



**COVID-19
MACROECONOMIC
POLICY RESPONSES
IN AFRICA**

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Evaluating Macroeconomic Resilience: The Case of South Africa and Botswana

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About CoMPRA

The COVID-19 Macroeconomic Policy Response in Africa (CoMPRA) project was developed following a call for rapid response policy research into the COVID-19 pandemic by the IDRC. The project's overall goal is to inform macroeconomic policy development in response to the COVID-19 pandemic by low- and middle-income countries (LMICs) and development partners that results in more inclusive, climate-resilient, effective and gender-responsive measures through evidence-based research. This will help to mitigate COVID-19's social and economic impact, promote recovery from the pandemic in the short term and position LMICs in the longer term for a more climate-resilient, sustainable and stable future. The CoMPRA project will focus broadly on African countries and specifically on six countries (Benin, Senegal, Tanzania, Uganda, Nigeria and South Africa). SAIIA and CSEA, as the lead implementing partners for this project, also work with think tank partners in these countries.

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Abstract

This occasional paper explores the impact of exogenous, commodity price-driven shocks on longer-term macroeconomic resilience to withstand these shocks in Southern Africa. It draws a comparison between South Africa, the dominant economy of the regional customs and monetary union, and Botswana, its small, landlocked and diamond-dependent neighbour which has an independent currency. The two economies' relative capacities and policy choices regarding the implementation of counter-cyclical fiscal responses and inflation targeting are compared against the backdrop of their respective free-floating and crawling peg exchange

rate regimes. The prospects for containing public debt, achieving fiscal balance, stabilising inflation and currency depreciation are explored within the context of introducing fiscal rules and managing the use of foreign exchange contingency reserves.

Introduction

This occasional paper provides a comparative analysis of the macroeconomic resilience of South Africa and Botswana, two upper middle-income members of the Southern African Customs Union (SACU), as well as their responses to crises over the period 2000–2022. Socioeconomic crises are defined as periods when per capita GDP declines, implying rising poverty levels when economic growth fails to keep pace with population growth. Macroeconomic resilience generally refers to the capacity of economies to withstand negative exogenous and endogenous shocks and to achieve a sustainable growth path. The impact of such crises reinforces the importance of fiscal, monetary and social policies in driving economic recovery and creating a shield against possible future crises.¹

This paper provides the following: (a) a comparative review of the macroeconomic structure and performance of the country peers, (b) an identification of the exogenous (global external) and endogenous (domestic internal) shocks impacting these national economies, (c) a description of the interplay between long-term structural features and the transmission of shocks into cyclical downturns and crises, (d) an evaluation of the fiscal and monetary policy responses to these shocks leading into (e) a set of generic and country-specific policy recommendations that could build future resilience.

Macroeconomic structure and performance

South Africa is the dominant economy in the SACU and the Southern African Development Community (SADC). Its population is nearly 23.4 times larger than that of its much smaller neighbour, Botswana, while its economy is 20 times larger. Despite having a higher population growth rate – nearly 2% per annum compared to South Africa’s 1.3% per annum over the period 2000–2023 – Botswana’s economy has grown faster than South Africa’s, such that real per capita incomes have risen by an average of 1.3% per annum compared to 0.9% in South Africa. Furthermore, Botswana’s GDP per capita surpassed that of South Africa in 2016, and as of 2023 was 14% higher.

1 Vusi Gumede, Santos Bila, Mduduzi Biyase, Shonisani Chauke and Sodiq Arogundade, *South African Economy: Trails and Possibilities* (South Africa: Springer Nature, 2024).

Table 1 Comparative macroeconomic performance of South Africa and Botswana, 2000–2023

Indicator	South Africa	Botswana
GDP 2023 (constant 2015 \$)	\$364.6 billion	\$18.3 billion
Population 2023	63.2 million	2.7 million
GDP per capita 2023 (constant 2015 \$)	5 773	6 614
Average annual real GDP growth rate	2.19%	3.39%
Average annual population growth rate	1.31%	1.96%
Average annual real GDP per capita growth rate	0.86%	1.30%
Average inflation rate	6.22%	6.21%
Average exchange rate movement (against \$)	-3.82%	-4.15%

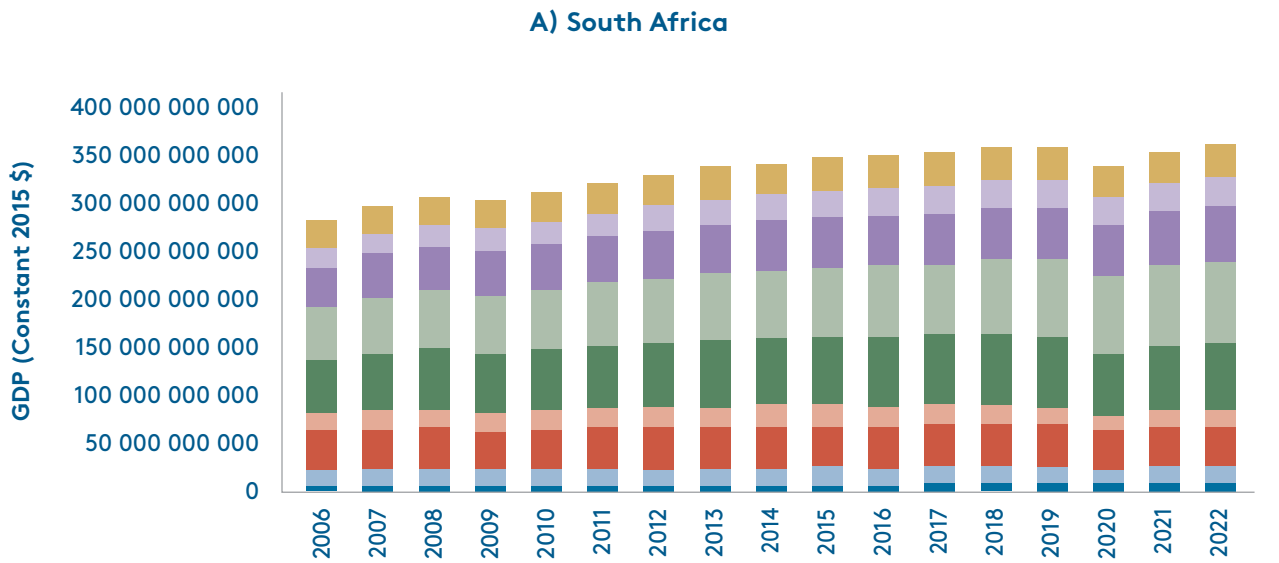
Source: Authors' compilation from World Bank, 'World Bank Development Indicators' <https://databank.worldbank.org/source/world-development-indicators> and updated with Statistics South Africa Census 2022, Department of Statistics of the Republic of South Africa, 'Census 2022', <https://census.statssa.gov.za/#/>

South Africa has a free-floating exchange rate regime with few controls on financial flows. Since South Africa dominates trade and investment flows in the entire SACU region, most SACU members are also part of the Common Monetary Area (a monetary union). Botswana's independent currency, the Pula (BWP), is on a crawling peg to the Rand (ZAR) and the value of Special Drawing Rights (XDR). The objective of its exchange rate policy is to minimise the inflation differential with its major trading partners. Botswana's trendline inflation has remained equivalent to South Africa's, but the exchange rate against the US dollar (\$) devalued more quickly than the ZAR depreciated.

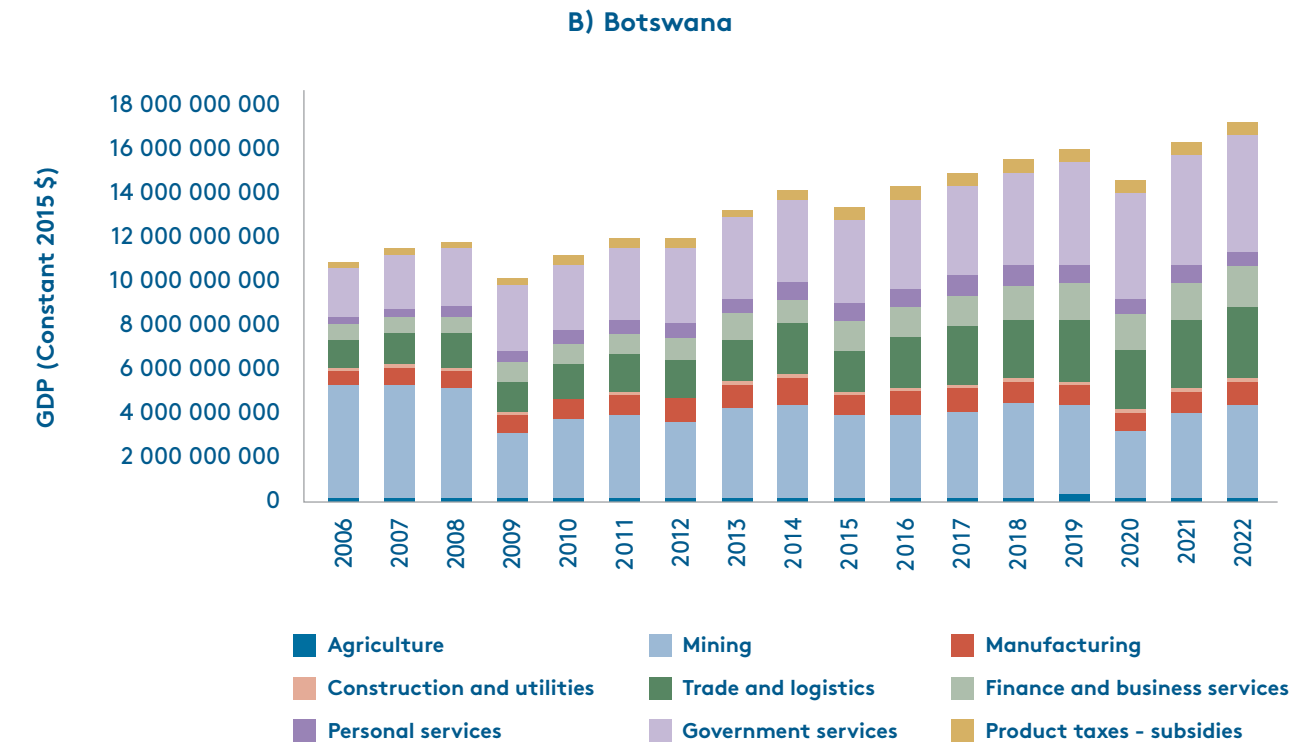
South Africa's production and trade in goods and services are more diversified than those of its smaller neighbour. Figures 1A and 1B illustrate the difference between the two countries. Of greatest significance is the role of mining, constituting nearly 30% of Botswana's GDP compared to 5% of South Africa's GDP. Manufacturing, construction, trade and logistics, and financial services play a more prominent role in South Africa. Also noteworthy is the relative importance of government services in Botswana, at nearly 27% of GDP compared to 8% in South Africa.²

² Clovis Freire and Anja Slany, 'Realizing product diversification for structural change in African countries' (Working Paper 5, United Nations Conference on Trade and Development, 2023), <https://unctad.org/publication/realizing-product-diversification-structural-change-african-countries>.

Figure 1 GDP by industry, 2006–2022



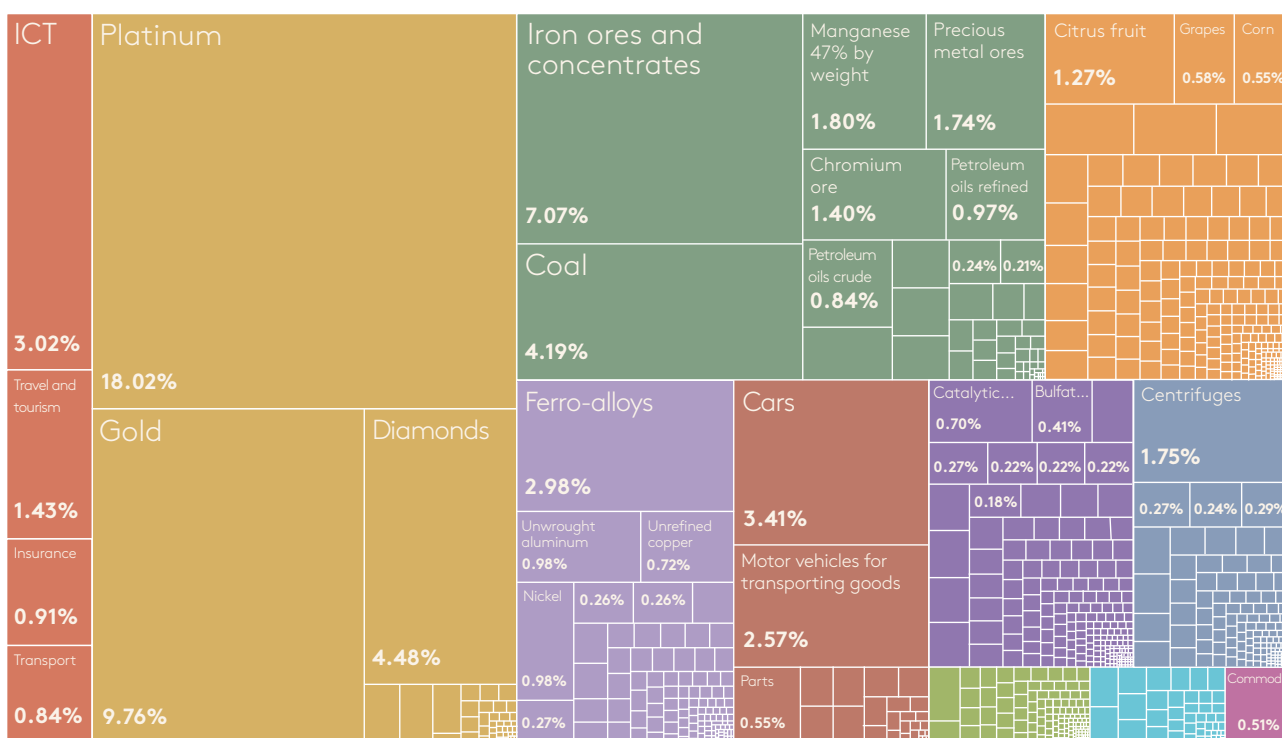
Source: Authors' own computation based on Statistics SA economic data, Department of Statistics of the Republic of South Africa, 'Economic Growth,' https://www.statssa.gov.za/?page_id=735&id=1



Source: Authors' own computation based on Statistics Botswana economic data, Department of Statistics of the Government of Botswana, '2022 Population Census,' <https://www.statsbots.org.bw/>

The relative diversification of production is also reflected in the countries' respective goods trade profiles (refer to Figures 2A and 2B). Diamonds constituted 72% of Botswana's total export value in 2022, whereas two main mineral commodities, platinum and gold, made up 18% and 10% respectively of South Africa's total export value in 2022. Furthermore, South Africa exports a wide range of minerals, some agricultural products, transport equipment and machinery, whereas these are largely absent from Botswana's goods export profile. Botswana's only export earners from the services sector are tourism, and information and communication technology, at 3.6% and 2.4% respectively of total export value.³

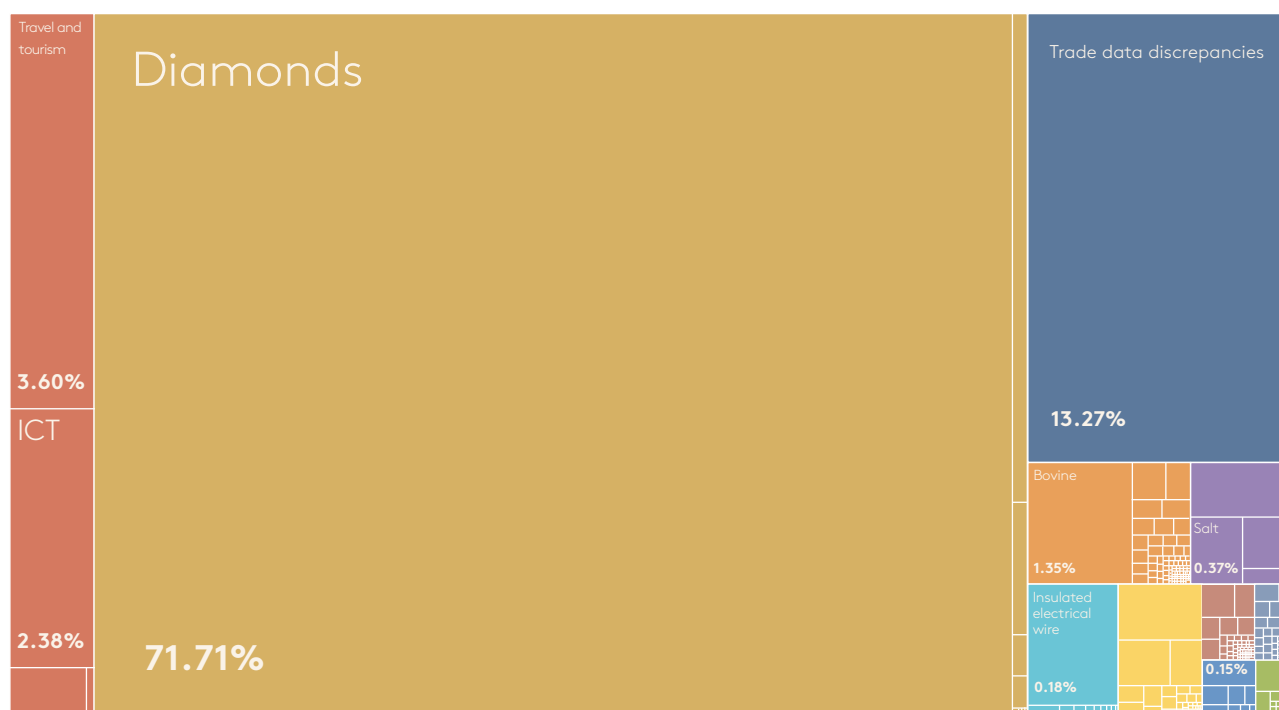
Figure 2A South Africa's commodity exports (% of total export value), 2022



Source: Harvard Growth Lab, 'South Africa Export Basket in 2021,' Atlas of Economic Complexity, <https://atlas.cid.harvard.edu/countries/246/export-basket>

3 Department of Statistics of the Government of Botswana, 'Annual Report 2021/22 Enabling Stakeholders formulate policies, plan and make decisions,' <https://www.statsbots.org.bw/sites/default/files/documents/Statistics%20Botswana%20Annual%20Report%202021-22.pdf>.

Figure 2B Botswana's commodity exports (% of total goods export value), 2022



Source: Harvard Growth Lab, 'Botswana Export Basket in 2021,' Atlas of Economic Complexity, <https://atlas.cid.harvard.edu/countries/37/export-basket>

Identifying shocks and crises

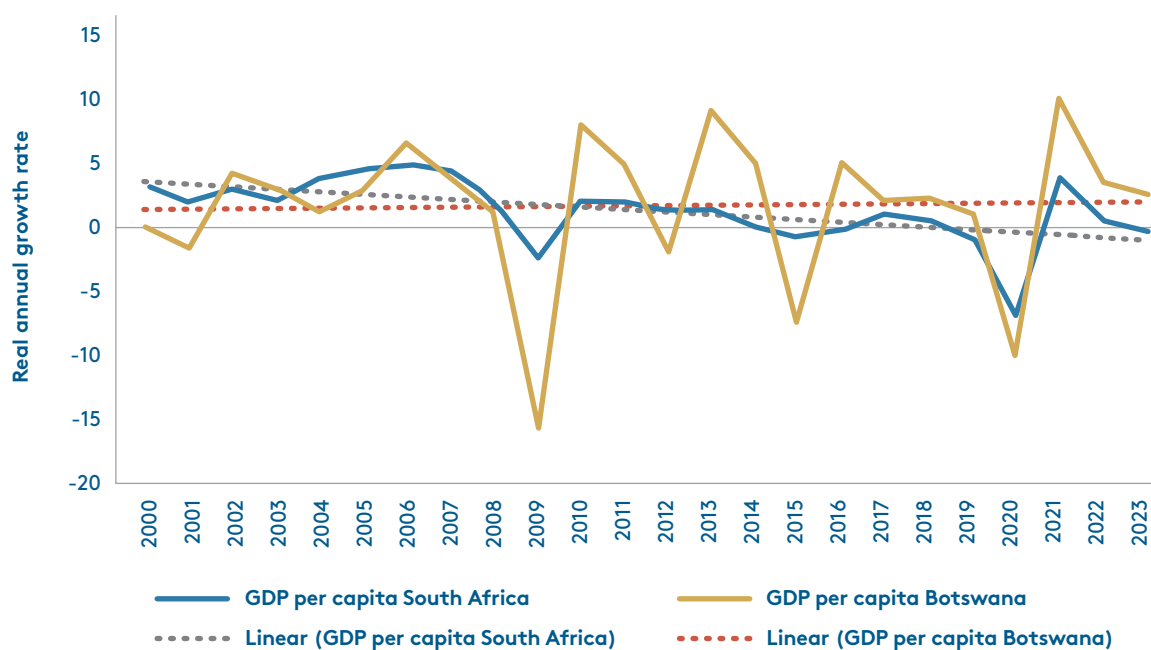
During the period 2000–2022, both the South African and Botswanan economies were externally shocked into a crisis of declining per capita incomes following the Global Financial Crisis (GFC) in 2008–2009,⁴ the accelerated decline of global commodity prices in 2015–2016, and the COVID-related shock of 2020.⁵ That these shocks triggered socioeconomic crises rather than decelerations can be attributed to the low and anaemic growth path of the two SACU economies since the start of the millennium. This has exposed structural vulnerabilities to development efforts, such as low productivity, failing infrastructure (particularly in the power and rail sectors) and high inequality.⁶

4 Sherwin Gabriel, 'South Africa and the Global Economic Crisis: Assessing the Effects using a Static CGE Model' (Paper, 20th International Input-Output Conference, Bratislava, Slovakia, June 25–29, 2012), 2.

5 Jean Luc Erero and Mangalani Peter Makananisa, 'Impact of Covid-19 on the South African economy: A CGE, Holt-Winter and SARIMA model's analysis,' *Turkish Economic Review* 7, no. 4 (2020): 193–213.

6 Government of South Africa, National Treasury, *Budget Review Economic Outlook* (Pretoria: National Treasury, 2023), <https://www.treasury.gov.za/documents/national%20budget/2023/review/Chapter%202.pdf>; Margaret Chitiga, Ramos Mabugu, H el ene Maisonnave, Veronique Robichaud and Bernard Decaluwe, 'The Impact of the International Economic Crisis in South Africa' (CIRPEE Working Paper 09–52, 2009), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1532775.

Figure 3 Real GDP per capita growth rate – South Africa vs Botswana, 2000–2023



Source: Authors' plot based on the World Bank, World Development Indicators, <https://databank.worldbank.org/source/world-development-indicators>

South Africa's GDP per capita growth rate has been decelerating since the GFC, whereas Botswana's long-term GDP growth trend has been a slow acceleration. This, though, has contributed to considerably greater cyclical volatility, with further crises following declines in the global diamond price during 2000–2001 and 2012 and deep recessions following other global commodity price shocks. This greater exposure to shocks can be attributed to the dominance of diamond exports in shaping the economic fortunes of this small, landlocked country.⁷ South Africa's relatively diverse production and trade profile mitigates its exposure to these exogenous shocks to some degree. However, against a stagnant domestic economy, the country's growth prospects remain disproportionately dependent on the movement of platinum, gold and other metal prices.

While exogenous shocks are dominant in inducing socioeconomic crises, both countries were subject to climatic, epidemiological and governance shocks. Climate shocks included floods in South Africa in 2001, 2004, 2007, 2009, 2011–2012 and 2022; and droughts in 2004, 2015 and 2018–2019. Botswana experienced floods in 2000, 2004, 2013 and 2017–2018, and droughts in

⁷ International Monetary Fund, 'Botswana: 2017 Article IV Consultation – Press Release; Staff Report'. (International Monetary Fund, Country Report No. 17/249, Washington DC, August 8, 2017), <https://www.elibrary.imf.org/view/journals/002/2017/249/002.2017.issue-249-en.xml>.

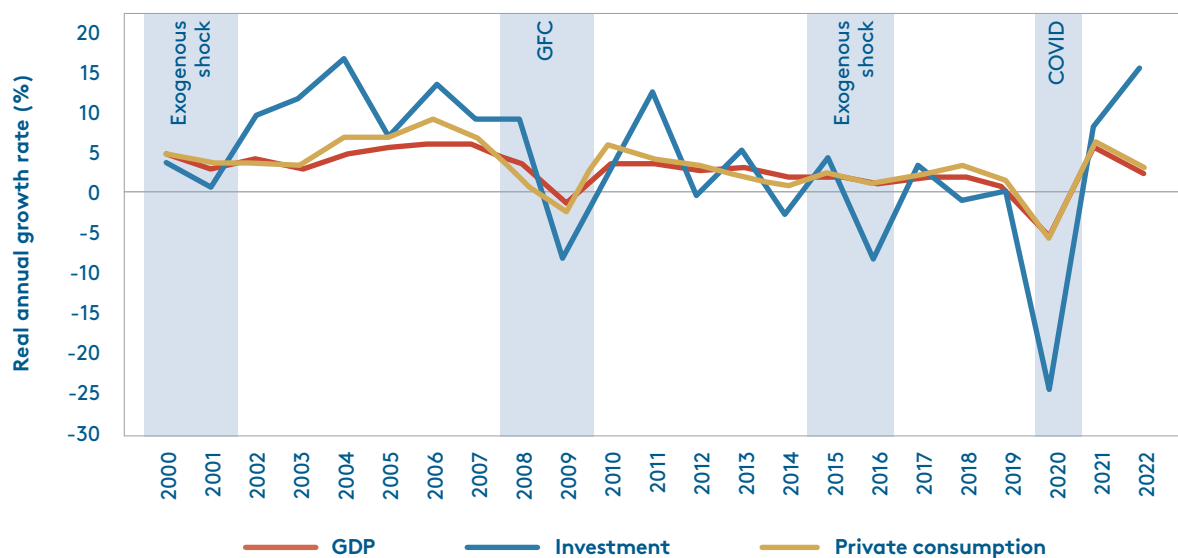
2019. The HIV/AIDS epidemic ravaged both countries between 2000 and 2004.⁸ With the exception of the HIV/AIDS epidemic and the 2013 floods in Botswana, none of the other endogenous shocks corresponded with or induced socioeconomic crises.

Governance shocks in South Africa included the xenophobic attacks of 2008, the Marikana massacre of 2012, the State Capture exposure of 2017 and the social unrest of 2021. The events of 2008 and 2017 heralded changes in the dominant ruling party's leadership, while the frequency of political and social conflicts is indicative of declining governance and decelerating growth. Botswana's democracy has been altogether more stable politically but is not immune to splits and leadership battles in the dominant ruling party (2010 and 2019).⁹ The interplay between exogenously generated economic crises and governance shocks is evident in the near coincidence of these events.

Shock transmission mechanisms

Figures 4A and 5A compare the domestic transmission mechanisms of shocks (whether exogenous or coincidentally endogenous) by comparing GDP growth with the plots for its two major components, private consumption and investment. Figures 4B and 5B review the trade position relative to GDP performance.

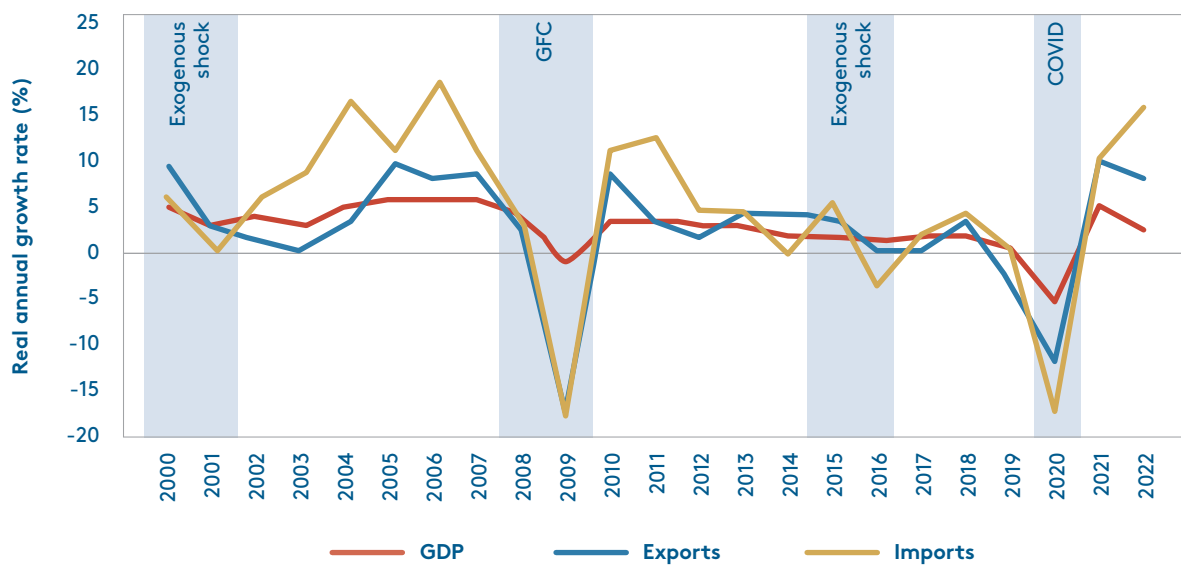
Figure 4A South Africa's GDP and domestic spending growth trends, 2000–2022



8 Derived from the World Bank, 'Climate Change Knowledge Portal,' <https://climateknowledgeportal.worldbank.org/country/botswana/vulnerability>; <https://climateknowledgeportal.worldbank.org/country/south-africa/vulnerability>.

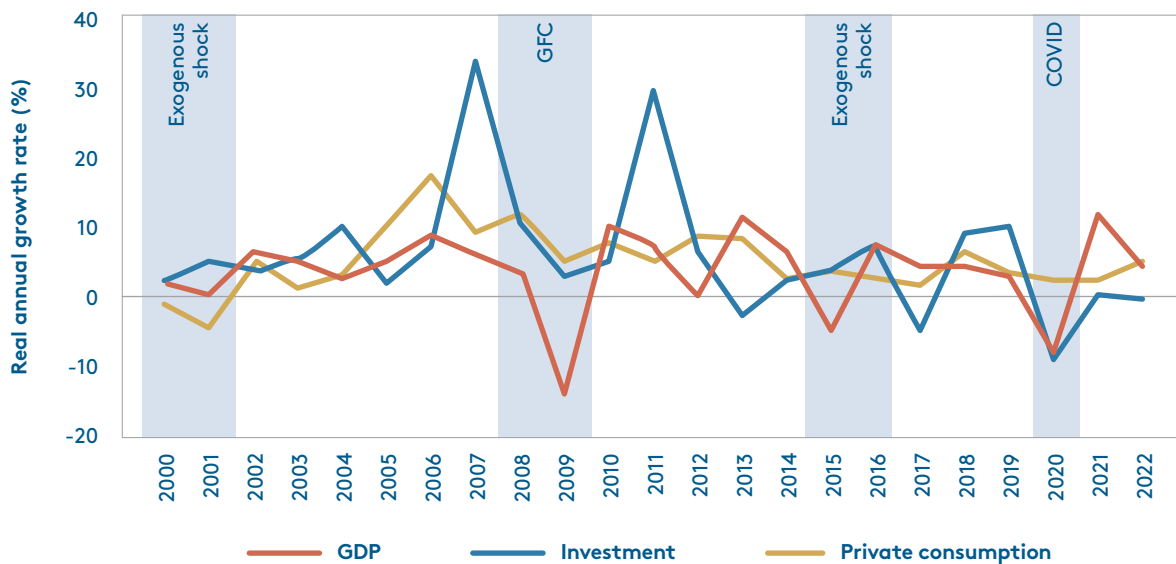
9 Afrobarometer, 'Botswana worried that tensions between current and former presidents undermine the country's stability,' <https://www.afrobarometer.org/articles/botswana-worried-that-tensions-between-current-and-former-presidents-undermine-the-countrys-stability/>.

Figure 4B South Africa's import and export growth trends, 2000–2022



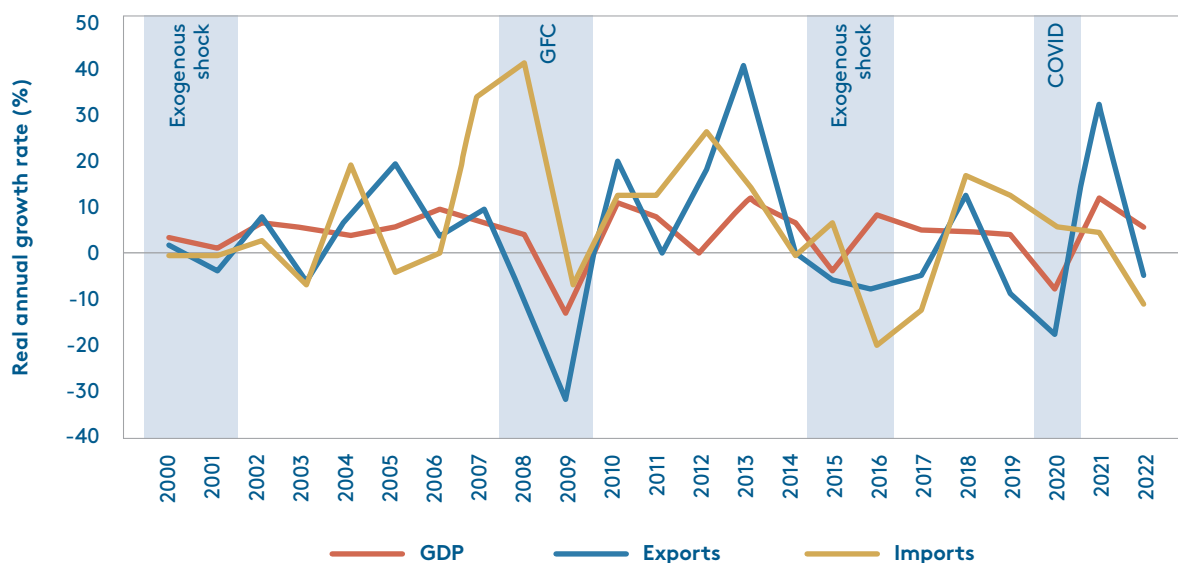
Source: Authors' plot based on the World Bank, 'World Development Indicators,' <https://databank.worldbank.org/source/world-development-indicators>

Figure 5A Botswana's GDP and domestic spending growth trends, 2000–2022



For South Africa, the long-term trend of structural deceleration and the correspondence between the commodity price cycles (induced by shifts in global aggregate demand) and domestic socioeconomic crises are apparent across all the major components of GDP. Stagnating or collapsing exports are mirrored (but with greater volatility) by similar trends in importation – directly if export production is import-intensive and indirectly through currency depreciations

Figure 5B Botswana's import and export growth trends, 2000–2022



Source: Authors' plot based on the World Bank, 'World Development Indicators,' <https://databank.worldbank.org/source/world-development-indicators>

that raise the cost of imports while cheapening exports. Domestic investment is an early casualty of both exogenous commodity price shocks and domestic governance crises and is reflected in abrupt depreciations as foreign disinvestment intensifies. The relative income and price inelasticity of private consumption make for more muted cyclical behaviour; nevertheless, discretionary spending on non-essentials is decelerating over the long term and is responsive to the business cycle.

As with South Africa, there is evidence of correspondence between the global commodity cycle and export and import trends in Botswana. Volatility in these cycles is significantly more pronounced in Botswana. What is distinctive is the short-run disjuncture between export and import cycles where discontinuous leads and lags can be observed. This might be attributable to Botswana's adjustable peg exchange rate regime which could delay (or advance) a currency devaluation.

Botswana's investment cycle is more closely related to the specifics of global diamond price movements than to its exports. A surge in the diamond price in 2010–2011 and its subsequent decline in 2012–2013 are mirrored in the investment cycle, as well as in those diamond price movements that are coincidental to the global commodity cycle. The long-term decline in diamond prices between 2012 and 2021 has been attributed to reduced global demand for, and restrictions on the supply of, conflict diamonds (managed through the Kimberley Process

Certification Scheme).¹⁰ However, diamond prices soared in 2022, two years after the COVID shock, just as they did two years after the GFC in 2012.¹¹

Private consumption growth has been decelerating since 2006, and its volatility is relatively muted in comparison with GDP overall. Compared with South Africa, the investment proportion of Botswana's GDP is relatively high, and the GDP cycle thereby reflects the greater influence and volatility of the investment and diamond price cycle.

Structural constraints to growth

The slow growth of per capita incomes and their steady deceleration over the past generation have been attributed to three factors: (a) infrastructure failings, (b) declining productivity, and (c) high income inequality.¹²

South Africa's infrastructural failings are long term, impacting the energy and transport sectors, in particular, which are dominated by public enterprises captured by monopoly rent extraction such that they are a constant drain on public finances. A legacy of disinvestment, lack of maintenance and loss of skills, coupled with opposition to decentralised renewable energy substitution, have led to nearly two decades of managed energy disruptions (or loadshedding). Botswana faced several years of crippling water and electricity shortages following the drought of 2013 but secured World Bank loans to increase its capacity to provide these essential services. Recently, in 2022, South Africa secured funding pledges from the EU, France, Germany, the UK, the US, Denmark and the Netherlands to enable its Just Energy Transition from coal to renewables. South Africa has one of the highest per capita CO₂ emission levels globally, on a par with China's and above the world average in 2021.¹³ Nonetheless, the need to implement climate-friendly and energy diversification policies may result in premature deindustrialisation and the loss of production and trade diversification, if not managed carefully.

10 Rory E Anderson, 'Conflict Diamonds: The Problem Persists Despite Progress,' *Centre for Strategic and International Studies*, July 5, 2007, <https://www.csis.org/analysis/conflict-diamonds-problem-persists-despite-progress> Please see the Kimberly Process Certification Scheme (KPCS) website at <https://www.kimberlyprocess.com/> for further information about the scheme and its members and partners. Botswana hosted the 2022 hybrid meeting of the parties to the KPCS and the final communiqué provides valuable insight into how grievances and challenges related to the certification scheme are approached. See KPCS, 'Kimberly process communiqué' for the hybrid plenary meeting held in Gaborone, Botswana on November 1-4, 2022, <https://www.kimberlyprocess.com/en/2022-final-communiqu%C3%A9-gaborone-botswana-0>.

11 Diamond Search Engine, 'Diamond Prices Index,' <https://www.diamondse.info/diamonds-price-index.asp>.

12 International Monetary Fund, 'South Africa: 2023 Article IV Consultation - Press Release; Staff Report; and Statement by the Executive Director for South Africa' (International Monetary Fund, Country Report No. 23/194, Washington DC, June 6, 2023), <https://www.imf.org/en/Publications/CR/Issues/2023/06/06/South-Africa-2023-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-534271>; International Monetary Fund, 'South Africa: 2018 Article IV Consultation - Press Release; Staff Report; and Statement by the Executive Director for South Africa' (International Monetary Fund, Country Report No. 18/246, Washington DC, July 30, 2018), <https://www.imf.org/en/Publications/CR/Issues/2018/07/30/South-Africa-2018-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-46132>.

13 Julia Evans, 'Despite a drop in greenhouse gas emissions in the past decade, SA is still a shockingly high emitter,' *Daily Maverick*, May 3, 2023, <https://www.dailymaverick.co.za/article/2023-05-03-while-sas-overall-greenhouse-gas-emissions-are-lower-its-per-capita-emissions-are-still-shockingly-high/>.

Between 2000 and 2019, Total Factor Productivity (TFP) declined by 7% in South Africa and by 30% in Botswana.¹⁴ TFP is the residual effect on output not directly attributable to labour or capital inputs and relates to factors such as technological progress, capacity utilisation and skills mismatches. The first two factors tend to be the longer-term outcome of disinvestment. Human capital formation through education and training is considered key to the issue of skills mismatches and labour productivity in general. South Africa's educational outcomes are considered low by African standards, even if the rates of school enrolment are higher than average. Over the period 2000–2019, South Africa's Human Capital Index (HCI) averaged 2.43 while Botswana's averaged 2.66.¹⁵

Inequality is high and has been rising in both South Africa and Botswana since the GFC. Botswana's record in several measures of social inclusion has been better than that of South Africa, with lower unemployment rates, Gini coefficients and ratios of extreme poverty (refer to Table 2).

Table 2 Comparative indicators of socioeconomic exclusion for South Africa and Botswana

Indicator	South Africa	Botswana
Unemployment rate (average 2000–2022) ^a	22.2%	19.3%
Inequality (Gini coefficient)	0.63 (2014)	0.53 (2015)
Poverty headcount ratio at \$2.15 per day (2017 purchasing power parity [PPP]) (% of population)	20.5% (2014)	15.4% (2015)
Poverty headcount ratio at \$3.65 per day (2017 PPP) (% of population)	40.0% (2014)	38.0% (2015)
Poverty headcount ratio at \$6.85 per day (2017 PPP) (% of population)	61.6% (2014)	63.5% (2015)

^a For the purposes of international comparison, the International Labour Organization (ILO)-modelled estimates of unemployment are used. In the case of South Africa, these estimates are lower than the official rates reported by Statistics South Africa. Using Statistics SA data, Trading Economics reports that unemployment rates between 2000 and 2022 averaged 27.17%. The differences between national and ILO sources can be attributed to incongruent definitions of discouraged workers, informal sector workers and the non-economically active, <https://tradingeconomics.com/south-africa/unemployment-rate#:~:text=Unemployment%20Rate%20in%20South%20Africa%20averaged%2027.17%20percent%20from%202000,the%20fourth%20quarter%20of%202008>

Source: Authors' collation based on the World Bank, 'World Development Indicators', <https://databank.worldbank.org/source/world-development-indicators>; and United Nations Development Programme (UNDP), '2023 Global Multidimensional Poverty Index', July 2023, <https://hdr.undp.org/content/2023-global-multidimensional-poverty-index-mpi#/indicies/MPI>

14 Our World in Data, <https://ourworldindata.org/grapher/tfp-at-constant-national-prices-2011?tab=table&time=2000..latest&showSelectionOnlyInTable=1&country=BWA~ZAF>.

15 Penn World Tables, <https://www.rug.nl/ggdc/productivity/pwt/?lang=en>.

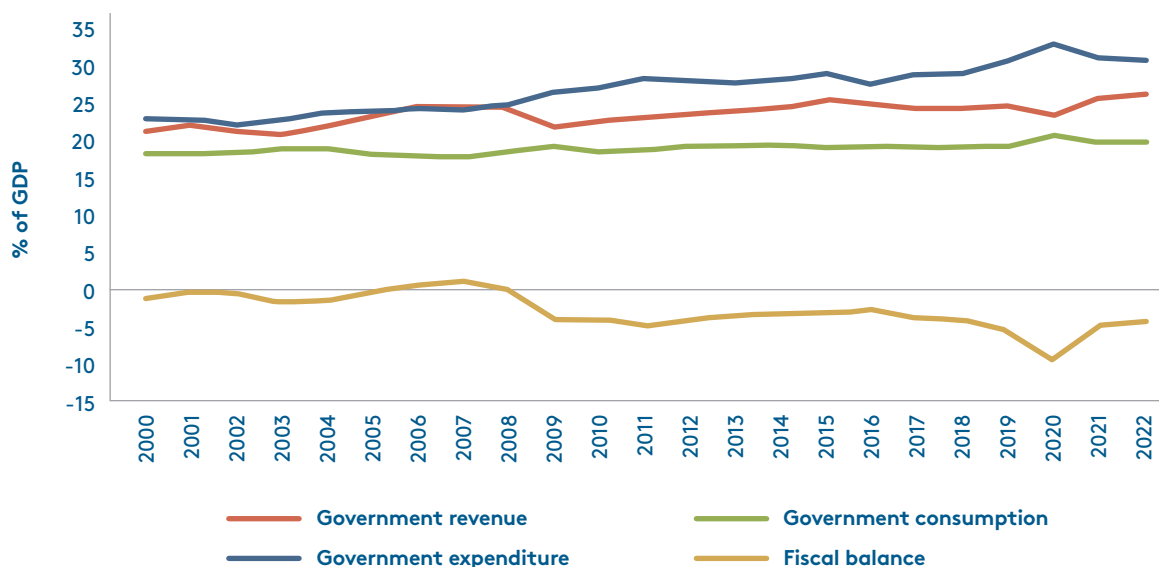
Social exclusion is problematic for resilience, reflected in the underutilisation of human capital potential, domestic market suppression of the import-substitution potential for higher value-added manufacturing and service delivery, and the fiscal burden associated with providing a social wage for the poor and unemployed. Higher inequality together with decelerating growth in South Africa contributed to the country's prevalence of social unrest.¹⁶

Fiscal policy responses to external shocks

Fiscal balance

The capacity of national government treasuries to stimulate demand against a deceleration of growth or a recession depends both on the heft (proportion of GDP generated or spent by the government) and its capacity to maintain the fiscal balance between revenue and spending. Figures 6A and 6B compare the relative heft and evolution of the fiscal balance between South Africa and Botswana from 2000 to 2022.

Figure 6A Evolution of South Africa's fiscal balance, 2000–2022

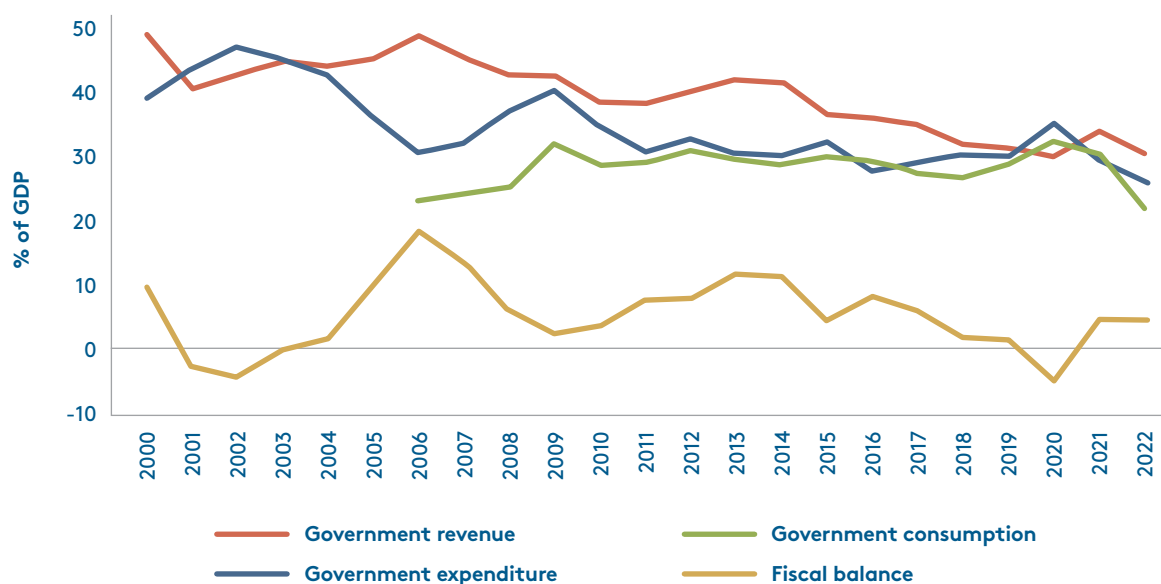


Source: International Monetary Fund, International Finance Statistics, Government Finance Statistics, <https://data.imf.org/regular.aspx?key=61545853>

16 Centre for Development and Enterprise, 'The silent crisis: South Africa's failing education system,' (Policy research report, Centre for Development and Enterprise, Johannesburg, 2023), <https://www.cde.org.za/wp-content/uploads/2023/03/The-Silent-Crisis-South-Africas-failing-education-system.pdf>; Imraan Valodia, 'South Africa can't crack the inequality curse. Why, and what can be done,' University of the Witwatersrand, September 15, 2023, <https://www.wits.ac.za/news/latest-news/opinion/2023/2023-09/south-africa-cant-crack-the-inequality-curse-why-and-what-can-be-done.html>.

Between 2000 and 2022, the proportion of South Africa’s GDP devoted to central government spending increased from 23% to 31%, while revenue increased at a slower pace, from 21% to 26%. Save for a brief period (2006–2007) prior to the GFC, South Africa carried a fiscal deficit which grew progressively wider, by a margin of up to 5% of GDP, following the GFC and COVID shocks respectively.¹⁷ Government consumption (compensation of employees, use of goods and services, and consumption of fixed capital) rose from 18% to 20% of GDP during this period, keeping it within the revenue envelope and implying that most government spending growth was directed at interest payments, social benefits, grants and subsidies. The utilisation of debt is appropriate for capital spending on public investment if the returns from revenue generation at least match the interest costs. However, once debt financing of current spending accelerates, debt servicing will crowd out other components of government spending. Public debt servicing costs have increased from 2% to nearly 5% of GDP since the GFC, essentially using up 60% of the additional revenue generated in this period.

Figure 6B Evolution of Botswana’s fiscal balance, 2000–2022



Source: International Monetary Fund, International Finance Statistics, Government Finance Statistics, <https://data.imf.org/regular.aspx?key=61545853>

Botswana’s fiscal fortunes are closely tied to the vagaries of the global diamond price. The country ran a fiscal deficit between 2001 and 2003 following the collapse of the diamond price and, with it, government revenues. Once the diamond price and associated revenues had

17 South African National Treasury, *2023 MTBPS Fiscal Policy* (South Africa: Pretoria, 2023), 19, 28.

recovered during the interregnum before the GFC, the fiscal authorities held back expenditure growth, enabling the fiscal surplus to peak at nearly 18% of GDP in 2006. The surplus declined sharply during the GFC to just over 2% of GDP as revenues decelerated and spending accelerated. As the diamond price recovered, the fiscal surplus grew, with revenue rising to over 15% of GDP in 2013 and 2014, but which has subsequently been declining.¹⁸ Botswana dipped into a fiscal deficit during the COVID crisis of 2020. Over the course of 2021 and 2022, revenue was boosted and a fiscal surplus generated from the diamond price upcycle.¹⁹ However, with each successive exogenous price shock, the recovery of fiscal capacity appears to have progressively weakened.

Since 2003, Botswana has incorporated expenditure (30% of GDP), public debt (40% of GDP) and balanced budget rules into its National Development Plan.²⁰ Thus far, the country has been fortunate enough to possess the fiscal capacity to treat these rules as minimum rather than maximum limits, but this looks set to change in the coming years. With South Africa's structural fiscal deficit, the country's authorities have been sceptical of simple fiscal rules specifying expenditure or debt ceilings on the grounds that (a) economic growth is inherently difficult to predict, making it challenging to avoid pro-cyclical outcomes which breach these limits, (b) debt rules are easily gamed without controls on the buildup of contingent liabilities, and (c) total spending ceilings are insufficient to prevent ineffective capital or operational expenditure.²¹

While the proportion of Botswana's GDP devoted to total government spending has fluctuated around a constant 30%, its composition has shifted significantly away from investment towards consumption (such that during the COVID crisis, government consumption spending exceeded revenue, signalling potential fiscal distress). This increase in consumption spending can be only minimally attributed to rising debt-servicing costs, which doubled in the period between the GFC and COVID crises to approximately 1% of GDP.

Although considerably greater than that of their African neighbours, the heft of both governments (at between a quarter and a third of the economy) is still insufficient to completely counteract the scarring effects of exogenous crises through fiscal stimulus; it can only mitigate against them. Both countries have experienced a long-term decline in their fiscal resilience –

18 International Monetary Fund, 'Botswana: 2023 Article IV Consultation – Statement; Staff Report; and Statement by the Executive Director for South Africa' (International Monetary Fund, Country Report No. 23/317, Washington DC, August 31, 2023), <https://www.imf.org/en/Publications/CR/Issues/2023/08/31/Botswana-2023-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-538736>.

19 Ministry of Finance of Botswana, *Quarterly Economic Bulletin Q2 2022*, https://www.finance.gov.bw/images/Research/Quarterly_Economic_Bulletin/2022_Q2_QUARTELY_ECONOMIC_BULLETIN.pdf.

20 IMF Fiscal Rules Database, <https://www.imf.org/external/datamapper/fiscalrules/map/map.htm>.

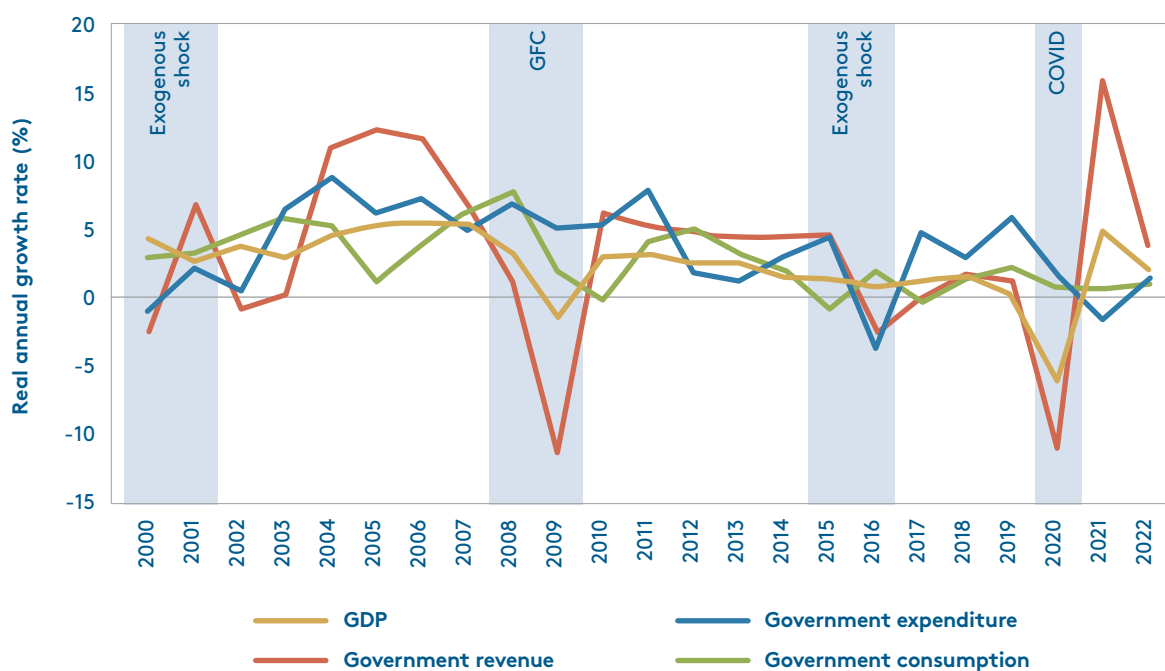
21 National Treasury, 'Response to the debate on the Fiscal Responsibility Bill, Parliamentary Monitoring Group Response Document,' May 2021, https://static.pmg.org.za/210601Fiscal_rules_NT_Submission_v01.pdf.

albeit for different reasons. In Botswana, it is due to the loss of diamond revenues, while in South Africa it is due to the rising costs of supporting state-owned infrastructure utilities against depreciation and monopoly rent-extraction through state capture.

Capacity to effect counter-cyclical fiscal policy

Figures 7A and 7B track the growth paths of government revenue and spending against GDP growth trends. The outstanding feature of the three global shocks on the two economies (the GFC of 2008–2009, the commodity price downcycle of 2015–2016 and the COVID shock of 2020) is the rapid decline in revenue, indicating the essentially pro-cyclical nature of government revenue collection. Counteracting the contractionary impulses is therefore left to governments' spending policies.

Figure 7A South Africa's fiscal cyclicality, 2000–2022



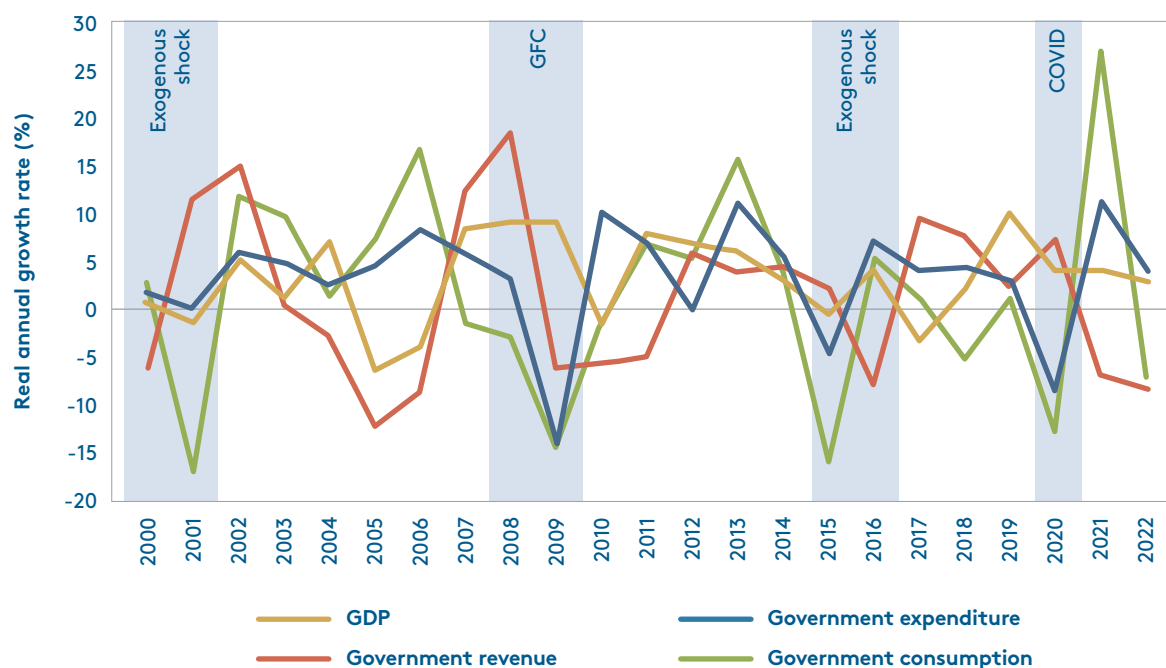
Source: Authors' plot from World Bank, 'World Development Indicators,' <https://databank.worldbank.org/source/world-development-indicators>; International Monetary Fund, 'IMF Data,' <https://data.imf.org/regular.aspx?key=61545853>

Both countries effected stimulus packages in the wake of the GFC and COVID crises. Between 2007 and 2009, the South African government directed about 2.5% of GDP into improving public infrastructure through housing construction, energy generation, hospitals and clinics.

In Botswana, overall state spending increased from an average of 31% of GDP in 2007 before the crisis to 39% of GDP in 2009, driven mainly by a doubling of capital spending in real terms.²² South Africa's public investment stimulus was sustained for four years but was accompanied by a rapid deceleration of government consumption, while Botswana's capital spending boom was sharply curtailed. In both countries, the capital stimulus packages were insufficient to prevent a recession, and the de facto outcome was pro-cyclical.

In both countries, this exogenous shock heralded the re-accumulation of external and domestic debt. In South Africa, the burden of external public (or publicly guaranteed) debt increased from 7% of GDP in 2009 to 21% in 2021. By contrast, Botswana has been steadily decumulating debt, from 16% in 2012 to 9% in 2021, a testament to its ongoing fiscal surpluses and substantial reserve holdings.

Figure 7B Botswana's fiscal cyclicity, 2000–2022



Source: Authors' plot from World Bank, 'World Development Indicators,' <https://databank.worldbank.org/source/world-development-indicators>; International Monetary Fund, 'IMF Data,' <https://data.imf.org/regular.aspx?key=61545853>

22 Joannes Mongardini, Dalmacio Benicio, Thomson Fontaine, Gonzalo Pastor and Geneviève Verdier, 'In the Wake of the Global Economic Crisis' (International Monetary Fund: African Department, 2011), <https://www.imf.org/external/pubs/ft/dp/2011/afr1101.pdf>; Mazars, 'Botswana government's economic interventions in response to COVID-19,' https://www.mazars.co.bw/content/download/991548/51835020/version//file/Summary_of_the_COVID_19_Speech_Finance_Ministetr.pdf.

In between the GFC and COVID crises, in the period 2015–2016, a less-recognised exogenous shock impacted on African economies towards the end of a protracted global commodity price downcycle. The accompanying decline in government revenue was much sharper in Botswana (with its dependence on one export commodity) than in South Africa, with its more diversified export profile. While South Africa was able to spend counter-cyclically and sustain government consumption levels until COVID, Botswana scaled back its government spending in favour of decumulation of external debt. Thus, while South Africa was fiscally resilient enough to counter this GDP downcycle, it compromised longer-term resilience through debt accumulation. In contrast, Botswana chose to respond pro-cyclically in the short term in favour of lower indebtedness (and lower fixed capital formation) in the longer term.

Counter-cyclical management of the COVID crisis in 2020 followed a similar pattern of a sharp deceleration or decline in revenue collection and, consequently, a shortened stimulus package with an overall pro-cyclical outcome. The difference between the COVID and the GFC stimulus packages in both countries was their orientation towards sustaining household incomes and consumption through transfer payments, grants and loan guarantees, rather than through direct investment packages. Specifically, South Africa allocated approximately 5.3% of GDP to additional spending (mainly social welfare and pandemic health measures, such as the vaccination programme) and foregone revenue, and a further 4.1% of GDP to liquidity support in the form of a credit guarantee scheme, a job creation programme via support for SMEs, and tax concession measures.²³ Botswana's package was more modest, with 1.7% of GDP directed to tax concessions,²⁴ food relief funds and wage subsidies, and a further 0.7% of GDP to a loan guarantee of approximately BWP 1 million.²⁵ This further shift in approach from investment to consumption spending was a necessary complement to lockdown policies, which restricted movement and employment directly. South Africa's lockdown was more stringent and hence more costly than Botswana's. Time will tell whether the accumulation of shorter-term debt for operational expenses will weaken resilience in the form of rising debt-servicing costs or mitigate against it by sustaining domestic living standards and consumption.²⁶

23 IMF, 'Fiscal Monitor Database: Country Fiscal Measures in Response to the COVID-19 Pandemic,' <https://www.imf.org/en/Topics/imf-and-covid19/Fiscal-Policies-Database-in-Response-to-COVID-19>; Government of South Africa, National Treasury, 'Economic Measures for Covid-19' (Pretoria: National Treasury, 2020), https://www.treasury.gov.za/comm_media/press/2020/20200428_COVID_Economic_Response_final.pdf.

24 This included temporary reductions on VAT and zero rating of foodstuffs. Ministry of Finance of Botswana, 'Quarterly Economic Bulletin Q2 2022,' https://www.finance.gov.bw/images/Research/Quarterly_Economic_Bulletin/2022_Q2_QUARTELY_ECONOMIC_BULLETIN.pdf.

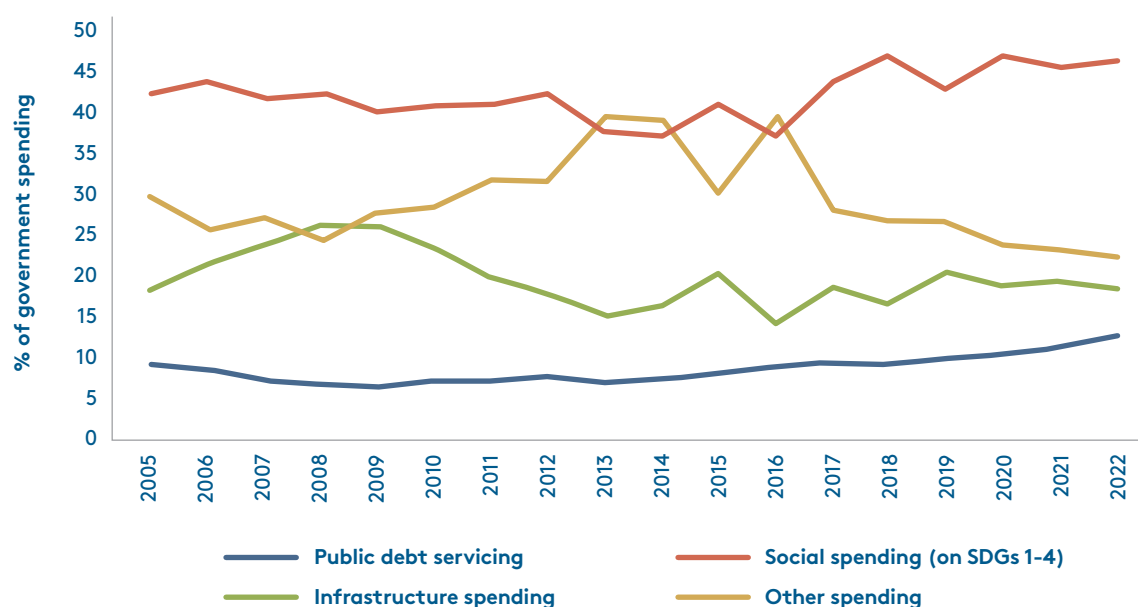
25 Mazars, 'Botswana government's economic interventions in response to COVID-19,' https://www.mazars.co.bw/content/download/991548/51835020/version//file/Summary_of_the_COVID_19_Speech_Finance_Ministetr.pdf.

26 Shaun de Jager, Chris Loewald, Konstantin Makrelov and Xolani Sibande, 'Leaning against the wind with fiscal and monetary policy' (Working Paper Series WP/22/12, South African Reserve Bank, Pretoria, 2022), <https://www.resbank.co.za/content/dam/sarb/publications/working-papers/2022/leaning-against-the-wind-with-fiscal-and-monetary-policy>.

Prioritisation of government spending

Figures 8A and 8B indicate changes in the composition of government spending in both countries over the period 2000–2022, thereby outlining long-term trends and responses to exogenous (and endogenous) shocks. The de facto prioritisation of spending (especially during crises) might be characteristically ranked as follows: (1) contractual obligations of debt servicing, (2) social spending on welfare, health and education as obligations under the globally recognised Sustainable Development Goals (SDGs 1–4), (3) infrastructural and other economic services required to stimulate economic growth, and (4) other government consumption services, such as administration, justice and security.

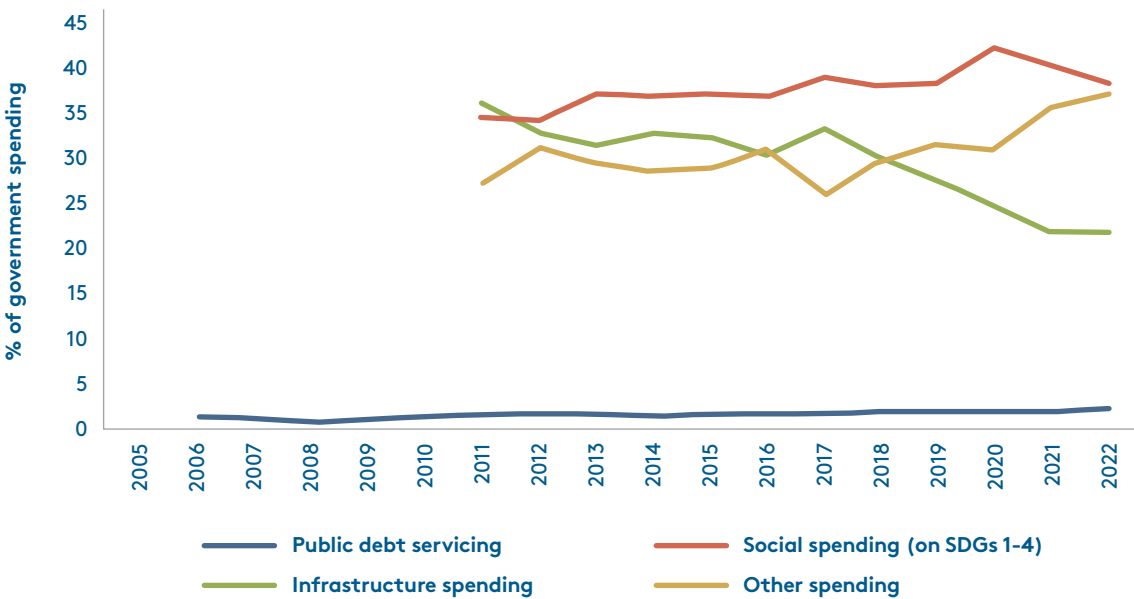
Figure 8A Composition of South Africa’s government spending, 2005–2022



Source: Authors’ plot from International Monetary Fund, ‘IMF Data,’ <https://data.imf.org/regular.aspx?key=61037799>

As alluded to earlier in the text, the proportion of South African government spending (and GDP) devoted to public debt redemption has more than doubled since the GFC (from 6.2% in 2009 to 12.6% in 2022). Social spending has generally been the largest component of state expenditure and is constitutionally backed by the mandate to progressively realise basic needs. Nevertheless, the proportion of spending devoted to achieving the SDGs 1–4 declined in relative importance from 2005 to 2016, with little indication that the GFC stimulus package countered this structural trend.

Figure 8B Composition of Botswana’s government spending, 2005–2022



Source: Authors’ plot from Bank of Botswana, ‘Botswana Economic and Financial Statistics,’ February 2024, <https://www.bankofbotswana.bw/publications>²⁷

While Botswana has generated a fiscal surplus every year except for 2020 during the COVID crisis, this uncharacteristic deficit is the culmination of a structural trend of declining tax and rising expenditure to GDP ratios. Thus, while Botswana’s external public debt burden is comparatively very low by African standards, debt servicing increased from 1% of state spending in 2009 to 2.25% in 2022. Like South Africa, Botswana has spent the biggest portion of its budget on social spending, and this ratio has been rising over the long term with notable jumps in 2012, 2016 and 2020 when diamond prices and hence per capita incomes fell. Botswana has typically spent more of its budget on infrastructure than South Africa. However, the ratio of infrastructure to total spending declined from 36% in 2011 to 22% in 2022, despite the World Bank-financed capital stimulus of 2013 to bolster water and electricity supply. Meanwhile, the residual consumption component of state spending has been rising (from 27.5% in 2011 to 37.25% in 2022), thereby aggravating the deficit-inducing tendencies at the expense of social inclusion, human capital formation, and infrastructure development and maintenance.

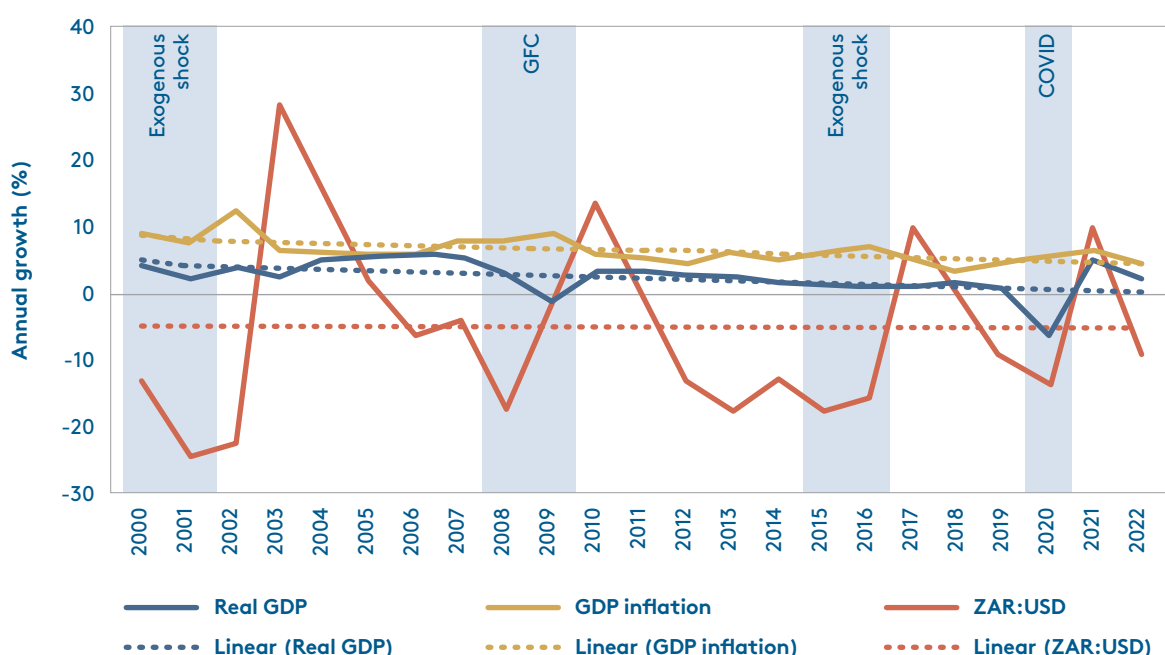
²⁷ Neither source provides data on government spending by function for Botswana before 2011.

Monetary policy responses to external shocks

Exchange rate mechanisms and the business cycle

South Africa has a free-floating currency with minimal restrictions on capital flows, thus allowing the exchange rate to fluctuate in response to stages of the production cycle and with an impact on the inflation cycle. As indicated in Figure 9A, the typical response of the South African currency to the four exogenous shocks since 2000 has been (i) presaging of a medium-term currency depreciation, (ii) a sharp depreciation coincident with the first year of the crisis, followed by (in the next year) (iii) a sharp appreciation and recovery before a slow depreciation again. Both successive peaks and troughs appear to be converging over time, implying a stabilising exchange rate (averaging -3.8% depreciation per annum).

Figure 9A Relationship between South Africa's currency movements, production and inflation cycles, 2000–2022



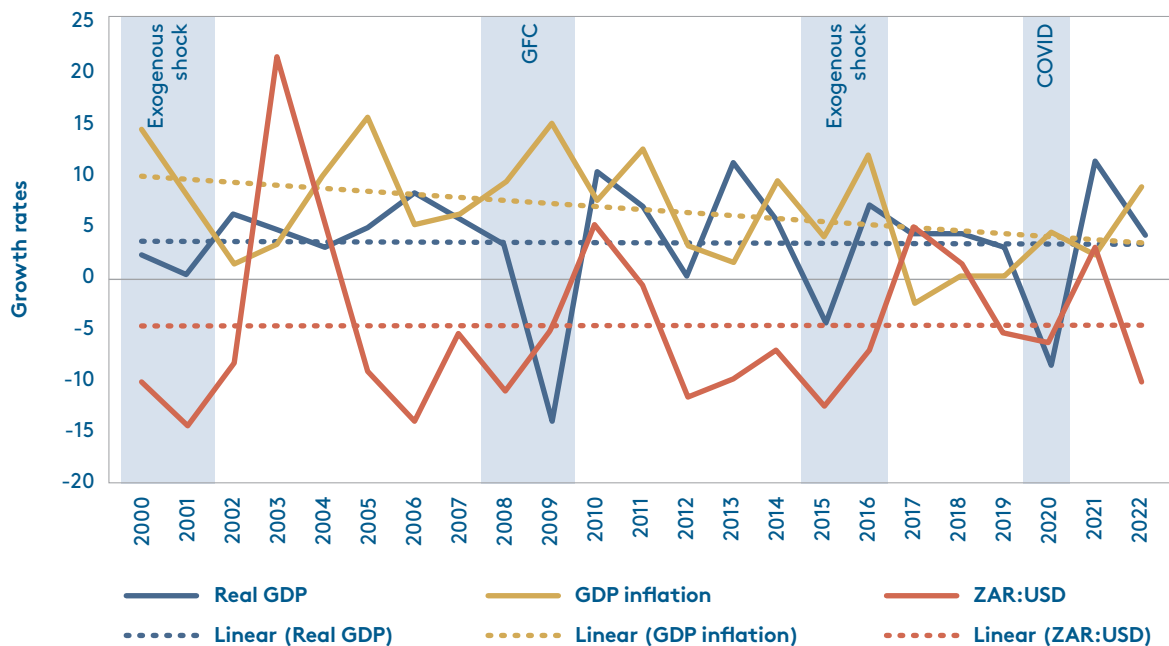
Source: Authors' compilation from World Bank, World Development Indicators, <https://databank.worldbank.org/source/world-development-indicators>; International Monetary Fund, 'IMF Data,' <https://data.imf.org/?sk=4c514d48-b6ba-49ed-8ab9-52b0c1a0179b&sid=1409151240976>

In South Africa, inflation peaks generally lag production troughs by one year, reflecting both the inherited demand-pull pressures from the previous growth upcycle and the imported cost-push pressures from the preceding currency depreciation. Disinflation periods follow the currency

recovery until the structural depreciation trend reasserts itself and the inter-crisis growth runs into capacity constraints.

As indicated by the trendlines, structural features of South Africa’s economic development include output growth deceleration into stagnation, stabilising and declining inflation, and reduced currency volatility stabilising its depreciation to approximately -3.8 % per annum.

Figure 9B Relationship between Botswana’s currency movements, production and inflation cycles, 2000–2022



Source: Authors’ compilation from World Bank, World Development Indicators, <https://databank.worldbank.org/source/world-development-indicators>; International Monetary Fund, ‘IMF Data,’ <https://data.imf.org/?sk=4c514d48-b6ba-49ed-8ab9-52b0c1a0179b&sid=1409151240976>

Botswana utilises a crawling peg arrangement against a trade-weighted basket of partner currencies. Since South Africa is the dominant trading partner, the BWP is effectively tied to the ZAR. This is evidenced in Figures 9A and 9B which show how the cycles of each currency’s value correspond very closely to each other. Between 2000 and 2022, the structural rate of Botswana’s currency devaluation was -4.2% per annum, 0.4% greater than the rate of depreciation of the ZAR. This is despite the Bank of Botswana drawing on its substantial holdings of foreign exchange reserves to support the currency’s value.

Botswana’s structural GDP growth trend is low, but the upcycles generally compensate for the downcycles and growth is not decelerating (as in South Africa) but accelerating slightly. The

production growth path is also considerably more volatile than that of South Africa, with its larger and more diversified economy. Within the constraints of Botswana's fixed exchange rate regime, currency valuations will respond to global exogenous shocks on general commodity prices, but not to specific fluctuations in the diamond price which Botswana is (overly) dependent on, or any endogenous shock.

This focus on exchange rate stabilisation constrains efforts by the monetary authorities to control inflation. While inflation peaks coincide with, or follow shortly after, production troughs induced by general commodity price deflation and subsequent devaluations (as they do in South Africa), there have been several inflationary peaks without apparent reference to currency valuations or the output cycle.

Inflation targeting

The monetary authorities can choose between the objectives of exchange rate, output cycle or inflation stabilisation. However, by not ranking these objectives, shifting priorities and inconsistent application can both undermine confidence in the monetary policy and exacerbate, rather than temper, volatility. Where exchange rates are fixed, pegged or crawled, exchange rate stabilisation is logically prioritised, albeit without clear evidence of the achievement of that objective. Where currencies are free floating, the monetary policy choice is between output and inflation cycle stabilisation. If production and inflation upcycles and downcycles were coincident over the short term, there would be no contradiction since a restrictive monetary policy would temper both upcycles, and vice versa. However, inflation is not only a demand-led phenomenon but also a cost-driven one during (exogenous or endogenous) supply shocks. As indicated earlier, both countries tend to experience inflationary peaks (troughs) during or shortly after production troughs (peaks) and currency depreciations (appreciations). This coincidence puts counter-inflationary and counter-production cycle policies at odds with each other. With (albeit limited) fiscal capacity to stabilise the output (real GDP) cycle, and a free-floating exchange rate regime, it is logical for monetary policy in South Africa to prioritise the control of inflation.

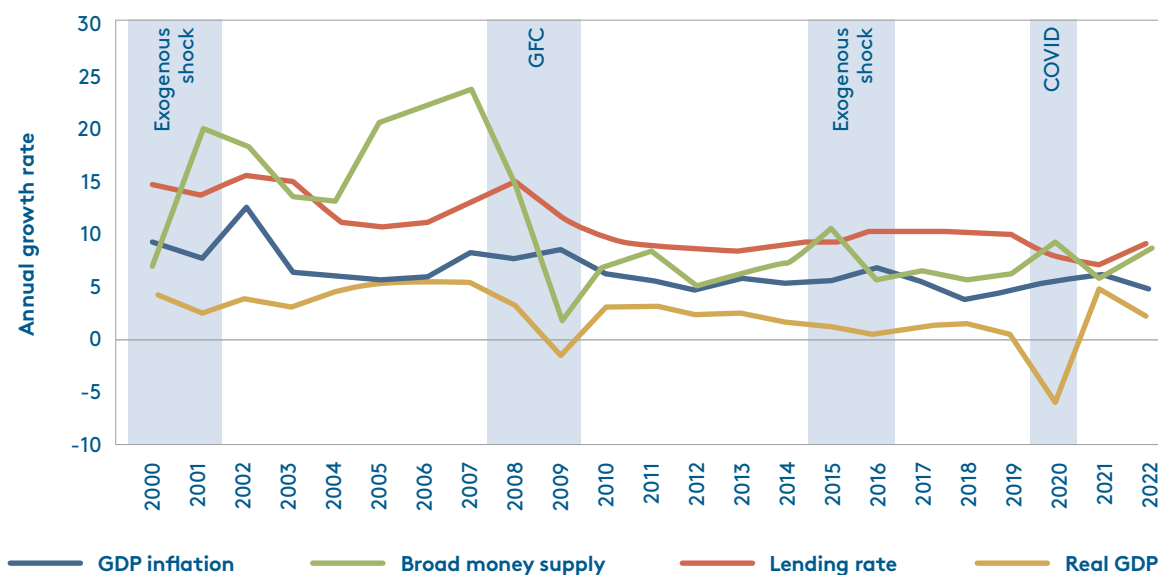
Inflation targeting was adopted in South Africa in 2002 and a band of 3–6% was set, which has prevailed ever since. During the first decade of the policy regime, overall GDP inflation was not able to be suppressed below the maximum limits. The upper limit has subsequently been breached twice, in 2016 and 2021, the years immediately following exogenous shocks. By contrast, Botswana's pegged exchange rate regime appears less able to control the volatility of the inflation cycle and, were it to follow the same inflation-targeting policy, it would have breached both maximum and minimum levels over most inflationary surges and disinflation (and deflation) episodes. South Africa's inflation targeting appears to be succeeding in (a) suppressing the volatility of the domestic inflation cycle, (b) lowering the structural rate of inflation (despite

several exogenous shocks, notably COVID), and (c) stabilising exchange rate volatility. It also has knock-on impacts in reducing Botswana’s structural rate of inflation in line with that of its larger neighbour.

Utilisation of counter-inflationary tools

As indicated earlier, the inflationary cycle is intimately connected with the output and exchange rate cycles, and a singular focus on price stabilisation might obscure the relevance of responding to leading and reacting to lagging indicators. For example, if the build-up of inflationary pressures towards the end of a growth period and the subsequent surge following an exogenous shock and depreciation/devaluation event were reacted to with a contractionary monetary policy, this may deepen the recession. Alternatively, a counter-cyclical monetary expansion might exacerbate inflationary pressures (depending on the strength of the rebound currency appreciation). Such complexities mean that any inflation-targeting regime would need to accommodate a (limited) range of outcomes over the medium term and allow for the flexible use of different instruments.²⁸

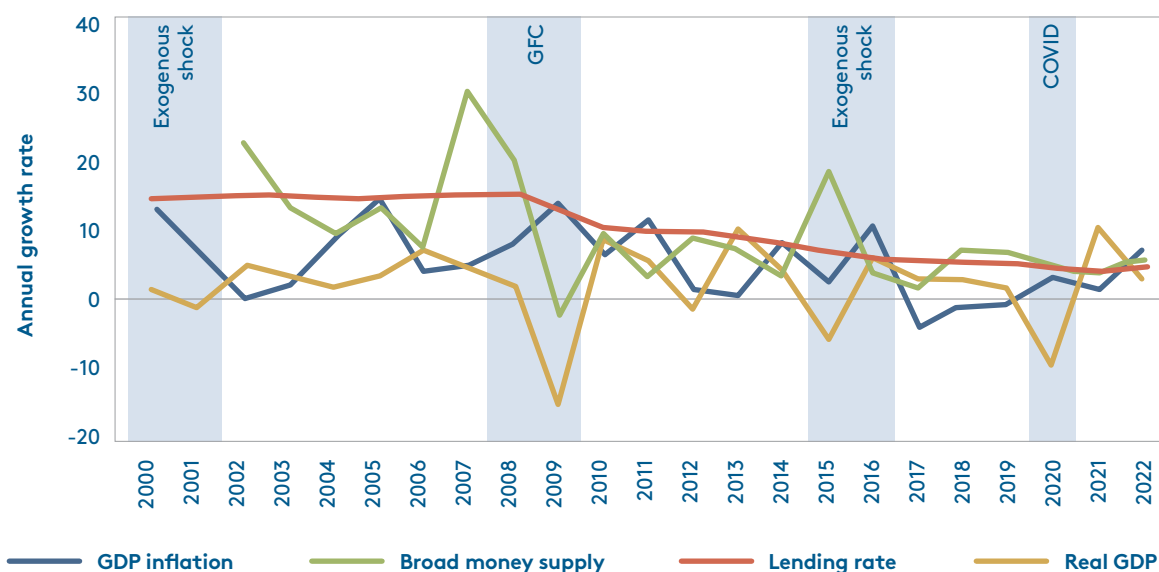
Figure 10A South Africa’s monetary policy response, 2000–2022



Source: Authors’ compilation from World Bank, ‘World Development Indicators,’ <https://databank.worldbank.org/source/world-development-indicators>; International Monetary Fund, ‘IMF Data’, <https://data.imf.org/?sk=4c514d48-b6ba-49ed-8ab9-52b0c1a0179b&sid=1409151240976>

28 Gunnar Jonsson, ‘The relative merits and implications of inflation targeting for South Africa’ (IMF African Department WP/99/196, August 1999), <https://www.imf.org/external/pubs/ft/wp/1999/wp99116.pdf>.

Figure 10B Botswana's monetary policy response, 2000–2022



Source: Authors' compilation from World Bank, 'World Development Indicators,' <https://databank.worldbank.org/source/world-development-indicators>; International Monetary Fund, 'IMF Data', <https://data.imf.org/?sk=4c514d48-b6ba-49ed-8ab9-52b0c1a0179b&sid=1409151240976>

The primary tool of inflation targeting is the policy rate at which the central bank charges commercial banks for on-lending to companies, households and the government. Figures 10A and 10B indicate the relationship between the lending rate and inflation in both countries. The long-term decline in structural inflation in South Africa corresponds with a long-term decline in the lending rate achieved by greater reduction in response to exogenous shocks than the subsequent counter-inflationary rate increases. In Botswana, the lending rate was steadily reduced between 2008 and 2021, rising again only in 2022. As such, the lending rate has not been used as a counter-cyclical tool in the way that South Africa's inflation targeting has been. The long-term decline in lending rates in both countries after the GFC can, in large measure, be attributed to the decline in global interest rates during which time most upper-income creditor nations practised quantitative easing. In the aftermath of COVID, however, this has been replaced by a counter-inflationary policy of quantitative tightening, with adverse consequences for debt-servicing burdens.

The secondary tools of inflation targeting are those that influence the growth of the broad money supply. This may involve an intensification of government's normal open market operations in short-term securities or of selected longer-term securities (such as mortgage bonds) characterised by the prevalence of asset bubbles. Alternatively, prudential regulation of financial institution reserve requirement, capital adequacy and liquidity coverage ratios can be

used. These interventions are intended to decelerate expansion of the broad money and credit supply during either production upcycles or inflationary surges and accelerate growth during downcycles and disinflationary episodes.

Prior to and during the GFC, the growth of the broad money supply in both countries decelerated sharply in a (roughly one-year) lagged response to the GDP cycle. This generated a pro-cyclical monetary accommodation of the business cycle, while simultaneously countering the imported inflationary surge following currency depreciation/devaluations. This lagged pro-cyclical accommodation of the production cycle and counter-inflationary policy continued to characterise the Botswanan monetary response to the subsequent downcycle of 2015–2016 and the COVID crisis of 2020. However, the South African authorities adopted an approach of countering the GDP cycle by pro-cyclically accommodating inflationary surges with accelerations of money supply growth through quantitative easing and open market purchases of government bonds to finance the growing fiscal deficit. Whereas the South African Reserve Bank has been flexible in the use of these two main instruments to stabilise inflation, the Botswanan monetary authorities have focused on using their levers over the money supply rather than utilising the policy rate.²⁹

Reserve management

Further to their control of the base money supply, risk management of the interest rate, and prudential regulation of the money and credit multipliers, central banks also manage the accumulation/decumulation of foreign exchange and other reserves with which to settle transactions on the current and financial accounts. The choice of exchange rate regime is instrumental to the management of these accounts. Since the government is a major player in financial account transactions, reserve management is also intimately connected to the nation's fiscal capacity, prospects and policy stance.

South Africa maintains a free-floating currency regime with some controls over capital flows. A generally accepted minimum is that nations should hold reserves equivalent to the value of three months of imports.³⁰ Many African countries with greater dependence on volatile export commodity and external financial flows prefer to hold more precautionary reserves, especially if they operate managed floats, crawling pegs or fixed exchange rate regimes in which they

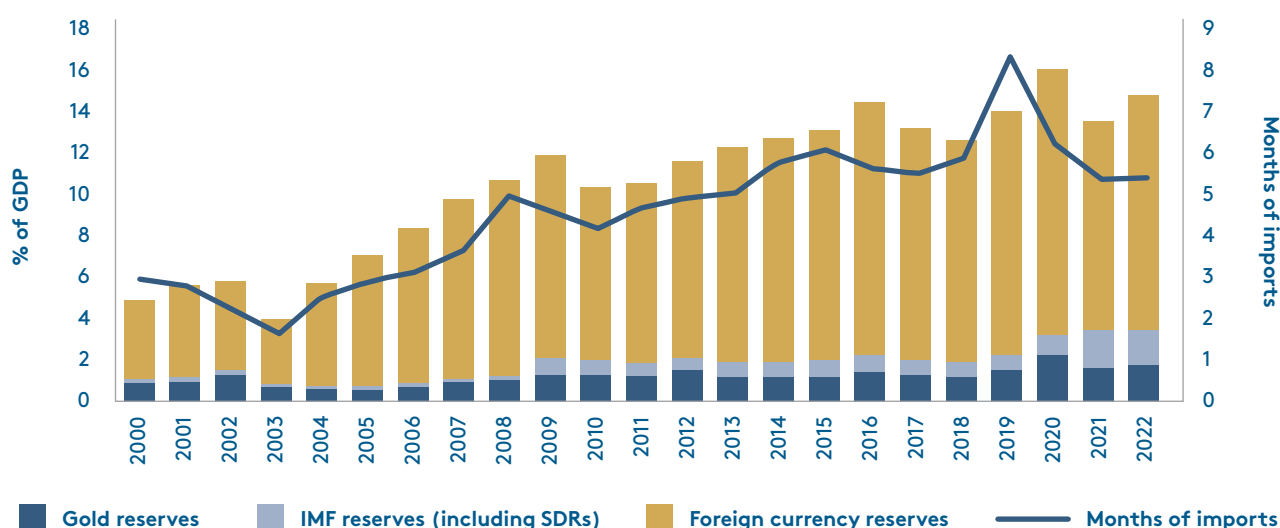
29 South Africa can be characterised as following a discretionary monetary policy, implying flexible use of instruments to achieve an inflationary target outcome. Botswana might be described as following an eclectic monetary policy where money supply targeting is used to control inflation.

30 International Monetary Fund, 'Assessing the Need for Foreign Currency Reserves,' IMF Survey, 7 April 2011, <https://www.imf.org/en/News/Articles/2015/09/28/04/53/sopol040711b>.

must intervene to support an overvalued exchange rate. The Southern African Development Community (SADC) convergence criteria suggest a minimum of six months of import cover.³¹

Figures 11A and 11B compare the relative reserve positions of South Africa and Botswana respectively. South Africa allows its currency to depreciate in line with (shocks to) investor confidence and a persistent and growing fiscal deficit. Correspondingly, the South African Reserve Bank has presided over an increase in all components of its reserves (foreign currency, gold and IMF holdings) as a proportion of GDP and their reflection in the months of import cover which have shown an increase from 2.2 months in 2002 to 5.4 months in 2022.

Figure 11A South Africa's reserve management, 2000–2022



Source: Authors' compilation from IMF Balance of Payments and International Investment Position Statistics, <https://data.imf.org/?sk=7a51304b-6426-40c0-83dd-ca473ca1fd52&sid=1390030341854>

Routine operation of the reserve account involves decumulation when reserves are sold to pay for imports or to meet external debt-servicing obligations, and accumulation when export payments are received or external loans are disbursed. These (a) working capital tranches should ideally enable six months of import cover and be able to meet all short-term external debt obligations. An additional (b) buffer tranche is required to cushion against shocks or to otherwise decelerate currency depreciation by engaging in open market purchases to counter speculative sales that accelerate depreciation. These buffers need to be re-accumulated during inter-crisis growth

31 South African Reserve Bank, 'Reserve management and FX intervention' (Bank of International Settlements (BIS) Paper 104, October 31, 2019), <https://www.bis.org/publ/bppdf/bispap104w.pdf>.

periods. Finally, central banks may keep (c) an investment tranche which is used to cover the holding costs of reserves by earning returns based on interest rate differentials between the policy rate and returns from short-term foreign exchange transactions.³² Where, as in Botswana, excess reserves have been sustainably accumulated, they can be redirected into (d) Sovereign Wealth Funds (SWFs). These funds are often focused on longer-term investments in infrastructure and infant industries, and are usually funded by surplus resource taxes/royalties or state pension deposits. In practice, the working capital (import cover, short-term debt redemption) and investment activities of favoured industries can bleed over into the transactional space of SWFs, making definitional transparency of concern to oversight bodies.³³

Between 2000 and 2022, South Africa's external debt holdings increased from 17.8% to 40.6% of GDP while imports rose from 21.3% to 29.1%,³⁴ thereby raising the reserve adequacy requirements for the working capital functions of the Gold and Foreign Exchange Contingency Reserve Account (GFECRA). With respect to its crisis-buffering functions, it can be seen from Figure 11A that reserves decumulated during and for several years following crises (2001–2003, 2008–2010, 2015–2017, 2019–2021), but not so much as to reverse the long-term accumulation of reserves during intervening periods of economic growth. Structural reserve accumulation appears to be well correlated with the structural depreciation of the ZAR.

One of the most contentious issues between treasuries and central banks is the proportion and timing of external debt issuance.³⁵ In February 2024, South Africa's National Treasury reached an agreement with the Reserve Bank whereby excess reserves from the investment tranche of the GFECRA are funnelled through a Reserve Bank contingency fund (which maintains the reserve position of the commercial banking system) into the National Revenue Fund. This enables a substitution of higher interest-bearing external and domestic debt with reserves lent at the policy rate, thereby reducing government's debt-servicing burdens and liquidity pressures. With specific reference to the forthcoming 2024–2026 medium-term period, this arrangement will be initiated with a transfer of roughly 15% of reserve holdings (or 2.25% of GDP).³⁶ The authors' calculations

32 South African Reserve Bank, 'Reserve management and FX intervention' (Bank of International Settlements [BIS] Paper 104, October 31, 2019), <https://www.bis.org/publ/bppdf/bispap104w.pdf>.

33 Statistics Department, International Monetary Fund, 'Sovereign Wealth Funds and Reserve Assets: A statistical perspective,' Twentieth Meeting of the IMF Committee on Balance of Payments Statistics, Washington, D.C., October 29–November 1, 2007, <https://www.imf.org/external/pubs/ft/bop/2007/07-06.pdf>.

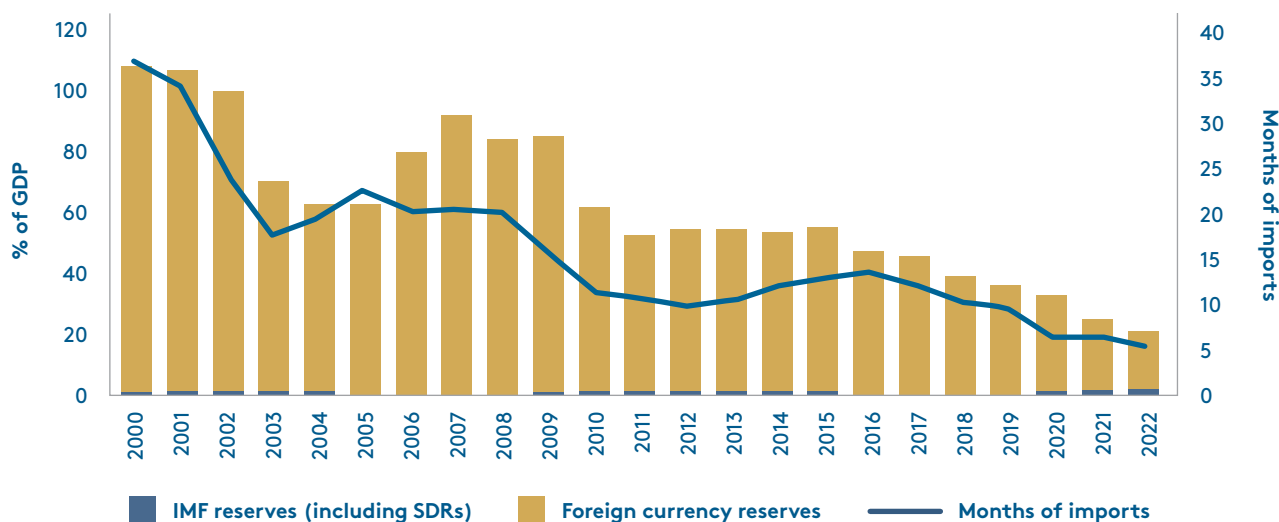
34 Authors' calculation from IMF International Finance Statistics and International Debt Statistics.

35 Gergely Baksay, Ferenc Karvalits and Zsolt Kuti, 'The impact of public debt on foreign exchange reserves and central bank profitability: the case of Hungary,' (Bank of International Settlements [BIS] Paper 67, October 9, 2012), <https://www.bis.org/publ/bppdf/bispap67l.pdf>.

36 National Treasury, Republic of South Africa and South African Reserve Bank, 'Gold and Foreign Exchange Contingency Reserve Account (GFECRA), Frequently Asked Questions,' February 2024, <https://www.resbank.co.za/content/dam/sarb/publications/media-releases/2024/gfecra-q-a/Gold%20and%20Foreign%20Exchange%20Contingency%20Reserve%20Account%20QandA.pdf>; National Treasury, Republic of South Africa, 'Budget Review 2024,' February 21, 2024, <https://www.treasury.gov.za/documents/national%20budget/2024/review/FullBR.pdf>.

suggest that a 15% withdrawal of reserves from the GFECRA could reduce import cover to 4.6 months, which is still above the three months' minimum standard.³⁷

Figure 11B Botswana's reserve management



Source: Authors' compilation from IMF Balance of Payments and International Investment Position Statistics, <https://data.imf.org/?sk=7a51304b-6426-40c0-83dd-ca473ca1fd52&sid=1390030341854>

In contrast to the structural trend of reserve accumulation in South Africa until 2024, Botswana's monetary authorities have withdrawn from their reserves and notably from their sovereign wealth fund, the Pula Fund, with adverse effects on the propensity to invest in fixed capital formation. Like South Africa, there is evidence of precautionary reserve accumulation prior to the exogenous commodity price shocks of 2000–2001, 2008–2009 and 2015–2016 but not for COVID in 2020. In response to these crises and during the inter-crisis growth periods, reserve decumulation in support of an overvalued exchange rate pegged to the ZAR outweighed any revaluations and precautionary accumulations. Between 2002 and 2022, reserves as a proportion of GDP fell from 101% to 21% and import cover from 24.2 months to 5.7 months, little more than those in South Africa.

37 Kopano Gumbi, Olivia Kumwenda-Mtambo and Nellie Peyton, 'South Africa taps contingency reserves to limit rising debt,' Reuters, February 21, 2024, <https://www.reuters.com/world/africa/south-africa-will-tap-contingency-account-curb-rising-debt-2024-02-21/>.

Fiscal and monetary policy recommendations

Fiscal policy

The ‘golden rule’ of debt is that government (or public sector) deficits should only be incurred to finance productive public investment and not consumption (compensation of employees, goods and services, interest payments, grants, subsidies and transfers).³⁸ This rule implicitly sets a parity target of public and publicly guaranteed (PPG) debt to public investment. In practice, this benchmark is difficult to measure, let alone implement.

First, internationally comparable measures of external debt are available but those of domestic debt are less transparent. Second, for a debt rule to be comprehensive, it should be inclusive, not just of the central government but also of subnational governments, social security funds and public corporations. With the increasing use of publicly guaranteed debt, the tracking of private-sector utilisation of PPG debt into investment will also be necessary. Third, there is some fungibility between (public) investment and consumption, especially with respect to institutional capacity building. Finally, any **debt limit** would have to be conceptualised as a target range over the course of the medium-term business cycle.

While a country’s sustainable debt levels would be expected to rise with per capita income, there is nevertheless a great deviation between countries from the norms associated with that income level. In a UNDP debt sustainability analysis of developing (low- and middle-income) economies, solvency ratios of between 35% and 75% debt-to-GDP and liquidity ratios of between 16% and 23% debt servicing-to-revenue were proposed as warning indicators of a high probability of default. The variation in debt limits depends on estimated debt-carrying capacity, which is typically influenced by the country’s credit rating and interest risk premium, perceptions of government effectiveness and rule of law, past fiscal and monetary policy choices, the extent of export commodity dependence and the volatility of cycles influencing future growth prospects.³⁹ In a separate OECD debt sustainability analysis of middle-income countries, South Africa was assessed with a 70% PPG:GDP ratio as the tipping point at which a self-fulfilling risk of debt default becomes likely.⁴⁰ As of December 2023, South Africa’s government debt-to-GDP stood at

38 James Chen, ‘The golden rule of government spending: Definition, applications, US approach,’ Investopedia, January 26, 2024, <https://www.investopedia.com/terms/g/golden-rule.asp#:~:text=The%20golden%20rule%20of%20government%20spending%20is%20a%20fiscal%20policy,term%20benefits%20for%20the%20future>.

39 Lars Jensen, ‘Sovereign debt vulnerabilities in developing economies’ (UNDP Development Futures Series Working Paper, March 2021), <https://www.undp.org/sites/g/files/zskgke326/files/publications/54241%20-%20UNDP%20WP%20Debt%20Vulnerability-web.pdf>.

40 Jean-Marc Fournier and Manuel Bégin, ‘Limits to government debt sustainability in middle-income countries’ (OECD Economics Department Working Paper No 1493, November 10, 2018), [https://one.oecd.org/document/ECO/WKP\(2018\)41/en/pdf](https://one.oecd.org/document/ECO/WKP(2018)41/en/pdf).

74% (with approximately 40% being externally sourced).⁴¹ While South Africa has likely breached this imputed debt limit, Botswana's public debt stands at approximately 18% of GDP (11% external), well below the debt limit of 40% that its National Development Plan caters for.

Botswana also follows a **balanced budget rule** which has been breached once (in 2020) since its introduction in 2003, and an expenditure limit (30% of GDP) which has been surpassed several times. It might be argued that an expenditure limit is redundant without an accompanying revenue target, both of which can be built into a comprehensive balanced budget rule. Simple limits, without recognition of medium-term leads or lags in transmission, complicate the implementation of counter-cyclical fiscal policy. As with debt rules, balanced budget rules should be expressed as target ranges over the medium term.

Within these medium-term debt and balanced budget target ranges, the fiscal component of macroeconomic resilience can be enhanced by the **consistent application of counter-cyclical policies**. This, critically, requires the acceleration of revenue collection and debt repayment and the deceleration of spending during the upcycle, not a singular focus on fiscal expansion during the downcycle. In both countries, both revenue and expenditure movements are pro-cyclical. However, there is some evidence that counter-cyclical policy is being implemented with the expenditure cycle being less volatile than the revenue cycle (such that, during the upcycle, expenditure is accelerating at a slower rate than revenue generation but not stabilising, and vice versa).

In order to integrate the application of fiscal rules and counter-cyclical policies, the **relative prioritisation** of debt repayments, and social, infrastructure and other government spending for stabilisation purposes will have to be addressed. In respect of debt servicing, the UNDP estimated that the maximum liquidity ratios of 16–23% of revenue have not been breached in either country. However, prior to 2003 and since 2020, South Africa's liquidity ratios have moved into this threshold range which is dependent on debt-carrying capacity, while Botswana's liquidity ratios have only recently exceeded 2% of revenue.

Table 3 clearly indicates the primacy of debt servicing in government spending. In both countries, the real growth of debt servicing is higher than GDP and any other component of spending. In South Africa's case, volatility of spend is repressed relative to all other components and even to the GDP benchmark, whereas Botswana has the leeway to adjust its debt-servicing burden as part of a counter-cyclical response.

41 CEIC Data, 'South Africa Government Debt: % of GDP,' <https://www.ceicdata.com/en/indicator/south-africa/government-debt--of-nominal-gdp#:~:text=Key%20information%20about%20South%20Africa,Dec%201960%20to%20Dec%202023>.

Table 3 Real growth of components of government spending

Item	15 year average (2007 to 2022)	10 year average (2012 to 2022)	5 year average (2017 to 2022)	Standard deviation (2007 to 2022)	Standard deviation (2012 to 2022)	Standard deviation (2017 to 2022)
SOUTH AFRICA						
Gross domestic product	1.29%	0.92%	0.43%	2.61%	2.61%	3.55%
Government spending (total)	2.52%	1.60%	0.15%	6.39%	6.08%	2.42%
Public debt servicing	6.30%	6.78%	6.09%	4.43%	1.84%	2.35%
Social spending (on SDGs 1-4)	3.21%	2.52%	1.22%	7.87%	9.20%	10.50%
Infrastructure spending	0.84%	1.87%	0.11%	16.63%	17.86%	16.75%
Other spending	1.29%	-1.90%	-4.16%	19.69%	21.28%	10.78%
BOTSWANA						
Gross domestic product	2.77%	3.76%	3.00%	7.10%	6.21%	6.72%
Government spending (total)	0.73%	0.85%	-1.12%	10.26%	5.47%	6.09%
Public debt servicing	6.36%	3.91%	4.91%	11.83%	11.38%	12.05%
Social spending (on SDGs 1-4)		2.07%	-1.40%	7.93%	7.93%	9.13%
Infrastructure spending		-3.16%	-9.04%	10.30%	10.30%	11.48%
Other spending		2.65%	6.36%	9.94%	9.94%	12.85%

Source: International Monetary Fund, Government Finance Statistics, <https://data.imf.org/?sk=89418059-d5c0-4330-8c41-dbc2d8f90f46&sid=1437488721405>

Social spending (inclusive of the SDGs 1–4 pertaining to social and food security, health and education) should exhibit positive real per capita growth as a minimum target in South Africa due to its constitutional Bill of Rights which mandates progressive realisation of basic needs. Furthermore, although volatility is above average and in line with the automatic stabilising components of social security and some aspects of health spending, average growth over the medium-term fiscal cycle generally remained positive between 2000 and 2022. By contrast, Botswana is unconstrained in using social spending as a counter-cyclical tool and allows it to be crowded out by other functional spends.

The brunt of cyclical adjustment and shock absorption is borne by infrastructure spending (energy, water, transport, waste management, communications, construction and economic services), particularly in Botswana, and other services (general administration, security and justice) in South Africa, as indicated by the lowest average growth rates and the highest deviations from the average. Infrastructure spend justifies greater prioritisation in respect of

both growth and stabilisation by virtue of its long-term growth multiplier impact, its strong intersection with the (other) SDGs, and the minimisation of wasteful spending incurred through unstable infrastructure and capital resource flows. The guide provided by the 'golden rule' that deficits should equal public Gross Fixed Capital Formation (GFCF) cannot currently be estimated. This is because there are neither internationally nor nationally comparable data that distinguish public from private capital spending. There is little in the way of objective benchmarks against which to evaluate the importance of other government functions, but there will be tipping points below which governance will be adversely affected.

Were it (or when it is) possible to measure and comprehensively manage public and publicly guaranteed GFCF, maximum deficit limits can be ascertained and built into fiscal rules. In the absence thereof, tax or **revenue target ranges** might be preferable to expenditure limits in securing a (more) balanced budget. In the less likely event of the maximum limits being breached, the excess should be channelled into foreign exchange and other contingency reserves to build up longer-term resilience. In the more probable event that the minimum limits are breached, this may imply an invigorated tax collection effort, despite growth deceleration. With specific reference to the forthcoming medium term, the IMF calculates that the permanent extension of the Social Relief Grant could be financed through a 2% increase in the corporate income tax rate, a 2.6% increase in the marginal rate of personal income tax or a 4.6% increase in VAT.⁴²

In most African nations, debt-management functions are undertaken by offices within the national treasury. However, for larger countries with more complex intragovernmental systems (such as Nigeria and South Africa), where tiers of government and their public corporations have revenue-, debt- and contingent liability-raising authority, central government may not have the legal remit to control and manage these debts. In such instances, a **debt management authority** with a separate though interdependent remit from the treasury and central bank and a legal authority over all PPG debt, might be better able to accurately measure, effectively control and implement debt limits (and channel its use into public investment).⁴³

Monetary policy

Though for different reasons, it is likely that both South Africa and Botswana have reached or could reach critical tipping points in their macroeconomic resilience through the decumulation of reserves beyond minimum requirements. Norms of three months of import cover as a minimum

42 International Monetary Fund, 'South Africa: 2023 Article IV Consultation – Press Release; Staff Report; and Statement by the Executive Director for South Africa' (International Monetary Fund Country Report No. 23/194, Washington, DC, June 6, 2023), <https://www.imf.org/en/Publications/CR/Issues/2023/06/06/South-Africa-2023-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-534271>.

43 Bopelokgadi Soko, 'Debt management and governance in Africa,' African Debt Series Vol. 1, Friedrich Ebert Stiftung, June 2022, <https://library.fes.de/pdf-files/bueros/fes-ua/19364.pdf>; A full overview of debt management function is provided in: International Monetary Fund, 'Guidelines for Public Debt Management,' March 2001, <https://www.imf.org/external/np/mae/pdebt/2000/eng/index.htm>.

may be appropriate for large, diversified, upper-income economies but in poorer, smaller and less-diversified economies, greater susceptibility to crises may push minimum requirements to six months or more. Thus, while a **reserve requirement** range of three to six months of import cover may be appropriate for South Africa, six months may be the minimum for the commodity-dependent, volatile Botswanan economy.

Assuming these reserve ratios are congruous, the agreement between South Africa's National Treasury and the South African Reserve Bank to enable a large upfront withdrawal to reduce the fiscal deficit (as well as subsequent smaller ones after replenishing a central bank contingency fund) remains within the limits implied by the three- to six-month reserve requirement ratio.⁴⁴ In Botswana's case, the six-month minimum was breached in 2022, though subsequent increases in the diamond price should restore reserves above this threshold again.

If the potential for a long diamond price downcycle or an exhaustion of supplies is considered feasible or imminent, the Botswanan authorities may have reason to consider the **sustainability of the crawling peg** arrangements against the ZAR (and XDR) which are premised on the probability of excess reserves to support the currency. Were the BWP to float freely, it could establish a structural depreciation path against the ZAR over and above South Africa's own structural depreciation against major trading partners' currencies. Furthermore, the inherent volatility of local currency values, inflation and production is likely to be exacerbated if the local currency is allowed to float. The possible benefit of structural currency depreciation is long-term production and trade diversification by enabling national competitiveness through import substitution. Alternatively, the Botswanan government and people might consider rejoining the Common Monetary Area and tying the fate of their currency and counter-inflationary policy to those of South Africa, an option that might not be politically palatable.

The South African Reserve Bank has proposed a gradual **tightening of its inflation target** towards the minimum 3% level, more in line with the singular inflation targets of the European Central Bank and the US Federal Reserve.⁴⁵ South Africa's actual inflation performance has tended to hover close to the maximum limit and it has rarely approached the minimum limits. The feasibility of reducing the maximum limit may be dependent on whether the structural depreciation of the currency and the long-term decline in the interest rate since the GFC can be sustained into the 2020s. The central bank is concerned with fiscal deficits driving monetary accommodation of inflationary surges, while the treasury is concerned that state spending enables greater productivity through human and physical capital formation.

44 National Treasury Republic of South Africa and South African Reserve Bank, 'Gold and Foreign Exchange Contingency Reserve Account (GFECRA), Frequently Asked Questions,' February 2024, <https://www.resbank.co.za/content/dam/sarb/publications/media-releases/2024/gfecra-q-a/Gold%20and%20Foreign%20Exchange%20Contingency%20Reserve%20Account%20QandA.pdf>.

45 Ntando Thukwana, 'South Africa Treasury backs Central Bank Inflation Target Review,' Bloomberg UK, February 23, 2024, <https://www.bloomberg.com/news/articles/2024-02-23/south-africa-treasury-backs-central-bank-inflation-target-review?embedded-checkout=true>.

Were Botswana to adopt a free-floating currency, it might choose to adopt inflation targeting as a means of stabilising currency movements and the inflationary cycle. Given the country's inherent volatility, the range of 3–6% would serve as a long-term stretch target, assuming fiscal surpluses can be restored sustainably.

Conclusion

This occasional paper has focused on the fiscal and monetary policy actions that are within the mandates and competencies of the ministries of finance and the central banks, during periods of crisis induced by exogenous shocks and the intervening growth periods, such as to detect structural trends in building or dismantling macroeconomic resilience.

A comprehensive or whole-of-government approach to developing macroeconomic resilience would also include trade and industrial policy (with the objective of diversifying domestic production and exports), infrastructure provision and maintenance (to secure energy and water supplies and reduce the transport-related costs of trade), human capital formation (through vocationally oriented education and primary healthcare) and improvements in governance (through institutional capacity building). Within the fiscal and monetary policy limits that are being recommended, these other components of a comprehensive national development plan are worthy of separate policy analyses which would inform recommendations on improving the efficiency and effectiveness of these components of government spending.

Studies of macroeconomic resilience or vulnerability should also be complemented with analyses of the transmission of shocks and policy interventions on the microeconomic (or household and enterprise-level) reallocation of resources and their consequent impacts on welfare. This would involve supplementary analyses of employment, household consumption, savings and debt to identify the shock transmission mechanisms, which tend to disproportionately negate the welfare of the poorest classes, and to evaluate the means by which the trickle-down of public spending can be augmented.

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