South African Reserve Bank

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Johannesburg
18 June 2020

The South African Reserve Bank, the coronavirus shock, and 'the age of magic money'

Good afternoon

It is now clear that the COVID-19 outbreak will produce the worst economic downturn in a century. We expect that 'the great lockdown' will cause output to contract by about 7% this year. The last time a figure of that magnitude appears in our data is 1931, during the Great Depression, when output fell by 6.2%. It had declined by 6.1% in 1930.

The South African Reserve Bank (SARB) has responded flexibly, quickly and aggressively to this crisis. So far, these actions have improved market functioning, and are supporting economic activity. However, the larger economic outlook remains uncertain. We are watching the data closely, and we are ready to act as appropriate, in accordance with our mandate.

Fortunately, central bank governors tend to get a lot of advice, and I have been particularly well-supplied with suggestions for SARB policy recently. Allow me to add to the national public debate today.

I will cover four main points.

First, the bond-buying programmes fall on a spectrum, running from limited to larger interventions. Conducting any of them successfully is made possible by our inflation-targeting framework and the flexible approach we take to it.

Second, the scale of asset buying we do should follow from a clear sense of why markets have been malfunctioning. I'll distinguish between liquidity and sustainability problems. Central banks can provide liquidity, while challenges like fiscal sustainability are best dealt with elsewhere.

Third, we need more clarity around the mechanics of central bank asset purchases, quantitative easing (QE), and the 'zero lower-bound'. These concepts are pretty hard to understand. It is easy, for example, to take the mistaken view that QE is 'free money'.

Finally, I will reflect on the utility of inflation targeting for addressing the current economic conditions and potential depression-type conditions. The intellectual heritage of inflation targeting traces back to the study of the Great Depression, so we can say that depression fighting is 'in its genes'.

As a starting point, it is perhaps worth reviewing what we have done to date. Our five most important measures have been as follows.

1. We have lowered interest rates. At the March meeting of the Monetary Policy Committee (MPC), we reduced the repurchase rate (repo rate) by 100 basis points. We then held an emergency MPC meeting in April, using new forecasts that incorporated the lockdown, and cut the repo rate by another 100 basis points. In May, we cut it by a further 50 basis points. Including our January cut, the cumulative reduction in the repo rate for 2020 now stands at 275 basis

points.[1] To compare, the emerging market median is 100 basis points.[2] The repo rate is now at its lowest level on record, and below zero in real terms.

2. We have made liquidity abundantly available to banks, through a range of facilities in addition to our usual weekly repo auctions, with take-up peaking at R83 billion in March.

3. We have provided regulatory relief to the financial sector, to help maintain the flow of credit in the economy despite the temporary payment problems for firms and households caused by the COVID-19 shock.[3]

4. We have offered funding for small and medium enterprises (SMEs), starting at R100 billion, with an option to scale up to R200 billion over time, or about 4% of gross domestic product (GDP). This facility is backstopped by a guarantee from National Treasury.

5. We have been buying government bonds in the secondary market, to improve market functioning. The total of new purchases now stands at around R25 billion, which is an increase in our bond portfolio of about 0.6% of GDP from pre-crisis levels. This is comparable to purchases by emerging market peers.[4]

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[1] The cumulative reduction in the repo rate stands at 300 basis points since July 2019.

[2] As of 4 June 2020, based on a sample of 66 emerging markets. Large cuts from high starting points, as in Argentina (-1 200 basis points, from 50%), distort the mean change, making the median a better representation of the central tendency of the data.

[3] For details, see the Prudential Authority's 'Press release on regulatory relief measures and guidance to the banking sector in response to COVID-19, published on 6 April 2020, available at https://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/9842/Prudential%20Authority%20Media%20Release%20-%20Regulatory%20relief%20and%20guidance%20to%20the%20banking%20sector.pdf.

[4] The Bank for International Settlements (BIS) gives data for bond purchases by seven emerging markets. Of these countries, four have purchased bonds worth 0.2% of GDP or less, Thailand is at 0.6% of GDP, Colombia at 0.8% of GDP and Chile at 2.8% of GDP (in Chile, the policy rate is now at its 'technical minimum', according to MPC minutes). The SARB's purchases to date, as of the latest published data, are at 0.6% of GDP. See Yavus Arslan, Mathias Drehmanm and Boris Hofman, 2 June 2020, 'Central bank bond purchases in emerging market economies, *Bank for International Settlements Bulletin No. 20,* available at https://www.bis.org/publ/bisbull20.pdf.

Of these interventions, it is the last one that has prompted the most discussion, so it deserves extra attention.

A spectrum of bond buying

In responding to the COVID-19 crisis, a whole range of central banks, both in advanced economies and in emerging markets, has launched bond-buying programmes. These programmes should be thought of as sitting on a spectrum, measured by what the various central banks are trying to do. Some are buying huge quantities of assets to provide stimulus despite the constraint of the zero lower-bound. Others are conducting more limited purchases, to improve market functioning. Many advanced economies sit on the far side of the spectrum. Some emerging markets, like Brazil, and us, sit at the near end: we are aiming to improve market functioning.[5]

Recognising this distinction, the Bank for International Settlements (BIS) has referred to emerging market operations as 'Bond Purchase Programmes', or BPPs.[6] Others have put the term 'QE' in quotation marks, to convey the nuance. Sometimes I think that if we just told people our asset purchases were QE, they might stop complaining that 'the SARB is conservative' – a criticism that has somehow survived despite surprise at how much the SARB has already done. We should not, however, simply assume that our conditions require full-blown QE, or that we can pull it off without creating unintended and damaging consequences down the road.

Rather, any decision to move along the spectrum needs to be embedded in our inflation-targeting framework. Getting the inflation forecast right gives us credibility to shift along the bond-buying policy spectrum without tipping into higher inflation. If inflation is collapsing and existing policy measures prove not enough to bring it back to target, we can move further. Judging by the recent moderation in long-term rates and lower inflation levels, it appears we have got the overall policy effort about right

[5] Bryan Harris, 8 June 2020, 'Brazil central bank chief resists using new QE powers', *Financial Times*, available at https://www.ft.com/content/e6eb0759-3a14-47ec-9835-a0b5d509b97c.
[6] Yavus Arslan, Mathias Drehman and Boris Hofman, 2 June 2020, 'Central bank bond purchases in emerging market economies', *Bank for International Settlements Bulletin No. 20,* available at https://www.bis.org/publ/bisbull20.pdf.

for the moment. But we are in an environment of unprecedented uncertainty, and we will adjust this policy effort, along that spectrum, as economic conditions and forecasts change.

The South African Reserve Bank's bond purchases

When the SARB began intervening in the South African government bond market, on 20 March, we had seen trading thin out, with even small transactions causing bond prices to move abruptly. By purchasing bonds in the secondary market, the SARB has helped restart price discovery and has encouraged the re-entry of private sector participants.

We continue to monitor the government bond market and to buy bonds where we observe signs of stress at different maturities of the yield curve. This will continue as needed to restore normal market functioning. Up to now, it appears our interventions have worked. Volatility has subsided, and bond yields have largely normalised. While we are not targeting yields specifically, the fact that the benchmark 10-year yield is back to where it was in February suggests that stress in the system has eased.

We are not the only country experiencing liquidity problems in its bond market. Indeed, at the height of the crisis, even the ultra-deep and liquid United States (US) Treasury market was disrupted, which just goes to show that, in a major crisis, even the best borrowers can have liquidity problems.[7] Solving these problems is one of the oldest duties of central banks; such practices are literally centuries older than the term 'quantitative easing'.

The trouble is that liquidity problems are not the only factor affecting the domestic bond market. There are also problems of fiscal sustainability in the mix, which requires us to act, and to communicate, with caution. We need to avoid what one expert has

[7] Jeffrey Cheng, David Wessel and Joshua Younger, 1 May 2020, 'How did COVID-19 disrupt the market for US Treasury debt?', available at https://www.brookings.edu/blog/up-front/2020/05/01/how-did-covid-19-disrupt-the-market-for-u-s-treasury-debt/.

called ‘the mother of all sudden stops’[8] turning into a permanent, and specifically South African, problem.

In general, I avoid commenting on fiscal issues, but it is difficult to discuss sustainability without mentioning some fiscal facts. The most important ones are these.

When the COVID-19 shock hit, South Africa was already running crisis-level deficits – over 6% of GDP in 2019. Our debt stock was on a rising trajectory.[9] Unfortunately, the coronavirus is now forcing an additional fiscal deterioration.

This has resulted in South Africa losing its last investment-grade credit rating. Market-based measures of sovereign risk, such as credit default swaps, have deteriorated further, both in absolute terms and relative to peers. This increase in sovereign risk has, in turn, further raised the return on bonds asked by investors, shifting up long-term rates for the whole economy, despite a very low repo rate.

As many economists have pointed out, sustainability concerns have to be addressed at a fiscal level. This means that the debt-to-GDP ratio has to stabilise, and those projections need to be realistic. If debt sustainability can be assured, with high probability, then near-term borrowing will be more readily available. In these circumstances, were government still to experience financing disruptions, we would feel confident that these were liquidity problems which the SARB could help address. However, presently, sustainability is not assured, which makes large-scale sovereign bond buying potentially inflationary.

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[8] Barry Eichengreen, quoted in Enda Curran and Michelle Jamrisko, 2 April 2020, ‘The same stimulus that rich countries lean on could worsen poor economies’, *Bloomberg Quint,* available at https://www.bloombergquint.com/global-economics/a-mother-of-all-sudden-stops-leaves-emerging-markets-in-crisis.

[9] Philippe Burger and Estian Calitz, 24 February 2020, ‘Soaring deficits and debt: restoring sustainability amidst low economic growth’, available at https://www.econ3x3.org/article/soaring-deficits-and-debt-restoring-sustainability-amidst-low-economic-growth.

The proposals on the table for more bond buying are not modest. I have seen one call for a trillion-rand fiscal stimulus financed by the SARB[10], and another for SARB bond purchases of R10-20 billion *per week* to continue until 'economic recovery is well underway'[11]. These numbers imply that the SARB would be buying, more or less, all new debt for the foreseeable future. Such interventions would crowd pension funds and other institutional investors out of the bond market.

Worse, we would be sending a dangerous signal. The crisis of the euro area, a few years back, showed how damaging it can be for countries to send mixed messages about their future monetary arrangements – the so-called 're-denomination risk'. In South Africa, the risk is that the domestic currency will no longer be issued by a credible, inflation-targeting central bank, but by one that is fully financing the public sector instead. Should we be going this way, some bondholders would probably be enthusiastic about a large bond purchase programme so they could dump their bonds on the SARB and minimise their losses. And why shouldn't they be looking for a way out? Imagine the situation: we would be taking over public sector financing, with no clear plan for how to stop buying a potentially ever-larger issuance of bonds.

And although I have heard it suggested that we should do QE with conditions, we need to keep in mind that we are a *national* central bank.[12] The Constitution tells me the SARB must protect the value of the currency, and that we must have regular discussions with the Finance Minister. Nowhere does it say I can set conditions. As such, the SARB cannot take responsibility for solving a fiscal sustainability problem, nor can it jeopardise the value of the currency by agreeing to inflationary money printing.

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[10] Owen Willcox, 2020, 'Macroeconomic response to COVID-19', available at https://www.tips.org.za/policy-briefs/item/3798-macroeconomic-response-to-covid-19.

[11] Andrew Donaldson, 9 April 2020, 'Monetary management, financial markets and public debt: responding to COVID-19 and the economic standstill', *Policy Brief #3,* available at https://covid19economicideas.org/2020/04/09/monetary-management-financial-markets-and-public-debt-responding-to-covid-19-and-the-economic-standstill/.

[12] It is relevant to note here that when the European Central Bank (ECB) announced its programme of Outright Monetary Transactions, to give effect to Mario Draghi's famous 'whatever it takes' commitment, it still insisted on 'strict and effective conditionality' through 'an appropriate European Financial Stability Facility / European Stability Mechanism (EFSF/ESM) programme'. The ECB did not itself take on the design or enforcement of conditionality arrangements. See https://www.ecb.europa.eu/press/pr/date/2012/html/pr120906_1.en.html.

Money creation, inflation and sterilisation

But why is it that monetary financing of the fiscus could be inflationary? As I have said elsewhere, I am not worried about high inflation this year, especially given the recent collapse of oil prices. But the fact that 2020 inflation is likely to be low in no way guarantees that inflation will stay low, and therefore that we can stop worrying about it permanently. In fact, if we commenced large-scale QE with a significantly positive inflation rate, we would have to do one of two things: either sterilise the QE purchases by absorbing those Rands back onto our balance sheet, or let interest rates fall below the MPC target, ultimately to zero. The problem with setting the repo rate too low is inflation. The problem with sterilisation is the cost. QE proponents in South Africa have not appreciated the inescapability of this choice.

Let me explain how this works in more detail.

When the central bank creates money, we create one very specific type of money, which is bank reserves, also called base money. The base-money system is a closed loop, which means that the central bank, as the monopoly provider of new base money, is the only institution that can change the total supply in the system. This is the basis for monetary policy, because it confers the power to set the price of bank reserves.[13]

When a central bank conducts a QE operation, or any other kind of asset purchase, it pays in base money, which it deposits into the central bank account of the seller, be it government or a commercial bank. This changes the total supply of bank reserves in the system. The change in supply, in turn, affects the price. The crucial implication is that unsterilised asset purchases are, in the words of two economists, 'tantamount to

[13] On this point, and for a broader review of how different parts of the money supply are created, see 'Money creation in the modern economy', especially pp. 21-25, in the *Bank of England Quarterly Bulletin Q1 of 2014,* available at https://www.bankofengland.co.uk/-/media/boe/files/quarterly-bulletin/2014/money-creation-in-the-modern-economy.

an easing of interest rate policy'[14]. As I'll explain in more detail later, this is the main reason such policies can be inflationary.

During this crisis, we at the SARB have already expanded the supply of central bank money, and although we have seen some deviation of short-term rates from the repo target, these have not been too large or persistent. In practice, we have a deposit rate set at 200 basis points below repo, which functions as a floor for the system – it is essentially a sterilisation instrument.[15] As predicted by theory, we have therefore seen actual short-term rates fluctuate between the repo rate and this deposit rate, although they have mostly stayed close to the repo rate.

Of course, our interventions have not been going on too long, and this has been a period of severe stress in financial markets. Were we to implement a large, long-term increase in bank reserves, as would be required for a big QE programme, we would need to sterilise more aggressively to keep the actual overnight rate close to the repo target.

To do this, we could use various techniques. For instance, we could issue SARB debentures to soak up Rands, or we could pay banks to deposit their reserves back with us. Most of these policies would end up looking functionally equivalent to National Treasury funding itself at the short end of the curve,[16] benefitting from the low rates set by monetary policy, which is already happening. Importantly, none of these scenarios would be a free lunch: instead of Treasury paying interest, the costs would show up at the SARB, as the price of doing sterilisation operations.

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[14] Claudio Borio and Piti Disyatat, November 2009, 'Unconventional monetary policies: an appraisal', available at https://www.bis.org/publ/work292.pdf. These authors also discuss, as an alternative inflation driver, the possibility that public narratives about central bank actions will also have economic effects.

[15] This point is equivalent to the one made for India by former Governor of the Reserve Bank of India, Raghuram Rajan, in his widely circulated LinkedIn post titled 'Monetization: neither game-changer nor catastrophe in abnormal times', specifically point 5.

[16] Claudio Borio, 8 November 2019, 'Wise fiscal policy is not about helicopter money', available at https://www.bis.org/speeches/sp191108.htm#:~:text=A%20more%20balanced%20policy%20mix,rates%20further%20into%20negative%20territory

These costs would also be large. If we as the SARB bought R500 billion of government bonds, at par, and then sterilised them at the repo rate, we would be insolvent in about a year.[17] For this reason, taking the perspective of the broader public sector balance sheet, these operations would add to National Treasury's already large need to borrow. As such, a big QE operation wouldn't lift the budget constraint. Instead, it would end up saddling Treasury with yet another bankrupt government enterprise asking for a bailout.

The only exception to the rule that asset purchases entail sterilisation costs is if interest rates reach the zero lower-bound. This happens if even a zero interest rate is not enough to achieve a central bank's objectives, like hitting an inflation target. In this case, central banks can create enormous quantities of bank reserves, which just pile up on their balance sheets without creating any further downward pressure on overnight rates. The reason for this is that banks with excess reserves will have no incentive to lend them out for less than 0% interest. This has been the exact situation of major advanced economies for much of the past decade, and it has given these central banks almost unlimited scope to buy assets. Given this extraordinary situation, one economist has described this as 'the age of magic money'.[18]

This is not, however, the situation in most emerging markets. For us, a persistent and unsterilised increase in bank reserves would create downward pressure on interest rates. If this pressure were not released through sterilisation, it would force overnight rates to zero and keep them there. This is likely to be inflationary, even in a weak economy. Creating extra reserves lowers the effective short-term interest rate compared to the repo rate set by the MPC, whether demand in the economy is weak or not.

The trick, therefore, is to figure out what the appropriate short-term rate for South Africa is. Market expectations are that it will remain above 3% over the next few years. Our projections show much the same, and that this will be enough to return inflation

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[17] The SARB's capital and accumulated reserves were R20 billion as of 2018/19. Sterilisation costs for R500 billion would be around R19 billion a year.

[18] Sebastian Mallaby, July/August 2020, 'The age of magic money', *Foreign Affairs,* available at https://www.foreignaffairs.com/articles/united-states/2020-05-29/pandemic-financial-crisis.

to the 4.5% target midpoint. Even some proponents of SARB QE have acknowledged that a zero repo rate is too low for South Africa, and that it should at least be the rate ruling in the developed world plus a risk premium.[19]

Credit and saving behaviour is part of the story here, but we also need to consider the exchange rate effects, in addition to the inflation expectations channel. Remember: because we have inflation several percentage points higher than in the advanced economies, our real rates can go quite a bit lower than theirs. If we really need to create extra inflation, we can set the repo rate to be minus 2% or minus 3% in inflation-adjusted terms, and then we'll get inflation led by the exchange rate.

Inflation targeting in a crisis

This raises a really interesting question, however, about whether we are heading into another Great Depression, in which case such radical policies might become appropriate. There is no agreed definition of a depression, but the outstanding characteristics of the last Great Depression were large and sustained falls in both output and prices. To be clear: this is not our baseline forecast, nor is it the outlook according to all available quantitative projections. Nonetheless, we understand that we live in a highly uncertain world, and that conditions could deteriorate further. It is therefore worth contemplating how the SARB would react in a depression scenario.

One of the extraordinary things about the Great Depression is that our understanding of what went wrong, and why, has evolved dramatically over the ensuing decades. The popular contemporary view, which still features in high-school accounts of the Depression, is that it was caused by a stock market crash. But the US stock market crashed many times, both before and after 1929, with much less disastrous results. Another popular explanation is that the Depression was caused by a collapse in demand, which was only ultimately resolved by active New Deal fiscal policies. But

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[19] See, for instance, Christopher Malikane, 17 May 2020, 'Why arguments against quantitative easing hold no water', *Business Day*, available at https://www.businesslive.co.za/bd/opinion/2020-05-17-why-arguments-against-quantitative-easing-hold-no-water/

this explanation is also given secondary status by most modern scholars, who emphasise, instead, the role of central banks.[20]

As former US Federal Reserve (Fed) Chairman Ben Bernanke once said: “Regarding the Great Depression … We did it. We’re very sorry … [W]e won’t do it again.”[21] By this account, the major mistakes were threefold.

First, central banks permitted large-scale bank failures, destroying credit intermediation and contracting the money supply.

Second, and largely in response to the first factor, countries fell into deflation, which pushed up the real value of debt, bankrupting borrowers. For instance, in the US, prices fell by almost 10% a year in the worst years of the Depression.

Finally, central banks stuck to fixed exchange rates via the gold standard, which required some badly timed interest rate increases, such as the Fed’s decision to raise rates by 200 basis points in October 1931. Imagine raising rates with negative inflation and real rates already in double digits!

It was precisely these sorts of central bank mistakes that turned sharp downturns into depressions, and then prolonged those depressions. When these mistakes were reversed, countries recovered.[22]

This is relevant because modern central banks, including the SARB, have policy frameworks to avoid precisely these errors. We have *symmetric* price stability mandates, expressed in inflation targets, which tell central bankers to avoid too high and too low inflation. We have floating exchange rates which absorb shocks rather than magnifying them, and our accumulated credibility is now such that we can slash interest rates despite large exchange rate depreciations. We have financial stability

[20] These points are drawn from Ben S. Bernanke, 2 March 2004, ‘Remarks by Governor Ben S. Bernanke: money, gold, and the Great Depression’, available at https://www.federalreserve.gov/boarddocs/speeches/2004/200403022/default.htm.
[21] Ben S. Bernanke, 8 November 2002, ‘On Milton Friedman’s ninetieth birthday’, available at https://www.federalreserve.gov/BOARDDOCS/SPEECHES/2002/20021108/.
[22] See Liaquet Ahamed, 2009, *Lords of Finance*, especially chapter 20, titled ‘Gold fetters’.

mandates to ensure that the financial system keeps functioning under stress, and that too-big-to-fail institutions don't.

In sum, far from being irrelevant in a depression scenario, our frameworks incorporate the most profound lessons of the Great Depression. If we start to go down this path, our frameworks will immediately guide us to take remedial action. This fact alone should protect us from another Great Depression.

Conclusion

Frankly, rather than 1929 repeating itself, I am more worried about a different scenario. As a country, we have got ourselves into a lot of trouble. We are struggling to learn the lessons of these mistakes, and to achieve the consensus to fix them. And we are running out of time. We have just completed our worst growth decade on record – worse than the 1980s or the 1990s. On a per capita basis, South Africans have been getting poorer since 2013.

In the world, we are slipping backwards. In 1960, South African incomes were around 26% of those in the US. They are now down to 13%. They were 128% of Brazil's in 1960, a country to which we are often compared; they are now down to 65%. Rather, we risk following Argentina's path, where ideological conflicts and unstable macroeconomic policies produced a steady economic decline.[23]

In much of the period after 1994, we in South Africa surprised everyone by cooperating despite our differences, and delivering robust and sustainable macroeconomic policies. But those accomplishments have faded. Instead, we now find ourselves sitting on the highest debt pile in our history, arguing about printing money and waving ideological banners at each other.

[23] For a quick review of this experience, see 'The tragedy of Argentina: a century of decline', 17 February 2014, *The Economist,* available at https://www.economist.com/briefing/2014/02/17/a-century-of-decline.

It seems imperative that we work hard to define a new approach for the future. We have used up the legacy of low debt levels. Fortunately, we have achieved low inflation. We cannot squander that achievement on the quixotic belief that if we just engineer higher inflation, somehow growth will permanently rise. Our own experience shows that belief to be wrong, and we can set out now on a new path with low interest rates if we guard and value them. We have nearly all the ingredients needed to get permanently stronger economic growth, create jobs, and rid ourselves of poverty and inequality. But we need to choose, as a society, to do these things.

First, let's make sustainable choices that get us past the COVID-19 pandemic and help us grow in future.

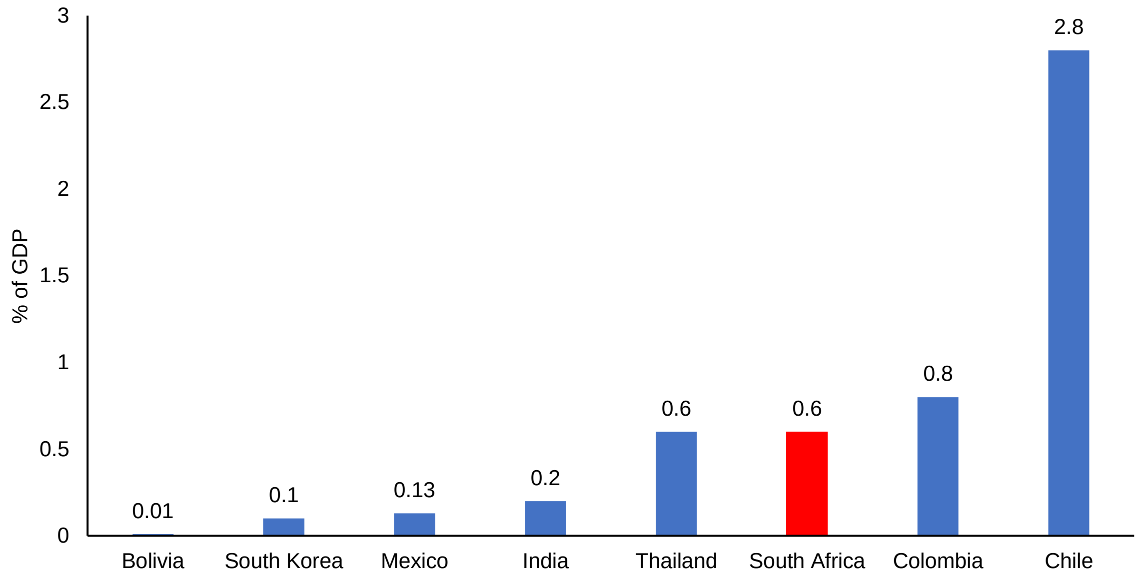
Second, let's open up for investment to increase our productivity.

Finally, let's work together, pragmatically, to choose the reforms that will create jobs and prosperity.

Thank you.

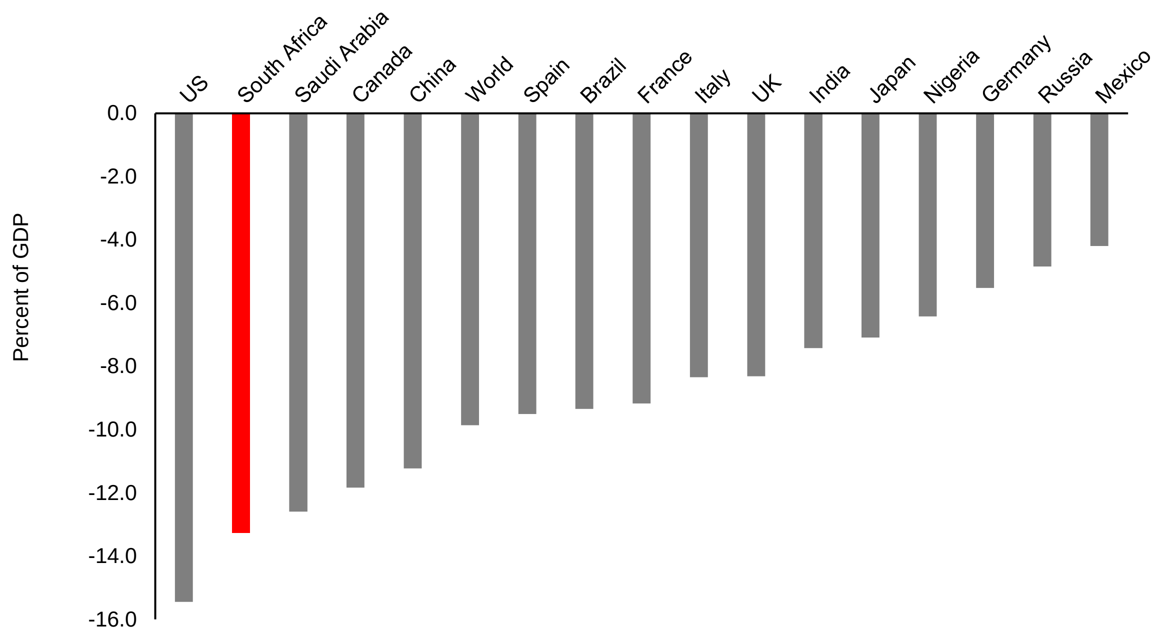
Supporting charts

Central bank bond-buying programmes*

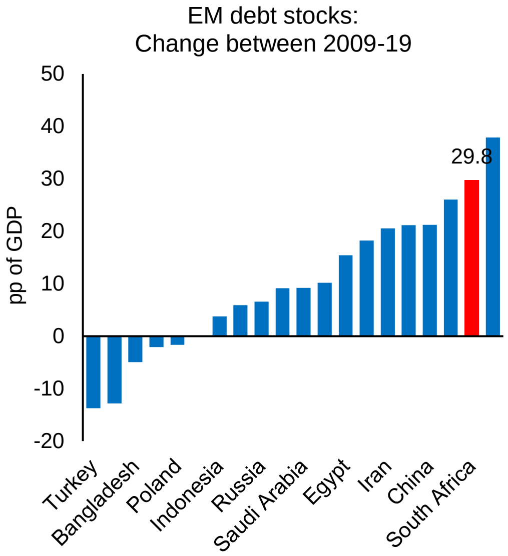


*Announced March/April 2020. Sources: BIS & SARB

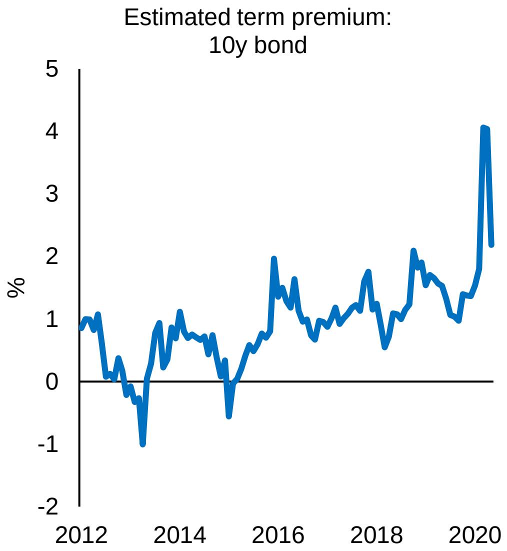
2020 General government balance projections



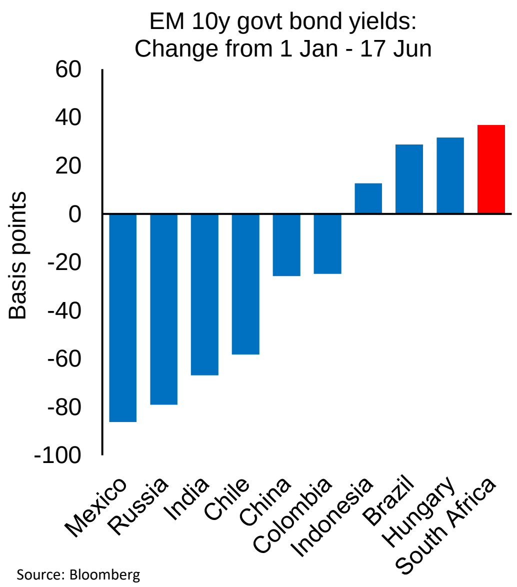
Source: IMF Fiscal Monitor, Apr 2020



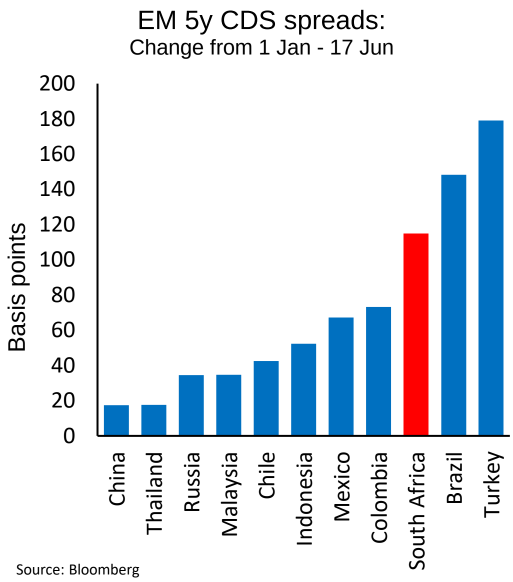
Source: IMF



Source: SARB



Source: Bloomberg



Source: Bloomberg