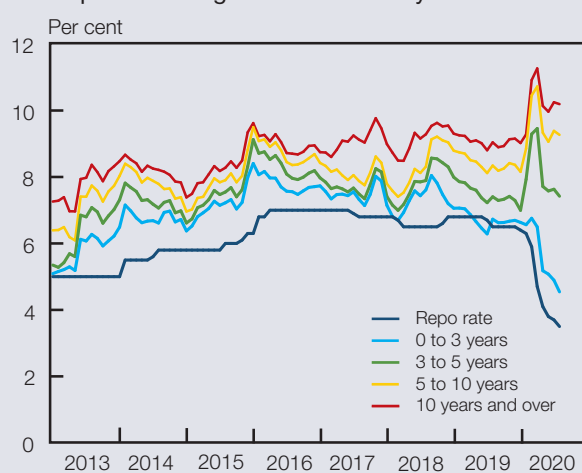
Effective government interest rate proxy*

Per cent**

* Dotted line indicates forecast
** Interest-debt ratio

Source: SARB
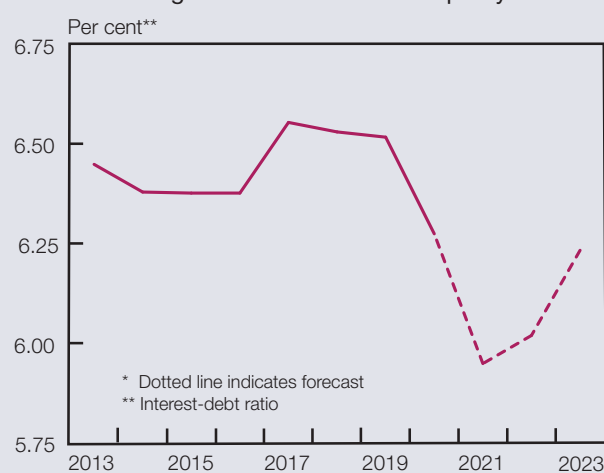
Box 2   How fast do interest rate cuts turn into credit growth?

The Monetary Policy Committee has cut rates to stimulate the economy. Box 1 presents empirical evidence that these cuts are transmitting to the economy through the credit channel. This box describes typical responses of credit to interest rate changes, based on impulse responses from the South African Reserve Bank's (SARB) Core Macroeconometric Model. Although current conditions are unprecedented, and the model was calibrated on historical data, these stylised facts are useful for benchmarking expectations of how fast interest rate cuts should raise borrowing.

The Core Macroeconometric Model distinguishes two kinds of credit: long-term credit and short-term credit. In a scenario where the repurchase (repo) rate is temporarily lowered by 100 basis points, short-term credit growth accelerates steadily, peaking after five quarters. Long-term credit moves more slowly and the peak is reached only after 10 quarters. In both cases, the elasticities are greater than one, with a 1 percentage point change in the repo rate raising short-term credit by 1.6%, at the peak, and long-term credit by 1.3%. The peak for short-term credit is also higher than it is for long-term credit, consistent with a temporary change having a smaller effect on long-term borrowing.

Based on the recent rate cuts being concentrated in the first half of 2020, with the repo rate falling by 125 basis points in the first quarter and 150 basis points in the second, the strongest effects on credit are likely to arrive around mid-2021.

Finally, repo rate changes affect the economy through a range of channels besides credit, including the exchange rate, wealth effects and inflation expectations. As a rule of thumb, in the Core Macroeconometric Model a 100 basis points repo cut will boost growth by a maximum of 0.3% after six quarters, working through all the different channels. The equivalent number for the Quarterly Projection Model (QPM) is 0.4%. Again, while the growth benefits of rate cuts are likely active at the moment, they will intensify during the first half of 2021, with the peak effects falling around the middle of that year.

Response of credit extension to a rate cut
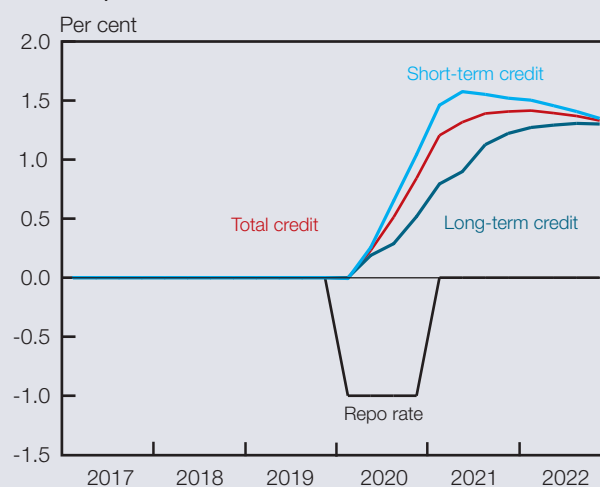
Source: SARB

Box 3   When last were interest rates this low?

The repurchase (repo) rate is currently at 3.5% – an all-time low. The repo rate has only been used since 1998, however, so this historical sample is too short to put current policy settings in true historical perspective.

There are two longer series that provide a better perspective. The first is the 'lowest South African Reserve Bank (SARB) lending rate', which links up different policy rates back to 1922. The second is the prime rate, a benchmark for lending to firms and households. This goes back to 1949.[1]

According to these measures, the previous trough for the SARB 'lowest lending rate' series was 3.15% in 1973. However, rates only stayed lower than today's rate of 3.5% for three months.[2] Furthermore, the prime rate did not decline alongside the SARB rate, instead rising from 7.5% to 8% during this period. The comparison between 1973 and 2020 is therefore incomplete.

The last time the prime rate was at 7% was in 1966. The year before it was at 6.5%, meaning the prime rate is now at a 55-year low. A more remarkable feature of the 1960s, however, is that the prime rate stayed consistently low. The *average* prime rate for the decade was 6.98%, with a low of 5.5% between December 1962 and June 1964. The 'lowest rate' series averaged 4.61%.

These interest rates were not a response to crisis conditions. On the contrary, the economy grew strongly during the 1960s, at an

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1 The codes provided in the SARB's *Quarterly Bulletin* are KBP1401M for the lowest rate series and KBP1403M for the prime rate series.

2 Specifically, the lowest SARB lending rate was 5.5% in August 1973. It was 3.15% in September 1973, 3.14% in October, 3.30% in November, 3.78% in December and then 5.12% in January 1974.

average rate of 5.84%, a performance that has not been improved upon in any decade since.[3] Inflation nonetheless stayed moderate, averaging 2.38%, which explains how interest rates could stay in low single-digits, consistent with the Fisher equation.[4]

This mix of low inflation, low interest rates and high growth represented an optimal combination, one the South African economy has yet to reprise in a sustained way. Indeed, from this perspective, the subsequent half-century resembles a long and unsuccessful experiment with higher inflation. Real (inflation-adjusted) interest rates were sometimes deeply negative, and inflation occasionally slowed, but on the whole South Africa remained a relatively high-inflation country, and nominal interest rates never returned to 1960s levels. This precedent demonstrates the value of low and stable inflation, its compatibility with low interest rates, and the hazards of tolerating higher inflation as a route to recovering growth.

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3 Subsequently, average growth rates were as follows: 1970s: 3.4%; 1980s: 2.1%; 1990s: 1.6%; 2000s: 3.5%; and 2010s: 1.6%.

4 The Fisher equation holds that interest rates are the sum of inflation compensation plus a real premium for the inconvenience and risk of lending. For a more extensive discussion, see L Kganyago, 'Monetary policy: why we target inflation', Address by Lesetja Kganyago, Governor of the South African Reserve Bank, at the University of KwaZulu-Natal, 25 April 2017. https://www.resbank.co.za/Lists/Speeches/Attachments/492/Address%20by%20Governor%20Kganyago%20at%20UKZN%20 Graduate%20School%20of%20Business%20and%20Leadership.pdf

South African interest rates

Per cent
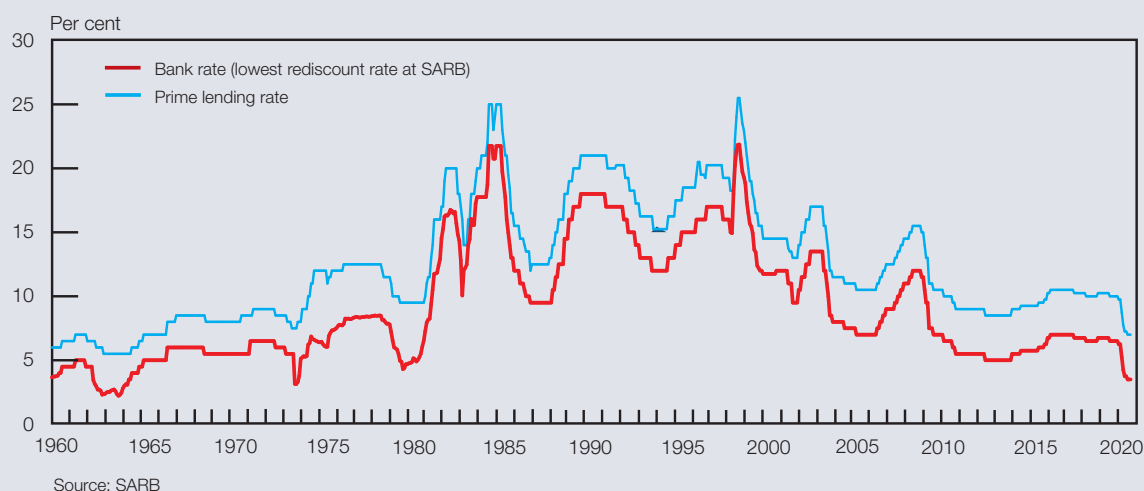
Source: SARB

South African inflation rate

Percentage change over 12 months
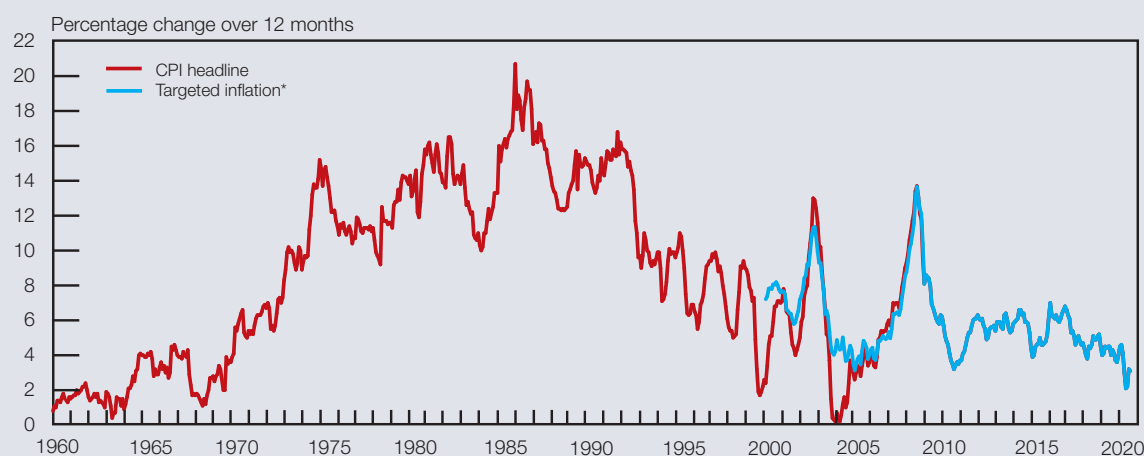
* CPIX for all metropolitan and other urban areas until the end of 2008;
  CPI for all urban areas thereafter

Sources: Stats SA and SARB

World real economic growth

Percentage change

Forecast

-0.1

-4.9

Source: IMF

Lockdown stringency

Sum of stringency scores*

Argentina
Philippines
India
Bangladesh
China
South Korea
South Africa
Brazil
Saudi Arabia
Vietnam
Mexico
Pakistan
Russia
US
Nigeria
Egypt
UK
Italy
Australia
Iran
Canada
Spain
Indonesia
EM average
Turkey
France
Germany
Malaysia
Thailand
Netherlands
Poland
AE average
Japan
Taiwan

5 000   10 000   15 000   20 000

* Since 1 March 2020

Sources: University of Oxford and SARB

Global economy

The COVID-19 shock has produced a large, synchronised downturn in the global economy. In general, the shock has been disinflationary, with the effects of weak demand overriding price pressures from supply disruptions and currency weakness – the latter mainly in emerging markets. Over the next two years, recovery paths are likely to diverge, with some economies rebounding quite rapidly and others remaining persistently weaker. Pre-existing country characteristics will play important roles in shaping this post-crisis variation in country performance. Risks to the global outlook include new rounds of COVID-19 infections (on the downside) and vaccine availability (on the upside).

The main economic event of the year has clearly been the COVID-19 pandemic. In response, many governments have resorted to lockdowns, accepting sharp reductions in economic activity as the price for slowing – or in countries such as New Zealand, stopping – the spread of the disease. On average, the stringency of the lockdowns peaked in April, for both advanced and emerging economies. Lockdown regulations have since been eased, but as of September conditions remained far from normal, with emerging markets maintaining tighter restrictions than advanced economies. Indeed, of the world's 32 largest economies, which account for 83% of global GDP, it is generally middle-income countries that have adopted tighter restrictions. Argentina and the Philippines have maintained the tightest lockdowns regulations; South Africa is ranked 7th.
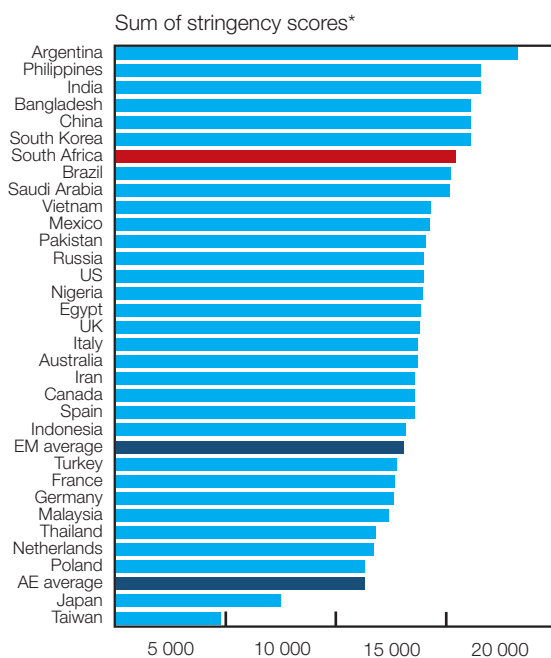
In this context, global GDP has fallen sharply. The International Monetary Fund (IMF) estimates the change in world output will be -4.9% this year; the World Bank, using somewhat different weights, puts the figure at -5.2%. The SARB's projections, based on Global Projection Model Network numbers and weighted for South African trade relationships, indicate -4.2% for 2020.[5] The median Bloomberg consensus estimate is -3.9%, with a range of -2.5% to -5.1%. By all these accounts, the current global recession is therefore likely to be significantly deeper than the 2009 crisis, where output declined by 0.1% (using IMF figures). It is also, as the World Bank has demonstrated, the most synchronised downturn in records going back to 1870, with 93% of economies contracting, in per capita terms.

Recent evidence suggests that output is rebounding rapidly from lockdown-induced lows. In part, this simply reflects low starting points, with many countries having experienced

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5   This projection incorporates South Africa's major regional trading partners, which are not directly modelled by the Global Projection Model Network.

their worst-ever quarterly outcomes while under lockdown. For instance, China, where COVID-19 first spread, recorded a first-quarter GDP figure of -6.8% – the lowest number in records dating back 25 years. Second-quarter GDP growth in the United States (US) was -9.1% – the lowest outcome in 45 years of records. However, preliminary data show activity has since picked up faster than expected, even considering the low bases. As a result, Citigroup's global Economic Surprise Index, a measure of whether data outcomes are above or below projections, hit an all-time high as of late August. The JPMorgan Global Manufacturing Purchasing Managers' Index (PMI) shifted from a low of 39.6 in April to 52.3 in September, implying an expansion. Inflation expectations have also picked up, particularly for advanced economies, suggesting improved sentiment around the strength of the recovery.

One driver of the recovery has been stored-up demand, with households catching up on consumption after the easing of lockdown regulations. Private sector savings rates rose sharply in the early stages of the crisis, partly due to precautionary motives, including a fear of job losses, but also because there were limited opportunities to spend. This allowed a consumption rebound as lockdowns eased. Rapid recoveries have also been supported by expansionary macroeconomic policies, with record contributions from both monetary and fiscal authorities. In advanced economies, in particular, governments have raised borrowing aggressively, with the experience of the previous crisis providing comfort that low interest rates will keep debt-service costs manageable. Accordingly, the IMF projects that advanced economy fiscal deficits will widen to a record 17% of GDP this year, compared to an average of less than 3% of GDP over the past five years. For emerging markets, the change is less extreme than in advanced economies, but still substantial, with average deficits up to about 10% of GDP this year, from just over 4% previously. As a result, global government debt is expected to reach 101% of global GDP in 2020, up by 19 percentage points, nearly double the 10 percentage point increase of the 2009 crisis.

Despite large debt increases, most countries have maintained their credit ratings at pre-crisis levels. Since the onset of the COVID-19 pandemic, Standard & Poor's rating agency, for instance, has re-affirmed 58% of sovereign credit ratings (as of July). Only 18% of rating reviews have led to downgrades. This suggests that while COVID-19 has had widespread macroeconomic effects, only a minority of countries are expected to be persistently weaker borrowers as a consequence. In most cases, interest costs are also not rising as much as debt totals, given low interest rates in the context of low inflation.

Average lockdown stringency

Index

Emerging economies
Advanced economies

2020
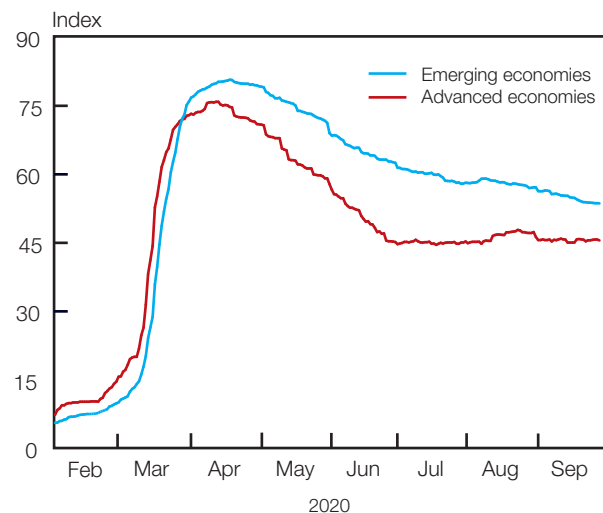
Sources: University of Oxford and SARB

Global manufacturing PMI*

Index

* A reading below 50 represents a contraction in the manufacturing sector
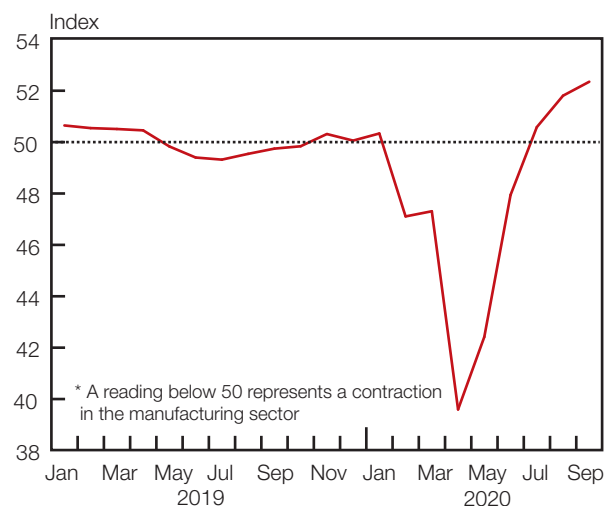
Source: Bloomberg

Citigroup global Economic Surprise Index

Index
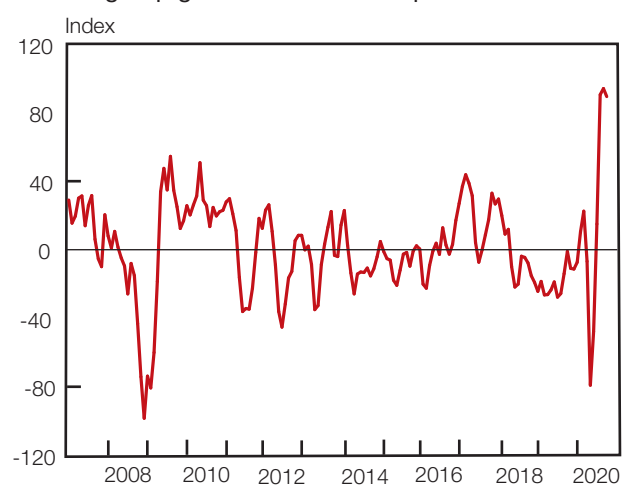
Source: Bloomberg

Global government debt

Percentage of GDP

* Shaded bar indicates forecast
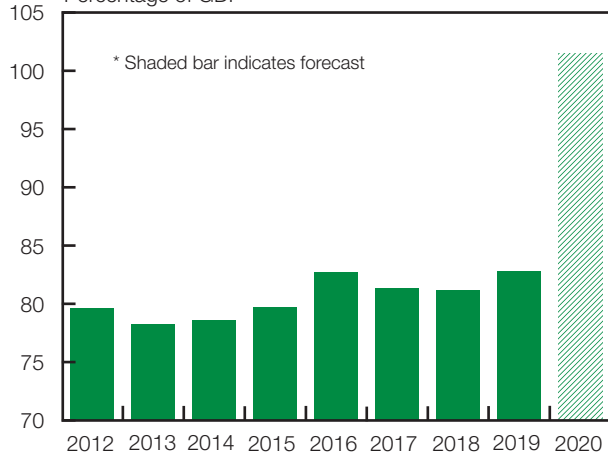
Source: IMF

Fiscal balances*

Percentage of GDP

Emerging markets
Advanced economies
* Shaded bars indicate forecast
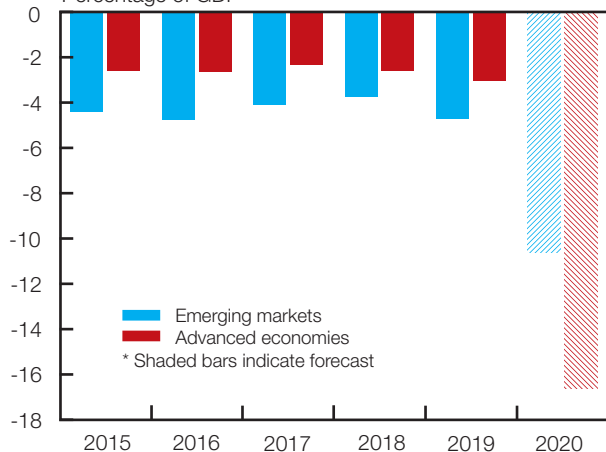
Source: IMF

Inflation rate

Percentage change over 12 months

Top 20 EMs excluding Argentina and Iran*
Advanced economies**

Dotted lines indicate the sample median

* Unweighted average of Bangladesh, Brazil, China, Colombia, Egypt, India, Indonesia, Malaysia, Mexico, Nigeria, Pakistan, Philippines, Poland, Russia, Saudi Arabia, South Africa, Thailand, Turkey, UAE and Vietnam

** Unweigted average of US PCE, Japan, euro area and UK

Sources: Haver and SARB

In general, inflation rates have declined across advanced and developing economies, in both cases falling by about 1 percentage point below longer-term averages. As of mid-2020, the average inflation rate among the major advanced economies was 0.8%; the equivalent number for the major emerging markets was 3.5%. Lower oil prices have had significant effects on inflation, but core inflation rates have also declined, consistent with widespread weakness in demand. As in 2009, however, inflation in advanced economies has moved less than would have been implied by the traditional Phillips curve estimates, and inflation rates are mostly expected to remain positive this year, despite large falls in growth and employment.[6] As before, this inflation resilience is likely explained by the anchoring of expectations, which has made prices less responsive to shocks.

A similar dynamic has now become visible in emerging markets, where inflation has largely remained under control despite abrupt currency depreciations, in contrast to historical experience. This has opened up space for countercyclical policy easing, an option not previously available during episodes of economic stress and tighter global financial conditions. The main explanation for this change appears to be stronger monetary institutions, with the combination of inflation targeting, central bank independence and free-floating exchange rates proving more resilient to shocks than alternative frameworks.[7]

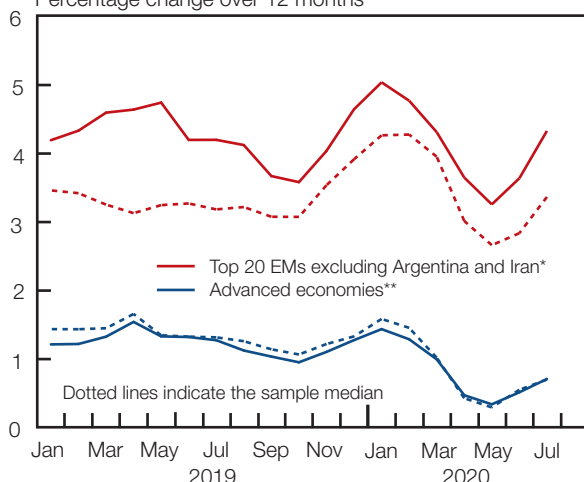This conclusion is supported by cases where these principles have not been adopted or effectively institutionalised. For instance, in Turkey inflation has remained in double digits (11.8% as of September) and the Turkish lira has hit record lows against the US dollar, despite massive currency market interventions. The central bank has recently raised its benchmark rate to 10.25%, but this is still negative in real terms, which discourages capital inflows. It is nonetheless high in nominal terms, which raises short-term debt-service costs relative to incomes. A more extreme case is Lebanon, where an unsustainable exchange rate peg has now effectively broken, leading to hyperinflation and acute shortages of food and medicine. By contrast, even emerging markets with otherwise difficult debt dynamics, such as Brazil, have been able to reduce rates to record lows: the Central Bank of Brazil's policy rate is currently at 2.0% against a 10-year average of 9.5%, with inflation at 2.4%. (A comparable claim can be made for South Africa: the repo rate is at 3.5% against a 10-year average of 6.0%, with inflation at 3.1%.)

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6   For instance, see M Del Negro, M P Giannoni and F Schorfheide, 'Inflation in the great recession and new Keynesian models', *American Economic Journal: Macroeconomics*, 7(1): 2015, pp 168–196. https://www.aeaweb.org/articles?id=10.1257/mac.20140097

7   G Gelos, U Rawat and H Ye, 'COVID-19 in emerging markets: escaping the monetary policy procyclicality trap', 20 August 2020. https://voxeu.org/article/covid-19-emerging-markets-escaping-monetary-policy-procyclicality-trap

Over the medium term, there is likely to be substantial variation across countries in how rapidly output recovers from the COVID-19 downturn. Bloomberg consensus forecasts indicate that a small minority of fast-growing countries – 11 out of 88 countries for which data are available, or 12.5% – will surpass 2019 levels of GDP this year. This group includes China and small, fast-growing economies such as Côte d'Ivoire. A larger share of countries, 28%, will regain 2019 levels of output by 2021. A further 47% of countries will require until 2022 to reach that threshold. Only 25% of countries are expected to take longer, a group which includes South Africa.

There is considerable uncertainty attached to the outlook, however, mainly because so little is known about the future course of the COVID-19 pandemic. If a vaccine were to be developed and distributed rapidly, the global economy could return to business as usual quite quickly. However, it is also plausible that new waves of infections will require additional lockdown measures, delaying a full economic recovery. A longer period of COVID-19 disruption is also likely to leave permanent scars on the economy, particularly in sectors which are heavily exposed to mobility restrictions, such as tourism and transport.

Another area of uncertainty is the macroeconomic consequences of stimulus policies. There is widespread disagreement over the inflation outlook, particularly in advanced economies, with investors simultaneously apprehensive about deflation and high inflation. As long as inflation remains low, central banks will be able to retain ultra-accommodative monetary policies, protecting fiscal sustainability. Higher inflation, however, would present difficult policy choices, while deflation would raise real interest rates and challenge central banks to find new tools to deliver on their mandates. Similarly, sovereign debt levels are now unusually elevated, and while extra spending was well-justified by emergency circumstances, extra debt will limit future policy flexibility and could be hard to bear if economic circumstances change. It is very difficult to assess the effects of these policies as there are no modern precedents for them.

GDP levels

Indices: 2019 = 100
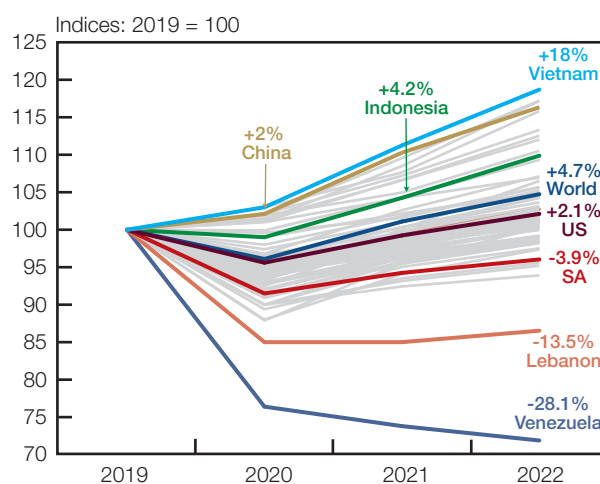
Sources: Bloomberg and SARB

Five-year break-even inflation rates for major advanced economies

Per cent
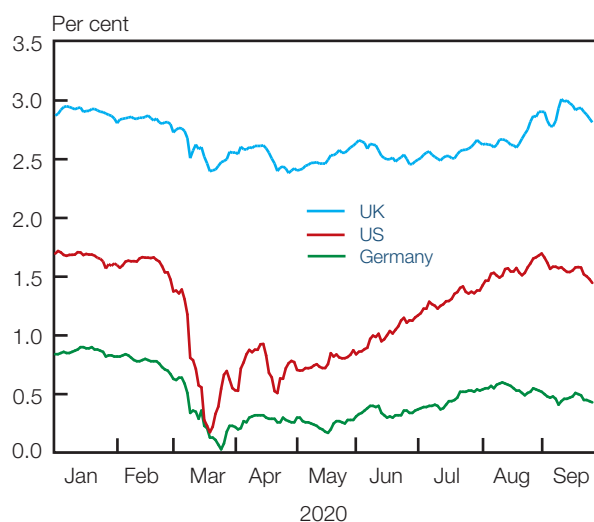
Source: Bloomberg

High debt comparators

Percentage of GDP

Bahrain
Brazil
Croatia
Dominica
Egypt
Honduras
India
Jamaica
Jordan
Kyrgyz Republic
Lebanon
Saudi Arabia
Sri Lanka
Syria

Source: IMF

Primary balances

Percentage of GDP

Standard deviation (+)
Mean
Standard deviation (-)

Source: IMF

Box 4   High debt in a comparative perspective

According to forecasts by National Treasury, South Africa's sovereign debt ratio is likely to pass 80% of gross domestic product (GDP) this year, and stay above this threshold for seven years. Debt on this scale is unprecedented in South African history, but not elsewhere in the emerging market universe. This box identifies some lessons from the experiences of other high-debt emerging markets.

The International Monetary Fund's (IMF) World Economic Outlook Database shows 67 emerging markets that have experienced debt levels of at least 80% of GDP for at least three years.[1] Of these, 53 are weak analogues for South Africa, because they are low-income countries (e.g. Burundi), very small (e.g. Comoros) or were involved in wars during the high debt period (e.g. Iraq). Excluding these cases leaves a sample of 14 countries with high debt episodes.

Countries reach high debt levels in different ways. Some routes are familiar from the South African experience, including protracted growth stagnations and excessive government spending. In particular, there are recurring instances of debt being driven up by public sector wage spending as well as bailouts for state-owned enterprises. There are also many instances of a debt-trap dynamic in which growing interest payments drive more borrowing. (Interest payments have been the fastest-growing line item in the Budget for most of the past decade.) South Africa has also avoided some pitfalls. For example, fiscal expenditure has not been driven by subsidies for items such as fuel and food. South Africa's relatively low share of foreign currency debt means exchange rate depreciation has not produced a debt explosion. High debt also cannot be blamed on a commodity price collapse, as in some other cases, especially oil exporters. (In fact, South Africa's terms of trade are currently at all-time highs.)

On reaching high debt levels, every country in the sample pursued fiscal consolidation by cutting spending and raising taxes.[2] A majority (nine) did so with the involvement of the I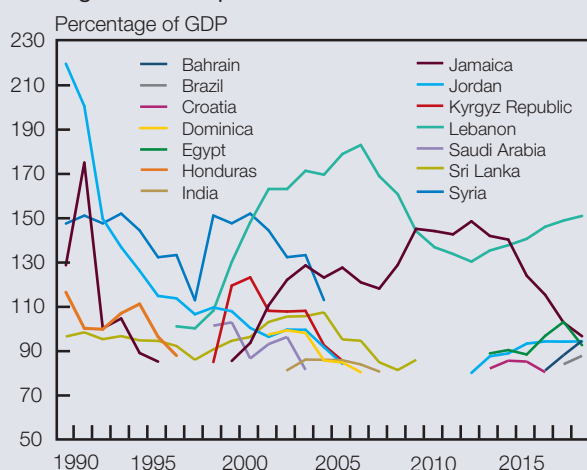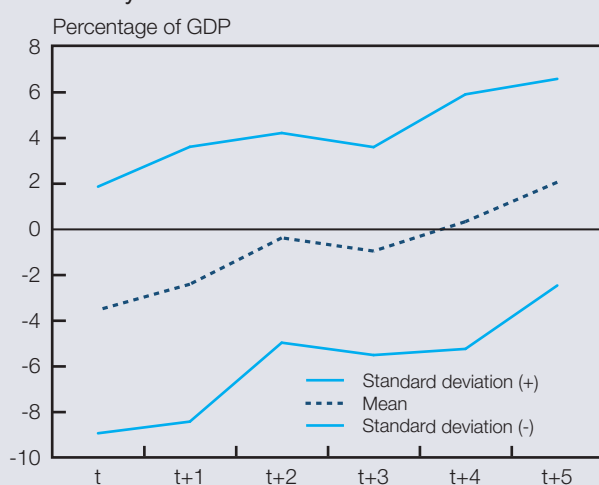MF or the World Bank. On average, primary (non-interest) fiscal deficits became fiscal surpluses within five years of debt passing 80% of GDP. This consolidation timeline is consistent with National Treasury's forecast of a primary surplus by the 2024/25 fiscal year. South Africa's starting point is worse, however, with National Treasury projecting a primary deficit of 9.7% of GDP this year, against an average of 3.5% for this sample.

Of the sample, 8 out of 14 countries had debt back below 80% by 2020. Of these, the median country took 6.5 years to reduce debt to less than 80% of GDP. The average is much higher, at 10.1 years, due to two outliers, Syria and Sri Lanka, with debt above 80% for

---

1   The sample excludes advanced economies, which are likely to have higher debt-carrying capacities.

2   Not all countries took this route, but their metrics are missing from the database. Peru famously opted for stimulus instead of austerity under Alan García between 1985 and 1990, an experiment which made it a paradigmatic case for the macroeconomics-of-populism literature. Archival sources also show that the Soviet Union under Gorbachev opted to avoid fiscal consolidation in favour of a programme of expanded investment, a choice contrary to Chairman Gorbachev's wishes, which led not to better growth but rather low productivity and ultimately an inflationary fiscal crisis. On the former, see Ricardo Lago, 'The illusion of pursuing redistribution through macropolicy: Peru's heterodox experience' in Dornbusch and Edwards, *The macroeconomics of populism in Latin America;* on the latter, see Chris Miller, *The struggle to save the Soviet economy*, especially Chapter 7.

23 and 24 years respectively. The average, excluding these countries, is 5.7 years. The remaining six countries in the sample, with debt still above 80% as of 2020, had, on average, been above 80% for 10.1 years, or a median of 6 years. Again, the large difference between the mean and median is due to outliers: in this case, Lebanon and Jamaica stand out with 24 and 20 years of high debt respectively.[3] National Treasury's projection that South African debt will be back under 80% of GDP by 2027/28, or seven years, is again consistent with the typical emerging market experience. This sample warns, however, of the possibility of getting stuck at high debt levels for a much longer period.

The relationship between debt and growth is complex, as these case studies attest. Most countries experienced slower growth after passing the 80% debt mark, relative to their previous averages. In three cases – Lebanon, Jordan and Saudi Arabia – commodity prices and regional instability deserve most of the blame. A further eight cases show clearer evidence of high debt causing growth problems, with repeated mentions of five specific channels: crowding out of the private sector, high tax rates, reduced investment, uncertainty and austerity. By contrast, three countries – Croatia, India and Egypt – achieved stronger growth despite high debt levels. Croatia benefitted from a recovery in the euro area. India and Egypt both undertook significant structural reforms, which contributed to growth averaging 7.8% and 4.1% respectively in the five years after debt surpassed 80%.

It is sometimes argued that high debt leads to high inflation, either because government solvency takes precedence over inflation control, or because inflation is deliberately used to inflate away debt. For this sample, however, faster inflation is a minority outcome. In half these cases, inflation remained under 5% when debt passed 80%, and it stayed below 5% over the medium term. In three cases – Egypt, Jamaica and Sri Lanka – inflation started in single digits but shifted to double digits within five years (without solving debt problems). The other cases experienced higher and more volatile inflation, with no obvious trend. Overall, this evidence suggests that for high debt countries, higher inflation is possible but far from inevitable.

Law-like generalisations about economies are risky, given small sample sizes, the lack of controlled experiments and the capacity for economic actors to change behaviour based on past lessons. Historical comparisons are nonetheless useful for grounding claims about South Africa's economic outlook. National Treasury's consolidation timeline is in line with sample averages. It is reasonable to be worried about the growth consequences of high debt, but there are cases where reforms have lifted growth, underscoring the importance of such measures. Half of the countries in this sample kept inflation consistently under 5%, suggesting price stability is a viable goal even where debt is high. Some countries get stuck with high debt and low growth for decades, a trap of which policymakers should be wary.

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3 Excluding Lebanon and Jamaica, the average is 4.25 years, but high debt is ongoing for these countries.

Inflation variations

Percentage change over 12 months

Low inflation group (n=6)
Rising inflation group (n=3)
Other countries (n=6)

Source: IMF

Equity performance

Cumulative percentage return since 1 Jan 2020

Legend:
- MSCI EM
- MSCI DM
- JSE All-Share Index
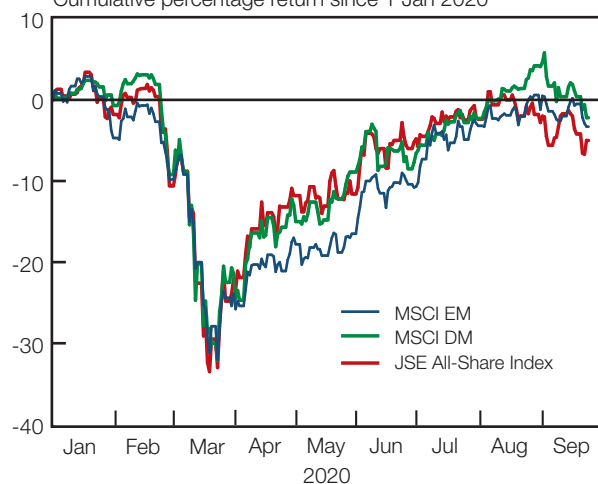
Sources: Bloomberg and SARB

Emerging market currencies

Cumulative percentage return since 1 Jan 2020

Legend:
- US$/rand
- JPMorgan EM FX Index
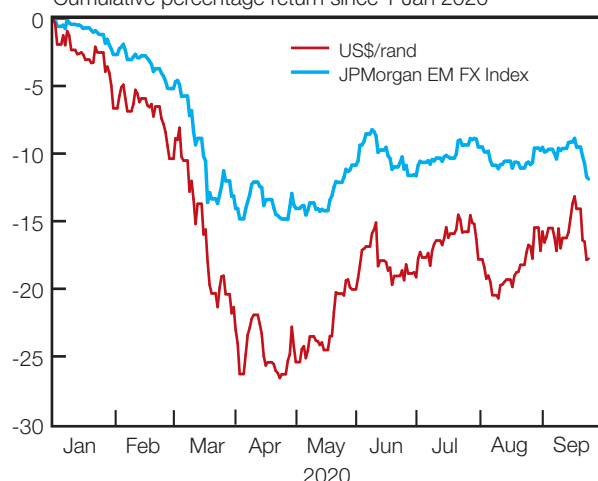
Sources: Bloomberg and SARB

G4 central bank assets

Percentage change over 12 months

Sources: Bloomberg and SARB

Overview of financial market developments

Asset prices in the advanced economies have rebounded since the onset of COVID-19 pandemic, buoyed by ambitious stimulus measures. Emerging markets have also seen asset price gains, if not all the way to pre-crisis levels. In South Africa, the rand has recovered somewhat from its March overshoot, and equity prices have come close to January valuations. Long-term sovereign bond yields have moderated since April, given more normal trading conditions, but these yields remain high due to fiscal risks. With short-term rates at long-term lows, the yield curve continues to be unusually steep.

The starting point for this chapter is a huge financial shock, with the COVID-19 pandemic triggering acute stress in the global financial markets. The ensuing flight to liquidity and safety drove down prices of risk assets, while the US dollar rose to a three-year high against a broad index of other currencies. Major equity markets fell abruptly: the US S&P 500 dropped by 34% between its February peak and March trough, paralleling declines of 33% in the UK FTSE 100 and 38% in the Euro Stoxx 50. Emerging market currencies and bond prices also weakened. The MSCI Emerging Markets Currency Index, for instance, lost 6% between February and March, while the Bloomberg Barclays local-currency bond index lost 11% during March.

The COVID-19 crisis was met with a forceful response from macroeconomic policymakers, especially the major central banks. The US Federal Reserve (Fed) cut interest rates back to zero and embarked on large-scale quantitative easing, essentially reprising the entirety of the Bernanke Fed's response to the global financial crisis in less than a month. The Fed then expanded its asset purchases beyond government-backed securities to forestall a credit crunch. In addition, it expanded swap lines with a select group of central banks and provided repo facilities to others, permitting countries to borrow US dollars in exchange for the collateral of US government bonds.

The European Central Bank (ECB) also responded aggressively to the crisis, despite having little to no room to cut short-term rates further. Instead, it relied mainly on expanding its asset purchases and targeted bank lending programmes. Under the Pandemic Emergency Purchase Programme, the ECB has committed to buy up €1.35 trillion of assets, mostly government bonds, but also corporate debt. Meanwhile, an expansion of the ECB's existing bank-lending programme (the third round of targeted longer-term refinancing operations, or TLTRO-3) has provided banks with cheap funds for lending to the real economy, with lower rates for larger lending volumes. The lowest rate currently available is -1%. Given the possibility of the ECB providing this funding at deeply negative rates,

without the adverse consequences normally attached to charging depositors to hold their money, this instrument may ultimately become a solution to the zero lower bound problem.[8]

Whereas late in the previous decade it became received wisdom that central banks in advanced economies had insufficient ammunition to address new crises, the COVID-19 shock has instead prompted innovative stimulus measures. As a consequence, the balance sheets of these central banks have expanded dramatically, reaching 36% of GDP for the US, 37% for the Bank of England, 61% for the euro area, and 128% for the Bank of Japan, as of mid-2020. In turn, the surge in liquidity and the promise of ultra-low interest rates well into the future has lifted asset prices. The S&P 500, for instance, passed its already-elevated pre-crisis levels in August, although it has since slipped back. Bond yields have also declined, with the US one-year Treasury yield collapsing from almost 2% in 2019 to around 0.6% currently, the German equivalent falling to -0.6%, and even Greek government 10-year bonds returning just 1% (down from 3.8% in mid-March).

One important asset that has lost value in the post-crisis period has been the US dollar, which has declined by around 10% from its crisis-level high. The US dollar has been unusually expensive for most of the past five years, benefitting not only from its status as the global reserve currency, but also from an attractive interest rate differential with other major economies. Easing by the Fed has since eliminated that yield advantage, however, permitting major advanced economy currencies to appreciate (including the euro, the Japanese yen, the Swiss franc, the Swedish krona and the Australian dollar). By contrast, most emerging market currencies remain relatively depreciated, with the rand down by around 18% year-to-date, the Brazilian real down by 27%, and the Russian ruble down 21%. Capital flows into emerging markets have turned positive again, but new inflows have yet to match the outflows seen during the crisis. While the precedent of the previous crisis suggested that very low yields in rich countries would force capital into emerging markets in a hunt for yield, this dynamic was not yet operating robustly as of late 2020.

South African asset prices have shared in the rebound from March and April lows, but the recovery has been limited relative to advanced economy experiences. The rand, for instance, has come back from a record nominal low of 19.36 to the US dollar on 6 April, but remains about 15% cheaper than it was before the crisis. The JSE All-Share Index has recouped most of its losses since March, but remains close to early-2019 levels, with mining and industrial stocks compensating for weakness in the banking and retail components.

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8 Editorial, 'Has the ECB found a way around the lower bound on interest rates?', *The Economist*, 13 August 2020. https://www.economist.com/finance-and-economics/2020/08/15/has-the-ecb-found-a-way-around-the-lower-bound-on-interest-rates

US dollar exchange rate

Index

Source: Bloomberg

Non-resident portfolio flows to emerging markets

US$ billions

Debt
Equity
Total
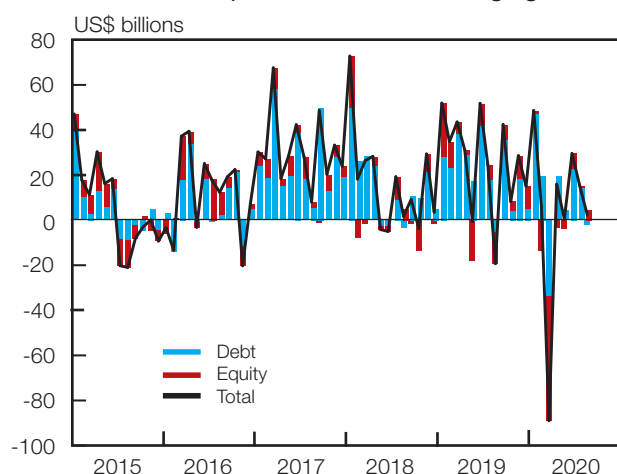
Source: Institute of International Finance

Exchange rate of the rand

Rand per US$

2020
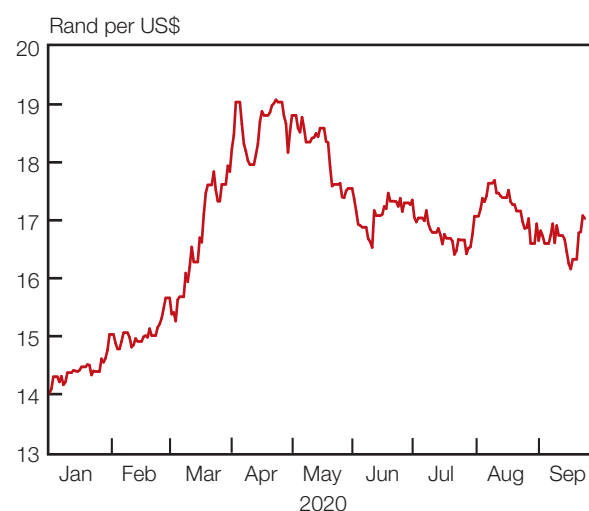
Source: Bloomberg

Rand/US$ trading range: high minus low

Cents
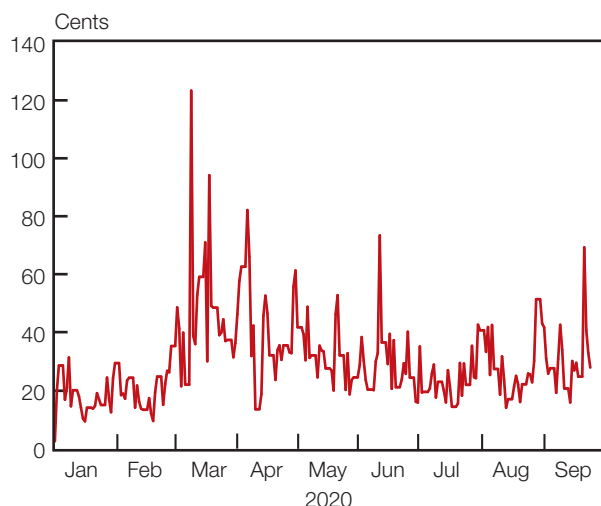
Sources: Bloomberg and SARB

Term spreads

Basis points

R2023/R2048
R186/R2048
R2030/R2048
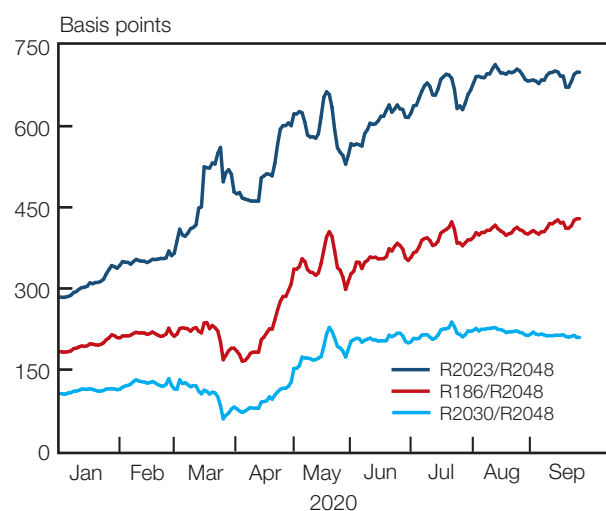
Sources: Bloomberg and SARB

Government bond holdings

Percentage of total

- Non-residents
- Insurers
- Other financial institutions
- Banks
- Local pension funds
- Other
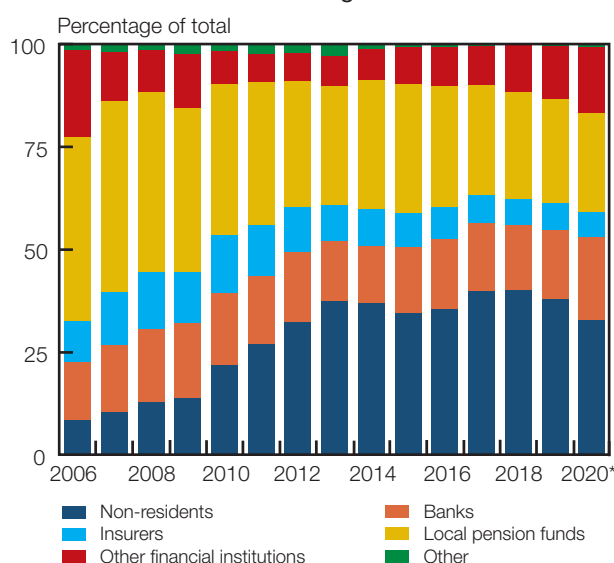
* Year to date

Source: National Treasury

The sovereign yield curve, which was unusually steep before the crisis, has steepened further. Short-term rates have fallen to long-term lows, as required by monetary policy objectives, but long-term rates have climbed further. Some of the initial upward pressure on bond yields was due to a breakdown in the sovereign bond market, in conditions of extreme global stress. This market failure led to price volatility in conditions of very thin liquidity, until the SARB intervened with a bond purchase programme aimed at restoring stability. Conditions have since improved, as evidenced by reduced bid-ask spreads and higher trading volumes, allowing the SARB to taper its buying programme from around R11 billion per month initially to R353 million as of August 2020.

The SARB has not specifically been targeting yields, however, and the extent to which these have remained elevated despite more normal trading conditions is explained by a high term premium, reflecting the compensation demanded by investors for long-term exposure to sovereign debt.[9] Since the COVID-19 shock, South Africa has lost its remaining investment grade rating as well as its place in the World Government Bond Index (WGBI). Foreign investors have reduced their exposure to domestic bonds, from a peak of 42.8% ownership of the total stock as of March 2018 to 29.9% in August 2020, a level well below the 35.2% recorded in 2012 when South Africa first joined the WGBI. In these conditions, high bond yields speak to the scarcity of capital in South Africa, in turn related to concerns about the ultimate sustainability of government debt.

The SARB's balance sheet and monetary policy implementation

In normal conditions, the SARB's balance sheet is not an active tool of policy. Its size fluctuates in response to changing demand for notes and coin or exchange rate movements that affect the valuation of the foreign exchange reserves. These changes are of limited interest for most audiences and are rarely discussed in the context of monetary policy. During the current crisis period, however, the balance sheet has been used as an active policy tool, and these decisions have also affected monetary policy implementation, making the subject relevant for this edition of the *MPR*.

The SARB's balance sheet has grown to 21.6% of GDP as of August, the highest level in at least 50 years. On the asset side of the balance sheet, the single largest factor in this expansion has been the valuation of the foreign exchange reserves, which has been boosted by rand depreciation as well as higher gold prices. This item alone explains 87% of the change from 2019 to August 2020. In addition, the SARB has expanded its assets by purchasing government bonds (as discussed above), offering additional accommodation to banks and financing the COVID-19 Loan Guarantee Scheme, among other initiatives.

9   See Box 2 of the April 2020 *MPR* on 'South Africa's term-premium shock'.

These interventions have contributed to balance sheet growth, but to a much smaller degree than the valuation effects on the reserves. By expanding the monetary base, however, these operations have also affected monetary policy transmission.

To give effect to monetary policy decisions, South Africa relies on a classical cash reserve system. Commercial banks are required to hold reserves against a portion of their liabilities, which they borrow directly from the central bank at the policy rate.[10] This means the SARB does not use its open market operations to control a specific market interest rate. Rather, these interventions are used to maintain a shortage in the market's supply of bank reserves, obliging banks to refinance the shortfall at the SARB, generally through weekly repo operations. In turn, the price of this financing serves as commercial banks' marginal funding cost, which influences the pricing of credit to the broader economy.[11]

For several years prior to the current crisis, the SARB maintained the shortage at a constant R56 billion. Following the COVID-19 shock, however, the SARB's balance sheet operations have increased the supply of cash to the interbank market. National Treasury has also drawn down some of its deposits at the SARB, further increasing market liquidity. As a result of these factors, the liquidity requirement for banks has been smaller than usual, falling to less than half its normal levels at some points in July and September. Since mid-March, markets have generally been in surplus at the end of the day, in contrast to what is typically a balanced position.

In normal circumstances, the money market shortage would have been maintained by liquidity-draining operations, using instruments such as foreign exchange (FX) swaps, SARB debentures and shifts in public deposits. The SARB has not been strictly enforcing the normal shortage, however, mainly because policy was deliberately providing abundant liquidity to maintain the stability of the system. In addition, whereas the SARB normally provides a standing facility for deposits priced at 100 basis points below the repo rate, during the crisis this was lowered to 200 basis points below the repo rate. By charging a more punitive rate for deposits, banks faced a stronger incentive to provide excess reserves to the interbank market, instead of placing them back at the SARB. At the same time, the standing facility lending rate was also lowered, from the repo rate plus 100 basis points to the repo rate, further improving the availability of liquidity. However, an implication of these adjustments was that, where the repo rate had previously been at the centre of a corridor bounded by the two standing facilities, it now became the ceiling, with interbank rates free to fluctuate between the repo rate and a floor 200 basis points below.

10 Banks are required to deposit 2.5% of the value of their liabilities at the SARB.

11 For a fuller discussion of this system, see N Brink and M Kock, 'Central bank balance sheet policy in South Africa and its implications for money-market liquidity', *South African Reserve Bank Working Paper Series No. WP/10/01*, Pretoria: South African Reserve Bank, December 2009.

SARB balance sheet

Percentage of GDP

* Using 2020 GDP forecast
Source: SARB

SARB assets

R billions

Other assets
Securities
Accommodation to banks
Loans and advances
Foreign exchange reserves (including SDRs)
Gold
Total assets

Source: SARB

SARB liabilities

R billions

Other liabilities (including GFECRA*)
Bank deposits
Government's domestic and foreign deposits
Government's SDR deposit account
Notes and coins in circulation
Reserve fund
Share capital
Total liabilities

* Gold and Foreign Exchange Contingency Reserve Account
Source: SARB

Liquidity requirement

R billions

Source: SARB

End-of-day liquidity position
(relative to liquidity requirement)

R billions
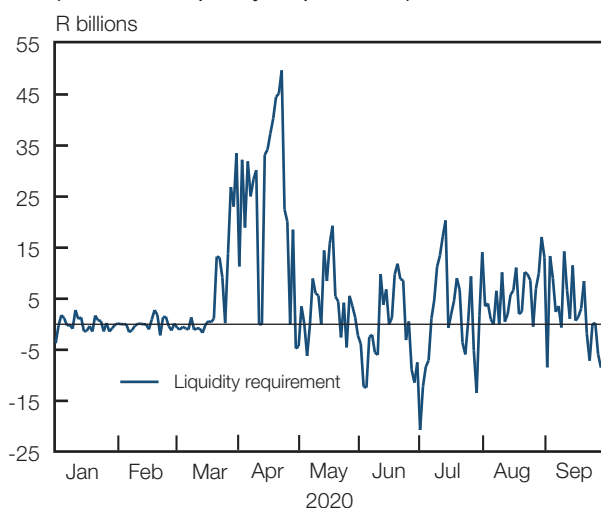
Source: SARB

Money market rates

Per cent
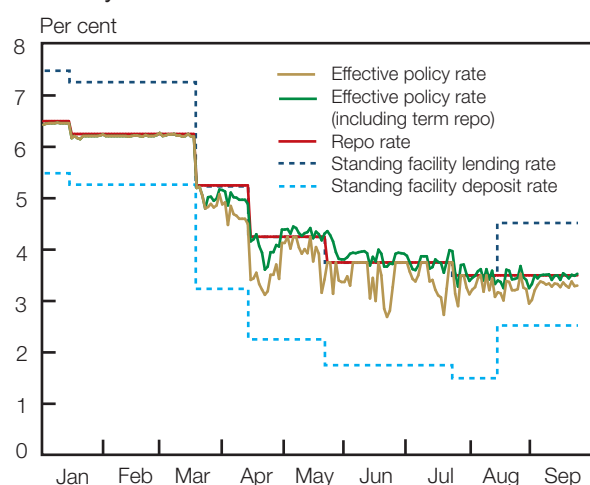
Source: SARB

In these circumstances, the effective repo rate declined relative to the official repo rate set by the MPC. Specifically, this measure, which is estimated from banks' borrowing and deposits with the SARB, averaged 34 basis points less than the repo rate from mid-March to mid-August.[12] Short-term market rates, particularly the 3-month Johannesburg Interbank Average Rate (Jibar), also fell, at times trading below the repo rate. Some of the downward pressure on short-term rates may have reflected expectations of further repo rate cuts. These market rates were also affected by higher short-term savings, combined with limited demand for short-term borrowing. Given the smaller shortage, the overall effect was a weaker relationship than usual between the official repo rate and short-term open market interest rates.

To mitigate this problem, and in the context of reduced market demand for liquidity now that financial conditions are normalising, the standing deposit facility rate has been raised back to the repo rate less 100 basis points. The R56 billion money market shortage will also be reinstated in time, with additional sterilisation operations to soak up extra liquidity, if needed.

The recent crisis has shown up weakness in the shortage system for transmitting monetary policy, especially during moments of market stress where there is more demand for liquidity. This experience bolsters the case for an eventual transition to a more modern open market system. The ongoing benchmark interest rate project is an important step towards this goal, as it will provide a better metric for identifying whether actual market rates are following MPC decisions. In time, it is likely that this benchmark will become the operational target for monetary policy, with open market operations then supplanting the current shortage system. At the moment, however, market fragmentation remains a problem, with liquidity not flowing freely between different pools of short-term funding, making it difficult to adopt any specific rate as the main policy tool. As things stand, the existing system has not produced large deviations of actual rates from the official repo rate, but it is not working smoothly enough that reforms can be postponed well past the current crisis.

12 This measure excludes term repos, which are for longer-term (three-month) funding. Including this form of borrowing narrows the spread.

Box 5   Average inflation targeting from a South African perspective

The United States (US) Federal Reserve (Fed) Chair, Jerome Powell, recently announced significant refinements to the Fed's monetary policy strategy.[1] Specifically, the Fed will now aim for an average inflation rate of 2% over time, with past undershoots to be made up by a period of higher inflation. This replaces the previous objective of always aiming for 2% over the medium term, without reference to historical outcomes.

The context for this policy shift is a persistent inflation target undershoot, which was exacerbated by the Fed's decisions to pare back stimulus, both by winding down quantitative easing (starting in late 2013) and then by raising interest rates (from late 2015). This policy normalisation process was guided by two 'stars'; r*, the neutral rate of interest, and u*, the natural rate of unemployment.[2] The Fed saw interest rates below neutral and unemployment falling below its natural rate, and responded by tightening policy to prevent an inflation overshoot. As John Williams, the then President of the San Francisco Fed, argued in 2015,[3] '… policy must be forward-looking. When you're driving towards a stoplight, you don't keep your foot on the accelerator; you ease off so you're ready to stop at your target. Otherwise you slam on the brakes – and probably wind up in the middle of the intersection.' Having eased off too much, the Fed instead failed to reach the intersection. It is now trying a new approach.

Given the Fed's status as the world's most important central bank, other countries will now also consider whether average inflation targeting makes sense for them. In this context, it is worth understanding how South Africa's experience has differed from that of the US.

For roughly the first half of the 2010s, South Africa had the mirror image version of US outcomes. The repurchase (repo) rate was kept very low (mostly negative in real terms) to reignite growth. The economy nonetheless slowed persistently, while inflation moved to around the top of the 3–6% target range. Rather than the slack disappearing faster than expected and inflation nonetheless undershooting forecasts, as in the US, South African inflation repeatedly surprised to the upside and growth disappointed.

In the second half of the decade, the South African Reserve Bank (SARB) began emphasising the midpoint of the target range as the medium-term objective of monetary policy. Inflation duly decelerated, faster than anticipated, and was mostly close to the target midpoint until the COVID-19 crisis hit. At that juncture, monetary policy had ample space to slash interest rates, helping to mitigate a major demand shock.

Comparative inflation averages

Since 2010, US inflation has been below target for 96 out of 127 months, averaging 1.5%. Since 2017, it has averaged 1.7%, with 32 out of 43 months (nearly three quarters) below target.

1   J H Powell, 'New economic challenges and the Fed's monetary policy review', Address by Jerome Powell, US Fed Chair, at a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, 27 August 2020.
https://www.federalreserve.gov/newsevents/speech/powell20200827a.htm

2   J H Powell, 'Challenges for monetary policy', Address by Jerome Powell, US Fed Chair, at a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, 23 August 2019.
https://www.federalreserve.gov/newsevents/speech/powell20190823a.htm

3   J C Williams, 'The view from here: outlook and monetary policy', FRBSF Economic Letter No. 2015-08, San Francisco: Federal Reserve Bank of San Francisco, June 2015.
https://www.frbsf.org/economic-research/files/el2015-08.pdf

United States PCE inflation

Percentage change over 12 months
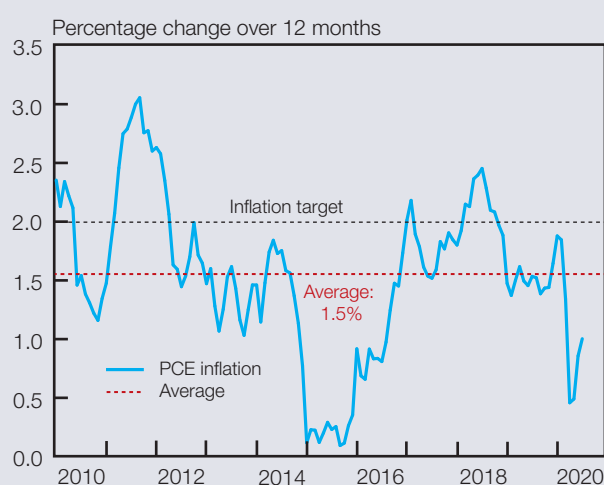
Source: US Bureau of Economic Analysis

South African CPI inflation

Percentage change over 12 months
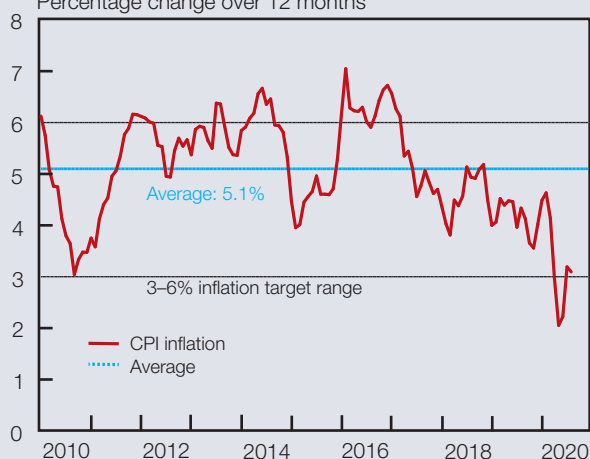
Sources: Stats SA and SARB

By contrast, South African inflation has averaged 5.1% since 2010, with 32 months (one quarter) below 4.5%. Since 2017, it has averaged 4.5%, with 19 of the 43 months (less than half) below the midpoint target. On balance, and unlike the US, South Africa's experience has been of too-high inflation rather than too-low inflation.

The more interesting case for average inflation targeting, however, is a forward-looking one, given expectations that inflation will be mostly below 4.5% until late in 2022.[4] In these circumstances, would it make sense to tolerate an inflation overshoot later, to make up for the undershoot? In fact, the scale of that overshoot would be small. Based on current forecasts, and starting from 2017 when the 4.5% objective was first communicated, inflation would need to be 4.7% between 2023 and 2026[5] to bring the average inflation rate for the whole period up to 4.5%. This is a 0.2 percentage point deviation, only fractionally higher than the 4.5% objective. The same calculation for the Fed requires a 2.6% inflation rate between 2022 and 2023, or a 0.6 percentage point deviation, which is large relative to a 2% objective.

Finally, adopting a higher inflation target under the guise of average inflation targeting would likely raise rates rather than lowering them. While the Fed may well get lower medium-term interest rates from its new strategy, this will come mainly through reassuring markets that it will not tighten rates prematurely, prolonging the period of sub-2% inflation. If inflation appears to be moving persistently higher, however, interest rates are also likely to be higher over the medium term, in keeping with the Fisher equation (see also Box 3). Average inflation targeting is an interesting new strategy for combating an extended period of inflation target undershoots, and therefore restoring credibility, but it has less application for countries with different circumstances, including South Africa. The US experience is nonetheless useful in warning against excessive reliance on unobservable 'stars' as well as the problem of inflation expectations falling too low.

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4 This is true of both the SARB MPC forecasts and average analyst expectations, either from Bloomberg or Reuters.

5 The Fed has not communicated the period over which inflation should average 2%. A four-year window would correspond with the 2015–2018 rate hiking cycle, the intuition being that rather than tightening policy at the pace it did previously, the Fed would instead tolerate higher inflation. Different time frames are also plausible.

Comparative statistics

	SA CPI	US PCE
Months undershot (2010 to date)	32	96
Months undershot (2017 to date)	19	32
Cumulative deviation from target-implied price level by 2022 (starting 2017)*............................	-0.94	-2.42
Implied compensatory annual inflation rate (2023 to 2026 inclusive)...	4.7%	2.6%

* Percentage points

Box 6 Broken? Developments in break-even inflation rates

Break-evens are market-derived measures of inflation expectations. They are constructed by comparing a normal government bond with an equivalent inflation-protected version, often called a linker. The intuition is that yield differences between nominal bonds and linkers should reflect inflation expectations, so that investors in either instrument break even, rather than earning a predictably superior return for one of the two options.

Between 2017 and early 2020, breakeven-implied expectations shifted steadily lower, in line with the Monetary Policy Committee's (MPC) strategy of anchoring inflation expectations nearer the target midpoint. In 2020, however, these measures have become highly volatile. In March and April, for instance, 10-year break-evens increased to 7%, from around 5% in January. Subsequently, break-evens declined again, sometimes dramatically. Bloomberg's measure of five-year break-evens, for instance, fell to 2.9% as of late August, below the 3–6% target range, and also well below the Bureau for Economic Research (BER) survey result of 4.7% over five years. Break-evens for three years are even lower at 1.8%. What explains this behaviour?

In March and April, it appears market dislocations were to blame. During this period, yields on both nominal bonds and linkers rose, but those of nominal bonds rose more, generating higher breakeven-implied expectations. The volumes of bonds transacted declined and bid-ask spreads rose sharply, especially for nominal bonds, producing abrupt movements in yields. As conditions normalised again, aided by the South African Reserve Bank's bond-buying programme, yields declined and break-even rates subsided again. By late May, 10-year expectations were back at their January levels.

Despite this normalisation of market functioning, the yield curve has remained extremely steep. This phenomenon helps explain why some break-even rates are now implying very low inflation – a reversal of the March–April puzzle. Because there are not always nominal bonds with equivalent-maturity inflation linkers for the different break-even tenors normally reported, break-even calculations are made using nearby maturities as proxies. This technique works well in normal times, but it breaks down when the yield curve is so steep. For instance, the highly liquid R186 bond is often used as a benchmark indicator of 10-year yields, but it matures in six years. Break-evens calculated using the R186 show 10-year inflation expectations of 3.2% (as of September 2020). The same calculation with the R2030, a true 10-year bond, gives inflation expectations of 5.2%. Similarly, a five-year break-even calculated using a blend of the three-year and six-year nominal bonds gives inflation expectations of 3.3%. The same calculation using only the six-year nominal bond would give expectations of 4.4%. However, both calculations are compromised by the absence of a true five-year bond.

The three-year break-even is more puzzling, however, as this is based on actual three-year instruments. Three-year nominal bond yields are currently around 4.6%. Yields on three-year linkers are unusually low, however, at 2.2%. If analysts are correct and inflation will be around 4% for this period, then inflation linkers would be returning more than 6%, a generous yield, and a 'free lunch' relative to holding nominal bonds. The three-year nominals have comparatively large bid-ask spreads and the inflation linkers are barely trading, however, which may explain

Break-even inflation rates
Per cent
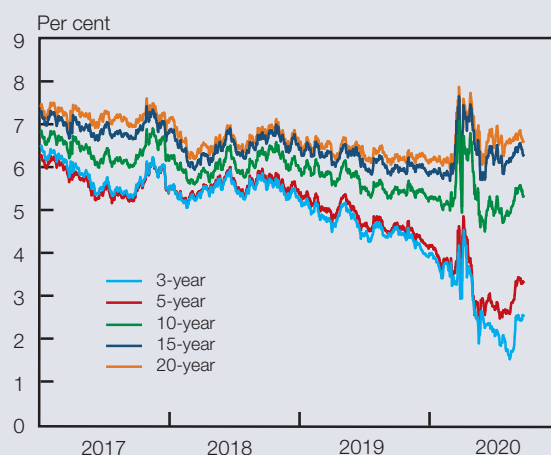
Source: Bloomberg

Nominal bond bid-ask spreads
Basis points
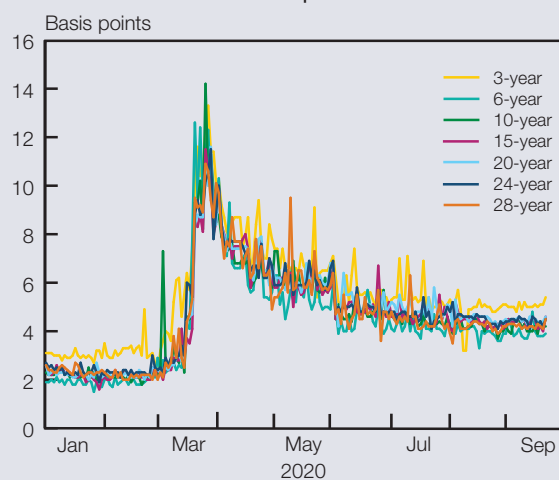
Sources: Bloomberg and SARB

Inflation risk premium

Per cent

Source: SARB

their anomalous yields. This thin-trading problem is still more extreme with inflation swaps, for which there is really no functioning market, although inflation rates of around 2.6% are sometimes quoted.

The single most reliable break-even data point is probably the 10-year measure, which is underpinned by a true 10-year nominal bond and a 9-year linker, both of which are traded in liquid markets. This measure is currently slightly above 5%, as it was pre-crisis. It is well below the recent peak of 7.08% recorded in late March, which was the highest level reached since November 2016. It is also somewhat above the 4.5% nadir of early June, which was the lowest level on record.

This measure indicates long-run inflation is unlikely to remain in the bottom half of the target range, where it is now. Furthermore, the risks implied by this pricing are skewed towards somewhat higher inflation. This assessment is based on an estimated inflation risk premium, defined as the difference in term premiums between equivalent nominal bonds and linkers.[1] (Because linkers have no inflation risk, unlike nominal bonds, any difference in their term premiums should be due to a non-inflationary component, which can then be removed to leave only the compensation for inflation risk.) This persistence of upside risk, on top of 10-year expectations already above 4.5%, is a reminder that the midpoint objective is still not fully credible over the long run, despite lower shorter-term inflation expectations.

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1 Based on the methods described in L Soobyah and D Steenkamp, 'Term premium and rate expectation estimates from the South African yield curve', *South African Reserve Bank Working Paper Series No. WP/20/03,* June 2020. https://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/9998/WP%202003.pdf

Real economy

South Africa's economy is likely to fall by 8.2% this year, with a record contraction of 17.1% in the second quarter, in year-on-year terms. The recovery is now well underway, with high-frequency data generally surprising to the upside in recent months. Getting back to pre-crisis levels of output, however, is still expected to take several years. Demand will likely remain subdued throughout the forecast period, while electricity shortages and a difficult fiscal situation, among other constraints, will hobble a more robust recovery.

Starting point

The South African economy was underperforming prior to the COVID-19 shock, contracting for three consecutive quarters before the lockdown. Indeed, economic growth has been subdued for an extended period, averaging 0.69% since 2016, with the tertiary sector generally eking out low but positive growth and the primary and secondary sectors highly volatile, sometimes boosting the headline numbers but on other occasions causing the economy to contract.

This pattern was once again visible at the start of the year, with the primary and secondary sectors contracting by 1.2% and 1.3% respectively, and the tertiary sector growing by 0.5%.[13] The first quarter was marked by intense electricity load-shedding, which tends to affect the electricity-intense mining and manufacturing sectors in particular. The mining sector also appears to have suffered from early COVID-19 effects, with China's imports of key mining commodities falling in the first quarter in the context of that country's lockdown. Improved growing conditions actually benefitted the agricultural sector, which had contracted in the previous year, but this was insufficient to offset declines in the much bigger mining sector, leaving overall primary sector performance in negative territory. Aside from these specific shocks, the South African economy continued to grapple with the effects of low business and consumer confidence. Private investment contracted sharply after some surprisingly strong gains in 2019, and public sector investment fell further.

The COVID-19 shock and the recovery

South Africa entered lockdown late in the first quarter and stringent lockdown restrictions applied through the entirety of the second quarter. This predictably had dire effects on economic output, with Stats SA recording a 51% contraction for the second quarter, in quarter-on-quarter, seasonally adjusted and annualised terms, or -17.1% when measured year on year. The contraction was broad-based, with the largest negative contribution from the tertiary sector, which accounted for 24.3 percentage points of the total 51% downturn. Only agriculture delivered positive growth, consistent with a

Real GDP growth
Percentage change from quarter to quarter*

* Seasonally adjusted and annualised

-51.0

Sources: Stats SA and SARB
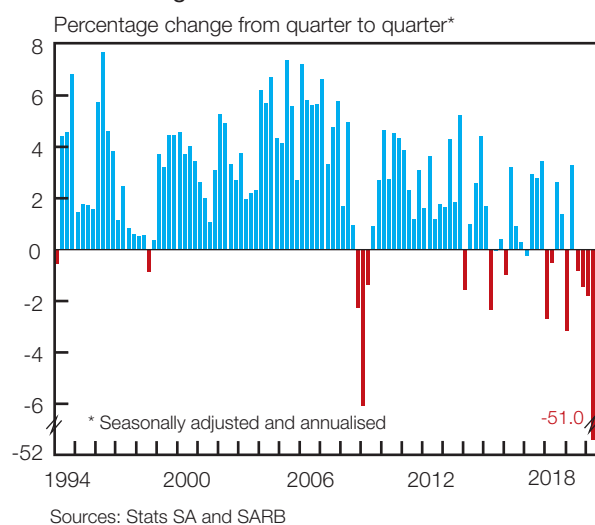
Contributions to real GDP growth
Percentage points

- Primary
- Secondary
- Tertiary
- Taxes and subsidies
- Real GDP growth*

-1.8

-51.0
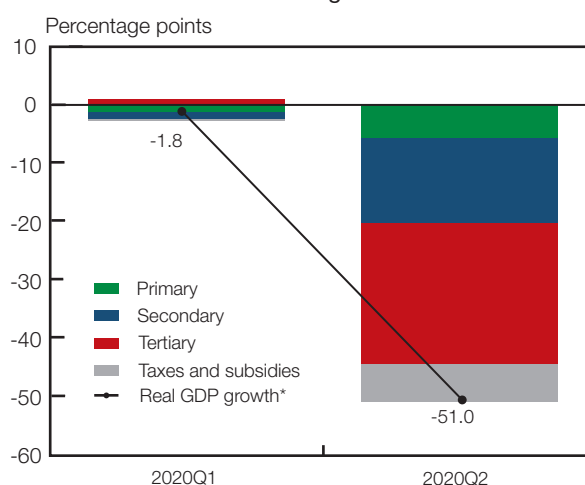
* Percentage change from quarter to quarter at seasonally adjusted annualised rates.

Sources: Stats SA and SARB

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13 Expressed in quarter-on-quarter terms, seasonally adjusted and at an annualised rate.

Real GDP growth*

Percentage change over four quarters

* Dotted line indicates forecast

Sources: Stats SA and SARB

Average daily truck traffic

Number of trucks

2020

Sources: SANRAL and SARB

Small business turnover

Deviation from baseline*, 7-day rolling average

— Retail
— Healthcare, beauty and fitness
— Food, drink and hospitality

2020
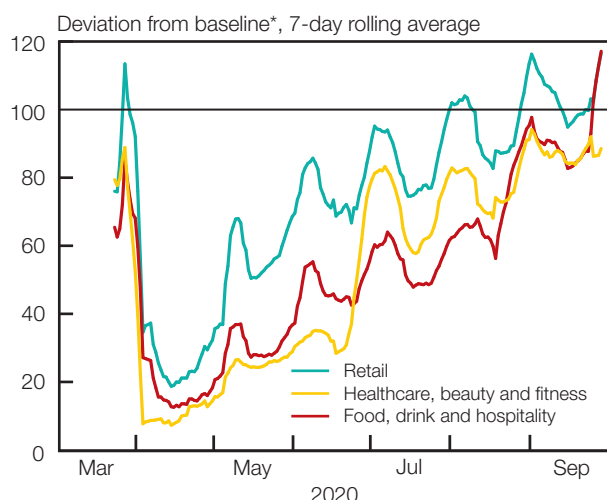
* Baseline = first two weeks of March

Sources: Yoco Technologies and SARB

rebound from last year's bad performances, plus exemptions from lockdown restrictions for the sector. The contraction was worse than anticipated in previous MPC forecasts, with the July MPC projections, for instance, putting the contraction at -40.1%, in quarter-on-quarter, seasonally adjusted and annualised terms.

With South Africa's level of output having fallen so much in the second quarter, a rebound is inevitable for the third quarter. The MPC forecasts now anticipate quarter-on-quarter growth of 45.2% in seasonally adjusted and annualised terms, marked up from 17.5% for the July forecast, based on strong high-frequency data and a lower starting point. This rebound only partially reverses the second-quarter fall, however, and the longer-term recovery is expected to be gradual, with output only returning to the levels reached at the end of 2019 by the second quarter of 2023. This contextualises the 2021 and 2022 growth projections of 3.9% and 2.6% respectively, which would otherwise appear optimistic compared with the sub-1% outcomes of the past few years.

Both the pandemic and the lockdown are unprecedented in modern economic history, so it is difficult to forecast the pace of the recovery with much confidence. This uncertainty has prompted more attentiveness than usual to high-frequency data. Some of these indicators have neared or reached pre-crisis levels quite quickly. For instance, truck traffic through tolling plazas was, on average, back to 98% of 2019 levels as of the week ending 4 September. Electricity demand has also hit pre-crisis levels, and is now close to normal seasonal demand patterns. According to Yoco Technologies, small business turnover has shown a similar rebound, with two highly lockdown-sensitive categories – food, drink and hospitality; and healthcare, beauty and fitness – surging in late August to levels last seen at the start of M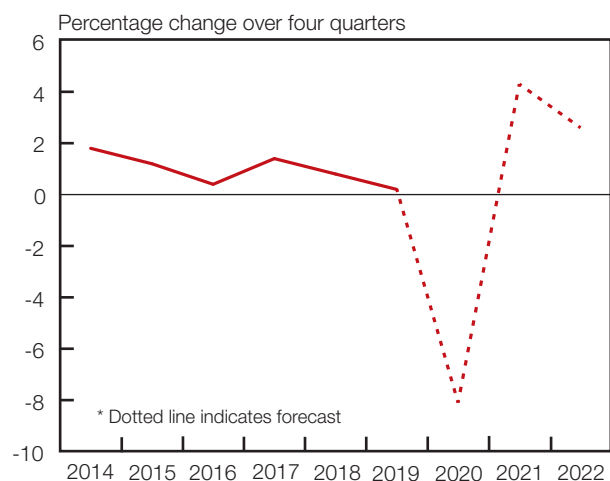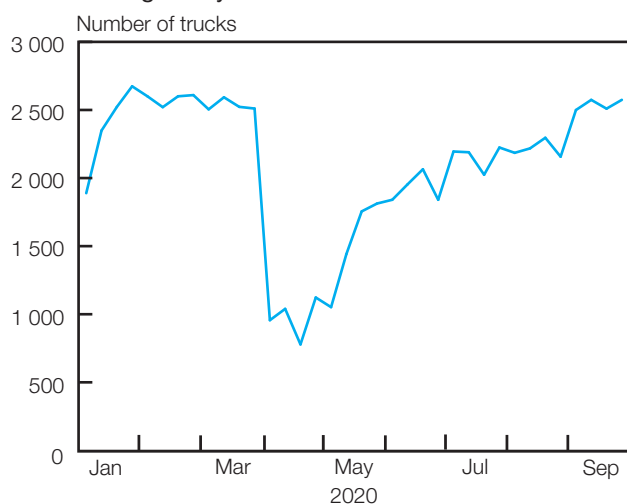arch. BankServAfrica data for interbank transactions have staged a comparable rebound. The Absa/BER Manufacturing PMI has been well above 50 – which is the threshold for expansion – since May 2020, reaching 58.3 in September, an all-time high.

Other indicators, however, speak of more persistent economic damage. The value of salaries processed through BankServAfrica is down by about 8%.[14] Domestic vehicle sales are also markedly lower at 37 403 units in September compared to 43 297 in February, although recent growth rates are strong given the rock-bottom April starting point of just 574 vehicles sold under lockdown.[15] Broader indicators, although these become available with more of a lag, present a similar pattern of strong growth off low bases, but still with a large

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14 The total number of payments is down by more than a third (-34.8%) year-on-year, but this metric is distorted by election-related payments last year, as well as overtime pay for police and army personnel being processed as separate payments in 2019, among other factors.

15 Including exports, the totals are 54 833 (August), 75 439 (February) and 1 475 (April).

wedge between current and pre-crisis levels. This applies, for instance, to mining and manufacturing output (down 9.1% and 10.6% respectively, in year-on-year terms) as well as wholesale and retail sales (down 8.8% and 4.9% respectively, also for July).

Employment data have been lagging more than normal,[16] but it is now clear that broad unemployment has risen sharply. The Quarterly Labour Force Survey for the second quarter of the year, released on 1 October, showed a 2.3 percentage points increase in this metric, to 42%. The damage appears to be worst in the lower-paid sections of the labour market: the National Income Dynamics Study–Coronavirus Rapid Mobile (NIDS–CRAM) Survey data from March and April 2020, for instance, show the highest probability of job loss for those earning less than R3 000 a month, and the lowest probability for those earning over R24 000 a month.[17] The retrenchment data released by the South African Revenue Service (SARS) also show the number of retrenchments up by 34% in July and August, relative to those two months in 2019, but with the value of retrenchment payouts up by a more moderate 7% for those two months.

A plausible synthesis of the upbeat high-frequency data discussed above, and these other less encouraging outcomes, is that the recovery has an easy 'V-shaped' start off the low lockdown base, followed by a more difficult period as headwinds to growth intensify.

Potential growth and the output gap

In the QPM framework, growth is anchored by an estimate of potential output and an output gap, which is the accumulated difference between actual and potential GDP. The model structure aims to close output gaps over the medium term, with the help of the interest rate tool, requiring actual growth to speed up or slow down so that actual output ultimately realigns with potential output. The COVID-19 shock poses interesting difficulties for this framework. It requires an apportionment of the shock into demand- and supply-side factors, with the former feeding into the output gap but the latter being assigned to the potential growth rate. It also requires some assessment of the parts of economic capacity that have become permanently less productive. For instance, there may have been permanent changes in consumers' tastes for cinemas, restaurants and cruise ships; and firms may never again use office space in the quantities they did before the lockdown. Both the supply side and the demand side are affected by the shock, with varying policy implications.

16 The Quarterly Labour Force Survey, which provides the official unemployment rate, was originally due for release on 11 August 2020. The Quarterly Employment Survey is due for release on 15 October 2020, having previously been scheduled for 29 September.

17 V Ranchhod and R Daniels, 'Labour market dynamics in South Africa in the time of COVID-19', NIDS-CRAM Survey, 15 July 2020. https://cramsurvey.org/wp-content/uploads/2020/07/Ranchhod-Labour-market-dynamics-in-the-time-of-COVID-19.pdf

Manufacturing PMI

Index, >50 = expansion

Source: BER

Labour market

Million people

Source: Stats SA
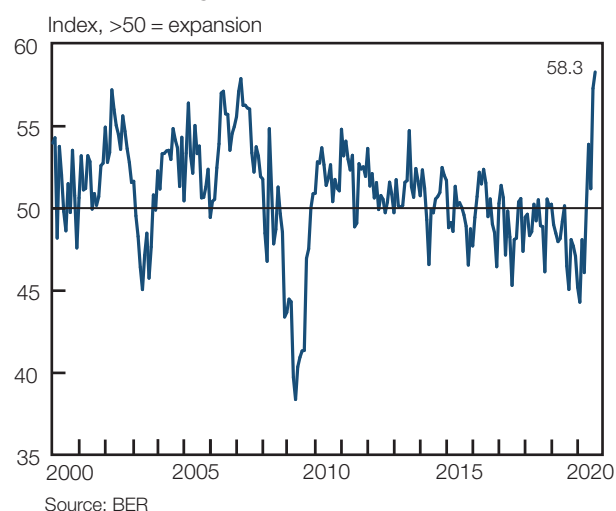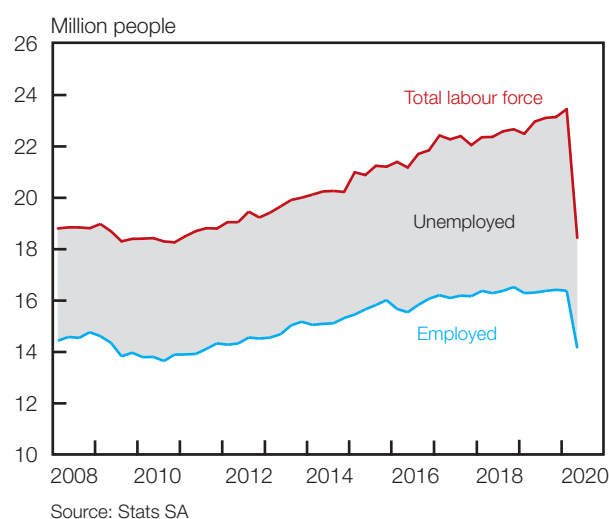
Selected monthly indicators

Percentage change over 12 months

Sources: NAAMSA, SARS, Stats SA and SARB

Output gap*

Percentage of potential GDP

* Dotted line indicates forecasts

Source: SARB

The forecast estimates of the economy's potential growth rate show a sharp fall in 2020 to -3.2%, from 0.3% the year before. The decline is centred in the second quarter of the year and is based on the short-term supply-side consequences of the lockdown: the economy cannot produce as much as it did in previous years because large portions of its productive facilities are locked down. Potential growth then rebounds, averaging 1.4% and 0.9% in 2021 and 2022 respectively, but the overall level of potential output is lower than it was before the crisis.

The forecast interprets the second-quarter growth collapse as only half attributable to lower potential, so the output gap also widens in that quarter to an extraordinary -11.94% of potential GDP. Part of this gap is then removed by the catch-up rebound of the third and fourth quarters, as the economy reopens and firms and households complete spending plans deferred by the lockdown. The gap narrows further across the forecast horizon, but it is still around -2% of potential GDP by the end of 2022, consistent with COVID-19 being an unusually intense shock.

Box 7   New estimates of potential gross domestic product

Potential output is an important variable in the Quarterly Projection Model (QPM) forecasts prepared for the Monetary Policy Committee. It describes the amount of output the economy can generate each quarter, employing its productive resources at full capacity. In turn, the difference between the economy's actual output and potential gross domestic product (GDP) is the output gap, which is the concept used in the QPM to assess the strength or weakness of demand. This is an important component of the QPM Taylor rule, which generates the repurchase (repo) rate projections.

Because potential output cannot be observed directly, it has to be estimated. (By contrast, a variable like inflation can be measured through price surveys.) Unfortunately, potential growth estimates are uncertain. They change in response to new or revised data, sometimes significantly. Different techniques also give different answers.[1]

Despite these shortcomings, it is difficult to dispense with the concept of potential growth altogether. Supply-side and demand-side shocks to growth generate different economic responses. It is also more transparent to base these assessments on a model[2]

and to publish the quantitative estimates, as the South African Reserve Bank does, rather than keep these judgements implicit and qualitative.

The potential growth estimates used in the QPM are revised periodically, when new data become available, or when a shock appears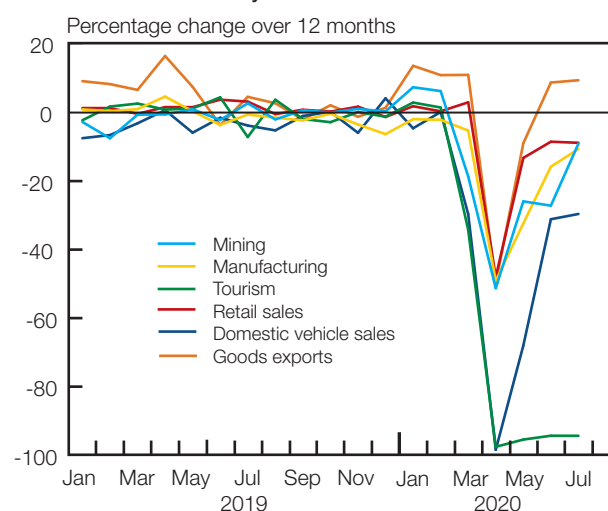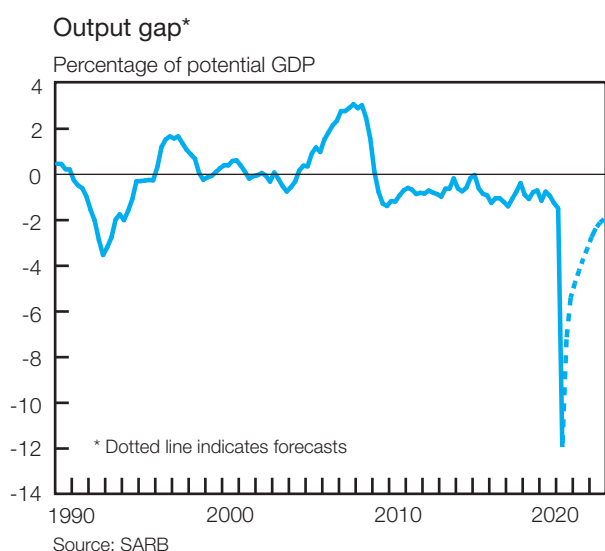 that is best modelled through this channel (such as a strike or lockdown).[3] For the current year, potential growth has been revised three times so far, in March, April and September. The September re-estimation attracted particular scrutiny because it narrowed the output gap, on average, relative to where it would have been using the previous potential growth estimate. This also affected the repo path.

Despite the uncertainty caused by the September revision, there were good reasons to implement updates. The existing estimates dated back to April. They used forecasts for the first- and second-quarter GDP outcomes, whereas Statistics South Africa had now published the official outcomes. High-frequency data for the third quarter were also providing clearer guidance on the economy's recovery from the lockdown. Finally, revisions to potential growth were also implemented in September 2018 and September 2019. There was no good economic reason to delay updates this year.

The September estimates showed a slower pace of potential growth before the COVID-19 crisis, with a deeper downturn in the second quarter of 2020 but also a faster recovery in the third quarter. The longer-term trend for potential growth was revised down. As a result, the output gap became less negative pre-crisis (at -1.48% of potential GDP, from -2.15% previously), but widened more in the

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1   For a discussion of different estimates, see Box 5 of the April 2020 *MPR*, p 25.

2   The model responsible for the potential growth estimates attempts to control for supply-side shocks, such as drought, which are common in economies with large natural resource sectors. This modelling technology is useful for an event such as a lockdown, which is a major supply-side shock, even if it also has demand-side consequences. It is superior to using a simple statistical trend, which would imply firms were open and willing to serve customers under the lockdown, but customers somehow failed to appear. Of course, firms were required to cease operations, so they were incapable of supply regardless of demand conditions. For details of the model, see B Botha, F Ruch and R Steinbach, 'Short-lived supply shocks to potential growth', *South African Reserve Bank Working Paper Series No. WP/18/02*, Pretoria: South African Reserve Bank, June 2018. https://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/8605/WP1802a.pdf

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3   For 2019, potential growth was revised in March, May, July and September. In 2018, revisions took place in January, March, July and September. In 2017, before the introduction of the current potential growth model, revisions occurred in July and November.

second quarter (reaching -11.94%, from 11.28% in July, despite the less negative starting point). Growth for the third quarter was revised up, which narrowed the gap further, although it remained deeply negative (at -7.22% in the third quarter, from -8.07% previously). The gap was smaller for the rest of the forecast period, given a lower potential growth rate.

COVID-19 is an unusually large shock. Were potential growth being estimated using a simple statistical tool such as an HP filter, it is likely this would give implausible results, especially for the second quarter. The potential growth model is more sophisticated than this, however, and the results also benefitted from interventions by the forecasting staff, guided by a burgeoning literature on the supply- and demand-side impacts of COVID-19.[4] Furthermore, the

pandemic shock had already appeared in the April re-estimation of potential, so this was not the first attempt at modelling its effects on potential output.

On the whole, it makes sense to mark down South Africa's longer-term growth trend. In particular, the outlook for investment has deteriorated over the past six months: the core model forecasts, for instance, now have the investment level expected for the end of 2022 – 10.1% lower than it was in April. By way of comparison, the level of total GDP has been revised down by just 1.7%. There has been limited progress on reforms that would crowd in new investment. Fundamentally, this is a more consequential fact for the South African economy than a marginally different repo rate forecast. The headline problem is an ongoing deterioration in South Africa's longer-run economic prospects, which monetary policy would be naïve to ignore.

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4 An example is V Guerrieri, G Lorenzoni, L Straub and I Werning, 'Macroeconomic implications of COVID-19: can negative supply shocks cause demand shortages?', *University of Chicago, Becker Friedman Institute for Economics Working Paper No. 2020-35*, 2 April 2020.

Potential growth and output gap

Potential GDP growth, percentage change over four quarters											
	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2022Q3	2022Q4
Jul 2020	0.43	-3.65	-2.91	-2.20	-1.54	2.50	2.02	1.44	1.40	1.36	1.31	1.25
Sep 2020	0.11	-7.39	-3.00	-2.33	-1.90	5.83	1.28	0.85	0.86	0.87	0.87	0.86

Output gap, percentage of potential GDP											
	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2022Q3	2022Q4
Jul 2020	-2.15	-11.28	-8.07	-6.50	-5.45	-4.59	-3.89	-3.29	-3.06	-2.85	-2.71	-2.63
Sep 2020	-1.48	-11.94	-7.22	-5.38	-4.76	-4.22	-3.69	-3.24	-2.74	-2.36	-2.11	-1.96

Source: SARB

Potential output
R billions (constant 2010 prices)

Source: SARB

Actual and potential GDP growth*
Percentage change

* Dotted lines indicate forecasts

Sources: Stats SA and SARB

Net energy sent out

GWh

Level 5 lockdown, weeks 13–18

— 2019
— 2020

Sources: Eskom and SARB

Load-shedding

GWh

Stage 1
Stage 2
Stage 3
Stage 4
Stage 5
Stage 6
Unknown

Source: CSIR

Electricity usage by sector

Percentage of total usage

Manufacturing
Mining
Community and commerce
Electricity, gas and water
Trade
Agriculture
Transport
Construction
Finance

Sources: Stats SA and SARB

Constraints to growth

Over the medium term, the pace of South Africa's recovery will be affected not only by weak demand, but also by more structural problems. Two stand out: electricity shortages and the fiscal situation.

South Africa has suffered from periodic electricity shortages since 2007. These appeared to ease following the 2009 crisis, but this effect was achieved by weaker-than-expected economic growth, together with a 'keep the lights on at all costs' strategy, which succeeded by deferring maintenance and therefore increasing the fragility of the system. Load-shedding resumed in 2015 and has persisted since, with 2020 having already become the worst-ever year in terms of total gigawatt hours shed, passing the 2019 record on 13 August. Although electricity demand collapsed under the initial lockdown, and some capacity was opportunistically taken off-line for maintenance, the increase in unplanned maintenance lasted less than a month, affecting at its peak an extra 10% of generating capacity. Load-shedding resumed on 10 July due to unplanned outages caused by breakdowns, and Eskom continues to warn that electricity shortages will persist through 2021. The proportion of total generating capacity actually producing electricity has declined quite steadily since 2001 and is now under 70%, from 90% two decades ago.

It is surprising that electricity demand has rebounded as much as it has, despite depressed levels of output. Nowcasts suggest GDP is still around 20% below where it was this time last year, and yet electricity usage is essentially back to pre-crisis volumes. The electricity-intensive mining and manufacturing sectors are, however, back to around March levels of output, which helps explain the resurgence in electricity demand. The initial return of load-shedding in July also occurred during very cold weather conditions.

Fiscal dynamics and the growth outlook

The fiscal situation is a second threat to the economy, along several dimensions. Over the past decade, South Africa has added more debt, relative to GDP, than any top 20 emerging market, except Argentina. Forecasts indicate that South Africa will also be growing debt by more than any of these countries over the next two years (although forecasts for Argentina are not available). While the 2009 starting point for debt was low, at less than 30% of GDP, a decade of debt accumulation has raised that number to 63.5% as of 2019/20, which is likely to become 81.8% this year, pushing South Africa well above the broad emerging market average of 63.1% (according to the IMF).

While efforts were made to contain this debt growth, these initiatives relied more heavily on tax increases than spending cuts, with minimal contributions from reform initiatives.
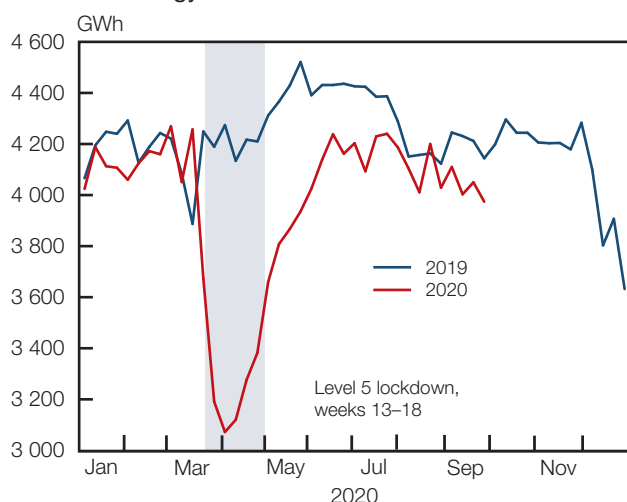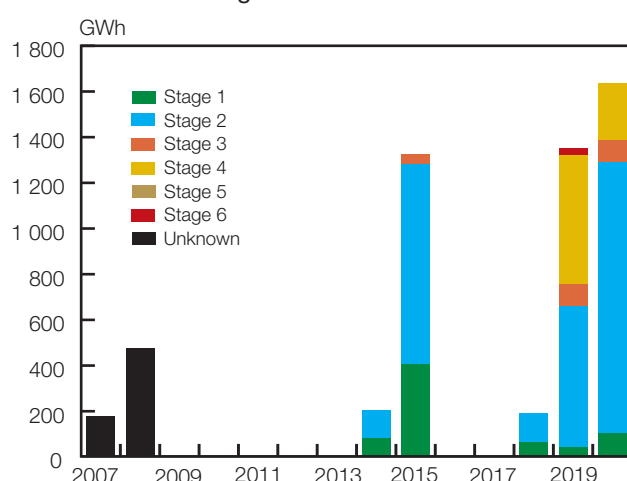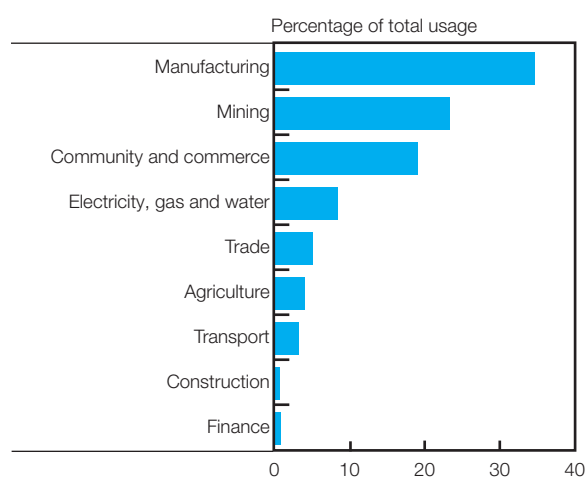
The lesson of this experience, also one spelled out in international studies on fiscal adjustment,[18] is that this consolidation mix was sub-optimal. Accordingly, government proposes to reverse this approach in future, relying on spending cuts and growth-boosting reforms to stabilise debt, with more limited tax action.

Despite this change in strategy, public spending is nonetheless programmed to rise further this year, on a net basis, consistent with the demands of a major emergency. Indeed, spending is likely to reach a record level in 2020, even when excluding interest payments and adjusting for both population growth and inflation. According to the 'active' scenario laid out in National Treasury's Supplementary Budget, the planned spending adjustment only commences in the following fiscal year. Thereafter, spending falls quite rapidly, with real spending per capita declining to around 2008/09 levels by 2022/23, again excluding interest payments.

The fiscal risk to output is two-sided. In the Supplementary Budget's passive scenario, no consolidation steps are taken and debt passes 140% of GDP by the end of the decade. The financing needs implied by this scenario would be sharply higher than at present, raising the risk of a sudden stop in funding and the potential for severe damage to the economy.[19]

In these circumstances, it is clearly better to adjust than not to adjust. However, adjustment itself can also have short-term growth consequences. Spending cuts will tend to subdue demand. Additional tax measures, even if limited, will also weaken growth. These effects will be more severe if cuts are skewed towards higher productivity spending, such as capital investment. It is plausible that with smart spending cuts and strong reform momentum, the adjustment could be relatively fast and growth-friendly, especially if fiscal policy credibility is quickly re-established. But historical experiences of fiscal consolidation are varied. (See also Box 8 on the fiscal multiplier.)

High government borrowing could also have damaging crowding out effects. Even in the National Treasury's 'active' adjustment scenario, fiscal deficits will remain much larger than they have been historically, at 9.3% and 7.7% in 2021/22 and 2022/23 respectively, compared with a 1994–2019 average of 2.9% of GDP. As such, government dissaving will rise relative to previous levels, reducing the pool of domestic savings available to finance investment. In these circumstances, either investment has to fall or the supply of savings has to expand, which can be achieved through more domestic savings or larger foreign capital inflows.[20]

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18 A recent example is A Alesina and C Favero, 'Austerity: when it works and when it doesn't', Princeton University Press, 2019.

19 In a March 2020 speech at the University of the Free State, Governor Kganyago made this point by citing Dornbusch's law, that 'The crisis takes a much longer time coming than you think, and then it happens much faster than you would have thought.' See https://www.ufs.ac.za/docs/default-source/news-documents/governor-kganyago-speech.pdf?sfvrsn=9b89921_2

20 The relevant economic identity is that, in an open economy, investment must equal domestic savings plus foreign savings, which is the inverse of the current account: I = S + (M - X).

Change in emerging market* debt stocks

Percentage of GDP
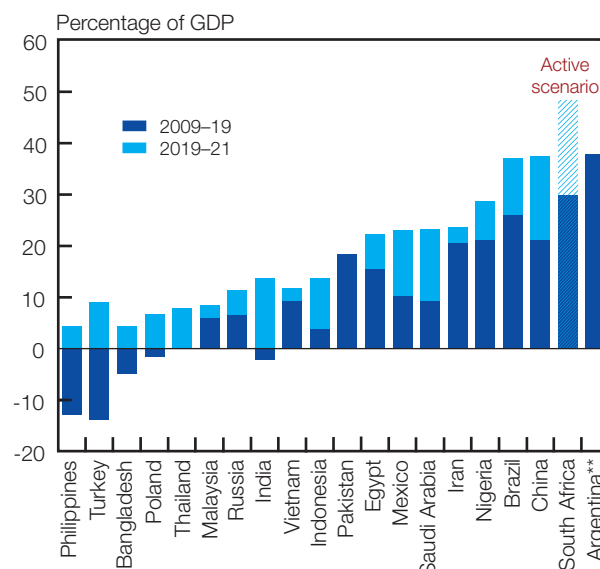
* Based on the largest 20 EMs (based on PPP)
** Argentina has no debt forecasts for 2020–21
Sources: IMF, National Treasury and SARB

Real non-interest expenditure per capita*

R thousand (2020/21 prices)

* Dotted line indicates forecast
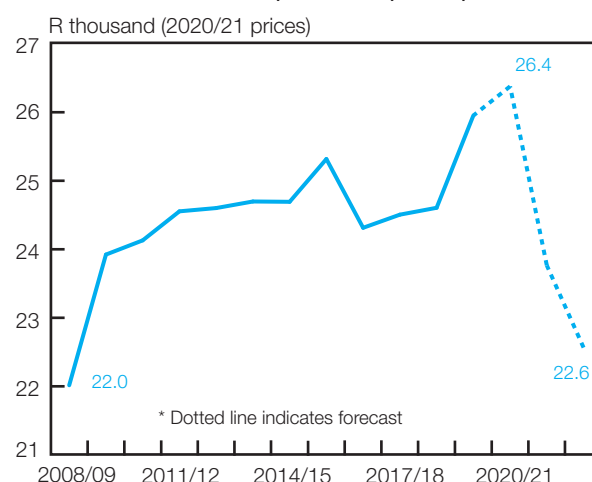
* Main budget expenditure, active scenario, deflated by headline CPI
Sources: National Treasury, Stats SA and SARB

Gross loan debt projections
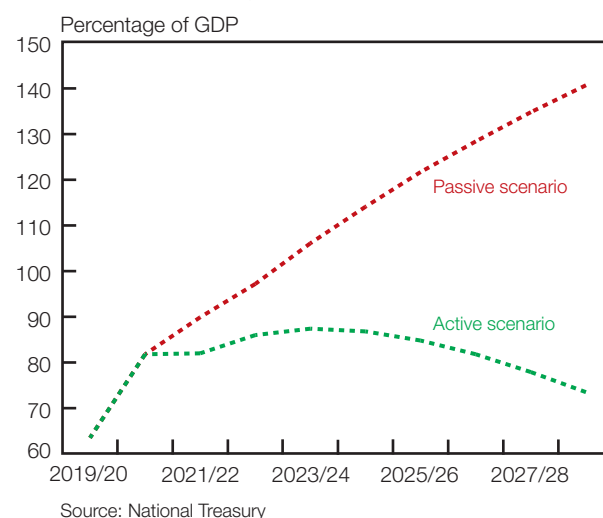
Percentage of GDP

Source: National Treasury

Gross savings

Percentage of GDP

Source: SARB

Current account balance and gross capital formation

Percentage of GDP

Sources: Stats SA and SARB
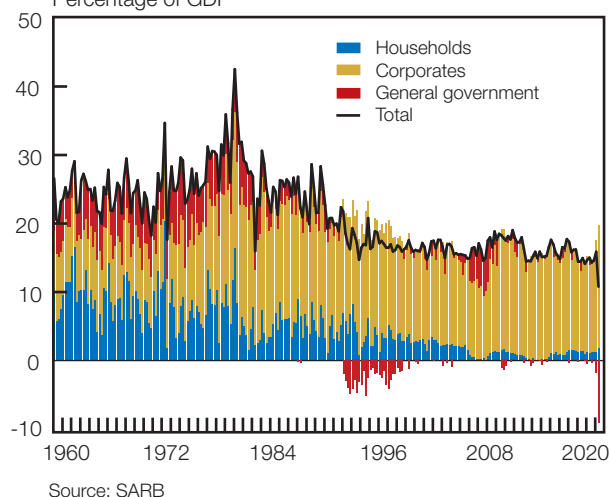
Over the past five years, South Africa has, on average, achieved investment rates of 18.9% of GDP. These have been funded with an average of 15.6 percentage points of domestic savings and 3.3 percentage points of foreign savings. Although the economy has been weak during this period and investment levels have been disappointing, South Africa has still been one of the world's biggest users of foreign savings, with the third-largest current account deficit of the world's 40 biggest economies for 2019. (This includes both advanced economies and emerging markets; South Africa's rank is similar for other years.)

In the first quarter of 2020, South Africa recorded a rare current account surplus, with a large decline in investment plus higher private savings (mostly corporates) offsetting more government dissaving. In the second quarter, the current account returned to deficit territory, while private sector saving rose and government dissaving deepened. The total increase in consumption was larger than the increase in saving, requiring investment to fall to just 13.8% of GDP for the first half of the year, funded by domestic savings worth 13.2% of GDP and foreign savings of 0.6% of GDP. Both these quarters were unusual in that they contained a major global crisis, so they should not be taken as conclusive proof that South Africa is suffering from crowding out. However, they illustrate the mechanism whereby crowding out could hamper growth in future, with a low savings rate and limited capacity to import savings forcing a low investment rate and therefore low growth.

The clearest local precedent for this is the late-1980s, when South Africa was shut out of global capital markets. In the five years after the 1985 crisis, when foreign banks refused to roll over loans, South Africa ran current account surpluses averaging 3.6% of GDP, from deficits of 1.8% of GDP for the previous five years. Between these two periods, the investment rate fell by 8 percentage points, from nearly 29% of GDP to an average of 21% of GDP. This occurred despite low real interest rates, on average around -2% for the policy rate, and a strong expansion in the money supply (M3), which grew by 17.3%, on average, during this period. Contrary to some theories,[21] South Africa was not able to achieve high investment through money growth in the presence of a low savings rate.

The current account outlook

The forecasts anticipate persistent current account deficits over the forecast period, averaging -1.0% in 2020, -1.9% in 2021 and -2.2% in 2022. As discussed above, this implies continued capital inflows. Simultaneously, on the trade side, it suggests the deficit on the services, income and current transfer (SIT) account will generally outweigh the trade surplus.

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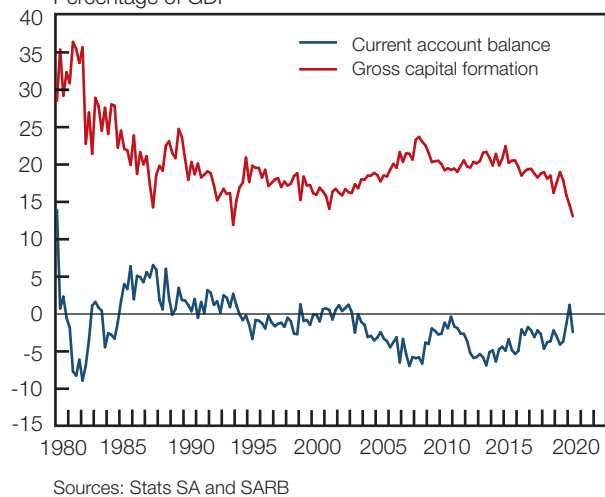
21 See for instance United Nations, 'Central banking, financial institutions and credit creation in developing countries', *United Nations Discussion Papers No. 193*, January 2009. https://unctad.org/en/Docs/osgdp20091_en.pdf

South Africa's current account surplus in the first quarter of 2020 was the first such surplus since 2003. The forecasts treat it as anomalous. Dividend outflows slowed sharply (moderating by 1 percentage point of GDP), probably due to firms conserving cash in the face of a major crisis. South Africa's terms of trade hit an all-time high during the quarter, with prices for platinum group metals rising abruptly and oil prices collapsing. While South African export volumes were little changed, in nominal terms their value increased, contributing to a trade surplus. Finally, imports collapsed, primarily due to a fall in investment in that quarter.

In the second quarter, exports contracted sharply due to the lockdown, with both goods (e.g. minerals and cars) and services (especially tourism) sharply lower. Imports also fell, but not to the same extent, leaving net merchandise exports lower by 1.8 percentage points of GDP, while net travel receipts fell by 1.2 percentage points of GDP (mainly a tourism effect). Net dividend payments also picked up a bit from the first-quarter low. Combined with some smaller movements in other current account components, the overall result was a large (3.6 percentage points) swing in the current account, to a deficit of 2.4% of GDP.

From the third quarter of 2020 to the end of the forecast period, the trade account is likely to remain in surplus, averaging 2.7% of GDP. This surplus will be offset by the deficit on the SIT account, which averages -4.6% of GDP, keeping the overall current account in deficit. The persistence of a trade surplus points to a weak economy with limited investment demand, constraining imports, as well as some export benefits from elevated commodity prices and a cheap rand. By contrast, the ongoing deficit on the SIT account reflects larger outbound interest payments and persistently weaker tourism exports, alongside continued dividend outflows and transfers to Southern African Customs Union partners – although these last two factors are likely to moderate somewhat in the context of a weaker domestic economy.

Conclusion

South Africa has just completed its worst growth decade on record, and is starting the 2020s in a recession. The recovery underway in the third quarter of the year is proceeding somewhat more rapidly than expected, but there are still significant headwinds to growth, including electricity shortages and an unsustainable fiscal position. The forecasts indicate a slow return to the levels of economic activity experienced in 2019. The unusual nature of the current crisis, and the unprecedented volatility in the data, means there is even more scope for error in the forecasts than usual.

Commodity prices

US$ index: 2015 = 100

* Dotted line indicates forecast

** Weighted average of the energy, non-energy and precious metals subcomponents

Sources: World Bank and SARB

Current account

Percentage of GDP

Source: SARB
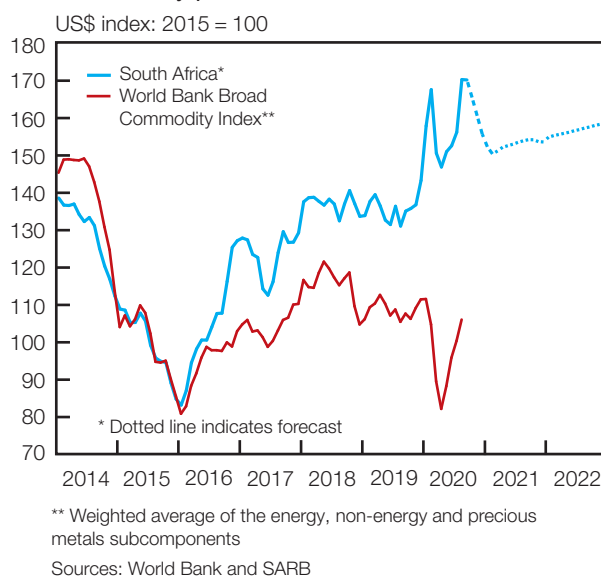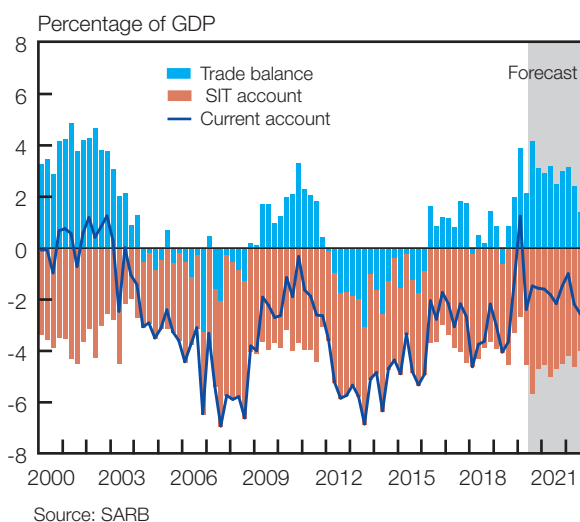
Box 8   South Africa's fiscal multiplier

What happens to the rest of the economy when government changes its spending? The standard metric for answering this question is the fiscal multiplier, which summarises in one number the change in gross domestic product (GDP) from a change in government expenditure. If a fiscal multiplier is 1, GDP changes by exactly R1 for every extra R1 of government spending. If it is more than 1, extra spending by government crowds in even more domestic output. If it is less than 1, activity does not rise as much as the spending increase, perhaps because of import leakage or capacity constraints. In extreme cases, a multiplier might even be negative, if the adverse reaction by the private sector is so severe that extra government spending makes the total economy smaller.

There is a substantial body of literature on fiscal multipliers, for South Africa and many other economies. Given South Africa's difficult fiscal situation, and its implications for the macroeconomic outlook, it is useful to reflect on this literature and to update multiplier estimates for current conditions.

This literature identifies a range of channels through which government spending can affect broader GDP. The simplest is that an increase in spending raises aggregate demand. This impact is reduced, however, if the extra expenditure pulls in more imports. Multipliers also vary depending on the composition of spending, with investment having the most positive multiplier. The size of the multiplier is further affected by the business cycle: if an economy is already operating at full capacity, multipliers will be smaller than when there is a negative output gap.[1] Advanced economy estimates also show much larger multipliers when monetary policy is constrained by the zero lower bound.[2]

Financing channels matter too. If government spending is paid for with higher taxes, multipliers will tend to be low. Funding through debt can support a higher multiplier where debt is perceived as sustainable.[3] Where sustainability is in doubt, more debt will tend to reduce capital inflows, raise interest rates for the entire economy, and undermine confidence in the economic outlook, thereby lowering the multiplier.[4] This effect is stronger where there is a large financial sector that holds government bonds as safe assets: rising fiscal risk weakens these balance sheets, in turn negatively affecting the supply and pricing of loans.[5]

Given these channels, we should expect multipliers to be time-varying. Estimates should also differ depending on which channels they incorporate. Of the estimates available for South Africa, the median multiplier is less than 1. Schröder and Storm (2020) have a

higher multiplier, but that estimate assumes a closed economy and ignores funding effects. Makrelov et al. (2020)[6] have a short-term multiplier of 2.5, in the presence of a sustainable fiscal outlook, a large negative output gap and strong positive financial accelerator effects. Under different conditions (fast-rising debt, downgrades and a smaller output gap), the multipliers become small and are zero in the long run.

New estimates of fiscal multipliers by South African Reserve Bank staff, and informed by lessons learnt from previous studies, show a steady decline in the multiplier over the past decade, from 1.6 at the start of the decade to less than zero by the end. The decline in the multiplier reflects the factors discussed above. Rising debt led to downgrades and higher long-term interest rates. From 2015, there was a shift in the composition of spending away from investment and towards more consumption, including interest spending. Government raised taxes to fund higher expenditure, with the tax-to-GDP ratio increasing from 23.9% in 2010/11 to 26.0% in 2018/19. Tax increases were also accompanied by large revenue shortfalls, suggesting substantial negative impacts on GDP. Supply-side shocks such as electricity shortages reduced South Africa's potential growth and made measures to increase aggregate demand less effective.

The multiplier for 2020 is very difficult to judge, given some factors that suggest a large, positive multiplier (especially a deeply negative output gap, cheaper government financing from multilaterals and tax deferrals) and others that suggest a low one (downgrades and a higher risk premium). It appears to be in a range between 0.6 and 0.8. Looking beyond 2020, it is likely that multipliers will decline again, to the low levels seen at the end of the past decade, as tax deferrals end, government borrowing costs rise and crowding-out effects intensify.

On the whole, low and falling multipliers are discouraging because they point to weak spending quality. The upside to this finding is that it implies limited growth costs for National Treasury's planned fiscal consolidation. Contrary to the claim that such measures are invariably self-defeating because of their negative effects on growth, this is one more piece of evidence that real-world effects are complex and highly context-dependent.

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6   K Makrelov, C Arndt, R Davies and L Harris. 'Balance sheet changes and the impact of financial sector risk-taking on fiscal multipliers', *Economic Modelling* 87, May 2020, pp 322–343.

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1   N Batini, L Eyraud and A Weber, 'A simple method to compute fiscal multipliers', *IMF Working Paper No. WP/14/93*, Washington DC: International Monetary Fund, June 2014. https://www.imf.org/external/pubs/ft/wp/2014/wp1493.pdf

2   L Christiano, M Eichenbaum and S Rebelo, 'When is the government spending multiplier large?', December 2010. https://www.kellogg.northwestern.edu/faculty/rebelo/htm/multiplier.pdf

3   D Bonam and J Lukkezen, 'Fiscal and monetary policy coordination, macroeconomic stability, and sovereign risk premia', *Journal of Money, Credit and Banking* 51 (2–3), March–April 2019, pp 581–616.

4   See for example N Batini, L Eyraud and A Weber, 'A simple method to compute fiscal multipliers', *IMF Working Paper No. WP/14/93*, Washington DC: International Monetary Fund, June 2014. https://www.imf.org/external/pubs/ft/wp/2014/wp1493.pdf

5   G Dell'Ariccia, C Ferreira, N Jenkinson, L Laeven, A Martin, C Minoiu and A Popov, 'Managing the sovereign-bank nexus', *IMF Monetary and Capital Markets Departmental Paper No. 18/16*, Washington DC: International Monetary Fund, September 2018. https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2018/09/14/Managing-the-Sovereign-Bank-Nexus-45133

Fiscal multipliers

Size of multipier

Source: SARB
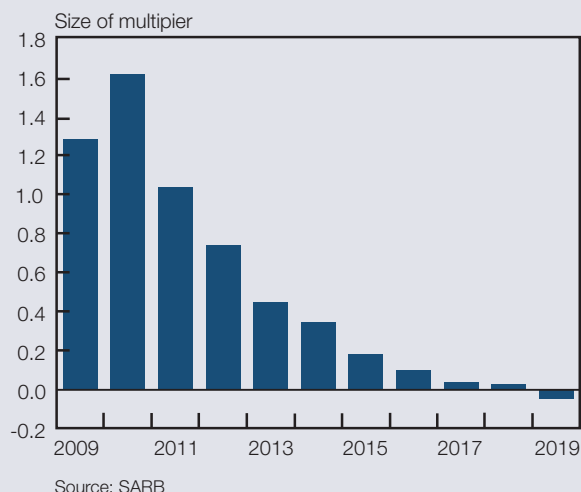
Author and date	Country	Short-term expenditure impact multiplier (number or range)	Comments
Jooste, Liu and Naraidoo (2013)[1]	South Africa	0.77	The size of the expenditure multiplier depends on the methodology used, the business cycle, the import intensity of the economy and the share of Ricardian households. The multiplier can exceed one. Monetary dynamics but no fiscal dynamics. Long-run multipliers close to zero.
Jooste and Naraidoo (2017)[2]	South Africa	0.6	The results are based on closed economy dynamic stochastic general equilibrium (DSGE) model and depend on the values of the labour supply elasticity, the foresight of households and the degree of sticky wages. No monetary accommodation and financial dynamics. The long-term multipliers are zero.
Mabugu et al. (2013)[3]	South Africa	0.73 to 0.76	The results are based on computable general equilibrium (CGE) model, which is supply and savings constrained. No monetary dynamics or financial dynamics. Results vary depending on the source of funding.
Akanbi (2013)[4]	South Africa	0.82	The results are based on macro econometric model over the period 1970–2011, and not distinguish between pre and post 1994 structural differences. Multiplier is in t+1 when the deviation from baseline is 0.6% in response to a 4% decline in consumption expenditure. Supply constrained multipliers are smaller. No financial dynamics. Long term multiplier close to zero.
Makrelov et al. (2020)[5]	South Africa	2.5	Results based on stock and flow consistent financial CGE model. The multiplier is large only in the presence of sustainable fiscal outlook, large negative output gap and low financial frictions. Small multipliers otherwise. Financial sector dynamics. Long term multiplier close to zero.
Kemp (2020)[6]	South Africa	0.01 to 0.78	Different VAR models. Varies depending on length of period, the methodology used, the business cycle and the monetary policy response. No financial dynamics. Long-term present-value government spending multipliers range from –0.24 to 1.06.
Kemp and Hollander (2020)[7]	South Africa	0.31	The results are based on an open economy dynamic stochastic general equilibrium model (DSGE). Household and Government consumption are substitutes. No monetary policy accommodation. Differentiation between low and high debt regimes. No financial dynamics or distinction of different phases of the business cycle. Long-term multipliers are close to zero.
Schröder and Storm (2020)[8]	South Africa	1.87	Input-output model, closed economy, no financing channels, no supply constraints under all economic conditions; authors urge high-quality spending.

1   C Jooste, G Liu and R Naraidoo, 'Analysing the effects of fiscal policy shocks in the South African economy', *Economic Research Southern Africa Working Paper 351*, May 2013. https://www.econrsa.org/system/files/publications/working_papers/working_paper_351.pdf

2   C Jooste and R Naraidoo, 'The macroeconomic effects of government spending under fiscal foresight', *South African Journal of Economics* 85(1), March 2017, pp 68–85. https://onlinelibrary.wiley.com/doi/epdf/10.1111/saje.12151

3   Mabugu et al., 'Impact of fiscal policy in an intertemporal CGE model for South Africa', *Economic Modelling* 31, March 2013, pp 775–782. https://www.sciencedirect.com/science/article/abs/pii/S0264999313000229

4   O A Akanbi, 'Macroeconomic effects of fiscal policy changes: a case of South Africa', *Economic Modelling* 35, September 2013, pp 771–785. https://www.sciencedirect.com/science/article/abs/pii/S0264999313003556

5   K Makrelov, C Arndt, R Davies and L Harris. 'Balance sheet changes and the impact of financial sector risk-taking on fiscal multipliers', *Economic Modelling* 87, May 2020, pp 322–343.

6   J H Kemp, 'Empirical estimates of fiscal multipliers for South Africa', *SA-TIED Working Paper 127*, July 2020. https://sa-tied.wider.unu.edu/sites/default/files/pdf/SA-TIED-WP-127.pdf

7   J H Kemp and H Hollander, 'A medium-sized, open-economy, fiscal DSGE model of South Africa', *WIDER Working Paper Series* 2020/92, July 2020.https://www.wider.unu.edu/sites/default/files/WP2020-92%20Kemp%20and%20Hollander_FINAL.pdf

8   E Schröder and S Storm, 'Fiscal policy in South Africa: closed input-output income and employment multipliers', *Institute of Economic Justice Research Note No 1*, 3 March 2020. https://iej.org.za/wp-content/uploads/2020/04/Multipliers-for-income-and-employment-Research-note-IEJ-1.pdf

Price developments

Inflation has decelerated sharply this year, primarily due to a collapse in global oil prices. Some services prices have also disinflated, especially those for housing. By contrast, food inflation has returned to more normal levels, having been unusually subdued for the past three years. Prices for core goods items, such as cars, are also accelerating, consistent with exchange rate depreciation. Over the forecast period, there is likely to be a temporary upsurge in inflation around mid-2021 due to fuel price base effects. Inflation is otherwise expected to be contained within the bottom half of the inflation target for most of the next two years, ultimately stabilising at the 4.5% target midpoint late in 2022.

The COVID-19 shock has had a marked effect on targeted inflation. Despite exchange rate depreciation, the shock has been disinflationary in the aggregate, with global and domestic demand both sharply weaker. In the near term, the biggest mover has been fuel prices: inflation for this category fell from 13.7% in January 2020 to -25.9% in May. As a result, domestic inflation declined to a low of 2.1% in May, before rising again, returning to the target range in July.

The short-term fall in inflation had been expected, given lower world oil prices: the May MPC forecast, for instance, anticipated two quarters of below-target inflation, a projection later reduced to one quarter as oil prices rebounded. Beyond the oil shock, however, the MPC forecasts project persistent downward pressures on inflation due to a negative output gap, as well as lower inflation expectations and a recovery in the exchange rate. Accordingly, headline inflation averages 3.3% in 2020, 4.0% in 2021 and 4.4% in 2022. The forecasts indicate that inflation will only stabilise at 4.5%, the model's target, by the end of the forecast period, with the assistance of a very low policy rate.

Methodological adaptions to lockdown

The lockdown posed some difficulties for Stats SA in collecting prices, both because field workers could not travel to collect prices and because some items, such as alcohol and tobacco, were not available for sale. Stats SA dealt with these challenges using three techniques. For the many items that are not surveyed monthly, even in normal times, existing price data were carried over. This affected around 40% of the basket in April, which was the monthly survey most affected by the lockdown. For a small number of items – just over 1% in April – prices were inferred from comparable items. (An example is diesel.) Finally, non-available items were effectively dropped from the inflation basket, temporarily, by assigning them the same inflation rate as the rest of the basket. This treatment affected about a quarter of the CPI in April, including items such as alcohol and tobacco.

Headline inflation*
Percentage change over four quarters

Midpoint

3–6% inflation target range

* Dotted line indicates forecast

Sources: Stats SA and SARB

Stats SA methodology to deal with lockdown restrictions
Percentage of total basket

Sources: Stats SA and SARB

Analytically, this third measure has had implications for core inflation.[22] It reduced the effective size of the core basket. It also carried over a headline shock to core inflation. By design, core inflation excludes fuel, food and electricity prices, which tend to be volatile. By imputing non-available items with the headline rate, however, the recent fuel price shock was inserted back into core. For these two reasons, core inflation was less reflective of underlying inflation than usual.[23]

Given these imputation effects, core inflation dipped in May 2020, to 3.1%, with prices falling in month-on-month terms. However, a measure of core which excludes the missing items outright shows more stability, with inflation rates of 3.8% for April and 3.9% for May. The forecast is tethered to actual Stats SA data, for which reason core inflation had to be revised down in July, in line with these outcomes. In interpreting core, however, it is important to understand that the recent dip in core, and subsequent rebound in June and July, was mainly due to price imputations, not changes in economic conditions.

Core inflation

Looking forward, beyond these short-term methodological considerations, core inflation is expected to stay close to 4% through most of 2021 and 2022, averaging 3.7% and 4.0% respectively. These projections compare with core outcomes of 4.7% for 2017, 4.3% for 2018 and 4.1% for 2019.

Within core inflation, housing inflation stands out as a large disinflationary contributor. Housing is the largest single item in the core basket at 23%, comprising actual rentals and owners' equivalent rent (OER). (The inflation rate for owner-occupied housing is proxied by rental inflation for comparable dwellings.) Housing inflation has been slowing steadily for three years in the context of a weakening economy and expanding housing supply. It has declined to new post-crisis lows this year, touching 1.7% in June.

There is evidence, although much of it is anecdotal, that rental inflation will slow further as landlords forego increases to retain good tenants and new rental rates fall in an environment of abundant supply. Interestingly, this disinflationary dynamic may be reinforced by low interest rates, as mortgage installments become more competitive with rental rates and existing renters choose to buy instead.

Some analysts had projected a more rapid decline in housing inflation than has occurred to date, but rental prices tend to be sticky, given that leases are usually agreed for prolonged periods (typically a year, sometimes with annual increases built in). This means they do not adjust very rapidly to shocks. The June housing inflation number, at 1.7%, was nonetheless below the SARB's short-term projection of 2.1%. In the September MPC forecasts, services inflation was lowered

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22 As Stats SA pointed out in its April CPI Report, 'Core inflation measures have diminished meaning as the imputation methods may now cause some of these indices to include products normally excluded.'

23 April and May were when imputations carried a large weight.

Active core inflation
Percentage change over 12 months

Sources: Stats SA and SARB

Headline and housing inflation
Percentage change over 12 months

Sources: Stats SA and SARB

Health insurance versus headline inflation

Percentage change over 12 months

Health insurance survey months

Health insurance
Headline inflation

Sources: Stats SA and SARB

Medical aid inflation and output gap

Percentage change over four quarters

Percentage of potential output

Post-crisis average (9.9%)

Pre-crisis average (6.4%)

Output gap (right-hand scale)
Medical aid inflation

Sources: Stats SA and SARB

Core goods inflation*

Percentage change over four quarters

* Dotted line indicates forecasts

Sources: Stats SA and SARB

to accommodate slower housing inflation. Specifically, the housing inflation rates for the third and fourth quarters are now 1.5% and 1.1% respectively, from 2.9% and 3.2% previously.[24]

By contrast, insurance, and specifically medical insurance, remains a prominent source of inflation pressure. Medical insurance is surveyed twice a year, in February 2020 and April, but the April survey only covers medical insurance for government employees and does not change overall medical inflation significantly, making the February survey more important. Medical insurance inflation was at 9.6% in February, above the SARB expectations of 8.8% and also above the 2019 average (also 8.8%). Over the past decade, medical insurance has c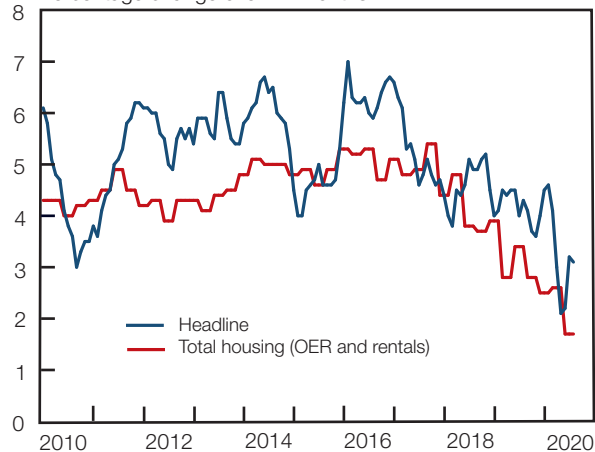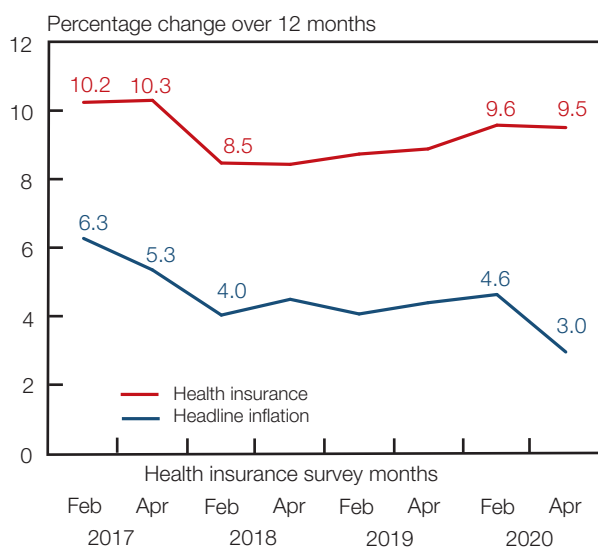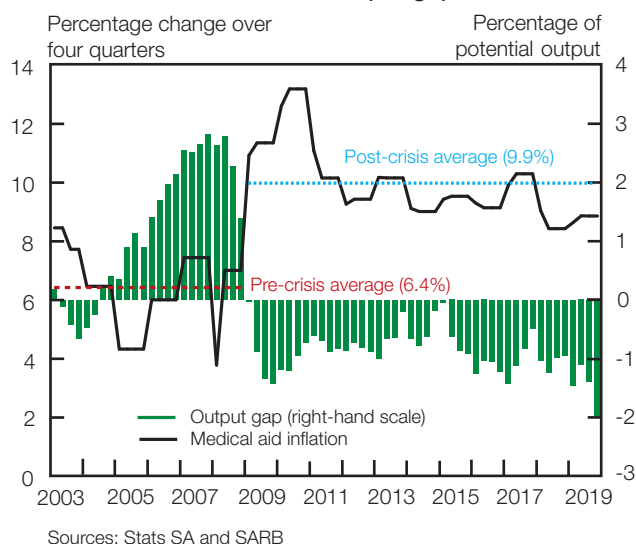onsistently exceeded headline inflation by around 5 percentage points, the only private sector price category at this level of aggregation to have had a sustained relative price increase over this period. (Public sector prices such as water and electricity have consistently outpaced headline CPI.)

Although medical insurance is sometimes interpreted as acyclical, meaning it does not respond to the economic cycle, its behaviour may better be described as countercyclical, meaning it accelerates when the economy is weak and subsides when it booms. For instance, it averaged 6.4% in the 2000s when the economy grew strongly, compared with 9.9% in the 2010s, which was a period of underperformance. The underlying logic appears to be that in expansion phases, employment picks up and more families become eligible for cover through employee schemes. By contrast, when the economy is underperforming, participation in these schemes is reduced. At the same time, younger and healthier individuals downgrade or forego health care, to limit expenses, leaving an older, sicker and therefore more expensive pool of covered individuals. This dynamic in turn necessitates larger tariff increases. In this context, medical insurance inflation is likely to stay elevated over the medium term. In the near-term, however, there is a chance of lower inflation given medical aid surpluses built up during the lockdown period, when scheme members avoided hospitals except for urgent treatments.
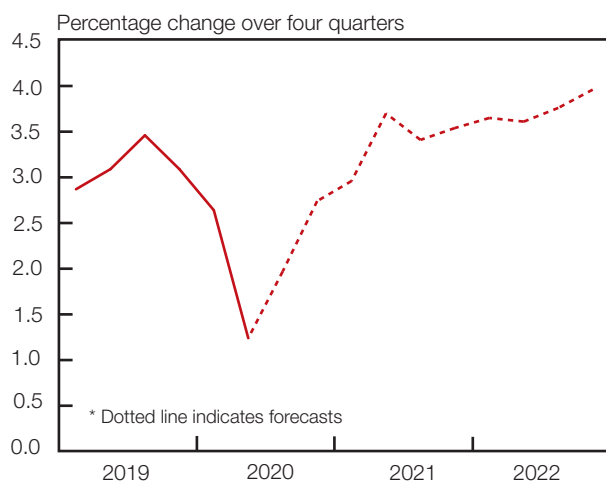
Core goods inflation is another area of special interest. It is the focal point of exchange rate pass-through into consumer prices, reflecting its high proportion of traded goods (either imports or import-competing products, such as cars and clothing). For this reason, the rand's 2020 depreciation is most likely to appear here. Over the past 12 quarters, core goods inflation has averaged just 2.5%, consistent with the rand's recovery from its 2016 overshoot. By contrast, for the preceding 12 quarters, core goods inflation averaged 5.3%.

In the second quarter of this year, core goods inflation averaged 1.2%, but this number is unreliable as it is distorted by Stats SA's zero-weighting of unavailable goods. It is expected to pick up to 2% for the third quarter and then accelerate further,

24 The QPM forecasts are fixed to the projections from the disaggregated model for the third and fourth quarters of 2020, which explains why a precise housing inflation number is in the MPC forecasts, even though the QPM does not specifically include a housing projection.

peaking at 3.7% in the second quarter of 2021. The core goods projections were previously lower, based on a more muted view of exchange rate pass-through, but high-frequency data show significant increases in vehicle prices, justifying the upward revisions to the September forecasts.[25]

Food prices

Food inflation has accelerated over the past two years, reaching 4.3% in the second quarter of 2020, up from a trough of 3% in the first quarter of 2019. This steady increase in food price inflation followed forecasts quite closely, in contrast to previous years where food price forecasts had to be revised lower by substantial margins. The current-year forecasts, for instance, have moved within a narrow range of 4.3% to 4.5% so far in 2020, whereas in 2019 current-year forecasts started at 4.2% and ended at 3.4%.

Food and non-alcoholic beverages inflation*

Percentage change over four quarters

* Dotted lines indicate forecasts

Sources: Stats SA and SARB

Consumer food price inflation (September 2020 forecasts)

Percentage change over four quarters, March 2020 forecasts in brackets

		Actual		Forecast	Actual		Forecast			
	Weight	2010–19*	2019*	2020*	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2
Food and non-alcoholic beverages	17.24	5.9	3.4	4.2	4.0	4.3	4.2	4.2	4.1	4.1
				(4.4)	(3.9)	(4.5)	(4.5)	(4.9)		
Bread and cereals...................	3.21	5.4	7.0	3.4	4.8	3.1	2.8	2.9	3.3	3.5
				(4.5)	(5.2)	(5.0)	(4.2)	(3.7)		
Meat	5.46	6.1	0.3	4.8	3.8	5.6	4.9	4.7	4.3	3.9
				(4.4)	(3.5)	(4.4)	(4.8)	(4.9)		
Beef....................................	1.44	6.4	-1.3	7.1	4.2	9.0	7.6	7.8	5.8	3.2
				(4.4)	(3.8)	(4.6)	(4.4)	(4.7)		
Poultry	2.12	5.8	1.0	5.0	5.3	5.9	5.0	4.0	4.3	4.1
				(4.6)	(4.9)	(5.0)	(4.6)	(4.1)		
Vegetables	1.30	5.9	6.3	1.5	1.8	-0.2	1.9	2.7	2.9	3.7
				(3.8)	(1.9)	(3.5)	(4.4)	(5.7)		

* Annual average percentage change

Sources: Stats SA and SARB

Food inflation has been low in recent years due to supply-side shocks, and the recent pick-up in food inflation has more to do with conditions normalising than new supply-side pressures. Meat prices, in particular, have been recovering from an episode of deflation a year ago, related to an outbreak of foot-and-mouth disease.[26] Bread and cereals inflation has also been recovering from deflation, which explains steady increases for this category from early-2018 through to early-2020.

Meat inflation*

Percentage change over four quarters

* Dotted lines indicate forecasts

Sources: Stats SA and SARB

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25 The model coefficient for the exchange rate is 0.1, so a 10% depreciation in the rand gives 1% inflationary pressure.

26 This outbreak caused export bans, which raised domestic meat supplies and therefore lowered prices.

Bread and cereals inflation*

Percentage change over four quarters

* Dotted lines indicate forecasts

Legend:
— Actual
····· Mar 2019
····· Sep 2019
····· Mar 2020
····· Sep 2020

Sources: Stats SA and SARB

Gauteng unleaded petrol price*

Rand per litre

* Unleaded 95 octane
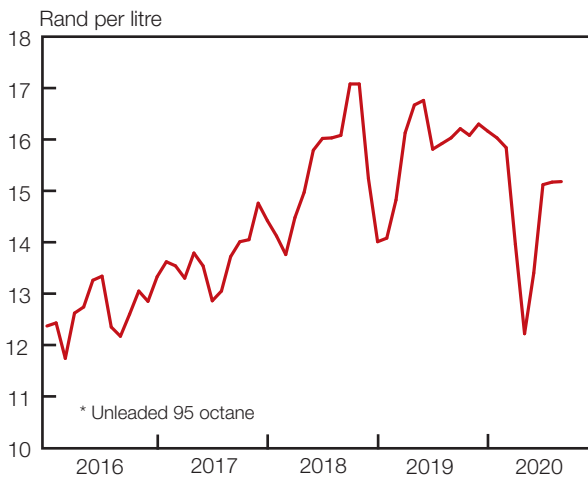
Source: Central Energy Fund

Evolution of oil price forecasts

US$ per barrel

Legend:
----- 2019
----- 2020
----- 2021
----- 2022

MPC meeting dates
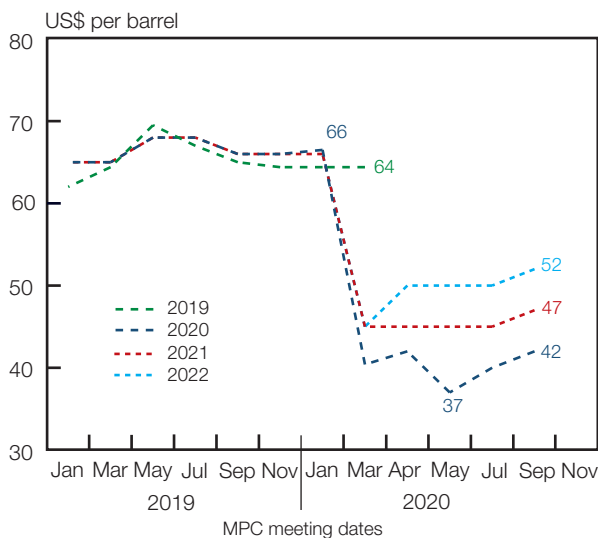
Source: SARB

Food inflation is expected to remain quite stable over the medium term, at relatively low levels, given expectations for positive rainfall conditions in South Africa this year. The latest forecast is for 4.2% food inflation this year, followed by 4.0% and 4.2% in 2021 and 2022 respectively. While these numbers are higher than the 2018 or 2019 outcomes, they are still well below the longer-run average: since 2000, food inflation has averaged 7.1%.

Fuel prices

Fuel prices are generating significant volatility in headline inflation. Brent crude cost US$71 per barrel as of 6 January; as of 22 April, the price had collapsed to US$12.50, as COVID-19 hit demand and inventories filled up with surplus stocks. Given this shock, domestic fuel prices fell sharply to a low of R12.22 per litre in May (for Gauteng 95 unleaded petrol), the sharpest drop on record, despite a simultaneous depreciation of the exchange rate. In turn, this rapid decline pushed CPI inflation below the 3% lower bound of the target, with fuel prices detracting 1.4 percentage points from headline inflation in May when that series hit a trough of just 2.1%. (This effect was reinforced by Stats SA's imputation method, as discussed above.)

Oil prices have since recovered somewhat faster than previously expected, requiring the assumptions for the rest of 2020 to be revised upwards by around US$6 per barrel. For instance, the third-quarter assumption moved from US$33 for the May meeting of the 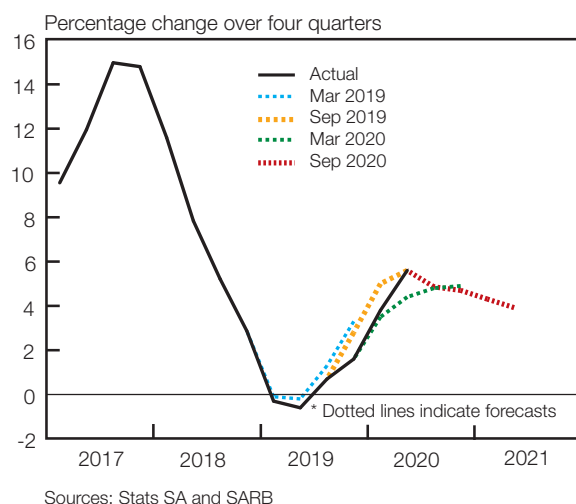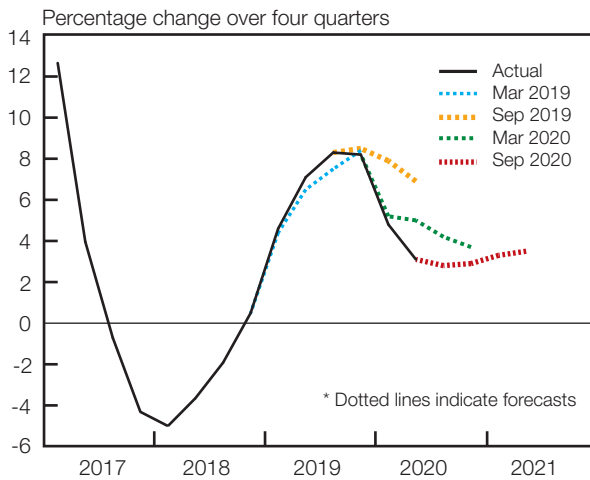MPC to US$43 for the September MPC. For the longer-term, the latest MPC forecast assumes Brent crude oil will average US$47 per barrel for 2021 and US$52 for 2022, more or less in line with global analysts' expectations. These assumptions have not changed significantly since the COVID shock – the average change over the past six months has been about US$2 per barrel – and prices remain below the 2019 average of US$64 per barrel. Nonetheless, given more expensive oil as well as a large base effect, fuel prices will lift headline inflation next year, with headline temporarily overshooting the 4.5% target midpoint in the second and third quarters of 2021. Fuel inflation is expected to slow to 6.3% in 2022, still somewhat below pre-COVID-19 averages (8.1% for 2017–2019, for instance).

Electricity

Electricity inflation was at 7.7% in July, and 6.2% in August, continuing a pattern of increases well above headline inflation. Electricity prices are now 177% above their level at the start of the previous decade, whereas consumer prices as a whole are 68% higher. The MPC forecasts indicate further large increases in electricity prices, averaging 8.2% for 2021 and 10% for 2022. (This equates to tariff increases of 10% in both years, but these increases are applied in July rather than at the start of the calendar year, so the annual numbers are different.)

The outlook for electricity prices is complicated by a range of court challenges affecting past regulatory decisions. Final decisions on these matters are still pending, but initial court judgments have favoured Eskom, and the risks therefore lie in the direction of electricity inflation rates exceeding current assumptions. The current National Energy Regulator of South Africa (NERSA) baseline implies electricity inflation will average 8% in 2021 and 5% in 2022. If all Eskom's challenges succeed, electricity inflation will likely average 14.1% in 2021 and 25.9% in 2022. The current electricity assumptions take a middle path through these scenarios.

High electricity price inflation tends to reduce household usage. In recent years, this volume effect has dominated the price effect, so households' total expenditure on electricity has fallen. For this reason, the weight of electricity in the CPI fell from 4.13% to 3.75% at the start of 2017.[27] However, CPI weights are only revised periodically, typically with no more than five years between re-weightings. It is uncertain, but plausible, that continued rapid electricity price inflation will have depressed electricity consumption further. For this reason, the most significant downside risk to electricity inflation is that the weight of electricity in the CPI basket will decline further.

Model determinants of inflation

In the forecasting framework, the COVID-19 event appears as a large shock which throws the determinants of inflation out of equilibrium. Over the medium term, these drivers return to equilibrium, and this allows inflation to stabilise at 4.5%, the inflation target midpoint, which is also where inflation was preceding the shock. (Specifically, headline inflation was 4.5% in January 2020 and 4.6% in February 2020).

In the QPM, the four main factors affecting inflation are the exchange rate, unit labour costs, the output gap and inflation expectations.

The exchange rate is a source of immediate inflationary pressure, given the large and sudden rand depreciation. For the QPM, the exchange rate affects model outputs inasmuch as it deviates from its estimated equilibrium value. An undervalued exchange rate raises inflation, both by boosting import prices and by encouraging growth through exports. By contrast, an overvalued exchange rate acts as a brake on foreign demand and brings down the cost of foreign goods and services, thereby lowering inflation.

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27 By contrast, the price effect dominated between 2008 and 2012, with electricity's share in the CPI basket increasing from 1.7% to 4.1%.

Electricity prices*

Percentage change over 12 months

* Dotted lines indicate forecasts

Actual
Jul 2020
Sep 2020
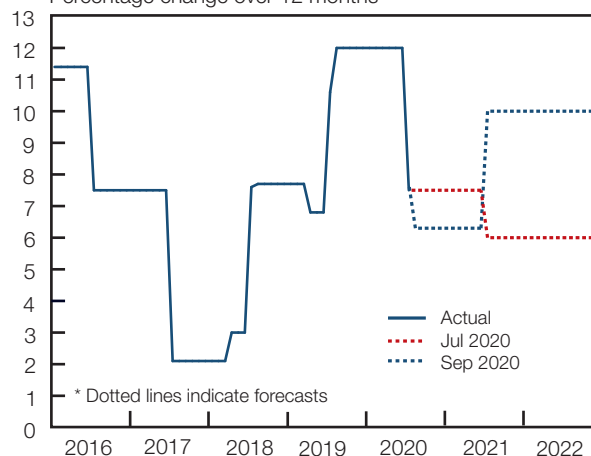
Sources: Stats SA and SARB

Electricity price risks

R billions

NERSA allowed revenues
Adjustments
2018/19 RCA (reviewed in 2020)
NT bailout
Disputed RCAs
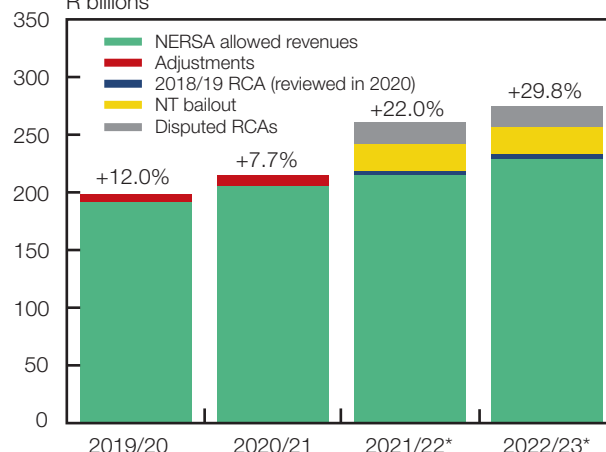
* The sum of RCA and court disputes, spread over three years (maximum impact).
Allowable revenue: 2021/22 based on MYPD4 decision; 2022/23 is an estimate based on average growth over the prior four years.

Sources: NERSA and SARB

Electricity weight in CPI basket

Per cent
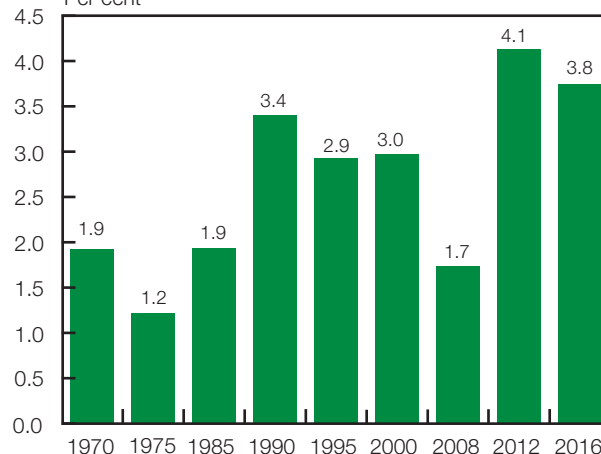
Sources: Stats SA and SARB

Headline inflation (September 2020 forecasts)

Percentage change over four quarters, March 2020 forecasts in brackets

	Actual			Forecast	Actual		Forecast			
	Weight	2010–2019*	2019*	2020*	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2
Headline inflation	100.00	5.2	4.1	3.3	4.4	2.4	3.2	3.3	3.4	4.6
				(3.8)	(4.4)	(3.4)	(3.5)	(4.1)		
Core inflation**	74.43	4.7	4.1	3.4	3.7	3.1	3.3	3.4	3.5	3.8
				(3.9)	(3.8)	(3.9)	(4.0)	(4.2)		
Rentals***	16.84	4.8	3.7	1.9	2.6	2.3	1.5	1.1	0.8	0.8
				(3.0)	(2.7)	(3.0)	(2.9)	(3.2)		
Insurance	10.06	7.4	6.7	7.6	7.6	7.7	7.6	7.7	7.7	7.6
				(7.1)	(7.1)	(7.1)	(6.9)	(7.0)		
Education	2.53	7.9	6.7	6.4	6.6	6.4	6.4	6.4	6.4	6.3
				(6.8)	(6.7)	(6.9)	(6.9)	(6.9)		
Vehicles	6.12	3.0	3.6	4.5	4.0	3.0	4.7	6.5	6.8	7.7
				(4.2)	(4.0)	(4.4)	(4.2)	(4.1)		
Fuel	4.58	8.3	2.2	-5.7	10.6	-19.9	-5.8	-5.5	-4.4	17.8
				(-5.8)	(10.5)	(-13.5)	(-12.1)	(-6.1)		
Electricity	3.75	10.8	9.6	9.1	12.0	12.0	6.7	6.3	6.3	6.3
				(10.4)	(12.0)	(12.0)	(9.0)	(9.0)		

*   Annual average percentage change
**   CPI excluding food, non-alcoholic beverages, fuel and electricity
*** Combines actual rentals and owners' equivalent rent

Sources: Stats SA and SARB

Real effective exchange rate gap forecasts

Per cent

Values <0 imply undervaluations

May 2020
Jul 2020
Sep 2020

Source: SARB
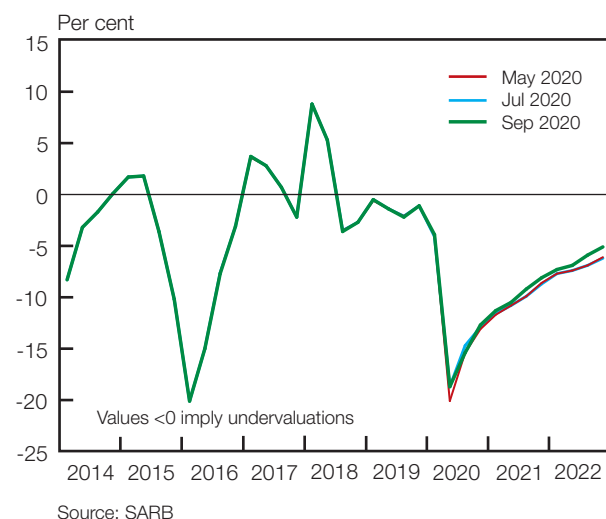
In the model, the rand's rapid depreciation in March and April of 2020 is interpreted as a large departure from equilibrium, in the mould of past rand overshoots (2001, 2008/09 and 2015/16). This excessive depreciation is then reversed as fundamentals reassert themselves, allowing the rand to recover its equilibrium over the forecast period. Accordingly, the implied rand/dollar exchange rate appreciates during the second half of 2020 and throughout 2021, from a low of R17.93 in the second quarter (and a daily low of R19.07 for 24 April).

There are two important caveats to this account. The first is that the rand does not regain its pre-crisis nominal value of around R14 to the US dollar. The QPM equilibrium is measured against a weighted basket of currencies, adjusted for inflation differentials. As South Africa remains a relatively high inflation country, the nominal exchange rate, consistent with equilibrium, is always rising. Second, the exchange rate equilibrium also reflects economic fundamentals, such as commodity prices and sovereign risk, which change over time. The estimated exchange rate equilibrium has depreciated quite sharply over the past six months (down 23%), mainly due to South Africa's more adverse risk profile. Accordingly, a portion of the rand's nominal weakness is taken to be consistent with fundamentals, and should not be unwound over the forecast period.

For inflation, exchange rate pressure is most intense early in the forecast period, fading over time as the gap closes. Although the forecasts anticipated an exchange rate recovery starting in the second half of 2020, the recovery to date has been somewhat more robust than projected. For instance, the May forecast had the rand at R18.40 per dollar in the second quarter; the actual outcome was R17.93. Offsetting pressure from the output gap has also served to counter near-term inflationary pressure.

Unit labour costs measure wage pressures on inflation, correcting for changes in productivity. The intuition is that higher wages exert inflationary pressure, but only if they run ahead of output gains and vice versa. The COVID-19 shock was unusual in that it initially caused a large increase in unit labour cost growth, as output declined under lockdown, falling more than total workforce remuneration. This reversed almost immediately, however, as output started to recover but firms moved ahead with cost-saving measures, affecting both employment and pay. The initial inflationary impulse therefore gave way to a disinflationary impulse. For this reason, the unit labour cost gap is negative through 2021 and 2022, driven by below-inflation growth in the total wage bill, implying a net disinflationary effect, except in the short term.

If this projection is realised, it would be unusual for South Africa, where wage agreements have been largely unresponsive to domestic demand conditions. For instance, in 2009, total remuneration rose by 8.4% (2.2% adjusted for inflation) despite a major recession and job losses. By contrast, at present, neither private nor public sector finances are in a position to fund further wage growth.

This is consistent with a prolonged negative output gap, which is the concept in the model which captures weak growth – a subject discussed in more detail in the real economy chapter. The September MPC forecasts, in common with other recent forecasts, show a deeply negative output gap in mid-2020, which narrows gradually over the rest of the forecast period, remaining slightly negative at the end of the forecast period. The initial widening of the output gap is sufficient to override other short-term inflationary impulses (higher unit labour costs and a more depreciated exchange rate), and keeps inflation relatively subdued over the rest of the forecast period.

Inflation expectations play a central role in the QPM. Ultimately, it is expectations that determine the inflation rate, once the gaps described above have closed, and so both negative and positive cost-push pressures are released from the economy. In South Africa, inflation expectations have been falling since 2017, in line with the MPC's strategy of steering them closer to the midpoint of the 3–6% target range. Actual expectations are now very close to the target midpoint, with current-year expectations below that target at 3.6% – an all-time low.

Nominal exchange rate*

Implied rand/US$
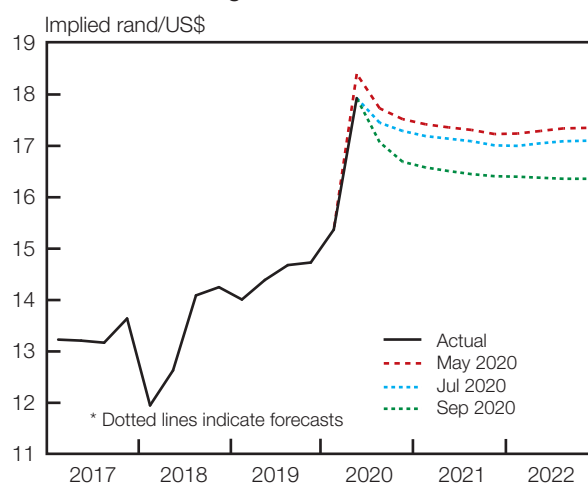
Source: SARB

Contributions to unit labour cost gap

Percentage points

Source: SARB

Output gap estimates*

Percentage of potential GDP

Source: SARB

Inflation expectations*

Per cent
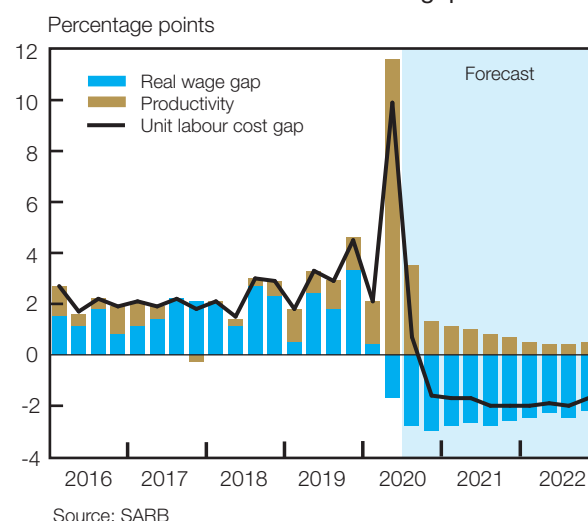
Sources: BER and SARB

Conclusion

The COVID-19 shock has depressed domestic inflation, bringing headline inflation below the target band. The shock has been highly disinflationary relative to previous crisis episodes, and its main inflationary aspect, currency depreciation, is likely to be contained. The MPC has responded with significantly lower interest rates, which will help guide inflation back to the target over the forecast period.

Box 9   Short-term inflation forecasts

Each *Monetary Policy Review (MPR)* contains an analysis of forecast accuracy, both as a matter of transparency and to promote learning from past errors. The COVID-19 shock, however, has compromised the accuracy of any forecasts older than about March 2020, producing errors that are all too easily explained. Given these considerations, this box deals instead with the accuracy of the near-term inflation forecasts. These matter because they shape the Monetary Policy Committee's (MPC) policy space: the more inflation is going to fall, the more leeway there is to ease policy. Furthermore, it is reasonable to expect short-term inflation projections to cope with 'black swan' events such as COVID-19, at least once they happen, given frequent data updates and substantial inflation-modelling capacity.

Reviewing the 2020 forecasts, there were of course large errors in the pre-lockdown period. As of January, inflation for 2020 was expected to a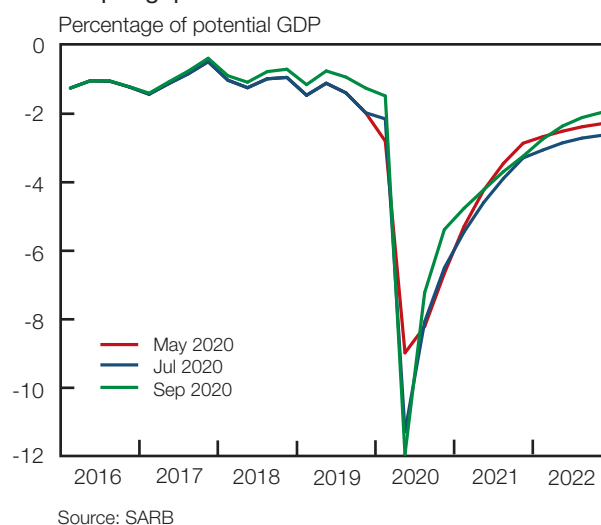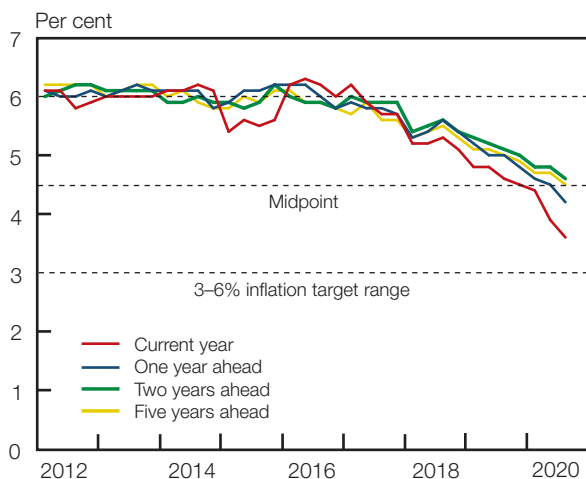verage 4.7% versus current expectations of 3.3%. Once the COVID-19 shock hit, the South African Reserve Bank's (SARB) forecasts fell significantly, as did those of all other analysts. It now appears they moved too low, at least in the short term: the lowest point reached for any forecast was 1.8% for the May consumer price index (CPI), which was 0.3 percentage points below the actual outcome.

The most important source of error in the forecasts has been oil prices, both given the initial collapse and the subsequent rebound. This is the main reason the May forecasts had inflation below the lower bound of the 3–6% target range for two quarters, whereas in fact the undershoot lasted only two months: May at 2.1% and June at 2.2%. The average oil price assumption for 2020 was lowered from US$66 per barrel (in January) to US$37 (in May) and then raised to US$42 (in September).

A second significant driver of forecast errors was Statistics South Africa's (Stats SA) technique for dealing with prices that were unobserved or missing under the lockdown. Stats SA imputed these prices using the headline inflation rate calculated for all other prices. Given that headline inflation was very low due to the oil price shock, this created a temporary downturn in core inflation. Core inflation then rebounded as imputations were scaled back, from 25% of the basket in April to 4% by August.

Comparison with analysts' forecasts

Compared with other analysts, there have been some small headline disagreements recently. The July CPI (3.2%) surprised analysts (3.0%) somewhat more than it did the SARB (3.1%), while August (3.1%) was slightly below both SARB (3.2%) and analyst (3.2%) expectations. The divergence in core inflation has been starker, with analysts' expectations below the SARB's, and also below the June, July and August outcomes. Based on analysts' reports, this may reflect expectations for a more rapid slowdown in housing than has occurred to date. It is also possible that reduced imputation is to blame, given the volatility it has created in what is usually quite a stable series.

For the third and fourth quarters, the SARB's projections are now close to those of analysts, with the SARB at 3.2% for the third quarter and 3.3% for the fourth quarter, compared to the analysts' projections at 3.1% and 3.3% respectively. For the 2020 annual inflation outcome, the SARB's forecasts started the year at 4.7%, pre-COVID-19, falling to 3.4% by May, and are currently at 3.3%. The average for analysts has followed a similar trajectory: the median is now at 3.3%.

In summary, the accuracy of the SARB's recent near-term forecasts has been the same as the analyst median, with an identical root mean square error of 0.12 for the SARB and the analysts median. The SARB's near-term forecasts for 2020 have actually been more accurate than those for the past three years, despite COVID-19 being an unprecedented shock.[1] Over the next two years, the SARB forecast is for slightly faster inflation than is expected by analysts. The distribution of analyst expectations is skewed to the bottom half of the target range, with nearly two-thirds of analysts expecting inflation below 4.5% in 2022; the SARB 2022 projection is also just below the midpoint at 4.4% for the year. Analysts mostly do not anticipate target misses in 2021 or 2022, with no forecasts above 6% for these years, and only one analyst projecting sub-3% inflation in 2021 (at 2.8% for the year).

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1   The root mean squared error for the near-term forecasts is 0.12 for 2020 year-to-date, compared with 0.15 for 2019, 0.16 for 2018 and 0.14 for 2017. For a more detailed analysis of the accuracy of recent forecasts, see Box 7 of the April 2020 *MPR*.

Headline CPI forecasts

Per cent

Legend:
- Actual
- Jan 2020
- Feb 2020
- Mar 2020
- Apr 2020
- May 2020
- Jun 2020
- Jul 2020
- Aug 2020

2019   2020

Core inflation forecasts

Per cent

Legend:
- Actual
- Jan 2020
- Feb 2020
- Mar 2020
- Apr 2020
- May 2020
- Jun 2020
- Jul 2020
- Aug 2020

2019   2020

Headline inflation forecast errors 2020

Percentage points

Legend:
- Jan 2020
- Feb 2020
- Mar 2020
- Apr 2020
- May 2020
- Jun 2020
- Jul 2020
- Aug 2020

Jan Feb Mar Apr May Jun Jul Aug
2020

Core inflation forecast errors 2020

Percentage points

Legend:
- Jan 2020
- Feb 2020
- Mar 2020
- Apr 2020
- May 2020
- Jun 2020
- Jul 2020
- Aug 2020

Jan Feb Mar Apr May Jun Jul Aug
2020

Headline CPI forecasts

Per cent

Legend:
- Actual
- Bloomberg
- SARB

Jan Feb Mar Apr May Jun Jul Aug
2020

Core inflation forecasts

Per cent

Legend:
- Actual
- Bloomberg
- SARB

Jan Feb Mar Apr May Jun Jul Aug
2020

Headline inflation forecast errors

Percentage points

Legend:
- Bloomberg*
- SARB

Jan Feb Mar Apr May Jun Jul Aug
2020

Core inflation forecast errors

Percentage points

Legend:
- Bloomberg*
- SARB

Jan Feb Mar Apr May Jun Jul Aug
2020

* One-month ahead Bloomberg and Reuters median forecasts have been identical since Jan 2020

Sources: Bloomberg, Stats SA and SARB

Real GDP growth: second quarter of 2020
Percentage change from quarter to quarter

Peru
India
UK
Spain
Mexico
Malaysia
South Africa -51.0
Argentina
Philippines
Colombia
Hungary
Greece
Portugal
France
Chile
Singapore
Italy
Romania
New Zealand
Belgium
Euro area
Malta
Cyprus
Canada
Turkey
China*
Austria
Median -35.6
Brazil
Germany
Thailand
Slovenia
US
Poland
Czech Republic
Netherlands
Russia
Uruguay
Sweden
Slovak Republic
Israel
Japan
Nigeria
Luxembourg
Australia
Indonesia
Latvia
Norway
Ireland
Estonia
Finland
South Korea
Taiwan POC
Hong Kong SAR

* 2020Q1, for lockdown

-80 -70 -60 -50 -40 -30 -20 -10 0

Seasonally adjusted and annualised
Sources: Bloomberg, Haver and SARB

Conclusion

South Africa is recovering from a major global crisis. Although the COVID-19 shock has been nearly universal, the second-quarter decline in domestic GDP was extremely large, with South Africa ranking in the bottom seven of the major economies. (The median for this sample was -35.6%.) South Africa's weak performance mainly reflects a hard lockdown, exacerbated by limited fiscal leeway or capacity to deliver income support. The economy has since rebounded from this low base, with high-frequency data showing a better recovery than was initially anticipated. The most important question now is whether this recovery can be sustained.

South Africa has several advantages. COVID-19 deaths have been substantially lower than expected, and also low relative to other countries' experiences. On the whole, prices for export commodities have risen this year and, given a simultaneous decline in world oil prices, South Africa's terms of trade have reached all-time highs.

Furthermore, inflation has slowed significantly in a short space of time, dropping below the target range despite rand weakness. In contrast with previous growth slowdowns, this has left monetary policy with ample scope for lower interest rates. Accordingly, the MPC has lowered the repo rate by 275 basis points since March, one of the largest adjustments in the peer group. In turn, lower borrowing costs have supported firms, households and government during a period of intense stress, and are now also driving new borrowing, particularly by households. The majority of professional analysts expect domestic inflation to average less than the 4.5% target midpoint through 2020, 2021 and 2022, implying no urgent need to normalise repo rate settings.

These advantages should not be discounted. The headwinds to growth, however, are also severe. Electricity shortages have returned sooner than expected, with load-shedding resuming in July despite a much lower level of economic activity. Eskom's aging generation fleet is producing steadily less electricity, while requiring more maintenance. Meanwhile, new capacity remains behind schedule. Load-shedding is therefore likely to interrupt economic activity for at least another year.
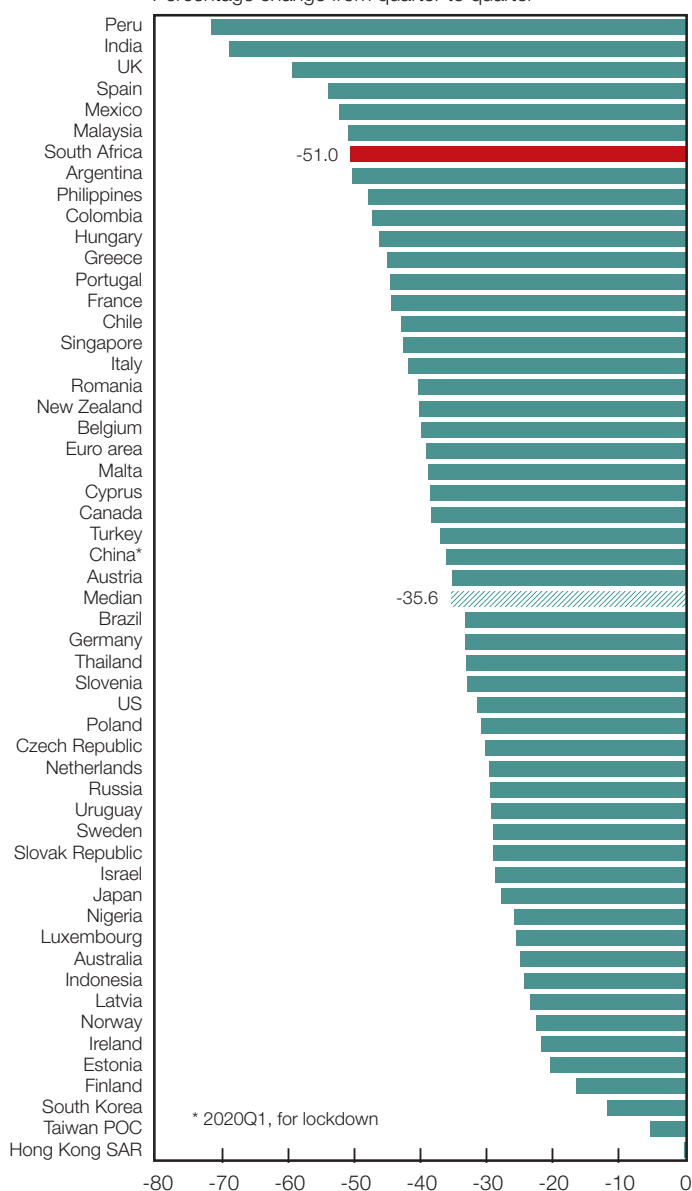
A second obstacle to growth is the strained fiscal position. Sovereigns have seen debt climb to uncomfortable levels during this crisis, but South Africa is an outlier, both for the scale of its borrowing and for its weak starting point. Debt is now expected to pass 80% of GDP this year and to stay above this threshold for most of the coming decade, even under an active consolidation scenario. Reducing debt is rarely easy, but permitting the fiscal position to deteriorate much further will sooner or later provoke a crisis. South Africa has little of value to show for the past 10 years of rapid debt accumulation, and the contribution of further borrowing to growth should not be overstated, given the country's high debt levels.[28] Changing course will nonetheless take a sustained effort.

It is clear that output collapsed under lockdown, and it is more or less inevitable that it will rebound. How far it will rebound is unclear. The MPC forecasts show it will only recover to end-2019 levels by mid-2023. It could recover faster if constraints to growth are addressed and confidence improves. Monetary policy is providing significant support, but low rates would provide even more stimulus if there were greater certainty about the economy's medium-term direction.

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28 On this point, see also P Burger and E Calitz, 'COVID-19: economic growth and South African fiscal policy', *Stellenbosch Economic Working Papers WP15/2020*, August 2020.
https://www.ekon.sun.ac.za/wpapers/2020/wp152020

Consensus inflation forecasts*
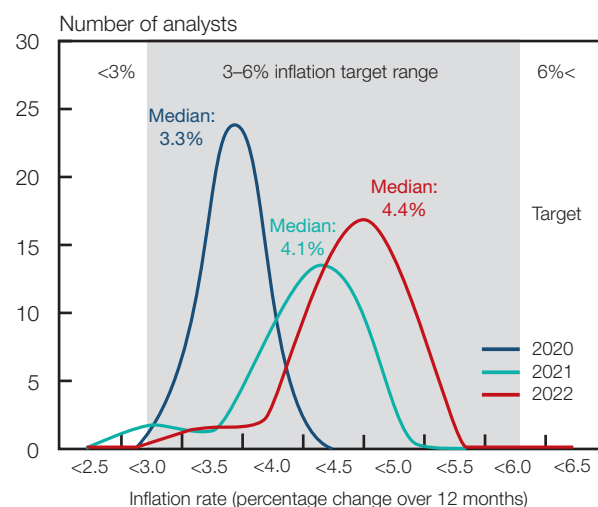
* Blend between Bloomberg and Reuters forecasts

Sources: Bloomberg, Reuters and SARB

Excess deaths, from COVID-19 or other causes

Source: The Economist
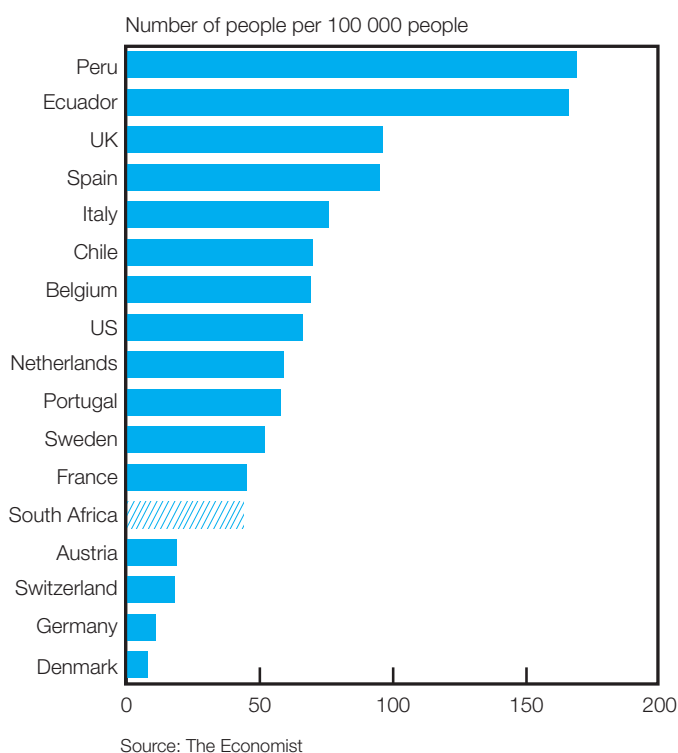
Statement of the Monetary Policy Committee

14 April 2020

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

Since the March meeting of the Monetary Policy Committee (MPC), the COVID-19 pandemic has spread globally, with its impact being felt in all economies. Current estimates from the International Monetary Fund (IMF) show global growth contracting by about 2.9% this year.[1] Economic contractions are expected to be deepest in the second quarter of 2020, with some recovery expected in the third quarter of the year. The strength of the recovery into the fourth quarter and 2021 will depend on how quickly countries are able to open up for economic activity *safely,* requiring sustainable social distancing rules, safety processes put in place by businesses and public institutions, and the capacity of hospitals to accommodate those in need. Current indications from the World Health Organization are that the pandemic is unlikely to end quickly, with shorter, less virulent waves hitting over time.

The uncertainties of the crisis have led to extremely high volatility in financial asset prices, with sharp and deep market sell-offs followed by a partial recovery. At this stage, the sustainability of that recovery remains uncertain, and global markets remain in risk-off mode. This has implications for emerging markets and South Africa in particular, as investor appetite for rand-denominated equities and bonds is expected to remain weak.

Policy responses to the crisis have generally been robust, with the magnitudes dependent on the degree of policy space available to countries. The United States Federal Reserve has taken further steps to expand its balance sheet. The European Central Bank (ECB) has made similar commitments. Emerging and developing economies generally have less policy space available and credit is more expensive, and for this reason, the International Financial Institutions (the IMF, the World Bank) and others have made available extraordinary levels of emergency financial support.

The COVID-19 outbreak will have a major health and social impact, and forecasting domestic economic activity presents unprecedented uncertainty. With that in mind, the South African Reserve Bank (SARB) expects gross domestic product (GDP) to contract by 6.1% in 2020, compared to the -0.2% expected just three weeks ago. GDP is expected to grow by 2.2% in 2021 and by 2.7% in 2022.

South Africa's lockdown has been extended by an additional 14 days, bringing the total lockdown period to 35 days.

Both the supply and demand effects of this extension reduce growth and deepen it in the short term, as businesses stay closed for longer and households with income spend less. This will likely also increase job losses, with further consequences for aggregate demand. The impacts will be particularly severe for small businesses and individuals with earnings in the informal sector.

Some factors will support growth, including where businesses are able to open under the current rules, new jobs being created to service more needs under the lockdown, and sustained government spending, both through normal operations and crisis-related spending and programmes. The faster the global economy recovers from the crisis, as China appears to be gradually doing now, the more positive growth spillovers will strengthen for South Africa, including healthy price levels for commodity exports.

Nonetheless, prices for many commodities have fallen as a result of weaker demand globally. The spot price for Brent crude oil is currently around US$31 per barrel, despite a new agreement reached by the Organization of the Petroleum Exporting Countries (OPEC) and other producers to make large oil production cuts. According to the SARB's forecast, the Brent crude oil price is expected to average US$42 per barrel in 2020 and US$45 per barrel in 2021, very close to the March forecast.

As noted earlier, while advanced economies conduct exceptionally accommodative policies, global financing conditions are no longer supportive of emerging market currency and asset values. Credit risk has risen back to 2008 levels and about R100 billion of local assets have been sold by non-resident investors. The rand has depreciated by 22.6% against the US dollar since January and by 17.3% since the March meeting of the MPC. The implied starting point for the rand forecast is R17.80 to the US dollar, compared with R15.40 at the time of the previous meeting.

Slightly lower oil prices and sharply lower domestic growth pulls down on the inflation forecast, while negative global sentiment and fiscal risks have led to equally aggressive currency depreciation and upside pressure on inflation. The timing and size of these contradictory impulses suggests that they are not perfectly offsetting, with weaker inflation in the near term likely to give way to higher inflation later in the forecast period.

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1   Global growth in the QPM is a trade-weighted average. This is now at -2.6% for 2020 and 4% for 2021.

The Bank's headline consumer price inflation forecast averages 3.6% in 2020, 4.5% in 2021 and 4.4% in 2022. The forecast for core inflation is lower at 3.8% in 2020, 4.0% in 2021 and 4.2% in 2022.

The overall risks to the inflation outlook at this time appear to be to the downside. Electricity pricing remains a concern but has moderated somewhat. Risks to inflation from recent currency depreciation are expected to be muted as pass-through is slow. Global producer price inflation has decelerated. Lower oil prices will reduce petrol prices in the near term. International food prices have eased and local food price inflation is expected to remain low, in part due to higher domestic production levels.

Expectations of future inflation broadly remain around the midpoint of the band, although market-based expectations have recently ticked up in response to the depreciation of the currency.[2]

Weaker domestic growth and greater fiscal risks have resulted in a downgrade by credit rating agency Moody's Investors Service and the confirmation of a negative outlook by Fitch Ratings, as well as a weaker currency and higher borrowing costs for government, banks and firms. South Africa's risk profile has increased.

Despite this rise in country risk, the Committee notes that the more prolonged lockdown and slower recovery creates downside risk to inflation and allows further space for monetary policy to respond to the virus-induced demand shock to the economy. Barring severe and persistent currency and oil shocks, inflation is expected to be well contained, remaining below the midpoint of the target in 2020 and close to the midpoint in 2021.

Against this backdrop, the MPC decided to cut the repurchase (repo) rate by 100 basis points. This takes the repo rate to 4.25% per annum, with effect from 15 April 2020. The decision was unanimous.

The implied path of policy rates over the forecast period generated by the Quarterly Projection Model (QPM) indicates five repo rate cuts of 25 basis points extending into the first quarter of 2021.

Monetary policy can ease financial conditions and improve the resilience of households and firms to the economic implications of COVID-19. In addition to the continued easing of interest rates, the SARB has taken steps to ensure adequate liquidity in money and government bond markets, and to ease capital requirements to free capital for onlending by financial institutions. Each of these steps makes more capital available to households and firms.

Monetary policy, however, cannot on its own improve the potential growth rate of the economy or reduce fiscal risks. These should be addressed by implementing prudent macroeconomic policies and structural reforms that lower costs generally and increase investment opportunities, potential growth and job creation. Such steps will further reduce existing constraints on monetary policy and its transmission to lending.

Global economic and financial conditions are expected to remain highly volatile for the foreseeable future. In this highly uncertain environment, future decisions will continue to be highly data-dependent, sensitive to the balance of risks to the outlook, and will seek to look through temporary price shocks. As usual, the repo rate projection from the QPM remains a broad policy guide which can change from meeting to meeting in response to changing data and risks.

Repurchase rate forecast (April 2020)
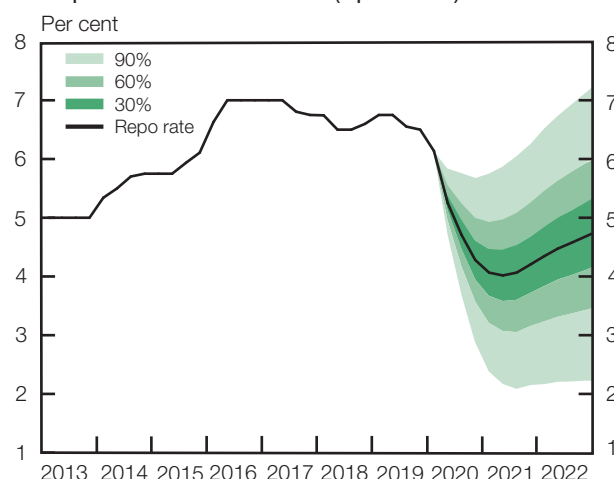
The uncertainty bands for the repo rate are based on historical forecasting experience and stochastic simulations in the QPM. The bands are symmetric and do not reflect any assessment of upside or downside risk.

Source: SARB

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2   The latest Bureau for Economic Research (BER) survey has expectations for 2020 down by 0.4 percentage points to 4.4% and to 4.6% (from 5.0%) for 2021. Five-year-ahead inflation expectations also eased to 4.7% (from 4.9%). Market analysts (Reuters Econometer) expect inflation to be 4.2% (from 4.4%) in 2020, 4.6% (from 4.7%) in 2021 and 4.5% (from 4.6%) in 2022. Market-based rates are calculated from the break-even inflation rate, which is the yield differential between conventional and inflation-linked bonds. These are at 4.7% for the 5-year and well over 6% for the 10-year break-even inflation rate.

Summary of assumptions: Monetary Policy Committee meeting on 14 April 2020*

1. Foreign sector assumptions

	Actual			Forecast		
	2017	2018	2019	2020	2021	2022
1. Real GDP growth in South Africa's major trading-partner countries	3.4%	3.3%	2.3%	-2.8%	4.0%	3.5%
	(3.4%)	(3.3%)	(2.3%)	(1.1%)	(2.8%)	(3.1%)
2. Output gap in South Africa's major trading-partner countries (ratio to potential GDP)..............................	0.0%	0.1%	-0.1%	-2.5%	-2.8%	-1.9%
	(0.0%)	(0.1%)	(-0.1%)	(-1.4%)	(-0.8%)	(-0.4%)
3. Change in international commodity prices in US$ (excluding oil)..............................	18.2%	11.2%	-0.9%	-7.1%	5.4%	5.5%
	(18.2%)	(11.2%)	(-0.9%)	(-0.6%)	(-7.0%)	(3.4%)
4. Brent crude (US$/barrel)	54.2	71.0	64.4	42.0	45.0	50.0
	(54.2)	(71.0)	(64.4)	(40.4)	(44.5)	(45.0)
5. Change in world food prices (US$)	8.1%	-3.5%	1.8%	-0.5%	3.5%	1.9%
	(8.1%)	(-3.5%)	(1.8%)	(2.5%)	(1.5%)	(1.5%)
6. Change in international consumer prices	1.7%	2.0%	1.4%	0.5%	1.3%	1.4%
	(1.7%)	(2.0%)	(1.4%)	(0.5%)	(1.3%)	(1.4%)
7. International policy interest rate.................................	0.5%	0.9%	1.1%	0.1%	0.0%	0.0%
	(0.5%)	(0.9%)	(1.1%)	(0.2%)	(0.1%)	(0.1%)

2. Domestic sector assumptions

	Actual			Forecast		
	2017	2018	2019	2020	2021	2022
1. Change in electricity price	4.7%	5.2%	9.6%	9.6%	6.7%	6.0%
	(4.7%)	(5.2%)	(9.6%)	(10.4%)	(7.4%)	(6.0%)
2. Change in fuel taxes and levies.............................	8.3%	8.9%	5.8%	5.8%	5.2%	5.0%
	(8.3%)	(8.9%)	(5.8%)	(5.3%)	(4.6%)	(4.4%)
3. Potential growth.............................	1.2%	0.9%	0.6%	-2.1%	1.1%	1.3%
	(1.2%)	(0.9%)	(0.6%)	(0.6%)	(0.9%)	(1.0%)
4. Inflation target midpoint.............................	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
	(4.5%)	(4.5%)	(4.5%)	(4.5%)	(4.5%)	(4.5%)
5. Neutral real interest rate.............................	1.7%	1.9%	2.1%	2.1%	2.2%	2.3%
	(1.7%)	(1.9%)	(2.1%)	(2.1%)	(2.2%)	(2.3%)

Notes

1. Shaded areas indicate forecast assumptions.
2. 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 66 and 67.

Summary of selected forecast results: Monetary Policy Committee meeting on 14 April 2020*

Selected forecast results (quarterly)

Year-on-year percentage change

	2019				2020				2021				2022			
	4.1 (4.1)				3.6 (3.8)				4.5 (4.6)				4.4 (4.4)			
1. Headline inflation	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	4.2	4.4	4.2	3.8	4.5	3.2	3.1	3.8	4.1	4.9	4.6	4.3	4.4	4.4	4.5	4.5
	(4.2)	(4.4)	(4.2)	(3.8)	(4.4)	(3.4)	(3.5)	(4.1)	(4.3)	(4.9)	(4.8)	(4.5)	(4.5)	(4.4)	(4.4)	(4.4)
	2019				2020				2021				2022			
	4.1 (4.1)				3.8 (3.9)				4.0 (4.3)				4.2 (4.4)			
2. Core inflation	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	4.4	4.2	4.1	3.9	3.8	4.0	3.7	3.8	4.0	3.9	4.0	4.0	4.1	4.2	4.2	4.2
	(4.4)	(4.2)	(4.1)	(3.9)	(3.8)	(3.9)	(4.0)	(4.2)	(4.3)	(4.3)	(4.3)	(4.3)	(4.3)	(4.4)	(4.4)	(4.4)

Notes

1. Shaded areas indicate the forecasts of the Monetary Policy Committee.
2. The figures in brackets represent the previous forecasts of the Monetary Policy Committee.

Selected forecast results (annual)

				Forecast		
	2017	2018	2019	2020	2021	2022
1. GDP growth	1.4%	0.8%	0.2%	-6.1%	2.2%	2.7%
	(1.4%)	(0.8%)	(0.2%)	(-0.2%)	(1.0%)	(1.6%)
2. Output gap (ratio to potential GDP)	-1.0%	-1.0%	-1.5%	-5.7%	-4.6%	-3.3%
	(-1.0%)	(-1.0%)	(-1.5%)	(-2.3%)	(-2.1%)	(-1.6%)
3. Change in nominal effective exchange rate	9.9%	-1.0%	-7.0%	-13.8%	-0.1%	-0.5%
	(9.9%)	(-1.0%)	(-7.0%)	(-6.6%)	(-0.4%)	(-2.1%)
4. Change in real effective exchange rate	13.7%	1.4%	-4.5%	-11.2%	2.9%	2.5%
	(13.7%)	(1.4%)	(-4.5%)	(-3.5%)	(2.9%)	(0.7%)
5. Real exchange rate gap	1.2%	2.0%	-1.3%	-11.8%	-8.6%	-6.0%
	(1.5%)	(2.2%)	(-2.4%)	(-5.9%)	(-3.1%)	(-2.3%)
6. Repurchase rate (end of period)	6.75%	6.60%	6.50%	4.28%	4.20%	4.68%
	(6.75%)	(6.60%)	(6.50%)	(5.87%)	(5.58%)	(5.79%)
7. Current account balance (ratio to GDP)	-2.5%	-3.6%	-3.0%	-2.9%	-3.6%	-3.4%
	(-2.5%)	(-3.6%)	(-3.0%)	(-2.4%)	(-3.4%)	(-3.7%)

Notes

1. The nominal effective exchange rate (NEER) is based on the bilateral exchange rates of South Africa's three largest trading partners (the euro area, the US and Japan). The bilateral exchange rates are weighted by export trade weights.
2. The real effective exchange rate (REER) is the NEER deflated by the consumer price differential (between South Africa and the trade-weighted CPI of the euro area, the US and Japan).
3. The real exchange rate gap signifies the extent to which the real exchange rate deviates from its estimated equilibrium level. A positive gap shows an overvaluation of the currency, and vice versa.
4. The forecast of the current account balance is obtained from the SARB's Core Macroeconometric Model.
5. Shaded areas indicate the forecasts of the Monetary Policy Committee.
6. The figures in brackets represent the previous forecasts of the Monetary Policy Committee.

Statement of the Monetary Policy Committee

21 May 2020

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

Since the April meeting of the Monetary Policy Committee (MPC), the COVID-19 pandemic has continued to spread globally, with wide-ranging and deep social and economic effects. Current forecasts from the International Monetary Fund (IMF) show global gross domestic product (GDP) decreasing by about 3.0% this year.[1] Economic contractions are expected to be deepest in the second quarter of 2020, with gradual recoveries in the third and fourth quarters of the year. The strength of the global economic recovery will depend in part on how quickly countries are able to open up for economic activity *safely,* and in particular how effectively societies comply with social distancing rules. The World Health Organization advises that further complications from the virus are being identified and the pandemic is unlikely to end quickly, with the virus coming in waves over time.

The crisis has caused extreme volatility in financial asset prices, with sharp and deep market sell-offs followed recently by a partial recovery. Investor interest in higher-yielding assets has improved somewhat in recent days, but the general environment reflects pronounced levels of risk aversion, in particular for emerging market currencies, equities and bonds. Uncertainty about future global economic prospects, trade relationships and supply chains has increased again.

Policy responses to the crisis have generally been robust, with the magnitudes dependent on the degree of policy space available to countries. The United States Federal Reserve has taken further steps to expand its balance sheet and the European Central Bank (ECB) has made similar commitments. Emerging and developing economies generally have less policy space available and credit is more expensive. The International Financial Institutions (IFIs) have made available extraordinary levels of emergency financial support to respond to COVID-19.[2]

The COVID-19 outbreak has major health, social and economic impacts, presenting challenges in forecasting domestic economic activity. The compilation of accurate economic statistics will also remain severely challenged. The South African Reserve Bank (SARB) currently expects GDP to contract by 7.0% in 2020, compared to the 6.1% contraction forecast in April. Even as the lockdown is relaxed in the coming months, for the year as a whole, investment, exports and imports are expected to decline sharply. Job losses are also expected to be widespread.

Easing of the lockdown will support growth in the near term and some high frequency activity indicators show a pickup in spending from extremely low levels. However, getting back to pre-pandemic activity levels will take time. GDP is expected to grow by 3.8% in 2021 and by 2.9% in 2022.

South Africa's terms of trade remain robust. Commodity export prices have eased in recent weeks, but are still at healthy levels. Oil prices remain generally low. The spot price for Brent crude oil is currently around US$34 per barrel, and is expected to remain around these levels in the coming months, contributing to reduced petrol price inflation. For the SARB's forecast, the Brent crude oil price is expected to average US$37 per barrel in 2020 and US$45 per barrel in 2021.

Exceptionally accommodative policies and the relaxation of lockdowns in many advanced economies have supported a partial recovery in global financial markets, but financing conditions for emerging markets remain uncertain. Domestically, credit risk associated with public borrowing needs remains very high, contributing to non-resident investors' sales of about R149 billion of local currency-denominated assets.

The rand has depreciated by 22.9% against the US dollar since January and by 0.7% since the April meeting of the MPC. The implied starting point for the rand forecast is R18.40 to the US dollar, compared with R17.80 at the time of the previous meeting. Resident investors have increased purchases of long-term bonds, helping to ease yields in recent days, but the yield curve remains exceptionally steep.[3]

The SARB's headline consumer price inflation forecast averages 3.4% in 2020 and 4.4% in 2021 and 2022. The forecast for core inflation is lower at 3.5% in 2020, 3.8% in 2021 and 4.1% in 2022.

The overall risks to the inflation outlook at this time appear to be to the downside, but less clearly so compared to conditions in March and April. Global producer price and food inflation appear to have bottomed out. Oil prices remain low but have recovered somewhat. Local food price inflation is also expected to remain contained. Risks to inflation from currency depreciation are expected to stay muted, while pass-through remains slow. However, electricity and other administered prices remain a concern. Upside risks to

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1   Global growth in the QPM is a trade-weighted average. This is now at -3.4% for 2020 and 4.3% for 2021.
2   About 57 countries have been granted funds from the IMF's Rapid Financing Instrument and the Rapid Credit Facility.
3   This is measured by the spread between the R2036 and R2048 to the R186 bonds.

inflation could also emerge from heightened fiscal risks and sharp reductions in the supply of goods and services.

Expectations of future inflation continued to soften, but remain broadly around the midpoint of the band. Market-based expectations for short- and medium-term inflation have fallen, while long-term inflation expectations remain higher.[4]

Despite sustained higher levels of country financing risk, the Committee notes that the economic contraction and slow recovery will keep inflation well below the midpoint of the target range for this year. Barring the inflation risks outlined earlier, inflation is expected to be well contained over the medium term, remaining close to the midpoint in 2021 and 2022.

Against this backdrop, the MPC decided to cut the repurchase (repo) rate by 50 basis points, taking it to 3.75% per annum, with effect from 22 May 2020. Three members preferred a cut of 50 basis points and two preferred a cut of 25 basis points.

The implied path of policy rates over the forecast period generated by the Quarterly Projection Model (QPM) indicates two repo rate cuts of 25 basis points in the next two quarters of 2020.

Monetary policy can ease financial conditions and improve the resilience of households and firms to the economic implications of COVID-19. In addition to the continued easing of interest rates, the SARB has eased regulatory requirements on banks and taken important steps to ensure adequate liquidity in domestic markets. These actions are intended to free up more capital for lending by financial institutions to households and firms.

Monetary policy, however, cannot on its own improve the potential growth rate of the economy or reduce fiscal risks. These should be addressed by implementing prudent macroeconomic policies and structural reforms that lower costs generally and increase investment opportunities, potential growth and job creation. Such steps will further reduce existing constraints on monetary policy and its transmission to the broader economy.

Global economic and financial conditions are expected to remain volatile for the foreseeable future. In this highly uncertain environment, future decisions will continue to be data-dependent and sensitive to the balance of risks to the outlook.

The MPC will seek to look through temporary price shocks and focus on second-round effects. As usual, the repo rate projection from the QPM remains a broad policy guide, changing from meeting to meeting in response to new data and risks.

Repurchase rate forecast (May 2020)
Per cent
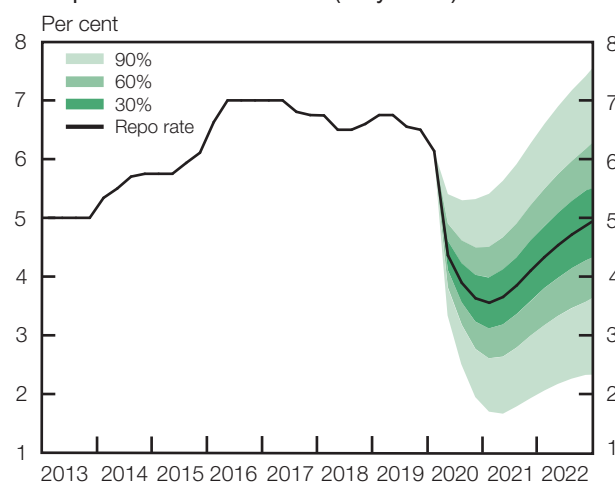
The uncertainty bands for the repo rate are based on historical forecasting experience and stochastic simulations in the QPM. The bands are symmetric and do not reflect any assessment of upside or downside risk.

Source: SARB

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4   The latest Bureau for Economic Research (BER) survey has expectations for 2020 down by 0.4 percentage points to 4.4% and to 4.6% (from 5.0%) for 2021. Five-year-ahead inflation expectations also eased to 4.7% (from 4.9%). Market analysts (Reuters Econometer) expect inflation to be 3.5% (from 4.2%) in 2020, 4.1% (from 4.6%) in 2021 and to remain unchanged at 4.5% in 2022. Market-based rates are calculated from the break-even inflation rate, which is the yield differential between conventional and inflation-linked bonds. These are at 2.5% for the 5-year, 5% for the 10-year and 6.4% for the 15-year break-even inflation rate.

Summary of assumptions: Monetary Policy Committee meeting on 21 May 2020*

1. Foreign sector assumptions

		Actual		Forecast		
	2017	2018	2019	2020	2021	2022
1. Real GDP growth in South Africa's major trading-partner countries	3.4%	3.2%	2.2%	-3.2%	4.3%	3.7%
	(3.4%)	(3.3%)	(2.3%)	(-2.8%)	(4.0%)	(3.5%)
2. Output gap in South Africa's major trading-partner countries (ratio to potential GDP).................	0.0%	0.1%	-0.1%	-3.0%	-3.1%	-2.0%
	(0.0%)	(0.1%)	(-0.1%)	(-2.5%)	(-2.8%)	(-1.9%)
3. Change in international commodity prices in US$ (excluding oil).................	18.2%	11.2%	-0.9%	2.0%	-6.0%	3.2%
	(18.2%)	(11.2%)	(-0.9%)	(-7.1%)	(5.4%)	(5.5%)
4. Brent crude (US$/barrel)	54.2	71.0	64.4	37.0	45.0	50.0
	(54.2)	(71.0)	(64.4)	(42.0)	(45.0)	(50.0)
5. Change in world food prices (US$)	8.1%	-3.5%	1.8%	-3.4%	5.1%	1.5%
	(8.1%)	(-3.5%)	(1.8%)	(-0.5%)	(3.5%)	(1.9%)
6. Change in international consumer prices	1.7%	2.0%	1.4%	0.5%	1.4%	1.3%
	(1.7%)	(2.0%)	(1.4%)	(0.5%)	(1.3%)	(1.4%)
7. International policy interest rate.................	0.5%	0.9%	1.1%	0.1%	0.0%	0.0%
	(0.5%)	(0.9%)	(1.1%)	(0.1%)	(0.0%)	(0.0%)

2. Domestic sector assumptions

		Actual		Forecast		
	2017	2018	2019	2020	2021	2022
1. Change in electricity price	4.7%	5.2%	9.6%	9.6%	6.7%	6.0%
	(4.7%)	(5.2%)	(9.6%)	(9.6%)	(6.7%)	(6.0%)
2. Change in fuel taxes and levies.............	8.3%	8.9%	5.8%	5.8%	5.2%	5.0%
	(8.3%)	(8.9%)	(5.8%)	(5.8%)	(5.2%)	(5.0%)
3. Potential growth...........	1.2%	0.8%	0.6%	-2.1%	1.1%	1.3%
	(1.2%)	(0.8%)	(0.6%)	(-2.1%)	(1.1%)	(1.3%)
4. Inflation target midpoint...........	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
	(4.5%)	(4.5%)	(4.5%)	(4.5%)	(4.5%)	(4.5%)
5. Neutral real interest rate...........	1.7%	1.9%	2.1%	2.1%	2.2%	2.3%
	(1.7%)	(1.9%)	(2.1%)	(2.1%)	(2.2%)	(2.3%)

Notes
1. Shaded areas indicate forecast assumptions.
2. 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 66 and 67.

Summary of selected forecast results: Monetary Policy Committee meeting on 21 May 2020*

Selected forecast results (quarterly)

Year-on-year percentage change

	2019 4.1 (4.1)				2020 3.4 (3.6)				2021 4.4 (4.5)				2022 4.4 (4.4)			
1. Headline inflation	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	4.2	4.4	4.2	3.8	4.4	2.8	2.9	3.7	4.0	5.0	4.6	4.1	4.2	4.3	4.4	4.5
	(4.2)	(4.4)	(4.2)	(3.8)	(4.5)	(3.2)	(3.1)	(3.8)	(4.1)	(4.9)	(4.6)	(4.3)	(4.4)	(4.4)	(4.5)	(4.5)
	2019 4.1 (4.1)				2020 3.5 (3.8)				2021 3.8 (4.0)				2022 4.1 (4.2)			
2. Core inflation	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	4.4	4.2	4.1	3.9	3.7	3.5	3.3	3.5	3.7	3.9	3.9	3.9	4.0	4.0	4.1	4.2
	(4.4)	(4.2)	(4.1)	(3.9)	(3.8)	(4.0)	(3.7)	(3.8)	(4.0)	(3.9)	(4.0)	(4.0)	(4.1)	(4.2)	(4.2)	(4.2)

Notes

1. Shaded areas indicate the forecasts of the Monetary Policy Committee.
2. The figures in brackets represent the previous forecasts of the Monetary Policy Committee.

Selected forecast results (annual)

				Forecast		
	2017	2018	2019	2020	2021	2022
1. GDP growth	1.4%	0.8%	0.2%	-7.0%	3.8%	2.9%
	(1.4%)	(0.8%)	(0.2%)	(-6.1%)	(2.2%)	(2.7%)
2. Output gap (ratio to potential GDP)	-1.0%	-1.0%	-1.5%	-6.7%	-4.0%	-2.5%
	(-1.0%)	(-1.0%)	(-1.5%)	(-5.7%)	(-4.6%)	(-3.3%)
3. Change in nominal effective exchange rate	9.9%	-1.0%	-7.0%	-14.8%	-0.6%	0.2%
	(9.9%)	(-1.0%)	(-7.0%)	(-13.8%)	(-0.1%)	(-0.5%)
4. Change in real effective exchange rate	13.7%	1.4%	-4.5%	-12.3%	2.5%	3.2%
	(13.7%)	(1.4%)	(-4.5%)	(-11.2%)	(2.9%)	(2.5%)
5. Real exchange rate gap	1.2%	2.0%	-1.3%	-13.1%	-10.2%	-7.0%
	(1.2%)	(2.0%)	(-1.3%)	(-11.8%)	(-8.6%)	(-6.0%)
6. Repurchase rate (end of period)	6.75%	6.60%	6.50%	3.63%	4.10%	4.87%
	(6.75%)	(6.60%)	(6.50%)	(4.28%)	(4.20%)	(4.68%)
7. Current account balance (ratio to GDP)	-2.5%	-3.6%	-3.0%	-1.3%	-2.3%	-2.8%
	(-2.5%)	(-3.6%)	(-3.0%)	(-2.9%)	(-3.6%)	(-3.4%)

Notes

1. The nominal effective exchange rate (NEER) is based on the bilateral exchange rates of South Africa's three largest trading partners (the euro area, the US and Japan). The bilateral exchange rates are weighted by export trade weights.
2. The real effective exchange rate (REER) is the NEER deflated by the consumer price differential (between South Africa and the trade-weighted CPI of the euro area, the US and Japan).
3. The real exchange rate gap signifies the extent to which the real exchange rate deviates from its estimated equilibrium level. A positive gap shows an overvaluation of the currency, and vice versa.
4. The forecast of the current account balance is obtained from the SARB's Core Macroeconometric Model.
5. Shaded areas indicate the forecasts of the Monetary Policy Committee.
6. The figures in brackets represent the previous forecasts of the Monetary Policy Committee.

Statement of the Monetary Policy Committee

23 July 2020

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

Since the May meeting of the Monetary Policy Committee (MPC), the COVID-19 pandemic has continued to spread globally, with wide-ranging and deep social and economic effects. Current forecasts from the International Monetary Fund (IMF) show global gross domestic product (GDP) contracting by about 4.9% this year.[1] Economic contractions are expected to be deepest in the second quarter of 2020, The deepest contractions are expected in the second quarter of 2020, with gradual recoveries in the third and fourth quarters of the year. The strength of the global economic recovery will depend in part on the control of new virus outbreaks, the extent of supply and demand losses, and expectations of future growth in investment and productivity.

The crisis has caused extreme volatility in financial asset prices, with sharp and deep market sell-offs followed by a partial recovery. Investor appetite has generally improved, reflected in a weaker US dollar and stronger capital flows to emerging markets. However, the general environment continues to reflect pronounced levels of risk aversion due to uncertainty about future global economic prospects.

Policy responses to the crisis have generally been robust. This week the European Union agreed to a large, targeted stimulus package primarily to support investment. Other monetary and fiscal authorities continue to provide accommodation and support. Emerging and developing economies are generally constrained by less policy space, currency risk and tight global financial conditions. The International Financial Institutions (IFIs) continue to make available extraordinary levels of emergency financial support to respond to the pandemic.[2]

The COVID-19 outbreak has major health, social and economic impacts, presenting challenges in forecasting domestic and global economic activity. The compilation of accurate economic statistics will also remain severely challenged.

The South African Reserve bank's (SARB) second-quarter estimate for output has been revised lower. The SARB currently expects GDP to contract by 7.3% in 2020, compared to the 7.0% contraction forecast in May. Even as the lockdown is relaxed in the coming months, for the year as a whole, investment, exports and imports are expected to decline sharply. Job losses are also expected to rise further.

Easing of the lockdown has supported growth in recent weeks and high frequency activity indicators show a pickup in spending from extremely low levels. However, getting back to pre-pandemic activity levels will take time. GDP is expected to grow by 3.7% in 2021 and by 2.8% in 2022.[3]

South Africa's terms of trade and commodity export prices remain high. While oil prices are generally low, they have increased since the May MPC meeting. The Brent crude oil price is expected to average about US$40 per barrel in 2020, rising to US$45 per barrel in 2021 and US$50 per barrel in 2022.

Exceptionally accommodative policies and the relaxation of lockdowns in many advanced economies have supported a partial recovery in global financial markets. However, financing conditions for emerging markets remain uncertain, contributing to currency weakness. The rand has depreciated by 15.2% against the US dollar since January and appreciated by 8.8% since the May meeting of the MPC. The implied starting point for the rand forecast is R17.93 to the US dollar, compared with R18.40 at the time of the previous meeting.

Resident investors have increased purchases of long-term bonds, helping to ease yields in recent weeks. However, the yield curve is exceptionally steep, reflecting credit risk associated with high public borrowing needs.[4]

The SARB's headline consumer price inflation forecast averages 3.4% in 2020 and is marginally lower than previously forecast at 4.3% in 2021 and 2022. The forecast for core inflation is lower at 3.3% in 2020, and remains broadly stable at 3.9% in 2021 and 4.1% in 2022.

The overall risks to the inflation outlook at this time appear to be balanced. Global producer price and food inflation appear to have bottomed out. Local food price inflation is expected to stay contained. Risks to inflation from currency

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1 Global growth in the QPM is a trade-weighted average of South Africa's trading partners. This is now at 4.7% for 2020 and 4.3% for 2021. The IMF expects global growth of 5.4% in 2021.

2 About 72 countries have been granted funds from the IMF's Rapid Financing Instrument and the Rapid Credit Facility.

3 This is compared to 3.8% and 2.9% respectively in May.

4 This is measured by the spread between the R2036 and R2048 to the R186 bonds.

depreciation are expected to be muted, while pass-through remains low. However, electricity and other administered prices continue to be a concern. Upside risks to inflation could also emerge from heightened fiscal risks and sharp reductions in the supply of goods and services.

Expectations of future inflation continued to soften for this year but are broadly stable around the midpoint of the target band for 2021. Market-based expectations for short- and medium-term inflation have eased slightly, while long-term inflation expectations are higher.[5]

Despite sustained higher levels of country financing risk, the Committee notes that the economic contraction and slow recovery will keep inflation well below the midpoint of the target range for this year. Barring the risks outlined earlier, inflation is expected to be well contained over the medium term, remaining close to the midpoint in 2021 and 2022.

Against this backdrop, the MPC decided to cut the repurchase (repo) rate by 25 basis points, taking it to 3.50% per annum, with effect from 24 July 2020. Three members preferred a cut of 25 basis points and two preferred to keep rates on hold.

The implied path of policy rates over the forecast period generated by the Quarterly Projection Model (QPM) indicates one repo rate cut of 25 basis points in the fourth quarter of 2020, remaining unchanged in the first quarter of 2021.

Monetary policy can ease financial conditions and improve the resilience of households and firms to the economic implications of COVID-19. In addition to the continued easing of interest rates, the SARB has relaxed regulatory requirements on banks and taken important steps to ensure adequate liquidity in domestic markets. These actions are intended to free up more capital for lending by financial institutions to households and firms.

As indicated previously, monetary policy cannot on its own improve the potential growth rate of the economy or reduce fiscal risks. These should be addressed by implementing prudent macroeconomic policies and structural reforms that lower costs generally and increase investment opportunities, potential growth and job creation. Such steps will enhance the effectiveness of monetary policy and its transmission to the broader economy.

Global economic and financial conditions are expected to remain volatile for the foreseeable future. In this highly uncertain environment, future decisions will continue to be data-dependent and sensitive to the balance of risks to the outlook. The MPC will seek to look through temporary price shocks and focus on second-round effects. As usual, the repo rate projection from the QPM remains a broad policy guide, changing from meeting to meeting in response to new data and risks.

Repurchase rate forecast (July 2020)
Per cent
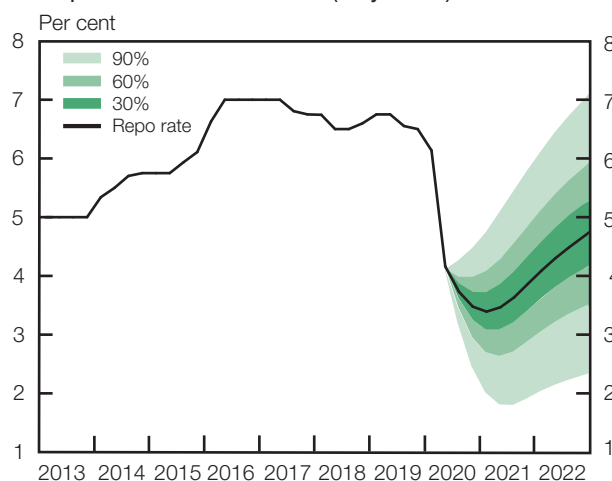
The uncertainty bands for the repo rate are based on historical forecasting experience and stochastic simulations in the QPM. The bands are symmetric and do not reflect any assessment of upside or downside risk.

Source: SARB

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5   The latest Bureau for Economic Research (BER) survey has expectations for 2020 down by 0.5 percentage points to 3.9% and to 4.5% (from 4.6%) for 2021. Five-year-ahead inflation expectations also remained at 4.7%. Household inflation expectations rose from 4.8% to 6.2%. Market analysts (Reuters Econometer) expect inflation to be 3.4% (from 3.5%) in 2020, 4.1% (unchanged) in 2021 and 4.3% in 2022 (from 4.5%). Market-based rates are calculated from the break-even inflation rate, which is the yield differential between conventional and inflation-linked bonds. These are at 2.5% for the 5-year, 4.8% for the 10-year and 6% for the 15-year break-even inflation rate.

Summary of assumptions: Monetary Policy Committee meeting on 23 July 2020*

1. Foreign sector assumptions

	Actual			Forecast		
	2017	2018	2019	2020	2021	2022
1. Real GDP growth in South Africa's major trading-partner countries	3.4%	3.2%	2.2%	-4.7%	4.3%	4.0%
	(3.4%)	(3.2%)	(2.2%)	(-3.4%)	(4.3%)	(3.7%)
2. Output gap in South Africa's major trading-partner countries (ratio to potential GDP)	0.0%	0.1%	-0.1%	-4.2%	-2.9%	-1.0%
	(0.0%)	(0.1%)	(-0.1%)	(-3.0%)	(-3.1%)	(-2.0%)
3. Change in international commodity prices in US$ (excluding oil)	18.2%	11.2%	-0.9%	9.3%	-3.9%	3.1%
	(18.2%)	(11.2%)	(-0.9%)	(2.0%)	(-6.0%)	(3.2%)
4. Brent crude (US$/barrel)	54.2	71.0	64.4	40.0	45.0	50.0
	(54.2)	(71.0)	(64.4)	(37.0)	(45.0)	(50.0)
5. Change in world food prices (US$)	8.1%	-3.5%	1.8%	-3.0%	4.5%	1.5%
	(8.1%)	(-3.5%)	(1.8%)	(-3.4%)	(5.1%)	(1.5%)
6. Change in international consumer prices	1.7%	2.0%	1.4%	0.5%	1.4%	1.3%
	(1.7%)	(2.0%)	(1.4%)	(0.5%)	(1.4%)	(1.3%)
7. International policy interest rate	0.5%	0.9%	1.1%	0.1%	0.0%	0.0%
	(0.5%)	(0.9%)	(1.1%)	(0.1%)	(0.0%)	(0.0%)

2. Domestic sector assumptions

	Actual			Forecast		
	2017	2018	2019	2020	2021	2022
1. Change in electricity price	4.7%	5.2%	9.6%	9.6%	6.7%	6.0%
	(4.7%)	(5.2%)	(9.6%)	(9.6%)	(6.7%)	(6.0%)
2. Change in fuel taxes and levies	8.3%	8.9%	5.8%	5.8%	5.2%	5.0%
	(8.3%)	(8.9%)	(5.8%)	(5.8%)	(5.2%)	(5.0%)
3. Potential growth	1.2%	0.9%	0.6%	-2.1%	1.1%	1.3%
	(1.2%)	(0.9%)	(0.6%)	(-2.1%)	(1.1%)	(1.3%)
4. Inflation target midpoint	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
	(4.5%)	(4.5%)	(4.5%)	(4.5%)	(4.5%)	(4.5%)
5. Neutral real interest rate	1.7%	1.9%	2.1%	2.1%	2.2%	2.3%
	(1.7%)	(1.9%)	(2.1%)	(2.1%)	(2.2%)	(2.3%)

Notes

1. Shaded areas indicate forecast assumptions.
2. 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 66 and 67.

Summary of selected forecast results: Monetary Policy Committee meeting on 23 July 2020*

Selected forecast results (quarterly)

Year-on-year percentage change

	2019				2020				2021				2022			
1. Headline inflation	4.1 (4.1)				3.4 (3.4)				4.3 (4.4)				4.3 (4.4)			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	4.2	4.4	4.1	3.7	4.4	2.5	3.1	3.6	3.9	5.1	4.3	4.0	4.2	4.2	4.4	4.5
	(4.2)	(4.4)	(4.1)	(3.7)	(4.4)	(2.8)	(2.9)	(3.7)	(4.0)	(5.0)	(4.6)	(4.1)	(4.2)	(4.3)	(4.4)	(4.5)
2. Core inflation	2019				2020				2021				2022			
	4.1 (4.1)				3.3 (3.5)				3.9 (3.8)				4.1 (4.1)			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	4.4	4.2	4.1	3.9	3.7	3.1	3.1	3.3	3.5	4.0	4.0	3.9	4.0	4.0	4.1	4.2
	(4.4)	(4.2)	(4.1)	(3.9)	(3.7)	(3.5)	(3.3)	(3.5)	(3.7)	(3.9)	(3.9)	(3.9)	(4.0)	(4.0)	(4.1)	(4.2)

Notes

1. Shaded areas indicate the forecasts of the Monetary Policy Committee.
2. The figures in brackets represent the previous forecasts of the Monetary Policy Committee.

Selected forecast results (annual)

	2017	2018	2019	Forecast		
				2020	2021	2022
1. GDP growth	1.4%	0.8%	0.2%	-7.3%	3.7%	2.8%
	(1.4%)	(0.8%)	(0.2%)	(-7.0%)	(3.8%)	(2.9%)
2. Output gap (ratio to potential GDP)	-1.0%	-1.0%	-1.5%	-7.0%	-4.3%	-2.8%
	(-1.0%)	(-1.0%)	(-1.5%)	(-6.7%)	(-4.0%)	(-2.5%)
3. Change in nominal effective exchange rate	9.9%	-1.0%	-7.0%	-14.2%	-0.9%	0.3%
	(9.9%)	(-1.0%)	(-7.0%)	(-14.8%)	(-0.6%)	(0.2%)
4. Change in real effective exchange rate	13.7%	1.4%	-4.5%	-11.8%	2.0%	3.2%
	(13.7%)	(1.4%)	(-4.5%)	(-12.3%)	(2.5%)	(3.2%)
5. Real exchange rate gap	1.2%	2.0%	-1.3%	-12.6%	-10.3%	-7.1%
	(1.2%)	(2.0%)	(-1.3%)	(-13.1%)	(-10.2%)	(-7.0%)
6. Repurchase rate (end of period)	6.75%	6.60%	6.50%	3.48%	3.87%	4.65%
	(6.75%)	(6.60%)	(6.50%)	(3.63%)	(4.10%)	(4.87%)
7. Current account balance (ratio to GDP)	-2.5%	-3.5%	-3.0%	-1.6%	-2.6%	-3.1%
	(-2.5%)	(-3.5%)	(-3.0%)	(-1.3%)	(-2.3%)	(-2.8%)

Notes

1. The nominal effective exchange rate (NEER) is based on the bilateral exchange rates of South Africa's three largest trading partners (the euro area, the US and Japan). The bilateral exchange rates are weighted by export trade weights.
2. The real effective exchange rate (REER) is the NEER deflated by the consumer price differential (between South Africa and the trade-weighted CPI of the euro area, the US and Japan).
3. The real exchange rate gap signifies the extent to which the real exchange rate deviates from its estimated equilibrium level. A positive gap shows an overvaluation of the currency, and vice versa.
4. The forecast of the current account balance is obtained from the SARB's Core Macroeconometric Model.
5. Shaded areas indicate the forecasts of the Monetary Policy Committee.
6. The figures in brackets represent the previous forecasts of the Monetary Policy Committee.

Statement of the Monetary Policy Committee

17 September 2020

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

Since the July meeting of the Monetary Policy Committee (MPC), the COVID-19 pandemic has abated in South Africa. A range of other countries, however, continue to experience a rapid spread of the virus. The economic effects of the crisis have been extensive and a recovery to pre-pandemic levels will take several years. Current forecasts from the International Monetary Fund (IMF) show global gross domestic product (GDP) contracting by about 4.9% this year, although the general economic outlook has improved somewhat.[1]   Second-quarter GDP outcomes for most economies have been massively negative, as expected. At this stage, third- and fourth- quarter recoveries for 2020 are expected to be robust. However, the pace of growth into 2021 could be modest, depending on control of new virus outbreaks, the extent of supply and demand losses, and future growth in investment and productivity.

Volatility in financial asset prices remains high, as virus developments and geopolitical events continue to impact heavily on market sentiment. While capital flows to emerging markets have generally picked up compared to the outflows experienced in March and April, the global environment continues to reflect pronounced levels of risk aversion.

Policy responses to the crisis have generally been robust across countries. In recent months, many fiscal and monetary authorities have opted to wait for new data to gauge conditions and assess the speed of economic recovery before making further adjustments.

The COVID-19 outbreak has had major health, social and economic impacts, presenting difficulties in forecasting domestic and global economic activity. The compilation of accurate economic statistics has and will remain severely challenged. On 8 September 2020, Statistics South Africa released its estimate of second-quarter growth in GDP and revised the first-quarter figure slightly. As expected, output was severely negative, with seasonally adjusted and annualised quarterly GDP contracting by 51% across all sectors except agriculture, which expanded.

The South African Reserve Bank (SARB) now forecasts a GDP contraction of 8.2% in 2020, compared to the 7.3% contraction forecast in July. The lower second quarter is followed by revised projections of a stronger expansion in the third and fourth quarters of 2020.

Further easing of the lockdown has supported economic growth. High-frequency indicators generally show a pickup in economic activity from extremely low levels in April and May. However, getting back to pre-pandemic output levels will take time. With a sharp decline in investment, potential growth estimates have been lowered, resulting in a smaller output gap over the forecast period. GDP is expected to grow by 3.9% in 2021 and by 2.6% in 2022.[2]

South Africa's terms of trade remain robust. Commodity export prices are high, while oil prices remain generally low. The Brent crude oil price increased between July and September, and is expected to average about US$42 per barrel in 2020, rising to US$47 per barrel in 2021 and US$52 per barrel in 2022.

The rand has depreciated by 14.5% against the US dollar since January and remains below its estimated long-run equilibrium value, despite considerable appreciation since June. The implied starting point for the rand forecast is R17.07 to the US dollar, compared with R17.93 at the time of the previous meeting.

Risks to the growth outlook are assessed to be balanced, but this is tentative and open to adjustments given the wide range of shocks hitting the economy, uncertainties involving the effectiveness of policy, and the sensitivity of sentiment to news flow.

The exceptionally accommodative policies in many advanced economies and improved economic outlooks have supported a partial recovery in global financial markets. But this has so far resulted in only a trickle of fresh capital flows to emerging markets, and financing conditions remain uncertain.

The sharp rise in South Africa's public financing needs arising from falling tax revenue and higher spending has been financed by higher private sector savings and borrowing from international financial institutions. Alongside the SARB's liquidity-management operations, resident investors, including banks, have increased purchases of sovereign bonds, helping to ease yields in recent weeks. However, the yield curve remains exceptionally steep, reflecting ongoing credit risk associated with high public borrowing needs.[3]

The SARB's headline consumer price inflation forecast averages 3.3% in 2020 and is lower than previously forecast

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1   Global growth in the QPM model is a trade-weighted average of South Africa's trading partners. For 2020 this is now at -4.2% (up from -4.7% in July) and revised up to 4.7% in 2021. Based on the June update of the *World Economic Outlook,* the IMF expects global growth of 5.4% in 2021.

2   Compared to -7.0%, 3.8% and 2.9% respectively in July.

3   This is measured by the spread between the R2036 and R2048 to the R186 bonds.

at 4.0% in 2021 and at 4.4% in 2022. The forecast for core inflation is lower at 3.4% in 2020, and remains broadly stable at 3.7% in 2021 and 4.0% in 2022.

The overall risks to the inflation outlook at this time appear to be balanced. Global producer price and food inflation have bottomed out. Oil prices remain low. Local food price inflation is expected to remain contained. Risks to inflation from currency depreciation are expected to stay muted while pass-through remains low. While there are no demand-side pressures evident, electricity and other administered prices remain a concern. Additional exchange rate pressures could result from heightened fiscal risks.

Importantly, expectations of future inflation continued to soften this year and have shifted slightly below the midpoint of the target band for 2021. Market-based expectations for short- and medium-term inflation have eased slightly, while longer-term inflation expectations remain higher.[4]

Despite a higher-than-expected inflation outcome in July and elevated levels of country financing risk, the Committee notes that the economic contraction and slow recovery will keep inflation below the midpoint of the target range for this year. Barring the risks outlined earlier, inflation is expected to be well contained over the medium term, remaining below but close to the midpoint in 2021 and 2022.

Against this backdrop, the MPC decided to keep rates unchanged at 3.5% per annum. Two members of the Committee preferred a 25 basis point cut and three preferred to hold rates at the current level.

The implied policy rate path of the Quarterly Projection Model (QPM) indicates no further repurchase (repo) rate cuts in the near term, and two rate increases in the third and fourth quarters of 2021.

Monetary policy has eased financial conditions and improved the resilience of households and firms to the economic implications of COVID-19. The SARB has taken important steps to ensure adequate liquidity in domestic markets. Regulatory capital relief has also been provided, sustaining lending by financial institutions to households and firms.

Monetary policy, however, cannot on its own improve the potential growth rate of the economy or reduce fiscal risks. These should be addressed by implementing prudent macroeconomic policies and structural reforms that lower costs generally and increase investment opportunities, potential growth and job creation. Such steps will enhance the effectiveness of monetary policy and its transmission to the broader economy.

Global economic and financial conditions are expected to remain volatile for the foreseeable future. In this highly uncertain environment, future decisions will continue to be data-dependent and sensitive to the balance of risks to the outlook. The MPC will seek to look through temporary price shocks and focus on second-round effects. As usual, the repo rate projection from the QPM remains a broad policy guide, changing from meeting to meeting in response to new data and risks.

Repurchase rate forecast (September 2020)
Per cent
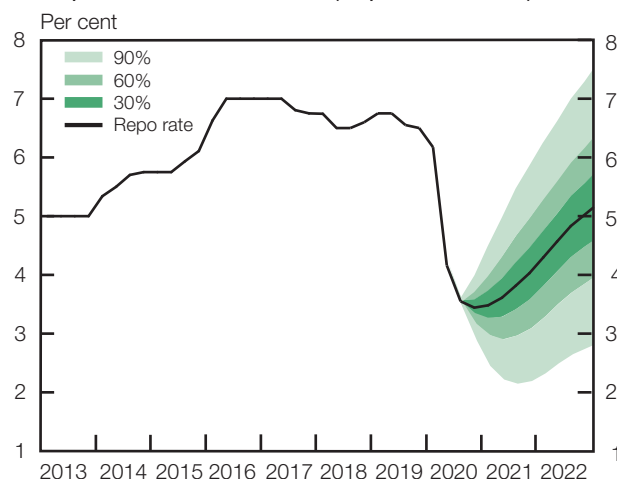
The uncertainty bands for the repo rate are based on historical forecasting experience and stochastic simulations in the QPM. The bands are symmetric and do not reflect any assessment of upside or downside risk.

Source: SARB

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4   The latest Bureau for Economic Research (BER) survey has expectations for 2020 down by 0.3 percentage points to 3.6% and to 4.2% (from 3.9% and 4.5%) for 2021. Five-year-ahead inflation expectations eased from 4.7% to 4.5%. Household inflation expectations are down from 6.2% to 5.9%. Market analysts (Reuters Econometer) expect inflation to be 3.3% (from 3.1%) for 2020, 4.2% (from 4.0%) in 2021 and 4.4% (from 4.3%) in 2022. Market-based rates are calculated from the break-even inflation rate, which is the yield differential between conventional and inflation-linked bonds. These are at 3.3% for the 5-year, 5.5% for the 10-year and 6.4% for the 15-year break-even inflation rate.

Summary of assumptions: Monetary Policy Committee meeting on 17 September 2020*

1. Foreign sector assumptions

	Actual			Forecast		
	2017	2018	2019	2020	2021	2022
1. Real GDP growth in South Africa's major trading-partner countries	3.4%	3.3%	2.2%	-4.2%	4.7%	4.0%
	(3.4%)	(3.2%)	(2.2%)	(-4.7%)	(4.3%)	(4.0%)
2. Output gap in South Africa's major trading-partner countries (ratio to potential GDP)................	0.0%	0.4%	0.4%	-4.0%	-2.2%	-0.2%
	(0.0%)	(0.1%)	(-0.1%)	(-4.2%)	(-2.9%)	(-1.0%)
3. Change in international commodity prices in US$ (excluding oil)................	18.2%	11.1%	-0.9%	13.3%	-4.4%	2.7%
	(18.2%)	(11.2%)	(-0.9%)	(9.3%)	(-3.9%)	(3.1%)
4. Brent crude (US$/barrel)	54.2	71.0	64.4	42.0	47.0	52.0
	(54.2)	(71.0)	(64.4)	(40.0)	(45.0)	(50.0)
5. Change in world food prices (US$)	6.6%	-2.2%	-0.8%	-1.4%	3.4%	1.5%
	(8.1%)	(-3.5%)	(1.8%)	(-3.0%)	(4.5%)	(1.5%)
6. Change in international consumer prices	1.7%	2.0%	1.4%	0.8%	1.4%	1.5%
	(1.7%)	(2.0%)	(1.4%)	(0.5%)	(1.4%)	(1.3%)
7. International policy interest rate................	0.5%	0.9%	1.1%	0.2%	0.0%	0.0%
	(0.5%)	(0.9%)	(1.1%)	(0.1%)	(0.0%)	(0.0%)

2. Domestic sector assumptions

	Actual			Forecast		
	2017	2018	2019	2020	2021	2022
1. Change in electricity price	4.7%	5.2%	9.6%	9.1%	8.2%	10.0%
	(4.7%)	(5.2%)	(9.6%)	(9.6%)	(6.7%)	(6.0%)
2. Change in fuel taxes and levies................	8.3%	8.9%	5.8%	5.7%	5.0%	5.0%
	(8.3%)	(8.9%)	(5.8%)	(5.8%)	(5.2%)	(5.0%)
3. Potential growth................	1.2%	0.7%	0.3%	-3.2%	1.4%	0.9%
	(1.2%)	(0.9%)	(0.6%)	(-2.1%)	(1.1%)	(1.3%)
4. Inflation target midpoint................	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
	(4.5%)	(4.5%)	(4.5%)	(4.5%)	(4.5%)	(4.5%)
5. Neutral real interest rate................	1.7%	1.9%	2.1%	2.1%	2.2%	2.3%
	(1.7%)	(1.9%)	(2.1%)	(2.1%)	(2.2%)	(2.3%)

Notes

1. Shaded areas indicate forecast assumptions.
2. 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 66 and 67.

Summary of selected forecast results: Monetary Policy Committee meeting on 17 September 2020*

Selected forecast results (quarterly)

Year-on-year percentage change

	2019				2020				2021				2022			
	4.1 (4.1)				3.3 (3.4)				4.0 (4.3)				4.4 (4.3)			
1. Headline inflation	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	4.2	4.4	4.1	3.7	4.4	2.4	3.2	3.3	3.4	4.6	4.0	4.2	4.3	4.4	4.4	4.5
	(4.2)	(4.4)	(4.1)	(3.7)	(4.4)	(2.5)	(3.1)	(3.6)	(3.9)	(5.1)	(4.3)	(4.0)	(4.2)	(4.2)	(4.4)	(4.5)
	2019				2020				2021				2022			
	4.1 (4.1)				3.4 (3.3)				3.7 (3.9)				4.0 (4.1)			
2. Core inflation	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	4.4	4.2	4.1	3.9	3.7	3.1	3.3	3.4	3.5	3.8	3.7	3.8	3.9	3.9	4.0	4.2
	(4.4)	(4.2)	(4.1)	(3.9)	(3.7)	(3.1)	(3.1)	(3.3)	(3.5)	(4.0)	(4.0)	(3.9)	(4.0)	(4.0)	(4.1)	(4.2)

Notes

1. Shaded areas indicate the forecasts of the Monetary Policy Committee.
2. The figures in brackets represent the previous forecasts of the Monetary Policy Committee.

Selected forecast results (annual)

				Forecast		
	2017	2018	2019	2020	2021	2022
1. GDP growth	1.4%	0.8%	0.2%	-8.2%	3.9%	2.6%
	(1.4%)	(0.8%)	(0.2%)	(-7.3%)	(3.7%)	(2.8%)
2. Output gap (ratio to potential GDP)	-0.9%	-0.9%	-1.0%	-6.5%	-4.0%	-2.3%
	(-1.0%)	(-1.0%)	(-1.5%)	(-7.0%)	(-4.3%)	(-2.8%)
3. Change in nominal effective exchange rate	9.9%	-1.0%	-7.0%	-14.0%	-0.1%	0.7%
	(9.9%)	(-1.0%)	(-7.0%)	(-14.2%)	(-0.9%)	(0.3%)
4. Change in real effective exchange rate	13.7%	1.4%	-4.5%	-11.9%	2.5%	3.5%
	(13.7%)	(1.4%)	(-4.5%)	(-11.8%)	(2.0%)	(3.2%)
5. Real exchange rate gap	1.2%	2.0%	-1.3%	-12.7%	-9.8%	-6.3%
	(1.2%)	(2.0%)	(-1.3%)	(-12.6%)	(-10.3%)	(-7.1%)
6. Repurchase rate (end of period)	6.75%	6.60%	6.50%	3.44%	4.03%	5.03%
	(6.75%)	(6.60%)	(6.50%)	(3.48%)	(3.87%)	(4.65%)
7. Current account balance (ratio to GDP)	-2.5%	-3.5%	-3.0%	-1.0%	-1.9%	-2.2%
	(-2.5%)	(-3.5%)	(-3.0%)	(-1.6%)	(-2.6%)	(-3.1%)

Notes

1. The nominal effective exchange rate (NEER) is based on the bilateral exchange rates of South Africa's three largest trading partners (the euro area, the US and Japan). The bilateral exchange rates are weighted by export trade weights.
2. The real effective exchange rate (REER) is the NEER deflated by the consumer price differential (between South Africa and the trade-weighted CPI of the euro area, the US and Japan).
3. The real exchange rate gap signifies the extent to which the real exchange rate deviates from its estimated equilibrium level. A positive gap shows an overvaluation of the currency, and vice versa.
4. The forecast of the current account balance is obtained from the SARB's Core Macroeconometric Model.
5. Shaded areas indicate the forecasts of the Monetary Policy Committee.
6. 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 broadly determined using the Global Projection Model (GPM), which is 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 six largest trading partners, namely the euro area, the United States (US), the United Kingdom (UK), Japan, China and India. Other countries considered, although with small weights, are Brazil, Mexico and Russia. The remaining trading partners are grouped into the 'Rest of Countries' bloc. Since sub-Saharan Africa is also a major trading region for South Africa (but does not have a bloc in the GPM), it is modelled separately and then combined with the aggregate of all the countries in the GPM to make up total trading-partner growth.

2. As with GDP growth, the **output gap** is determined using the GPM and is adjusted in a similar way. The output gap is driven by a combination of country-specific domestic factors, external factors, and financial-real linkages (beyond interest rate and exchange rate effects). Domestic factors include expectations of future demand and medium-term interest rates. External factors include exchange rate impacts on demand, direct spillovers through trade with trading-partner countries, and foreign demand.

3. The **commodity price index** is a weighted aggregate price index of the major South African export commodities.

4. The **Brent crude oil price** is expressed in US dollars per barrel. The assumption incorporates supply and demand dynamics as well as oil inventories (of all grades). The assumption is also informed by projections from the US Energy Information Administration, the Organization of the Petroleum Exporting Countries (OPEC) and Reuters.

5. **World food prices** is the composite food price index of the United Nations (UN) Food and Agriculture Organization (FAO) in US dollars. It 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 and imbalances from the anticipated trend in international food supplies relative to expected food demand pressures.

6. **International consumer prices** are also broadly determined using the GPM. The index is an aggregate of the consumer price indices of the euro area, the US and Japan, weighted by their relative trade shares. Consumer prices are determined for each of these economies by accounting for inflation expectations, demand pressures, and pass-through from changes in the relevant exchange rate. Other institutional forecasts for international consumer prices are also considered.

7. **International policy interest rates** are again broadly determined using the GPM. Interest rates are a weighted average of the policy rates of the euro area, the US and Japan. They are individually determined by a 'Taylor-type' monetary policy rule. The communications of the relevant central banks and other institutional forecasts are also considered.

Domestic sector assumptions

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

2. **Fuel taxes and levies** are the total domestic taxes and costs included in the price of fuel paid at the pump. They include the Road Accident Fund (RAF) levy, the fuel levy, retail and wholesale margins, the slate levy, and other minor levies. The two major taxes, which are set by the Minister of Finance in the annual national Budget, are the RAF levy and the fuel levy. The income generated by the RAF levy is utilised to compensate third-party victims of motor vehicle accidents, while the fuel levy is used to provide funding for road infrastructure.

3. **Potential growth** is derived from the South African Reserve Bank's (SARB) 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 (*SARB Working Paper Series No. WP/14/08*).

4. The **midpoint of the inflation target range** is 4.5%. The official inflation target range is 3–6%.

5. The **neutral real interest rate (NRIR)** is the interest rate consistent with stable inflation and output in line with the economy's potential. This variable is the basis for judging whether a given policy stance is expansionary, contractionary or neutral.

Glossary

Advanced economies: Advanced economies are countries with high gross domestic product (GDP) per capita, diversified exports, and close integration into the global financial system.

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.

Brent crude: Brent crude is a light and sweet blend of oil from five different fields in the North Sea. The price of Brent crude is one of the benchmark oil prices in international markets.

Budget deficit: A budget deficit indicates the extent to which government expenditure exceeds government revenue.

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

Commodities: 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 the volatile elements (e.g. food and energy prices). The South African Reserve Bank's (SARB) forecasts and discussions refer to headline CPI excluding food, non-alcoholic beverages (NAB), fuel and electricity prices.

Crude oil price: This is the United States (US) dollar price per barrel of unrefined oil. See also 'Brent crude' above.

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 transfers.

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.

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 the 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, as measured on a monthly basis by Statistics South Africa (Stats SA). 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.

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

Neutral real interest rate (NRIR): The NRIR is the level at which the real interest rate will settle once the output gap is closed and inflation is stable.

Nominal effective exchange rate (NEER): The 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 NEER 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: the euro (29.26%), the Chinese yuan (20.54%), the US dollar (13.72%), the Japanese yen (6.03%), and the British pound (5.82%). Index: 2010 = 100. See also 'Real effective exchange rate' below.

Output gap/potential growth: Potential growth is the rate of GDP growth that could theoretically be achieved if all the 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.

Policy rate: A policy rate is the interest rate used by a central bank to implement monetary policy.

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

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

Repurchase rate (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.

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

Unit labour cost (ULC): A ULC 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

AE   advanced economy

BER   Bureau for Economic Research

CPI   consumer price index

COVID-19   coronavirus disease 2019

CSIR   Council for Scientific and Industrial Research

DM   developed market

ECB   European Central Bank

EM   emerging market

Fed   United States Federal Reserve

FRA   forward rate agreement

FX   foreign exchange

G3   Group of Three (United States, euro area, Japan)

G4   Group of Four (United States, euro area, Japan, United Kingdom)

GDP   gross domestic product

GPM   Global Projection Model

IMF   International Monetary Fund

MPC   Monetary Policy Committee

MPR   *Monetary Policy Review*

MYPD4   Fourth Multi-Year Price determination

NAAMSA   National Association of Automobile Manufacturers of South Africa

NERSA   National Energy Regulator of South Africa

NT   National Treasury

OER   owners' equivalent rent

PCE   personal consumption expenditure

PMI   Purchasing Managers' Index

PPP   purchasing power parity

QPM   Quarterly Projection Model

RCA   regulatory clearing account

repo   repurchase [rate]

SANRAL   South African National Roads Agency Limited

SARB   South African Reserve Bank

SARS   South African Revenue Service

SIT   services, income and current transfer

Stats SA   Statistics South Africa

UAE   United Arab Emirates

UK   United Kingdom

US   United States

WGBI   World Government Bond Index