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Exploring the Monetary Architecture of South Africa: The South African Reserve Bank

Exploring the potential for "elasticity spaces"

Chantal Naidoo, Yasmin Meerholz, Patrick Lehmann-Grube

Input paper for the National Planning Commission

February 2026

Acknowledgements and statement of original work

This paper was commissioned by the National Planning Commission's Finance Working Group as part of a broader synthesis report which explores *The Transformation of South Africa's Monetary Architecture, 1983–2024:* A Report for the National Planning Commission. The lead authors for the report were Mark Swilling and Steffen Murau.

This particular paper focuses on the role of the South African Reserve Bank (SARB), examining its balance sheet during four pivotal years in the country's history – 1983, 1994, 2008, and 2022 – to better understand how the SARB responded to significant systemic shocks in each period and how its actions were linked to financial institutions under its oversight. The contents of this document represent original work by Rabia, developed in 2024.

Cite as: Naidoo, C.P., Meerholz, Y., and Lehmann-Grube, P. (2026). "Exploring the Monetary Architecture of South Africa: The South African Reserve Bank". Rabia Transitions Initiative. Johannesburg.

About Rabia

Rabia Transitions is a non-profit research initiative founded in 2021, and headquartered in South Africa. Its purpose is to reimagine a financial ecosystem that fosters a just and resilient transition. Through an interdisciplinary lens, Rabia integrates financial, environmental, economic, and social perspectives to advance low-emission, climate-resilient development. It offers critical and independent research through technical tools, and frameworks rooted in African approaches to sustainability transitions, emphasising compassion, justice, and interconnectedness.
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Executive Summary

This paper is commissioned for the National Planning Commission's Finance Working Group to explore the monetary architecture of South Africa. Theoretically, it applies Murau's (2020) Monetary Architecture (MA) framework to the South African Reserve Bank's (SARB) balance sheet. In applying the MA model and viewing the economy as a network of interconnected balance sheets, the potential to harness and mobilise any available financial flexibility during financial or systemic emergencies is assumed. This paper analyses the balance sheet of the SARB over four specific "shock point" years of South African history, namely, 1983, 1994, 2008, and 2022, to gain a clearer understanding of how the SARB responded to the associated systemic shocks and how its actions interconnect with financial actors under its jurisdiction. These insights contribute to broader considerations of whether the South African financial system is fit for the purpose of advancing a just and inclusive green transition.

The paper complements a static balance sheet analysis with the political economy context of South Africa across the four periods, providing a time series analysis of the SARB balance sheet movements, and draws further insights through liquidity ratio analysis.

Throughout all four periods (1983, 1994, 2008, 2022) and the surrounding years, the SARB balance sheet expanded, regardless of the financial and economic climate. From 1980-1989, SARB liquidity declined, but from 1990 onwards, liquidity diverged due to declining gold reserves versus government bonds and foreign currency reserves. This shift aligns with the opening of the South African economy and the global move away from gold, resulting in foreign reserves and government bonds driving increased liquidity between 1994 and 2008. This seems to have stabilised around 2022. These shifts may signal international pressure for the SARB to have higher foreign reserve holdings.

The SARB's advances listed under "other advances" create liquidity for banking institutions and government bodies. These advances contribute to balance sheet expansion within the broader monetary architecture. Advances surged in the early 1980s but decreased as financial stability through debt repayment was achieved. They rose again in the early 1990s, declining post-1994 with economic stabilisation. Advances dropped throughout the 2000s, possibly due to ongoing economic stability, but increased post-COVID-19 to support the pandemic response and economic recovery, before decreasing again as stability returned.

Government reporting on foreign currency deposits, which began post-2008, showed an increase until 2019, after which they fell. This trend suggests that having fewer foreign deposits expands liquidity during crises, in this case, post-COVID-19. Examining periods comparatively, significant shifts in balance sheet composition are evident, particularly the rise in foreign reserve holdings by the SARB and a general decline in advances and investments as a percentage of the balance sheet. Required reserve ratios have increased proportionally, consistent with global financial regulations like the Basel Accords. This trend may continue if the SARB mandates reserve ratios for non-banking financial institutions, providing a mechanism to bail out institutions and enabling potential balance sheet expansion within the system.

Throughout its history (1921-2024), particularly in the democratic era, the SARB has adopted a conservative approach to monetary policy, an approach which has often seen financial and market stability trumping socio-economic concerns. The SARB track record of approaching its mandate with conservatism and caution manifests particularly in times of crisis (e.g. the COVID-19 response). The SARB is deeply respected for strongly upholding its mandate of maintaining financial stability, and this has, to an extent, buffered the South African financial sector from global crises.

The International Monetary Fund believes the current financial architecture was not designed for the multiple crises enveloping our world. This is a view upheld in climate negotiations as well (i.e. the COP27 focus on reforms of the international financial system). More fundamentally, the instruments and policies supporting the current system may also not be appropriate for sustainable economic growth and the system-level transitions now needed. Answering questions such as these in the South African context, and how elasticity spaces can be created, also requires the SARB to reflect and act specifically in terms of the second part of its mandate, i.e. to “contribute to sustainable economic growth”, and this is the basis for enabling a just, inclusive, equitable and dignified.

Content

List of Abbreviations and Acronyms

ABHL	African Bank Holdings Limited
ANC	African National Congress
CEO	Chief Executive Officer
CODI	Corporation for Deposit Information
CPD	Corporation for Public Deposits
EU	European Union
FCL	Flexible Credit Line
FIC	Financial Intelligence Centre
FIMA	Foreign and International Monetary Authorities
FSC	Financial Stability Committee
FSCA	Financial Sector Conduct Authority
FSCF	Financial Sector Contingency Forum
FSOC	Financial Stability Oversight Committee
FSR	Financial Sector Regulation
GDP	Gross Domestic Product
GEAR	Growth, Employment and Redistribution
GFC	Global Financial Crisis
GFECRA	The Gold and Foreign Exchange Contingency Reserve Account
IOSROs	Intraday Overnight Supplementary Repurchase Operations
IMF	International Monetary Fund
MA	Monetary Architecture
MPC	Monetary Policy Committee
MPIF	Monetary Policy Implementation Framework
NBFI	Non-Banking Financial Institution
NCR	National Credit Regulator
NFC	National Finance Corporation
NSPF	National Supplies Procurement Fund
PA	Prudential Authority
PAC	Pan Africanist Congress
PBoC	People's Bank of China
RDP	Reconstruction and Development Programme
RFI	Rapid Financing Instrument
RMB	Renminbi
RSA	Republic of South Africa
SACP	South African Communist Party
SAMOS	South African Multiple Option Settlement facility
SARB	The South African Reserve Bank
SLL	Short-term Liquidity Line
SOE	State-Owned Entities
US	United States
USD	United States Dollar
ZAR	South African Rand

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1. Introduction

The concept of a Monetary Architecture (MA), developed by Murau (2020), envisages the financial sector as a system of interconnected balance sheets. This analysis unlocks a deeper insight into the total assets and liabilities within an economy as opposed to the traditional practice of looking at independent institutions when assessing the capacity for financial emergency responses. This MA model has been applied in both the European Union context (Murau, 2020) and in mapping the monetary architecture of the United States (US) (Murau et al., 2023), showing the application ability of the Monetary Architecture model in different jurisdictions.

In applying the MA model and the view of an economy as a series of interconnected balance sheets, it is assumed that available financial flexibility can be unlocked in the face of financial or systemic emergencies. This application and the insight it provides hold specific significance for a green energy transition (Murau et al., 2023). Fast and efficient mobilisation of financial resources is needed to properly facilitate such a transition. MA meets these needs through what Murau calls “elasticity space”. This is the ability of institutions to expand their balance sheets, and consequently, based on the notion that all balance sheets are connected, equally provide financial expansion of the balance sheets of institutions’ counterparties.

The green energy transition is already underway in South Africa. To support a speedy, efficient, and successful transition, a mechanism is needed to unlock additional liquidity financing (World Economic Forum, 2023). It is in this context that this paper assesses the Monetary Architecture of the South African economy. By assessing past critical periods where balance sheet expansion and liquidity creation were needed to tackle systemic issues, financial disasters and regime changes, this paper aims to discover the elasticity space that was used and may now be used for the green energy transition.

This paper forms part of a series that builds a South African Monetary Architecture Model and focuses specifically on the South African Reserve Bank (SARB) and the elasticity that exists within the SARB balance sheet and, consequently, the elasticity space this creates within the South African Monetary Architecture. This analysis focuses on four specific “shock point” years of South African history, namely, 1983, 1994, 2008, and 2022, to better understand how exactly the SARB reacted to the associated shocks to the system. Though the focus is on each of these years, given the lagging and leading impact of events on the South African economy and the SARB’s balance sheet, the political-economic and balance sheet analysis also focuses on the years before and after these “shock points”.

The paper is organised, after the general introduction, according to: (Section one); An introduction of the MA framework methodology (Section two); the role of the SARB in the domestic monetary architecture (Section three); an analysis of the South African political economy across the four "shock points" and the SARB's response to these changes with a focus on the balance sheets (Section four); and the conclusion (Section five).

2. Background and methodology

2.1 The concept of a "Monetary Architecture" and "Elasticity Space"

The MA framework developed by Murau (2020) is a novel approach that maps the entire financial ecosystem of a country by linking the assets and liabilities on the balance sheet of each actor in a financial system. The MA model identifies two key types of balance sheets within an economy, namely "workhorse" balance sheets, which provide elasticity for an economy and are generally hierarchically lower, and "firefighter" balance sheets, responsible for systemic stability (Murau et al., 2023). The SARB forms part of the "firefighter" balance sheets and ensures systemic stability throughout the balance sheet expansion process as well as during the post-expansion contraction process over the long term.

In this framework, balance sheets are separated into assets and liabilities and then further into actual contingent assets and liabilities as demonstrated in the stylised T-account, as in Figure 1.

Figure 1: Adapted Balance Sheet Template

(explains the categories of credit instruments)

Assets		Liabilities	
ZAR USD	**Actual assets** Held on the balance sheet over time, commitments for future cash inflow, subject to changes in valuation; typically are financial claims, but physical assets can also be treated as a bond.	**ZAR USD**	**Actual liabilities** Held on the balance sheet over time, commitments for future cash outflow, subject to changes in valuation, are merely financial claims. **Equity capital** Residual category, difference between actual assets and actual liabilities.
ZAR USD	**Contingent assets** Represent the potentiality of balance sheet expansion and cash inflow once the credit system contracts; then they become actual *assets;* can be explicit or implicit; as counterfactual instruments, it is often unclear whether they exist or not.	**ZAR USD**	**Contingent liabilities** Represent the potentiality of balance sheet expansion and cash outflow once the credit system contracts; then they become actual *liabilities;* can be explicit or implicit; it is in the issuer's power to decide on whether or not to grant the cash outflow.

Source: Authors' own, adapted from Murau, 2023.

As shown in Figure 1, the contingent assets and liabilities provide areas for balance sheet expansion, which is where Murau (2020) explores the concept of "elasticity space". These contingent assets and liabilities also indicate links to counterparty institutions and are essentially what create the framework connecting the balance sheets within the MA framework.

Murau (2020) describes elasticity space as the ability of a balance sheet to be extended by "creating a new credit instrument, which requires the expansion of both assets and liabilities while interacting with another balance sheet as counterparty."

The elasticity space of a balance sheet is determined by three factors (Murau, 2020):

1. The willingness and ability of other institutions in the architecture to act as a counterparty to the expansion;
2. The access that a balance sheet has to contingent instruments (typically from hierarchically higher balance sheets which supply emergency funds); and
3. The stipulations for these balance sheet expansions and how they are enforced.

2.2 Application of methodology

This paper expands on the MA concept within the South African context, applying these to the SARB institutional perspective. How this is applied is seen in Figure 2, which includes the line items relevant in each quadrant as read from the SARB balance sheets.

Figure 2: Stylised SARB T-Account

	Assets		Liabilities	
Actual	**ZAR**	Advances to banking institutions Discounts, advances and investments	**ZAR**	Notes and coins in circulation Securities Government deposits (domestic)
	Other	Gold coin and bullion Foreign reserves	**Other**	Government deposits (foreign)
Contingent	**ZAR**	Asset resale agreements	**ZAR**	Monetary banking institutions required reserves Securities of the SARB
			Other	The Gold and Foreign Exchange Contingency Reserve Account (GFECRA)

Source: Authors' own

To develop a holistic view of areas where elasticity exists within the SARB balance sheet, and how this relates to the greater monetary architecture, three levels are considered:

1. **Absolute analysis:** This looks at the absolute change in balance sheet size and the size of the respective line items within the balance sheet.
2. **Relative value analysis:** Informed by the work done by Brink and Kock (2009), this analysis assesses the change in balance sheet line items as a percentage of total assets (or liabilities, as both values are equal on the SARB balance sheet). This provides a deeper insight into the sources of elasticity and the movement in the composition of different assets and liabilities relative to the

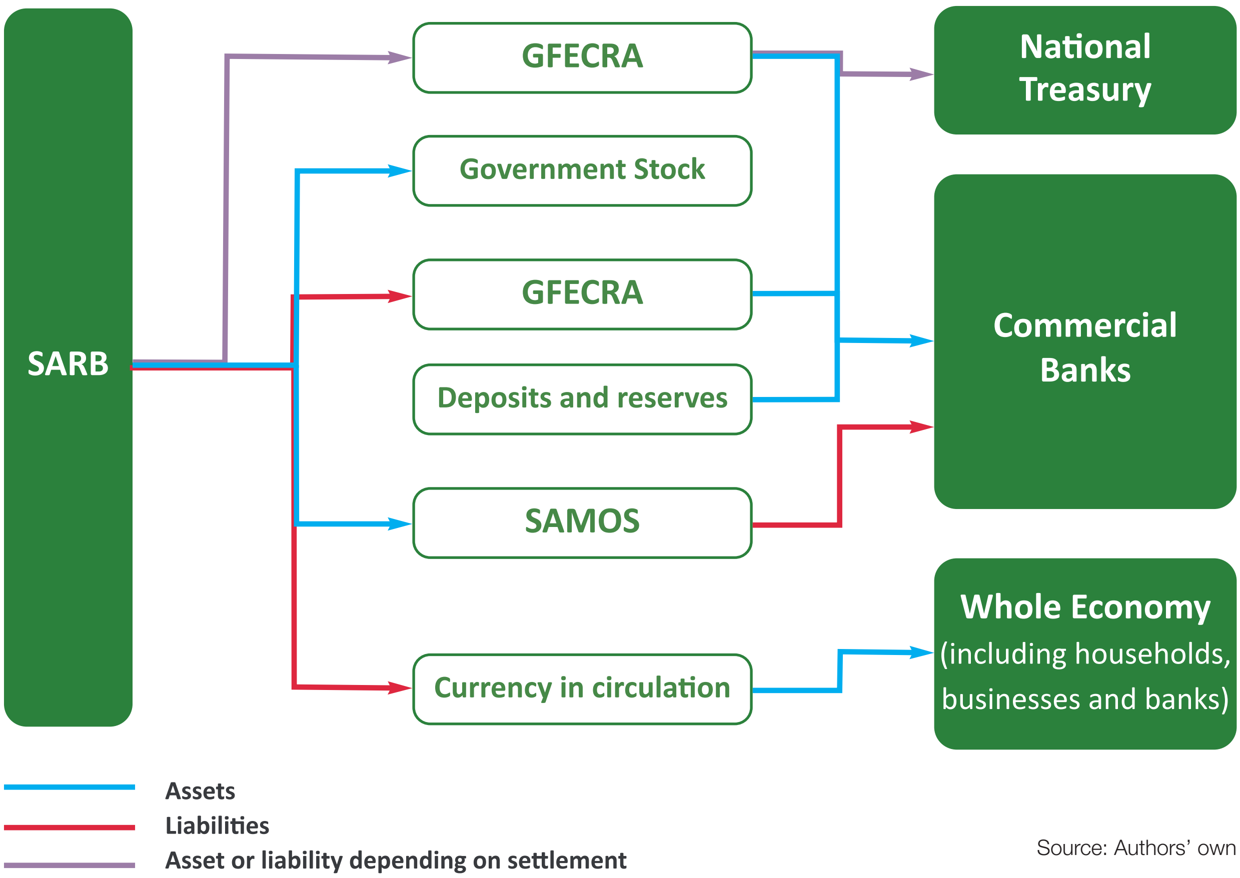
balance sheet as a whole. This helps to prevent erroneous attributing of natural increases in assets and liabilities with balance sheet expansion and change in elasticity space.

3. **Ratio analysis:** The last form of analysis is more novel, specifically when analysing central bank balance sheets. Bagus and Howden (2016) seem to be the first to use the accounting principle of ratio analysis, specifically in the context of central bank balance sheets. This provides an additional level of granularity when assessing the balance sheet of the SARB, and specifically shifts the view away from absolute monetary value to the quality of money, which provides better insight into the analysis of future monetary policy (Bagus and Howden, 2016). In addition, as the SARB creates liquidity for the entire economy, which can be seen as creating additional elasticity, understanding the state of SARB liquidity is key in assessing its ability to act as a "firefighter" balance sheet.

2.3 The South African Reserve Bank and its counterparties

The SARB, like all central banks, is the apex institution in Murau's Monetary Architecture. This location and the ability of the SARB to create monetary policy make the SARB a pivotal player in creating elasticity and liquidity in the South African economy. Figure 3 maps the connection between the SARB and the respective counterparties it interacts with, as well as showing the line item that connects the balance sheets of the institutions within the monetary architecture.

Figure 3: The South African Reserve Bank and its counterparties



Source: Authors' own

The SARB has several explicit counterparties, specifically National Treasury and commercial banks, and its policies in particular influence the whole economy. National Treasury and commercial banks have accounts with the SARB and transact with the SARB through deposits, purchases and sales of securities, advances, and purchases and sales of government stock.

By controlling currency in circulation and money market activities such as buying and selling government bonds to control the amount of money supplied, the SARB interacts with the economy as a whole and affects everyone who uses or holds physical currency, from individuals to households and small businesses.

Less evident counterparties of the SARB are government bodies, including national government, provincial governments, the National Supplies Procurement Fund (NSPF), agricultural control boards and other semi-government bodies. These bodies can receive advances from the SARB and have done so during periods of financial instability, as discussed in further detail in section four. State-Owned Entities (SOE) are not directly linked to the SARB but are indirectly linked through National Treasury.

Non-banking financial institutions (NBFIs) are currently not directly linked as a counterparty to the SARB, but discussion papers are circulating that discuss the potential for NBFIs to hold required reserves at the SARB.

3. The role of the South African Reserve Bank in the domestic Monetary Architecture

3.1 Role and mandate

The SARB was established in 1921 and issued its first banknotes to the public in April 1922 (SARB, n.d.-a). The SARB is a private company. Its primary mandate is determined by Section 224 of the Constitution of the Republic of South Africa (RSA): *"The primary object of the South African Reserve Bank is to protect the value of the currency in the interest of balanced and sustainable economic growth in the Republic"* (South African Government, 1996). In addition, since the introduction of the Financial Sector Regulation (FSR) Act No. 9 of 2017, the SARB also has a statutory mandate, which is the protection and enhancement of financial stability in South Africa, which *"includes strengthening the safety, soundness and integrity of financial institutions through the Prudential Authority"* (SARB, n.d.-b). Though there has been a degree of consistency in its mandate over time, there have been noteworthy changes, which are detailed in Section 4.

In the context of its mandate, the SARB has several tasks and responsibilities, many of which are interlinked (see Figure 4).

Figure 4: Tasks and Responsibilities of the SARB

Monetary Policy: The Constitution gives the SARB the mandate to protect the value of the rand. It uses interest rates to keep inflation low and steady.	**Financial Stability:** The SARB has a mandate to protect and enhance financial stability. It identifies and mitigates systemic risks that might disrupt the financial system.	**Prudential Regulation:** The Prudential Authority regulates financial institutions and market infrastructures to promote and enhance their safety and soundness, and support financial stability.
Financial Markets: Open market operations are the main tool the SARB uses to implement monetary policy.The SARB manages South Africa's gold and foreign exchange reserves.	**Financial Surveillance:** The SARB is responsible for regulating cross-border transactions, preventing the abuse of the financial system and supporting the regulation of financial institutions.	**Payment and Settlements:** The SARB is responsible for ensuring the safety and soundness of the national payment system, which is the backbone of South Africa's modern financial system.
Statistics: The SARB provides important economic and financial statistics that present an overview of the economic situation in South Africa.	**Research:** Research conducted by the SARB focuses on economics, financial stability, banking and emerging trends in finance. Its research supports policy decision-making.	**Banknotes and Coin:** The SARB has the sole right to make, issue and destroy banknotes and coin in South Africa.

Source: Authors' own, based on Information from the SARB (SARB, n.d.-b).

Prudential regulation of financial institutions and market infrastructures is led by the Prudential Authority (PA), which was established as a "juristic person" operating within the SARB on 1 April 2018. The PA has its own Chief Executive Officer (CEO), currently Ms Nomfundo Tshazibana, who also serves as a Deputy Governor of the SARB. Its mandate is the regulation of financial institutions and market infrastructures to promote and enhance their safety and soundness and support financial stability (SARB, n.d.-c).

3.2 Structure and management

Alongside the Constitution and FSR Act of 2017, several legal statutes guide the governance, structure, and actions of the SARB. The key statutes are:

- South African Reserve Bank Act No. 90 of 1989[1]
- Banks Act No. 94 of 1990[2]
- Financial Markets Act No. 19 of 2012[3]
- Co-operative Banks Act No. 40 of 2007[4]
- Mutual Banks Act No. 124 of 1993[5]
- Corporation for Public Deposits Act No. 46 of 1984[6]
- National Payment System Act No. 78 of 1998[7]

The Minister of Finance is responsible for amending these laws. However, the SARB can advise and make recommendations to the National Treasury. Members of Parliament can present private member bills, which can, in theory, be used to amend the above statutes.

The South African Reserve Bank Act No. 90 of 1989 (as amended) provides for a board of 15 directors, which includes one governor[8] and three deputy governors[9], all of whom are appointed by the President of the RSA, in consultation with the Minister of Finance and the SARB board. Four other board members are appointed by the President of RSA, and the remaining seven members are elected by the shareholders at an ordinary general meeting of shareholders (SARB, n.d.-d).

As a private company (with a public service mandate), the SARB also has private shareholders (approximately 800). There are two million issued shares, with no shareholders able to hold more than 10 000 shares. Dividend payments to shareholders also cannot exceed more than 10 cents per share.

1 https://discover.sabinet.co.za/document/1169411
2 https://discover.sabinet.co.za/document/1169463
3 https://discover.sabinet.co.za/document/1166436
4 https://discover.sabinet.co.za/document/1167248
5 https://discover.sabinet.co.za/document/1165961
6 https://discover.sabinet.co.za/document/1167622
7 https://discover.sabinet.co.za/document/1169161
8 Lesetja Kganyago
9 Nomfundo Tshazibana, Rashad Cassim, Mampho Modise.

In addition to electing seven board members, shareholders also consider the SARB's annual financial statements. It is important to note that the shareholders have no say over SARB policy or regulatory decisions (SARB, n.d.-e).

The SARB executive oversees and leads the four SARB committees (see Table 1), which manage and execute various aspects of the SARB's mandate. These are the Governors' Executive Committee, the Monetary Policy Committee (MPC), the Prudential Committee, and the Financial Stability Committee (FSC). These committees oversee a variety of internal departments and actors in the financial system and have several instruments at their disposal to implement the SARB's mandate.

Table 1: SARB Committees

Committee	Description	Instruments
1. Governors' Executive Committee	Handles the day-to-day decision-making at the SARB.	Implementation of the Gold and Foreign Exchange Reserves Investment Policy for **exchange control,** and oversight of the National Payment System Department, which is responsible for **transactions** (SARB, n.d.-f).
2. Monetary Policy Committee	Responsible for the SARB's monetary policy and decides on the repo rate at quarterly intervals.	The repo rate, open market operations, and special assistance for **liquidity management.**
3. Prudential Committee	Oversees the management and administration of the PA.	Circulars, directives, guidance notes, prudential standards, designation criteria, and margin requirements. All of which guide and inform **liquidity management.**
4. Financial Stability Committee	Assesses and considers risks to the broader financial system, and initiates steps to mitigate and address these risks.	Macroprudential monitoring framework: stress-testing financial institutions, standardised industry-wide scenario tests; resolution planning and recommendations. All of which guide and inform **liquidity management.**

Source: SARB, n.d.-g.

The SARB policies and mandates are executed based on the following rationale and processes:

a) Monetary Policy

The monetary policy of the SARB is guided by its inflation-targeting framework, which was adopted in 2000, with a consumer price inflation rate target of 3-6%. The specific target for a given period is determined by National Treasury in consultation with the SARB (SARB, n.d.-h). Until 2022, the primary tool the SARB used for **monetary policy** was setting the repo rate (which is announced by the MPC). However, since then, the key policy rate has been the rate banks earn for depositing qualifying funds at the SARB overnight. This is known as the tiered system. Under this revised framework, banks receive a surplus of reserves, known as settlement balances, surpassing their requirements for reserves and interbank transactions. The SARB offers a deposit option for these surplus balances, allowing banks to earn the repo rate overnight. To maintain activity in the interbank lending sector, the SARB imposes quotas on deposits, and excess balances earn a reduced rate (SARB, n.d.-i).

The SARB also has open market operations, which are instruments and practices the SARB uses to "drain excess liquidity from the market" (SARB, 2020). These are:

- Issuing debentures
- Reverse Repos
- Foreign exchange swap transactions (exchange control)
- Monetary Policy Portfolio

Finally, in its role as the lender of last resort, the SARB can also provide special assistance to commercial banks, allowing for liquidity provision against an array of collateralised assets (SARB, 2020).

b) Prudential Regulation

In June 2011, the South African government approved the transition to the Twin Peaks model of financial sector regulation, as part of efforts to overhaul the regulatory and supervisory framework for financial institutions and market infrastructures (SARB, n.d.-j). A cornerstone of this transition was the enactment of the FSR Act.

The FSR Act introduced three key regulatory changes:

- The SARB was given an explicit mandate to ensure financial stability.
- The PA was established as a regulatory body, responsible for overseeing financial entities and market infrastructures.
- The Financial Sector Conduct Authority (FSCA) was established as a national entity to regulate market conduct.

The financial entities the PA is responsible for **overseeing are banks, insurers, mutual banks and cooperative financial institutions and cooperative banks. In addition, the PA is also responsible for overseeing market infrastructures** (SARB, n.d.-j). To effectively carry out its mandate, the PA is responsible for licensing, ongoing supervision, enforcement, and resolution (SARB, n.d.-j), with a variety of regulatory instruments at its disposal. This includes but is not limited to circulars, directives, guidance notes, prudential standards, designation criteria, and margin requirements (SARB, n.d.-j).

Since the adoption of the Twin Peaks model, the PA has worked on developing "...strong and effective relationships with the Financial Sector Conduct Authority (FSCA), other financial sector regulators such as the National Credit Regulator (NCR) and the Financial Intelligence Centre (FIC), and stakeholders in general" (SARB, 2021a: 1). The PA meets every quarter with the FIC and the FSCA, to enhance regulation and oversight.

c) Financial Stability

To achieve its goal of financial stability, the SARB and National Treasury have agreed on a policy framework that outlines:

- "The SARB's responsibility for mitigating the build-up of risks and vulnerabilities that could threaten the stability of the domestic financial system, and
- A crisis management framework for systemic risks and events" (SARB, n.d.-k).

The three main institutions (within the SARB) responsible for monitoring and maintaining financial stability are the FSC, the Financial Stability Oversight Committee (FSOC), and the Financial Sector Contingency Forum (FSCF). The FSC was established in 2000 and is a non-statutory institution, while the FSOC and FSCF were established through a provision of the FSR Act and are therefore statutory institutions (SARB, n.d.-l). These committees have a high degree of interagency cooperation and coordination.

The FSC is responsible for assessing and considering risks to the broader financial system and formulating the financial stability policy of the SARB (SARB, n.d.-l). The primary tool that the FSC uses to monitor risks to financial stability is the **macroprudential monitoring framework,** which includes stress-testing financial institutions. The SARB does regularly stress-test individual financial institutions. Biennially, the SARB also administers standardised scenario stress tests across the banking and insurance industries. The FSR Act requires the SARB to publish the results of the assessments in the Financial Stability Review (SARB, n.d.-k). The FSC also oversees the work of two sub-committees, the Resolution Policy Panel, which develops resolution planning and crisis management policies; and the Crisis Preparedness Committee (SARB, n.d.-l). The Resolution Policy Panel was established following the SARB's designation as the Resolution Authority, giving it the responsibility to develop resolution strategies for designated financial institutions in case they fail. Any resolution recommendations are proposed to the Minister of Finance for approval (SARB, n.d.-m). The FSC is chaired by the Governor and comprises the SARB deputy Governors and heads of line departments (SARB, n.d.-l).

The primary purpose of the FSOC is to support the SARB (and National Treasury) in **functions relating to financial stability and facilitating cooperation and collaboration between the SARB and other financial sector regulators** (SARB, n.d.-l). The FSOC is chaired by the Governor and comprises the Deputy Governor overseeing financial stability, the CEO of the PA, the Commissioner of the FSCA, the CEO of the National Credit Regulator, the Director-General of National Treasury, the Director of FIC, and potentially three more SARB officials appointed by the Governor, currently including the heads of the Financial Markets Department, National Payment System Department, and Financial Surveillance Department (SARB, n.d.-l).

The FSCF's primary role is to help the FSOC **identify risks of potential systemic events and coordinate development of suitable plans, mechanisms, and structures to mitigate these risks** (SARB, n.d.-l). The FSCF is chaired by the SARB Deputy Governor responsible for financial stability and comprises "representatives of the SARB, financial sector regulators, financial sector industry associations and organs of state" (SARB, n.d.-l).

3.3 Subsidiaries and Associates

The SARB has four subsidiaries, all of which are wholly owned. These subsidiaries have three distinct roles (see Figure 5). Details on the assets and liabilities of these subsidiaries can be found in their annual reports.[10]

- The South African Mint Company and the South African Bank Note Company are responsible for currency production, with the South African Mint Company also holding an 80% stake in Prestige Bullion (SARB, 2023a). Which manufactures, distributes, and sells bullion coins (SARB, 2023a).

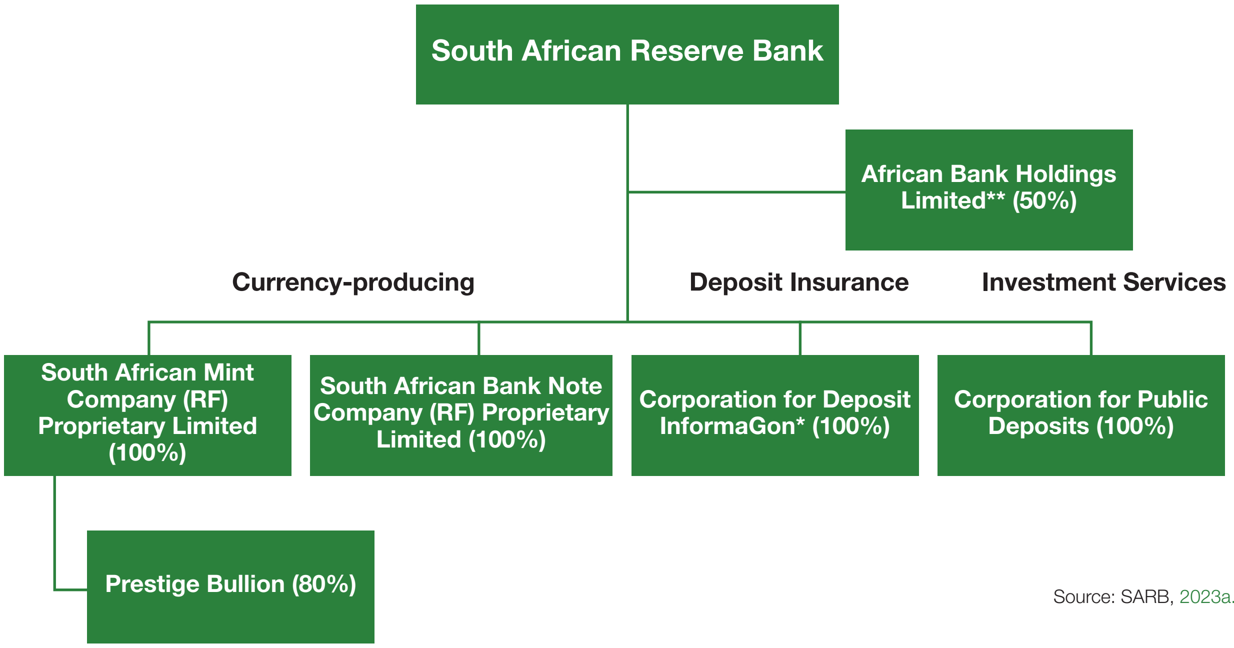
- The two other subsidiaries are the Corporation for Public Deposits and the Corporation for Deposit Information. The former "...invests call deposits from the public sector in deposits, short-term money market instruments and special Treasury bills" (SARB, 2023a). The Corporation for Deposit Information is a deposit insurance scheme that will provide depositors access to their money should their bank fail. It was established in March of 2023 and was set to be fully operational as of April 2024 (SARB, 2023a).

Currently, the SARB has one associate[11], African Bank Holdings Limited (ABHL). The SARB has a 50% holding in ABHL because of a successful resolution process implemented in 2014. ABHL *"...is the public holding company of African Insurance Group Limited (InsureCo) and African Bank Limited (ABL)"* (SARB, 2023a). Details of the assets and liabilities of ABHL can be found in the annual reports.

[10] Excluded for the purposes of consolidation.

[11] An associate is an entity over which the group has significant influence but not control or joint control. Generally this applies where the group holds between 20% and 50% of the voting rights.

Figure 5: SARB Subsidiaries and Associates



Source: SARB, 2023a.

* Active as of April 2024

** At the time of reporting [June 2023], the SARB planned to dispose of its holding in ABHL through an initial public offering."

3.4 SARB's relationship and links with global financial institutions

a) International Monetary Fund

The SARB has access to emergency United States Dollar (USD) liquidity from the International Monetary Fund (IMF), in the form of the Rapid Financing Instrument (RFI). An example of how it can be used, can be seen in July of 2020, during the COVID-19 pandemic. The IMF Board approved USD4.3 billion in emergency financial assistance to South Africa under the RFI "to support the authorities' efforts in addressing the challenging health situation and severe economic impact of the COVID-19 shock" (IMF, 2020).

Whether the SARB has access to other IMF emergency USD liquidity instruments, such as the Short-term Liquidity Line (SLL) or the Flexible Credit Line (FCL), is unclear. Eligibility for both is a lot more stringent than for the RFI.

b) PBoC SARB swap line

In 2015, the SARB and the People's Bank of China (PBoC) announced the signing of a bilateral swap agreement that enables the exchange of local currencies between the two central banks, with a limit of RMB30 billion (approximately ZAR57 billion) (SARB, 2015). The currency swap arrangement was renewed in 2021 with a limit of up to RMB30 billion/ZAR68 billion (PBoC, 2023).

c) Foreign and International Monetary Authorities

As of 2020, the SARB has access to the Foreign and International Monetary Authorities (FIMA) Repo Facility. FIMA allows account holders, including central banks with accounts at the Federal Reserve Bank of New York, to enter into repurchase agreements with the Federal Reserve (Federal Reserve, 2022).

"In these transactions, approved FIMA account holders temporarily exchange their U.S. Treasury securities held with the Federal Reserve for U.S. dollars, which can then be made available to institutions in their jurisdictions". This is provided at a backstop rate[12] *and acts as an alternative source of USD for holders of Treasury securities (Federal Reserve, 2022).*

[12] Above normal market rates.

4. SARB response amid the global and South African political environment

To understand and contextualise the SARB's policies and its overall structure, it is essential to grasp the key developments that have shaped the South African political and economic landscape. This section begins by mapping out the political economy landscape in South Africa and, where relevant internationally, using the four "shock-point years"[13] as a guide. Due to the lag and lead impacts of political-economic developments and the associated response, the four years in question will not be the sole area of focus. The years before and after will also be analysed, and have been grouped as follows to allow for more in-depth analysis:

- 1980-1989 was a period of political instability and economic downturn;
- 1990-2000, the transition to democracy;
- 2001-2018, a period defined by the Global Financial Crisis (GFC) and attempts to better regulate the financial sector; and
- 2019-2024, a period marked by COVID-19 and the conflict in Russia-Ukraine.

In response to political-economic changes and crises, the SARB has led significant changes in the monetary policy of the country. Given the central role the SARB plays in the South African monetary and financial architecture, the nature of the changes has shaped the broader financial sector and economy in South Africa. These policy changes are introduced and analysed in parallel and in relation to the "shock point years", offering insights into the evolution of SARB's monetary policy response to dramatic changes in the country's political economy.

4.1 1980-1989 – Political instability and economic downturn

a) The political-economic landscape

The 1980s were a time of political-economic instability and crisis in South Africa. This was due to changes in the global financial system and economy, as well as domestic challenges and changes brought about by the continued enforcement of Apartheid and the response to this at both a local and international level.

The beginning of the 1980s was marked by a significant drop in the price of gold, with the cost of an ounce of gold moving from USD2 645 in February of 1980 to USD1 095 in March of 1983, down to USD884 in February of 1985 (Macrotrends, 2024). This dealt a blow to the South African economy and harmed the country's current account (Mohamed and Finnoff, 2004). Simultaneously, resistance to apartheid in the country increased with the United Democratic Front, a broad, non-racial coalition of civil

[13] 1983, 1994, 2008, 2022

society organisations opposed to apartheid, being formed in 1983; and externally, sanctions ramped up pressure on the apartheid state. Despite this internal and external pressure, the apartheid government doubled down on its position with PW Botha making his infamous Rubicon speech in 1985, and a state of emergency being declared that same year (SAHO, n.d.-a).

The economic consequences of these developments were manifold, one of the most significant of which, from a monetary policy perspective, was increased capital flight from South Africa, which averaged 10.3% of Gross Domestic Product (GDP) between 1980-1985 (Mohamed and Finnoff, 2004). This capital flight, alongside other factors such as continuing sanctions and the decline in the value of exports, resulted in the depreciation of the foreign exchange value of the South African Rand (ZAR) throughout much of the 1980s (Jones and Inggs, 1994; Mohamed and Finnoff, 2004). This led to increasing inflation rates, which remained in double digits throughout this period and peaked at 20.7% in 1986 (Stats SA, 2019).

The 1980s also saw a growing debt crisis emerge, with the government taking on large short-term loans for various projects, and private borrowers also taking on short-term loans (Mohamed and Finnoff, 2004). This debt crisis reached its peak in 1985, after massive capital withdrawals, disinvestment and the refusal of key international banks to renew credit lines, and a standstill on most foreign debts became effective from September 1985 (SARB, 1986).

Text Box 1: SARB bailouts

The SARB has over the years bailed out market participants a number of times, including the bailout of Bankorp (later ABSA) between 1985 and 1995 (ABSA, 2017; SAFLII, 2019). In 2020 the SARB also issued R3.45 billion guarantee to bail out the Corporation for Public Deposits (CPD), following loan defaults by the Land Bank (Toyana, 2020).

In 2014 African Bank was placed under curatorship of the SARB following its collapse (see Section 4). Following a successful resolution process the African Bank was restructured, with shareholders being the SARB, six local commercial banks, and the Government Employee Pension Fund (South African Government, 2021). It reopened as a new entity in 2016.

In April of 2024 a new subsidiary of the SARB was established, the Corporation for Deposit Information (CODI). CODI serves as a deposit insurance scheme that will provide depositors access to their money should their bank fail (SARB, 2023a).

b) SARB Policy Response and Changes

In response to the dramatic political developments and economic changes facing the country, the SARB adopted several measures at different points in time. In 1983, exchange controls were loosened (Bezuidenhout, 2024); however, this was overturned in 1985, with exchange controls once again introduced in the form of the dual rand system (Bezuidenhout, 2024). One exchange rate was used for current account payments for residents and another rate was used for capital account payments for non-residents.

In response to the debt crisis of 1985, a debt standstill was introduced, a Standstill Coordinating Committee was established, and negotiations began between South Africa and the foreign creditors (SARB, 2021b). Following negotiations, the first debt payment rescheduling agreement was reached in 1986 (SARB, 2021b). The final payment for rescheduled debt was made in 2001 (SARB, 2021b). “A unique aspect of the debt agreements is that the South African government acted as the debtor of last resort”, using special restricted accounts (SARB, 2021b).

Throughout the 1980s, other changes were also made to the SARB’s monetary policy. Before December 1983, the Reserve Bank's refinancing rates were tied to market rates, with the Bank rate set above the Treasury bill rate based on the rediscounted paper. Starting in December 1983, the Reserve Bank set and adjusted the Bank rate and other refinancing rates at its discretion. These changes were used to influence the overall interest rate (Van Der Merwe, 1999). Initially, following this change, the Bank rate saw frequent and sometimes substantial changes. For instance, in the first eight months of 1984, the rate sharply increased: from 17.75% at the start of the year to 18.75% in July, then to 21.75% in August (Van Der Merwe, 1999).

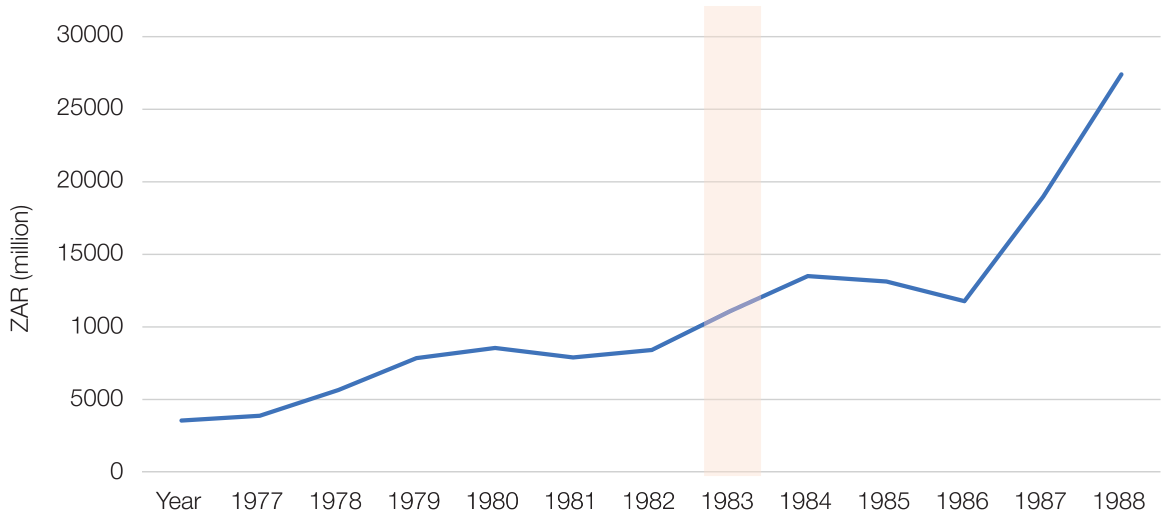
In 1984, the National Finance Corporation (NFC) was abolished and replaced by the Corporation for Public Deposits, which was established in 1984 as a subsidiary (SARB, n.d.-d).

The 1980s closed with the replacement of the SARB governor Gerhardus de Kock by Chris Stals in 1989 (SARB, 2021b). That same year, the Reserve Bank Act was signed into law. The primary purpose of the Act was to consolidate laws relating to the SARB and the South African monetary system (South African Government, 1989).

[14] “The NFC accepted as liabilities deposits from government and quasi-government institutions, and invested mainly in Treasury bills and other government securities. The liquidity of the NFC was guaranteed in terms of an agreement that the Bank would discount its holdings of Treasury bills, as and when required, at the rates at which the NFC acquired the bills” (SARB, N.d.d).

c) Balance Sheet Analysis

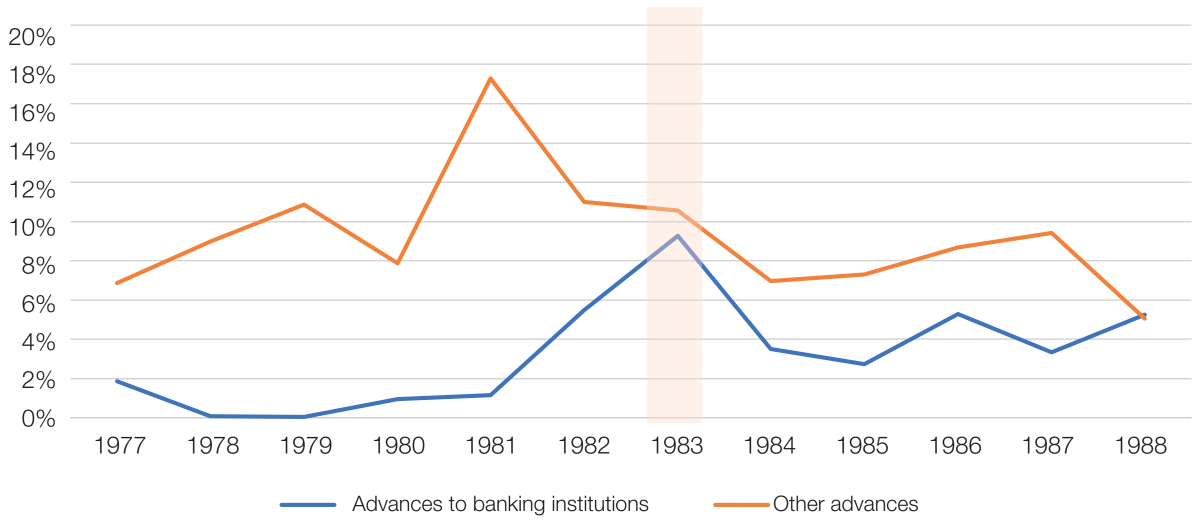
Figure 6: Total Assets 1977-1988



Source: Authors' own using SARB (2024) data.

Looking at the total size of the SARB balance sheet in Figure 6, with the focus period highlighted, and with a balance sheet size of ZAR8.4 billion for 1983, we can see that the balance sheet was gradually expanding directly before and after the focus period and then expanded significantly from the period after 1986, reaching ZAR18.9 billion at its maximum in 1998. This general expansion may be a response to the increased need for liquidity in the face of a national debt crisis during this time.

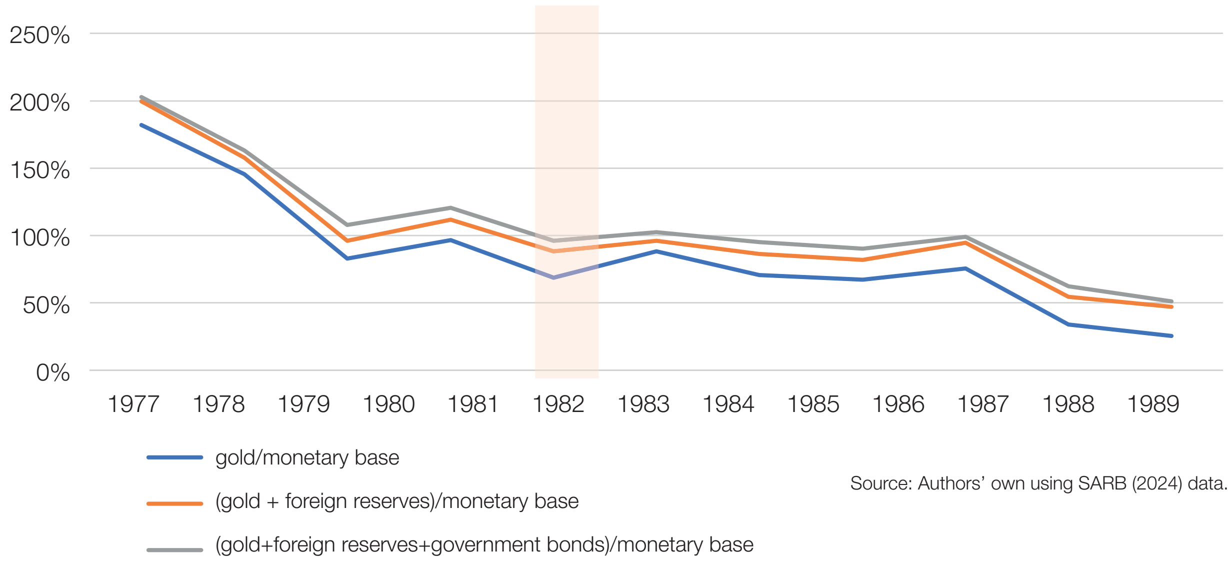
Figure 7: Advances provided (as a % of Total Assets) 1977-1988



Source: Authors' own using SARB (2024) data.

Figure 7 shows the ability for the expansion of elasticity space through the provision of advances by the SARB to banking institutions, as well as advances to other financial institutions, which have a value of ZAR780 million and ZAR887 million, respectively, in 1998. Figure 7 looks at the shift in the percentage composition of the SARB balance sheet that comprises these advances, which shows, relative to the expanding balance sheet shown in Figure 6, how the SARB can create that additional liquidity and expansion for other institutions through the provision of additional advances.

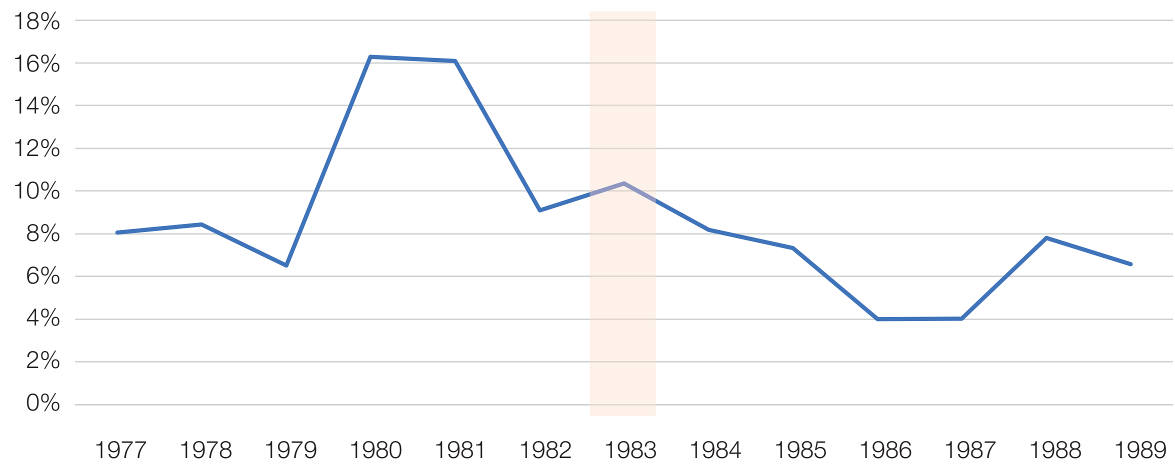
Figure 8: Liquidity Ratios 1979-1989



Source: Authors' own using SARB (2024) data.

Figure 8 looks at the three different liquidity ratios as set out in Bagus and Howden (2016).[15] Higher liquidity ratios mean that there are fewer illiquid assets held in SARB reserves, and the lower the ratio, the higher the level of illiquid assets held. The liquidity available to the SARB in terms of all three measures shows a decreasing trend throughout the 1980s. This shows that even with an increasing monetary base[16] over the period, the amount of gold, foreign reserves and government bonds held was also increasing. While this creates a liquidity problem within the SARB, buying illiquid assets would provide liquidity to counterparties and provide them with additional financial flexibility in the face of a debt crisis.

Figure 9: Required Reserve balances (SARB Liability) as a % of Total Liabilities 1977-1989



. Source: Authors' own using SARB (2024) data.

Figure 9 demonstrates the change in policy of the SARB to adjust bank rates at its discretion. This would have allowed the SARB to create more liquidity through a lower rate, allow banks to withdraw reserves and increase their liquidity, as a corresponding asset on banks' balance sheets. Here, fewer reserves

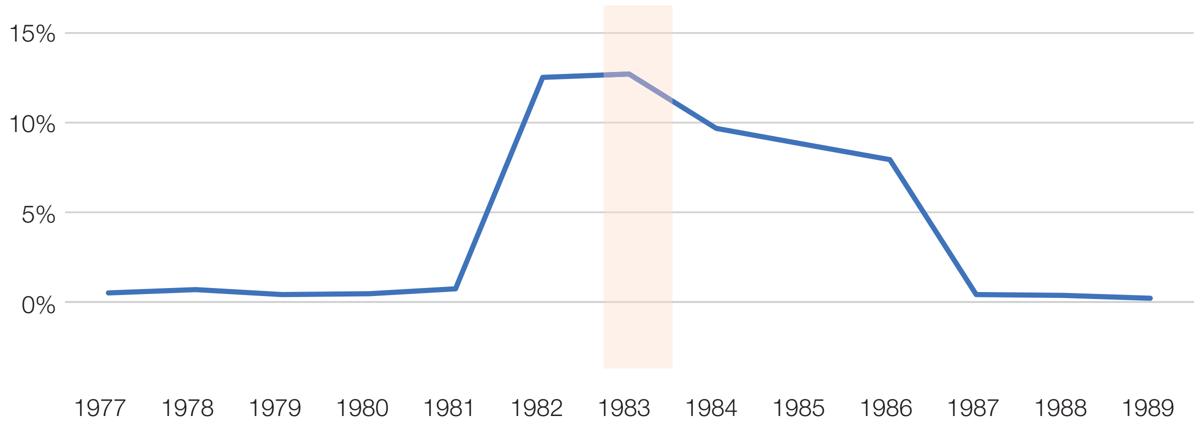
15 The calculations behind this methodology are expanded on in the Appendix.
16 The components of the monetary base calculation are included in the Appendix.

held at the SARB would mean banks would be withdrawing reserves or depositing fewer reserves, allowing for greater liquidity on their balance sheets.

What must be noted is that this dynamic would change with the implementation of required reserve ratios following the Global Financial Crisis.

d) Financial Flows

Figure 10: Foreign deposits (SARB Liability) as a % of Total Liabilities 1977-1989



Source: Authors' own using SARB (2024) data.

This activity exists outside of the decreasing foreign reserves, as exhibited in the ratio analysis in Figure 10. This shows the ability for elasticity and liquidity to be created through transactions outside of the South African economy, with foreign deposits changing from ZAR2.1 billion in 1980 to ZAR3.1 billion in 1983.

4.2 1990-2000 – Transition to democracy

a) The Political-Economic Landscape

The period 1990-2000 was one of significant political change in South Africa, marked by the end of apartheid and the creation of a democratic state. To begin the decade, the African National Congress (ANC), the South African Communist Party (SACP), the Pan Africanist Congress (PAC) and other political organisations were unbanned, and Nelson Mandela was released from jail in February 1990 (SAHO, n.d.-b). From 1990 until 1994, negotiations were underway to dismantle apartheid as international pressure grew. This period was marked by continued economic volatility and relatively high inflation rates, although there was a decline from 14.32% in 1990 to 8.94% in 1994 (Macrotrends, n.d.).

Following the election of the ANC to government in 1994, the business community was gripped by uncertainty about the economic policy that the new government would introduce. In 1994, the Reconstruction and Development Programme (RDP) was adopted. However, this was soon replaced with Growth, Employment, and Redistribution (GEAR), a five-year plan that emphasised neoliberal policies such as privatisation and the removal of exchange controls (Akio, 2013).

In the 1995-2000 period, inflation was relatively stable, with the inflation rate at 8.68% in 1995, dropping to 5.34% in 2000 (Macrotrends, n.d). However, the forex value of the ZAR fluctuated, and in 1998, the ZAR depreciated by 28% in nominal terms against the USD. Simultaneously, share prices dropped by 40%, and output shrank in the third quarter of 1998 (compared to the previous quarter) (Bhundia and Ricci, 2005).

b) SARB Policy Response and Changes

After the 1994 elections and the end of economic and financial sanctions on South Africa, the financial and economic outlook of the country began to change. The global financial system was subject to loosened capital controls and increasing financialisation. In response to these changes, the SARB adjusted its policies and became more institutionalised.

The period 1995-2000 was marked by noteworthy changes in the bank's policies and monetary architecture. In 1995, the dual rand system was abolished. In 1996, the mandate of the SARB was enshrined in the constitution: *“The primary object of the South African Reserve Bank is to protect the value of the currency in the interest of balanced and sustainable economic growth in the Republic”* (Republic of South Africa, 1996).

In 1998, the repurchase-based refinancing system[17] was introduced (SARB, n.d.-i). This change coincided with the replacement of the manually operated interbank settlement system with a new automated system (Van Der Merwe, 1999), while the decision was made that the government would appoint select private bankers as primary dealers in government bonds (Van Der Merwe, 1999).

That same year, following the dramatic depreciation of the ZAR, the SARB increased the repo rate from 15% in May to just under 24% by June (Trading Economics, n.d.). Simultaneously, the SARB borrowed foreign currency in the forward market, which was then sold on the spot market. Consequently, the net open foreign position (net international reserves minus the central bank's forward liabilities) decreased by USD10 billion between April and September 1998 (Bhundia and Ricci, 2005).

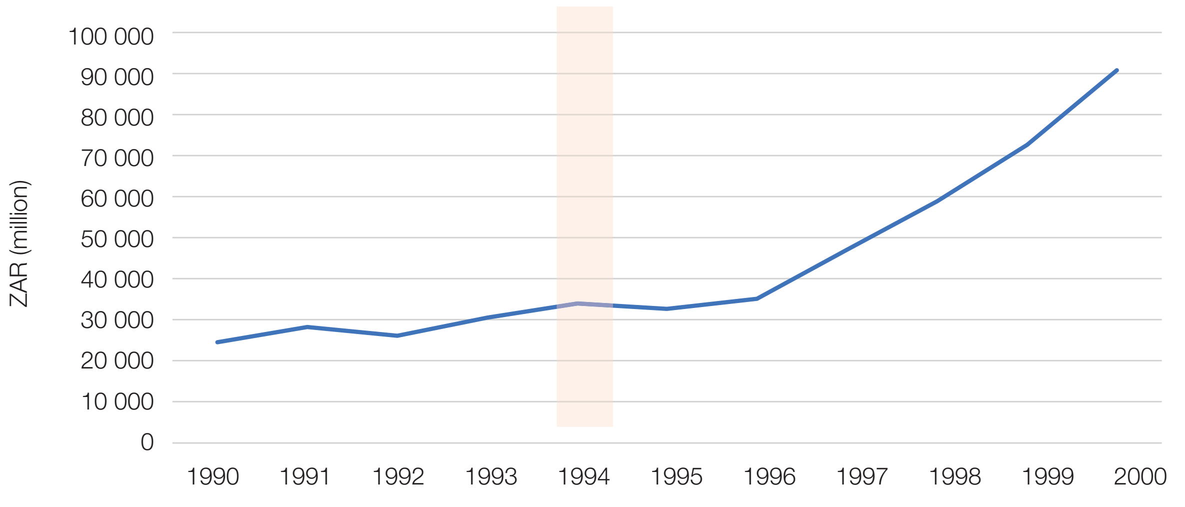
[17] “The SARB creates a liquidity requirement (or shortage) in the money market, which banks refinance at the repurchase (repo) rate – a fixed policy interest rate determined by the MPC” SARB, 2020.

In 1999, Tito Mboweni was appointed as Governor of the SARB. The following year (2000), the primary goal of the SARB's mission statement was described as "the achievement and maintenance of financial stability" (SARB, n.d.-a). 2000 was also the year that the SARB formally introduced an inflation-targeting monetary policy framework, with the target being 3-6% for the consumer price inflation rate (SARB, n.d.-h).

c) Balance Sheet Analysis

The period between 1990 and 2000 provides good insight into the stabilisation of the SARB balance sheet (1995-2000) after a period of intense financial volatility (1990-1994). This analysis contrasts with the period around 1983, which did not have a significant instance of stabilisation after a specific event but rather looked at financial movements through an entire crisis period.

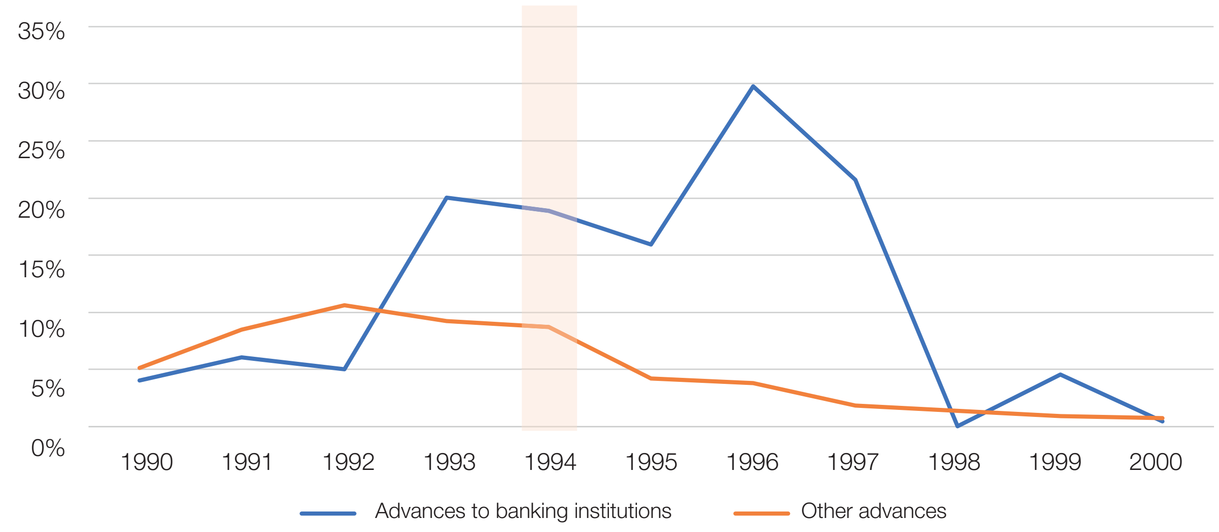
Figure 11: Total Assets 1990-2000



Source: Authors' own using SARB (2024) data.

Figure 11 shows the expansion of the SARB balance sheet over the whole period between 1990 and 2000, with an exponential expansion from 1996 to 2000, as expected due to the lifting of sanctions post-1994, as well as the globalisation of the SARB balance sheet. The balance sheet grew from ZAR33.9 billion in 1994 to ZAR90.8 billion in 2000.

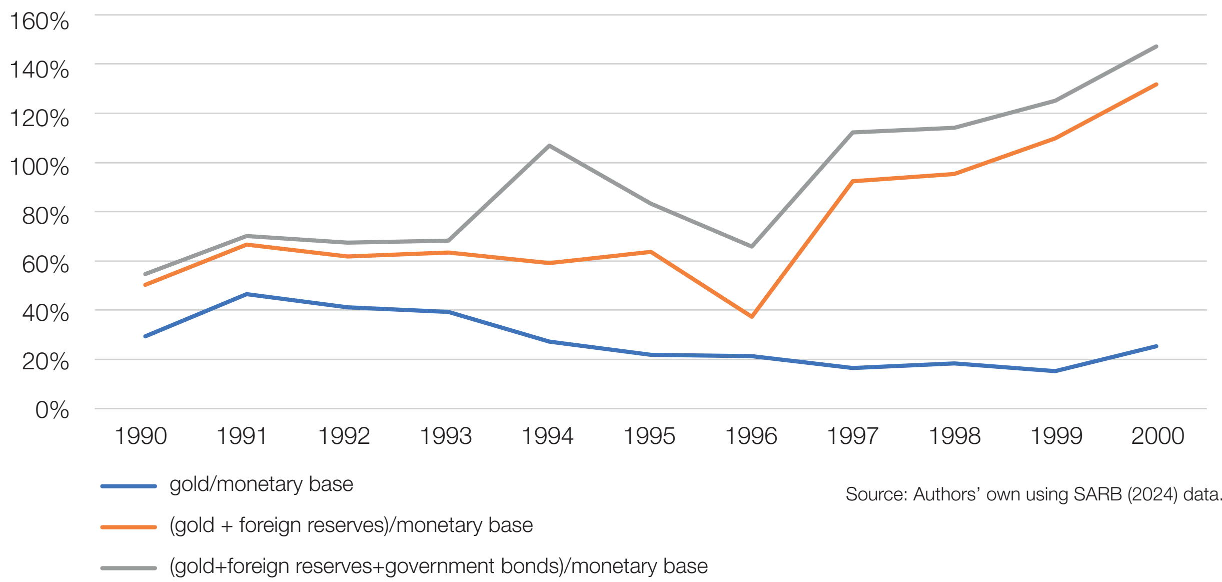
Figure 12: Advances provided (as a % of Total Assets) 1990-2000



Source: Authors' own using SARB (2024) data.

While the response of advances provided in Figure 12 is less clear for this period than for the 1980-1989 time period, it is still evident that during crisis periods these advances increase, in this case, the volatility leading up to the 1994 elections, and advances decrease during the proceeding recovery period. This shows finances can shift within the SARB balance sheet towards creating liquidity for the rest of the financial system during times of crisis, and will then decrease to maintain stability during recovery periods. Other advances here refer to national government, provincial governments, the NSPF, agricultural control boards and other semi-government bodies.

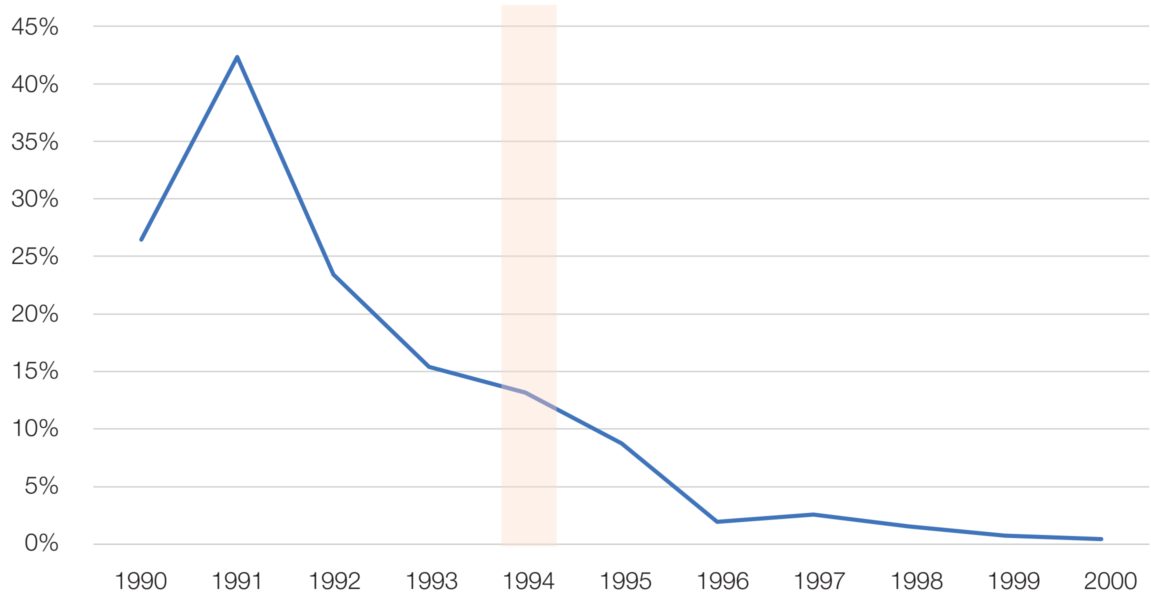
Figure 13: Liquidity Ratios 1990-2000



Source: Authors' own using SARB (2024) data.

The liquidity ratios in Figure 13 show an interesting outcome post-1994, which is that most liquidity initially came from government bonds, a development which would be expected once sanctions were lifted. Then, from 1996 onwards, liquidity created from gold reserves diverges hugely from that created with government bonds and foreign reserves. Again, this is indicative of the opening of the South African economy post-apartheid and the general international movement away from gold as a unit of account.

Figure 14: Government Deposits (as a % of total Liabilities) 1990-2000

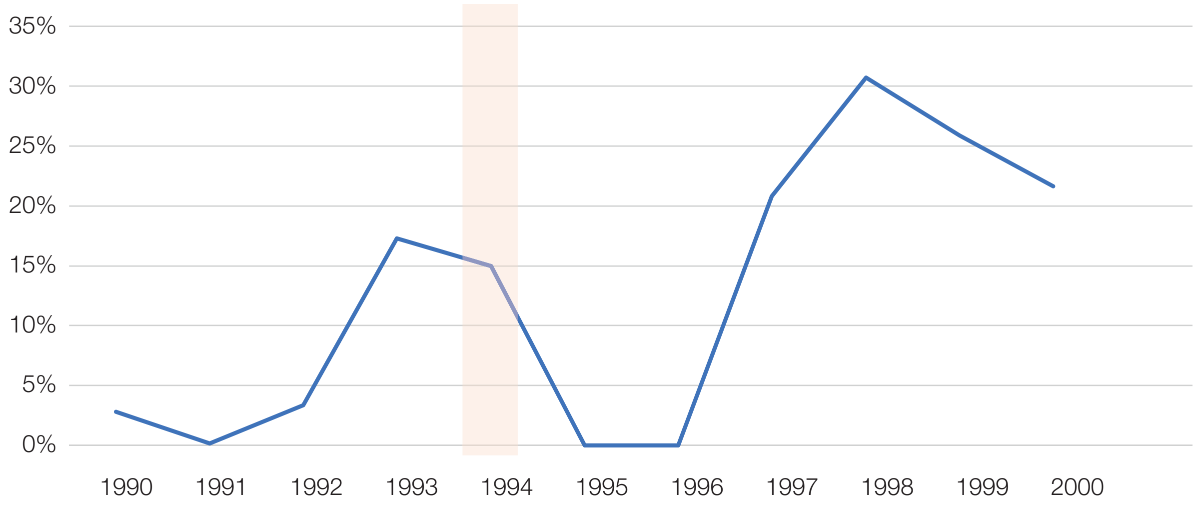


Source: Authors' own using SARB (2024) data.

Figure 14 above looks at a contingent liability, in the form of government reserves held at the SARB. This shows how, as the South African economy started to stabilise, this elasticity created by the contingent liability was no longer needed, and the elasticity space created by the SARB for government could be contracted in the process of stabilising the economy.

d) Financial flows

Figure 15: Foreign deposits (SARB Liability) as a % of Total Liabilities 1990-2000



Source: Authors' own using SARB (2024) data.

Foreign financial flows in the form of foreign deposits during the transitional period around the advent of South African democracy are less straightforward, but they do show a recovery of flows post-1996. This financial flow pattern is indicative of the volatility and changing foreign investor perception of South Africa during this period.

4.3 2001-2018 – Global Financial Crises and increased regulation

a) The Political-Economic Landscape

The period 2001-2007 was mainly marked by the cementing of democracy in South Africa, with Thabo Mbeki serving as President throughout this period, and the continued growth in the economy, which grew at an average of 4.3% (DPME, 2014). The ZAR also remained relatively stable during this period, trading at ZAR7.60 to the USD in January of 2001, and ZAR7 to the USD in December of 2007 (SARB, n.d.-n). There was an exception between September and December of 2001, as the ZAR plunged to ZAR13 to the USD. However, unlike in 1998, this did not lead to a fall in share prices or economic output, and the currency recovered to ZAR5.70 to the USD by December of 2004 (Bhundia and Ricci, 2005; SARB, n.d.-n).

However, this period of relative economic stability and growth was punctuated by the 2008 GFC. The immediate impacts of the GFC, which started in late 2007 and carried over to 2009 was manifold. By October 2008, the ZAR was trading at ZAR11.47 to the USD (SARB, n.d.-n), and the economy fell into recession over the 2008-2009 period, shrinking by 1.5% in 2009 (Stats SA, 2017; World Bank, n.d.).

Simultaneously, the consumer price inflation rate peaked at 13.7% in August 2008 (Stats SA, 2019). Despite an initial recovery of the ZAR (ZAR6.70 to the USD in July 2011), in the long term, the ZAR weakened substantially after the GFC, trading at ZAR16.80 to the USD by January of 2016 (SARB, n.d.-n). Furthermore, since the GFC, economic growth has slowed, and between 2009 and 2017 the economy grew at an average of just under 1.6% per annum (World Bank, n.d.).

b) SARB Policy Response and Changes

In the early 2000s, the policy decisions of the SARB were mainly informed by the relatively stable economic situation. Even following the ZAR's depreciation in late 2001, the SARB's response was restrained compared to its response in 1998, with interest rates remaining stable. In 2003, the Gold and Foreign Exchange Contingency Reserve Account (GFECRA)[18] had a negative balance of R28 billion, a deficit which was settled by National Treasury as required by the SARB Act (SARB, n.d.-o). In 2005, the mission statement was also updated to include “the achievement and maintenance of price stability” (SARB, n.d.-a).

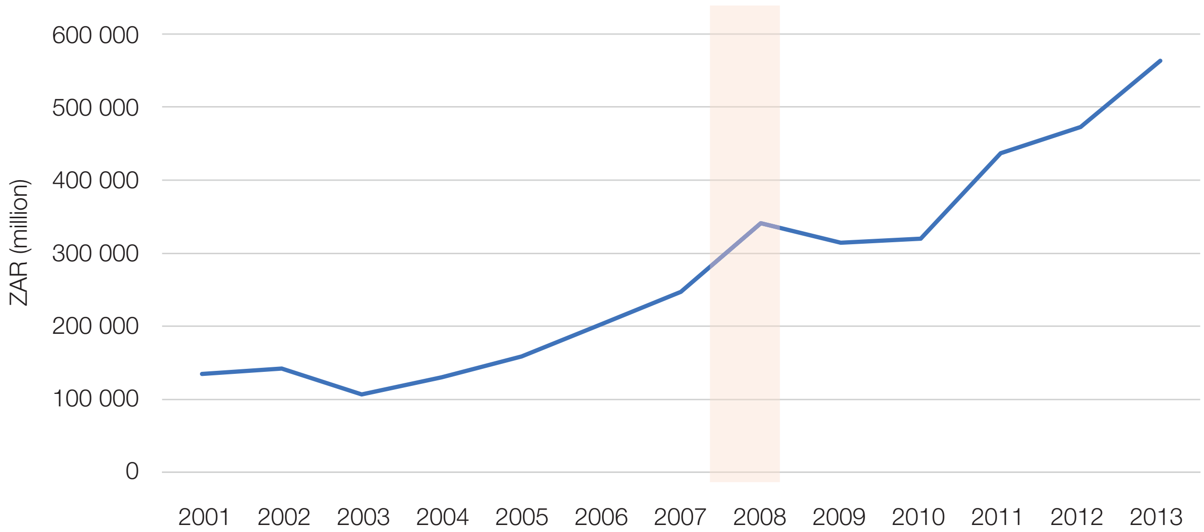
The GFC marked a turning point in the SARB's approach to prudential regulation and also saw the use of monetary policy tools to deal with the financial and economic fallout of the crisis. Between December 2008 and July 2012, the repo rate dropped from 12% to 5% (SARB, n.d.-n). Since the South African economy was largely insulated from liquidity disruptions, no unconventional monetary policy measures were introduced (Shikwane, De Beer, and Meyer, 2020).

On the prudential regulation side, the response of the SARB was noteworthy. In 2011, the SARB adopted the Twin Peaks model, which is underpinned by the regulatory jurisdiction of the financial sector and institutions by two separate agencies, to improve its regulation of financial institutions and market infrastructures. To this end, the PA was set up in 2018 as a regulatory body within the SARB, responsible for overseeing financial entities and market infrastructures, and the FSCA was established in 2018 as a national entity to regulate market conduct (SARB, n.d.-j). In addition, the SARB was given an explicit mandate to ensure financial stability. Since the adoption of the Twin Peaks Model and the signing of the FSR Act, there has been a greater degree of cooperation and collaboration between the PA, the FSCA, National Treasury, and other financial regulators (SARB, 2021a).

During this period, Gill Marcus was appointed Governor of the SARB, replacing Tito Mboweni in 2009 (SARB, n.d.-a). She held this position until 2014, when she was replaced by the current governor, Lesetja Kganyago (SARB, n.d.-a).

[18] The GFECRA is designed to capture losses and profits on certain foreign currency transactions, to protect the SARB from currency volatility (National Treasury, 2024).

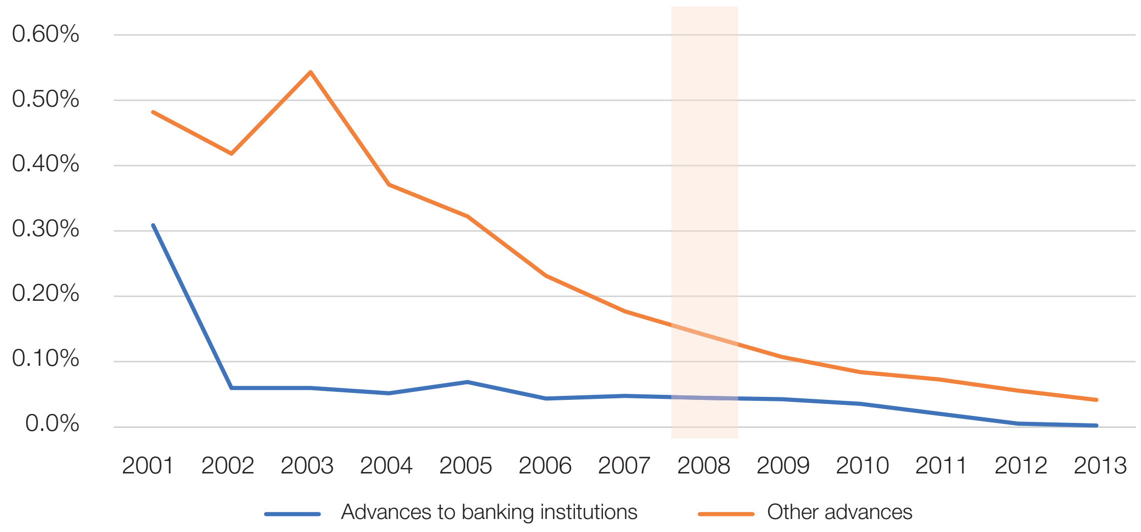
Figure 16: Total Assets 2001-2013



Source: Authors' own using SARB (2024) data.

During the period before and after the GFC, the SARB had a constantly expanding balance sheet. This spiked slightly during the 2008 period, plateaued from 2009-2010 – the slowdown likely a result of the GFC – and then continued on an upward trajectory. The balance sheet grew from ZAR247.1 billion in 2007 to ZAR341.1 billion in 2008, then contracted slightly to ZAR314.4 billion in 2009. The expansion trajectory continued in 2011, when the balance sheet totalled ZAR436.6 billion.

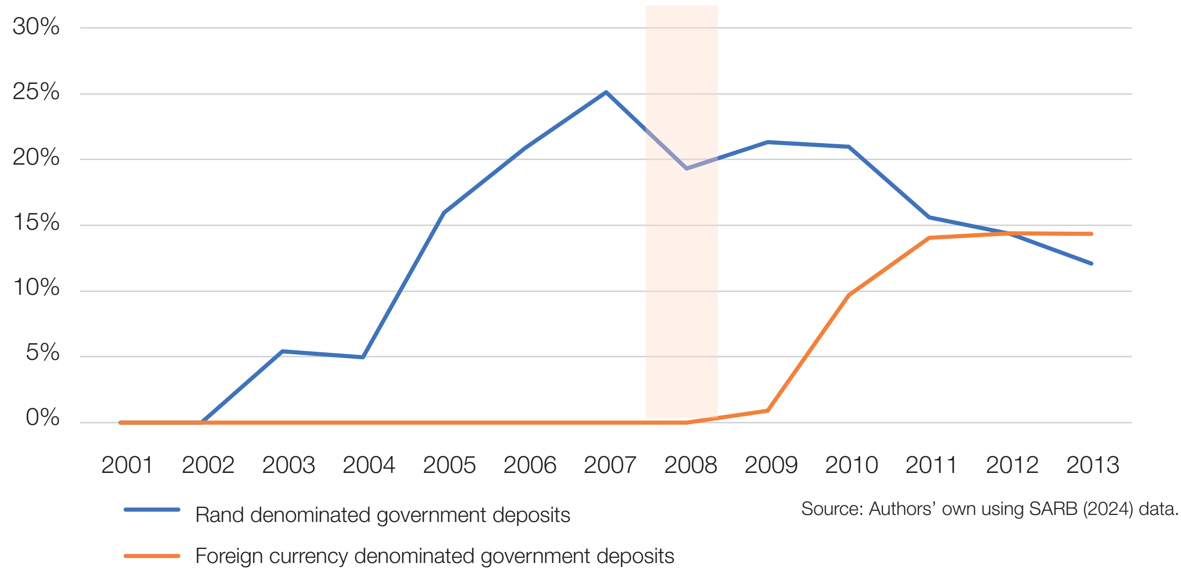
Figure 17: Advances provided (as a % of Total Assets) 2001-2013



Source: Authors' own using SARB (2024) data.

Between 2000 and 2008, economic stabilisation increased. The analysis of advances provided as a percentage of the total balance sheet in Figure 17 shows the expected trend of a contraction in advances provided. Other advances here include advances to the national government, provincial governments, the NSPF, agricultural control boards and other semi-government bodies.

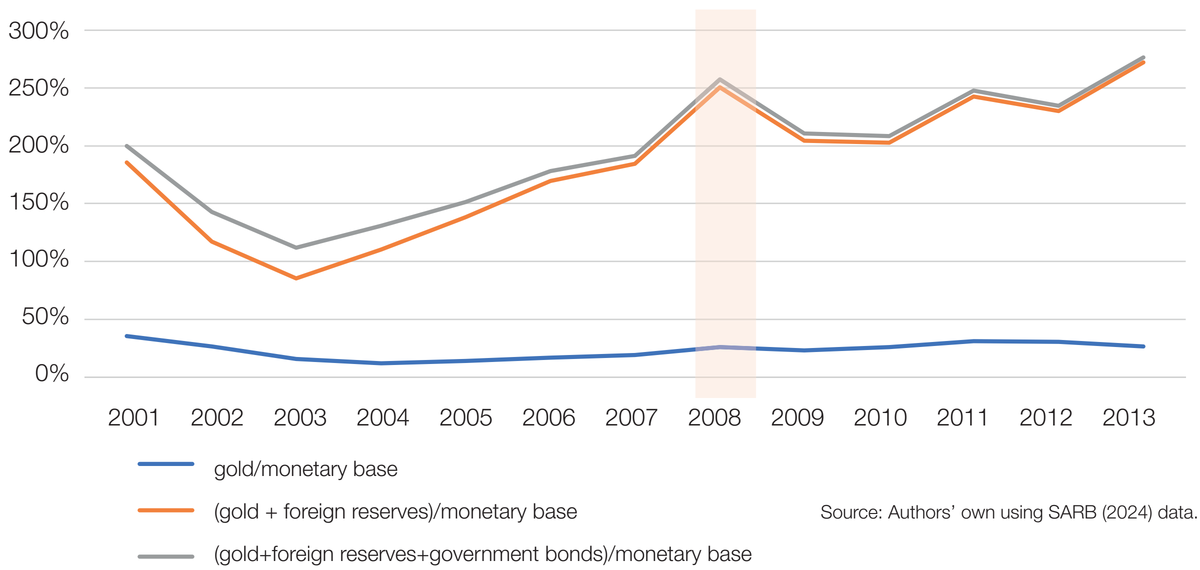
Figure 18: Government deposits (as a % of Total Assets) 2001-2013



Source: Authors' own using SARB (2024) data.

The 2008 period did see a large increase in foreign-denominated deposits held by the government at the SARB to buffer against domestic currency volatility around the time of the global financial crisis. This can be seen in Figure 18. This corresponds with a slight decrease in ZAR-denominated deposits and a following downward trend in these deposits after 2008. This may show a preference for foreign currency-denominated deposits, as they have higher resilience to global systemic financial shocks than domestic currency. Foreign currency government deposits increased from zero deposits in 2008 to ZAR80.7 billion in 2013. Domestic currency reserves rose from ZAR62 billion in 2007 to ZAR66 billion in 2008. This could be money used by the government to combat economic losses caused by the GFC.

Figure 19: Liquidity Ratios 2001-2013



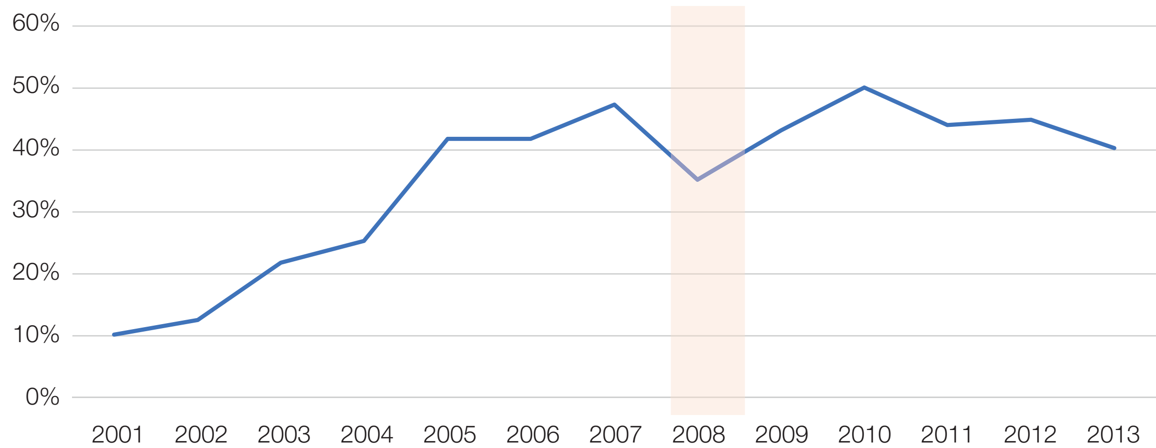
Source: Authors' own using SARB (2024) data.

Figure 19 shows an upward trend in liquidity ratios, including government bonds and foreign reserves, that spike during the crisis period, dip immediately after and then recover in trajectory. This is similar to the response of the liquidity ratios post-1994, which indicates a correlation between economic stabilisation and increased liquidity. This correlation is in line with the expected response of the SARB, which is to increase liquidity among the financial institutions during crisis periods.

This provides further insight into how the SARB creates liquidity and increases the elasticity space of the financial architecture in times of instability, and then contracts the elasticity space by repurchasing liquid assets.

d) Financial Flows

Figure 20: Foreign deposits (SARB Liability) as a % of Total Liabilities 2001-2013



Source: Authors' own using SARB (2024) data.

Figure 20 shows an increase in foreign deposits during the period of economic stabilisation in South Africa (2001-2007). Foreign deposits then dipped during 2008, recovering and stabilising after the GFC. This shows a stabilisation of foreign financial flows, but no extreme response as a consequence of the GFC.

4.4 2019-2024 – COVID-19 and rising geopolitical conflicts

a) The Political-Economic Landscape

The period 2019 to 2024 has primarily been defined by the COVID-19 pandemic and the economic and socio-economic effects it and the associated response have had on the local and global economy. In addition, significant damage was done to the South African economy from the July 2021 riots, which cost the economy an estimated ZAR50 billion (SAHRC, 2024), and the war in Ukraine, which upended global energy markets and caused global inflation.

The consequences of these events on the South African economy are best evidenced in the dramatic fluctuations of the ZAR, economic growth figures, and increasing inflation. Between 2019 and 2024, the foreign exchange value of the ZAR fluctuated widely. In January 2019, the ZAR was trading at ZAR14.48 to the USD, but by April 2020, it was ZAR19.07, recovering to ZAR13.52 in June 2021, then peaking at R19.86 in June of 2023, and as of July 2024, trading at ZAR18.38 (SARB, n.d.-n). Economic growth has also been largely stagnant, with the size of the economy having grown by only USD3.5 billion between 2019 and 2023, and 2020 being a low point with the GDP shrinking by 6% that year (World Bank, n.d.).

In 2022, following Russia's invasion of Ukraine, global energy prices skyrocketed. This had a knock-on effect across the global economy, and soon much of the world was facing increasing consumer price inflation. In South Africa, the inflation rate reached 7.8% in July of 2022 (Stats SA, 2022).

b) SARB Policy Response and Changes

In response to the COVID-19 pandemic, the SARB took unprecedented action to ease liquidity strains, including introducing several monetary policy operations in 2020 (Shikwane, De Beer, and Meyer, 2020). These are outlined in Table 2.

Table 2: SARB COVID-19 Response Measures

Response measure	Explanation
Purchases of government securities	The SARB embarked on a government security purchasing programme in the secondary bond market. With the SARB buying bonds "across the maturity spectrum of the yield curve". The subsequent increase in the central bank's assets reflected a rise in the deposits of private sector banks at the SARB (Shikwane, De Beer, and Meyer, 2020:90)
Intraday Overnight Supplementary Repurchase Operations	"The SARB's end-of-day discretionary supplementary facilities were replaced by Intraday Overnight Supplementary Repurchase Operations (IOSROs) to increase liquidity to support the daily flow of funds in the banking system" (Shikwane, De Beer, and Meyer, 2020:90). The IOSROs were offered at the repo rate and allocated on a pro-rata basis, with the amount determined by the prevailing liquidity requirement of the market. The additional liquidity provided to clearing banks will lower the money market shortage to below the current target level of ZAR56 billion and make it easier for banks to extend credit to clients" (Shikwane, De Beer, and Meyer, 2020:90).
End-of-day Standing Facility Rates	"The Standing Facility (SF) borrowing rate[19] was adjusted lower from the repo rate less 100 basis points to the repo rate less 200 basis points" (Shikwane, De Beer, and Meyer, 2020:90). This was done to stimulate interbank funding and to discourage banks from hoarding cash.
Repo rate	Between March and July 2020, the SARB cut the repo rate from 6.25% to 3.5%, a rate that was held until November of 2021 (see Section 4) (SARB, n.d.-n).

Later in 2020, the SARB also made refinements to its open market operations toolkit. The SARB had previously capped the debentures and reverse repos at the repo rate. However, a decision was made that the SARB would now be able to determine these below and above the repo rate (SARB, 2020). That same year, the SARB was also granted access to the US's FIMA facility, although it was not required. In addition to changes in SARB policy that were a direct response to the COVID-19 pandemic, there have also been further changes in the policies and use of tools by the SARB since 2022.

In 2022, the SARB reformed its Monetary Policy Implementation Framework (MPIF). With the key policy rate changed to the rate banks earn for depositing qualifying funds at the SARB, overnight, known as a tiered-floor system (SARB, n.d.-i). *"The core logic of the system is that the ample supply of reserves exerts a downward pressure on interest rates, while the deposit facility forms a floor which prevents rates* from falling below the policy rate" (SARB, n.d.-i). With this change to a surplus-based MPIF the monetary base[20] increased from ZAR310.1 billion in May 2022 to ZAR392.1 billion in August 2023 (SARB, 2023b). This was because "some of the liquidity provided by the SARB to banks circulated back as deposits in the South African Multiple Option Settlement (SAMOS) system" (SARB, 2023b).

[19] Provides overnight liquidity to banks.

[20] "Comprises total banknotes and coin in issue and in circulation outside of the South African Reserve Bank (SARB), net of issuance and removal from circulation, plus banks' required cash reserves as well as their excess cash reserves and other deposits at the SARB in rand" (SARB, 2023b).

In February of 2024, the SARB and National Treasury agreed to a reform to the GFECRA settlement agreement. This was due to the government withdrawal of ZAR150 billion from the GFECRA balance between 2024/25 and 2026/27 (SARB, n.d.-o).

The principles underpinning the new agreement are as follows (SARB, n.d.-o):

- “The Reserve Bank’s policy solvency should not be undermined by any GFECRA distribution”.
- “There should be no sales of foreign exchange reserves to realise GFECRA gains if such reserves are below estimated adequacy levels”.
- “There should be no distribution of unrealised GFECRA balances that could plausibly be unwound by future rand appreciation”.
- “GFECRA distributions will be used to reduce government borrowing”.
- “Any GFECRA distributions should be governed by a framework that rules out ad hoc decisions”.
- “GFECRA settlement arrangements should be made public to ensure transparency”.

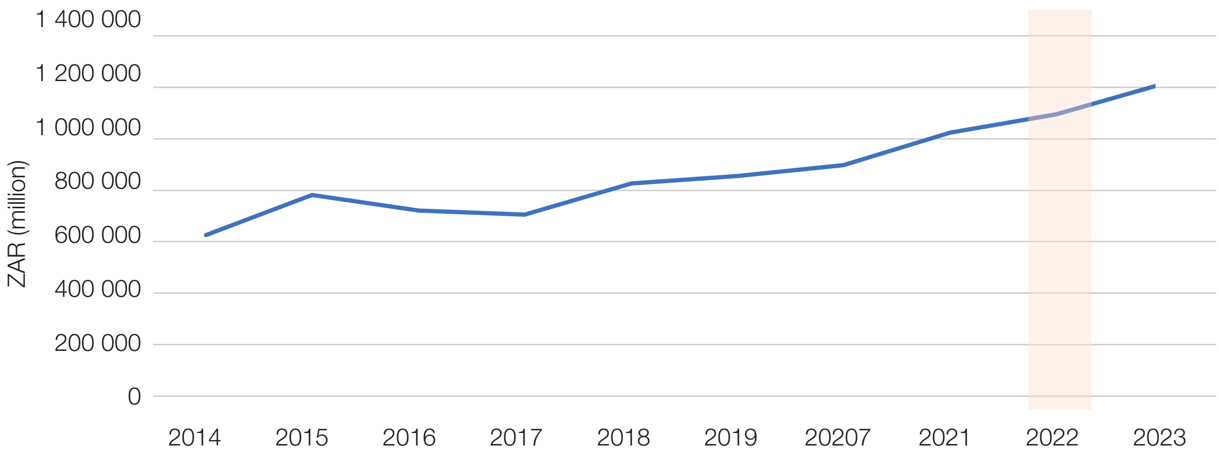
Before the settlement agreement, the GFECRA balance was over ZAR500 billion. With the new settlement agreement, the buffer is being set at ZAR250 billion (SARB, n.d.-o).

Finally, since November of 2021 and in response to increasing inflation, the SARB hiked the repo rate significantly, increasing it from 3.5% to 8.25% by May 2023, where it remained at this rate until September of 2024 (SARB, n.d.-n).

c) Balance Sheet Analysis

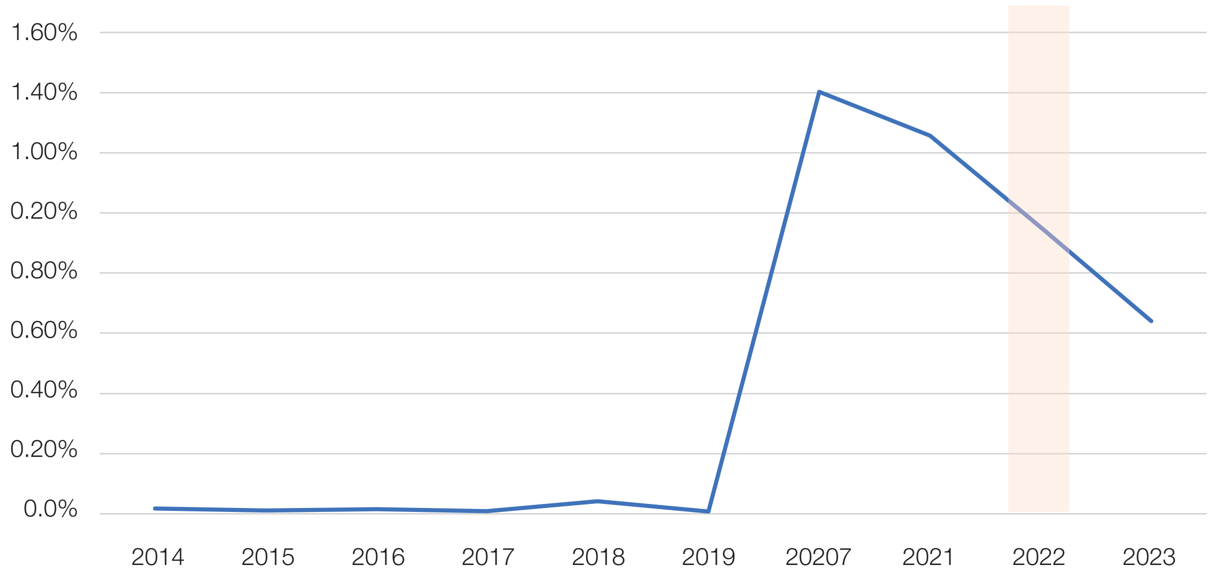
Figure 21 shows constant balance sheet expansion pre- and post-pandemic. The balance sheet size was ZAR856 billion in 2019 and ZAR1.1 trillion in 2022.

Figure 21: Total Assets 2014-2023



Source: Authors’ own using SARB (2024) data.

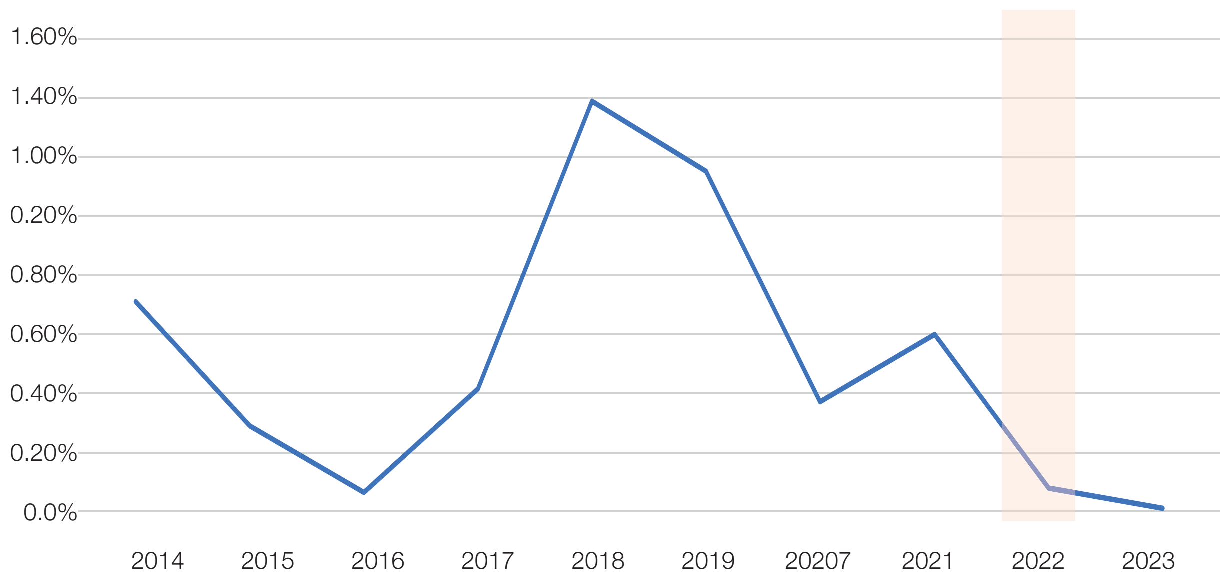
Figure 22: Other advances (as a % of Total Assets) 2014-2023



Source: Authors' own using SARB (2024) data.

The SARB stopped recording advances to banking institutions after 2014, but other advances were still recorded for this period, as shown in Figure 22. Noting that "other advances" include advances to national government, provincial governments, the NSPF, agricultural control boards and other semi-government bodies, it is possible to see how the SARB provided elasticity space and liquidity support to government, which spikes from ZAR65 million in 2019 to ZAR12.6 billion in 2020. This number tapers as the post-COVID-19 economic recovery occurs.

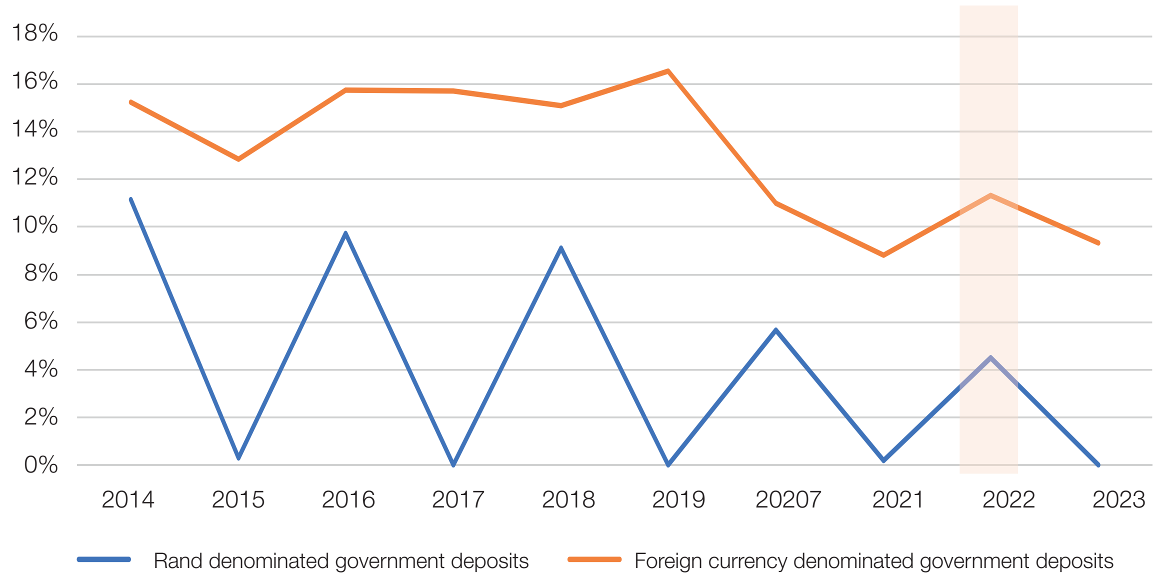
Figure 23: Asset Resale Agreements (as a % of Total Assets) 2014-2023



Source: Authors' own using SARB (2024) data.

Asset resale agreements show a decreasing trend from 2018-2023, as shown in Figure 23. While a small spike in asset resale agreements is seen between 2020 and 2021, the downward trend continues after that. This may indicate a lessened need for liquidity, either due to financial market contraction post-COVID-19 or economic stabilisation post-COVID-19.

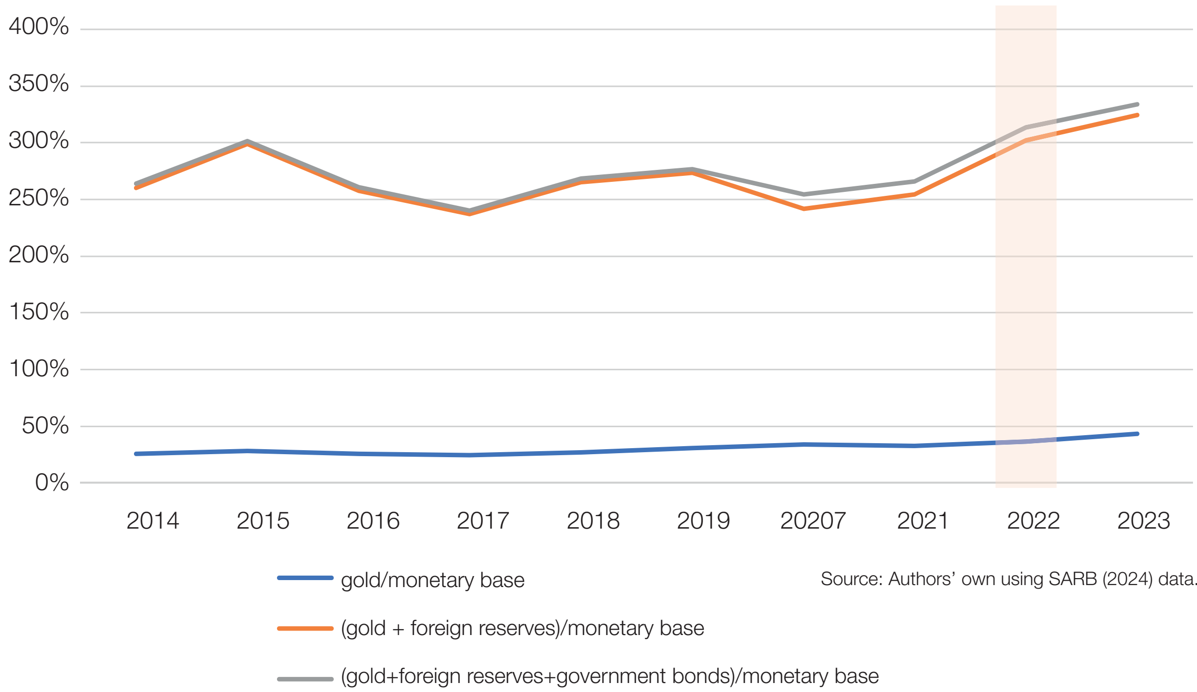
Figure 24: Government deposits (as a % of Total Assets) 2014-2023



Source: Authors' own using SARB (2024) data.

Government ZAR deposits fluctuated year-on-year between 2014 and 2023 in a diminishing trend. This may be due to austerity measures implemented by the South African government and the potential need for additional liquidity by the government to sustain government expenditure. Foreign currency-denominated government deposits are more stable and showed a large decrease between 2019 and 2020, from ZAR141 billion in 2019 to ZAR98.8 billion in 2020. This decrease is likely government using foreign currency reserves to aid in post-COVID-19 economic recovery, as well as to supplement the need for increased government spending.

Figure 25: Liquidity Ratios 2014-2023



Source: Authors' own using SARB (2024) data.

Figure 25 shows no significant changes in liquidity, driven by the sale of foreign reserves and government bonds, that occurred over the period. Despite lowering the repo rate significantly during this period to add liquidity to the financial system (SARB, 2020), the SARB did not directly participate in addressing the economic collateral damage of the pandemic. This may be because the pandemic was not a financially driven crisis, as was the case in the previous three periods considered.

The strategy of the SARB in this period was collaborative, working with National Treasury and regulatory bodies, to help mitigate the economic consequences of COVID-19, as opposed to using open market operations to do so.

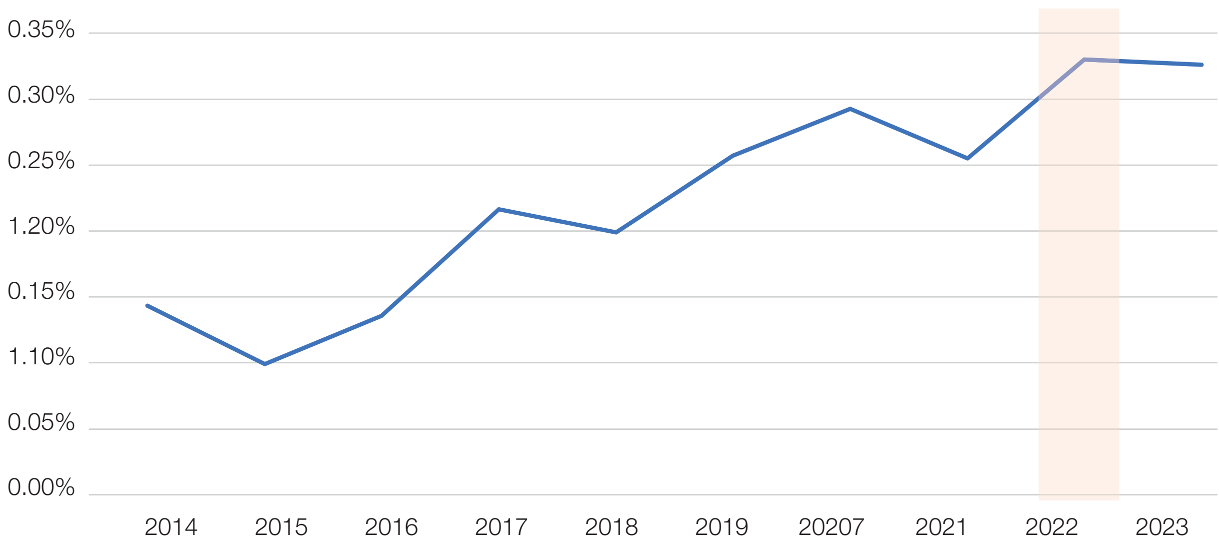
The general contractionary global economic response to the pandemic may also have been a factor in the inability to create liquidity through foreign reserves and government bond trading over this period, as well as the recent trend of holding reserves by the SARB. This may be a consequence of IMF recommendations around increasing reserves (IMF, 2023).

While the SARB can create elasticity the causal factors for such a decision may relate to exogenous pressures and the SARB's view of its role and that of its peers in developed markets.

d) Financial Flows

From a financial flows perspective, Figure 26 demonstrates the continual increase in foreign deposits as a proportion of the total SARB balance sheet over this period, again demonstrating the potential for balance sheet expansion by the SARB as a consequence of external financial flows.

Figure 26: Foreign deposits (SARB Liability) as a % of Total Liabilities 2014-2023



Source: Authors' own using SARB (2024) data.

5. Final insights

Applying Murau's (2020) Monetary Architecture approach to consider the elasticity space offered by the SARB has enabled an analysis of the movement among line items of the SARB balance sheet across four time periods, and the change in their composition. Each period analysis is complemented by the political and social factors occurring at or around the same time.

Throughout all four time periods, an expansion of the absolute value of the SARB balance sheet is observed, which is indicative of the SARB's approach to balance sheet expansion irrespective of the financial and economic climate. During the 1980-1989 period, a decrease in SARB liquidity was observed, and from the 1990 period onwards, a divergence between liquidity as a consequence of gold reserves and liquidity from government bonds and foreign reserves is evident. This aligns with the opening up of the South African economy and the global shift away from gold. This liquidity divergence saw a trend of increasing liquidity driven by foreign reserves and government bonds across periods two and three, and a stabilisation during period four.

Advances provided by the SARB create liquidity for banking institutions as well as government bodies included in the "other advances" line item. These advances provide an area in which the SARB can facilitate balance sheet expansion in the greater monetary architecture. Advances increased steeply in the first half of the 1980s and started decreasing as financial stability through debt repayment agreements was established. Again in the 1990s, before 1994, advances were an increasing proportion of the total SARB balance sheet and then decreased again once there was movement towards economic stability. Advances decreased across the entirety of the 2000s, and this may be a consequence of continued economic stability. Advances increased again post-COVID-19 to provide liquidity for the COVID-19 response and post-COVID-19 economic recovery, but have started to decrease as economic stability is reestablished.

Government reporting on deposits held in foreign currency started post-2008. These increased from 2008 until 2019, then decreased. This is another potential balance sheet movement, where the government held fewer foreign deposits to expand its liquidity during a crisis period, in this case, post-COVID-19.

Looking between the periods provided as opposed to within the periods, we can see the biggest shifts in balance sheet composition coming from a large increase in foreign reserve holdings by the SARB, along with a general decrease in the percentage of the balance sheet of the SARB allocated to advances and investments.

Required reserve ratios have increased as a percentage of the total balance sheet, in line with global financial regulations, specifically the Basel Accords, and this will likely be expanded if the SARB requires non-banking financial institutions to hold required reserve ratios in the future. This is a monetary tool used by the SARB to create the ability to bail out institutions during liquidity crises, and thus create flexibility and potential balance sheet expansion within the system.

In addition to the general balance sheet expansion of the SARB and liquidity created through monetary policy tools, the provision of advances and the requirement of reserve ratios from institutions are two areas of flexibility over time. Both can be used for expansion during crisis periods, as well as a tool for contractionary activities and long-term economic stability.

The analysis shows that the SARB has kept a steady approach in response to its mandate, though this is not without societal trade-offs. Throughout its history, particularly in the democratic era, the SARB has adopted a conservative approach to monetary policy, which has often seen financial and market stability trumping socio-economic concerns. This conservatism is evidenced by the narrowly focused mandate of the SARB (see Section 4), which places a premium on inflation targeting, with the SARB often accused of maintaining interest rates at too high a level as a result (Isaacs, 2014). This approach has been criticised, including when the SARB increased the repo rate in 2023 (Tshimomola, 2023), and the SARB initially maintaining high interest rates following the GFC (Padayachee, 2015). Further evidence of the SARB's conservatism is its support of liberalised capital markets despite the broader economic implications (financialisation) and socio-economic consequences (Isaacs, 2014). The SARB is also accused of a reluctance to use tools at its disposal to stabilise the economy and to support broader developmental objectives.

Nevertheless, there have been instances since 2020 when the SARB has been willing to use all the policy tools at its disposal in pursuit of economic stability. The first example of this is the 2020 bond purchasing programme. The second instance of this is the 2024 agreement between the SARB and National Treasury that allowed the government to withdraw ZAR150 billion from the GFECRA, thereby reducing the government's borrowing requirements (National Treasury, 2024).

As the apex financial institution in South Africa, the SARB's conservatism has been an important buffer to ensure financial stability. Its primary challenge in the current socio-economic context, with multiple global and national challenges which spill over and compound, will be to utilise existing or create new instruments to contribute in a targeted way to sustainable economic growth. Our national development plan, climate response strategies, and energy transition are all underpinned by a vision of justice and inclusivity – "not to leave anyone behind". However, it also needs to be underpinned by ensuring a dignified livelihood for all South Africans.

6. References

ABSA (2017). 'Bankorp bailout explained in 10 questions'. Life at ABSA. 3 November. Available at: https://blog.absa.co.za/category/life-at-absa/bankorp-bailout-explained-10-questions/ (Accessed: 20 June 2024).

Bagus, P. and Howden, D. (2016). Central Bank Balance Sheet Analysis. Available at: https://mpra.ub.uni-muenchen.de/79801/1/MPRA_paper_79801.pdf (Accessed: 13 May 2024).

Bezuidenhout, H. (2024). 'Herman Bezuidenhout: Exchange controls in South Africa: An 81-year legacy'. Business Day, 23 June. Available at: https://www.businesslive.co.za/bt/opinion/2024-06-23-herman-bezuidenhout-exchange-controls-in-south-africa-an-81-year-legacy/ (Accessed: 18 July 2024).

Bhundia, A.J. and Ricci, L.A. (2005). 'The Rand Crises of 1998 and 2001: What have we learned?' in. Nowak, M. and Ricci, L.A. (eds.). Post-Apartheid South Africa: The first ten years. 156-173. Washington D.C.: IMF. Available at: https://www.imf.org/external/pubs/nft/2006/soafrica/eng/pasoafr/sach10.pdf (Accessed: 20 June 2024)

Brink, N. and Kock, M. (2009). Central bank balance sheet policy in South Africa and its implications for money-market liquidity. Available at: https://www.resbank.co.za/content/dam/sarb/publications/working-papers/2010/3578/WP-10-01.pdf (Accessed: 13 May 2024).

DPME (2014). Twenty Year Review South Africa 1994 - 2014: Economy and Employment. Background Paper. Department of Planning Monitoring and Evaluation. Available at: https://www.dpme.gov.za/publications/20%20Years%20Review/20%20Year%20Review%20Documents/20YR%20Economy%20and%20Employment.pdf (Accessed: 20 May 2024).

Federal Reserve (2022). Foreign and International Monetary Authorities (FIMA) Repo Facility. Available at: https://www.federalreserve.gov/monetarypolicy/fima-repo-facility.htm (Accessed: 12 May 2024).

IMF (2020). Request For Purchase Under The Rapid Financing Instrument. Country Report No. 20. International Monetary Fund. Available at: https://www.imf.org/-/media/Files/Publications/CR/2020/English/1ZAFEA2020003.ashx (Accessed: 20 May 2024).

IMF. (2023). South Africa: 2023 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for South Africa. International Monetary Fund. Available at: 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 (Accessed: 20 July 2024)

Isaacs, G. (2014) The myth of "neutrality" and the rhetoric of "stability": Macroeconomic policy in democratic South Africa. 54426. MPRA. Available at: https://mpra.ub.uni-muenchen.de/54426/1/MPRA_paper_54426.pdf (Accessed: 12 June 2024).

Jones, S. and Inggs, J. (1994). 'An overview of the South African economy in the 1980s', South African Journal of Economic History, 9(2), pp. 1–18. Available at: https://doi.org/10.1080/20780389.1994.10417229 (Accessed: 20 July 2024).

Macrotrends (2024) Gold Prices – 100 Year Historical Chart, Macrotrends. Available at: https://www.macrotrends.net/1333/historical-gold-prices-100-year-chart#google_vignette (Accessed: 20 July 2024).

Macrotrends (n.d.). South Africa Inflation Rate 1960-2024, Macro Trends. Available at: https://www.macrotrends.net/global-metrics/countries/ZAF/south-africa/inflation-rate-cpi (Accessed: 12 June 2024).

Mohamed, S. and Finnoff, K. (2024) 'Capital Flight from South Africa, 1980 to 2000'. In African Development and Poverty Reduction: The Macro-Micro Linkage, Lord Charles Hotel, Somerset West, South Africa. Available at: https://www.tips.org.za/files/capital_flight_from_SASeeraj_Mohamed.pdf.

Murau, S. (2020). A macro-financial Model of the Eurozone Architecture Embedded in the Global Offshore US-Dollar. Available at: https://www.bu.edu/gdp/files/2020/07/Murau-Eurozone-architecture.pdf (Accessed: 13 May 2024).

Murau, S., Haas, A. and Guter-Sandu, A. (2023). Monetary architecture and the Green Transition. Available at: https://journals.sagepub.com/doi/10.1177/0308518X231197296 (Accessed: 13 May 2024).

National Treasury (2024). 2024 Gold and Foreign Contingency Reserve Account Defrayal Amendment Bill: Briefing for the Standing Committee on Appropriations. Parliament of South Africa, 28 February. Available at: https://static.pmg.org.za/240228Gold_and_Foreign_Contingency_Reserve_Account_Defrayal_Amendment_Bill_Presentation.pdf (Accessed: 12 June 2024).

Padayachee, V. (2015) 'South African Reserve Bank independence: the debate revisited'. In Transformation: Critical Perspectives on Southern Africa, 89(1), pp. 1–25. Available at: https://doi.org/10.1353/trn.2015.0029

PBoC (2023). 2023 RMB Internationalisation Report. People's Bank of China. Available at: http://www.pbc.gov.cn/en/3688241/3688636/3828468/4756463/5163932/2023120819545781941.pdf (Accessed: 20 May 2024).

SAFLII (2019). Public Protector v South African Reserve Bank (CCT107/18) [2019]. Available at: https://www.saflii.org/za/cases/ZACC/2019/29.html (Accessed: 20 June 2024).

SAHO (n.d.-a). 'PW Botha gives the "Rubicon" Speech in Durban'. South African History Online. Available at: https://www.sahistory.org.za/dated-event/pw-botha-gives-rubicon-speech-durban (Accessed: 20 June 2024).

SAHO (n.d.-b). 'F.W. de Klerk announces the release of Nelson Mandela and unbans political parties'. South African History Online. Available at: https://www.sahistory.org.za/dated-event/fw-de-klerk-announces-release-nelson-mandela-and-unbans-political-parties (Accessed: 12 June 2024).

SAHRC (2024) July's People: The National Investigative Hearing Report into the July 2021 Unrest in Gauteng and Kwa Zulu-Natal. South African Human Rights Commission. Available at: https://www.sahrc.org.za/home/21/files/JULY%20UNREST%20REPORT%20FINAL_29%20JAN%202024.pdf (Accessed: 20 July 2024).

SARB (1986). South African Reserve Bank Annual Economic Report: 1986. South African Reserve Bank. Available at: https://www.resbank.co.za/content/dam/sarb/publications/reports/annual-economic -reports/1986/5557/Annual-Economic-Report---1986.pdf (Accessed: 22 July 2024).

SARB (2015). SARB signs swap agreement with PBoC. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/publications/publication-detail-pages/media-releases/2015/6687 (Accessed: 20 June 2024).

SARB (2020). The South African Reserve Bank's system of accommodation. South African Reserve Bank. Available at: https://www.resbank.co.za/content/dam/sarb/publications/fact-sheet/fact-sheet/2020/Fact%20sheet%209.pdf (Accessed: 20 June 2024).

SARB (2021a). Prudential Authority Regulatory Strategy: 2021-2024. South African Reserve Bank. Available at: https://www.resbank.co.za/content/dam/sarb/what-we-do/prudential-regulation/PA%20Regulatory%20and%20Supervisory%20Strategy%202021.pdf (Accessed: 21 June 2024).

SARB (2021b). The South African Reserve Bank: Our 100 Year Journey. South African Reserve Bank. Available at: https://online.flipbuilder.com/oweri/voip/ (Accessed: 21 June 2024).

SARB (2023a). South African Reserve Bank: Annual Report 2022/23. South African Reserve Bank. Available at: https://www.resbank.co.za/content/dam/sarb/publications/reports/annual-reports/2023/SARB Annual Report 2022-23.pdf (Accessed: 12 May 2024).

SARB (2023b). The recent expansion of the monetary base, Quarterly Bulletin, Boxes. South African Reserve Bank. Available at: https://www.resbank.co.za/content/dam/sarb/publications/quarterly-bulletins/boxes/2023/Box%202%20The%20recent%20expansion%20of%20the%20monetary%20base.pdf (Accessed: 12 May 2024).

SARB (2024). Downloadable Quarterly Bulletin Time Series Data. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/publications/publication-detail-pages/quarterly-bulletins/download-information-from-xlsx-data-files/2024/Downloadinformationfromxlsx datafiles (Accessed: 20 July 2024).

SARB (n.d.-a). History. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/about-us/history (Accessed: 20 June 2024).

SARB (n.d.-b). Functions of the Prudential Authority. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/what-we-do/Prudentialregulation/functions-of-the-prudential-authority (Accessed: 20 June 2024).

SARB (n.d.-c). SARB @ A Glance. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home#:~:text=The%20Prudential%20Authority%20regulates%20%EF%AC%81nancial,soundness%2C%20and%20support%20%EF%AC%81nancial%20stability (Accessed: 20 June 2024).

SARB (n.d.-d). Governance. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/about-us/governance (Accessed: 20 June 2024).

SARB (n.d.-e). Shareholder Information. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/about-us/shareholder-information (Accessed: 20 June 2024).

SARB (n.d.-f). Payments and Settlements. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/what-we-do/payments-and-settlementshttps://www.resbank.co.za/en/home/what-we-do/payments-and-settlements (Accessed: 20 June 2024).

SARB (n.d.-g). SARB Executive and Committees. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/about-us/our-people (Accessed: 20 June 2024).

SARB (n.d.-h). Inflation Targeting Framework. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/what-we-do/monetary-policy/inflation-targeting-framework (Accessed: 20 June 2024).

SARB (n.d.-i). Monetary Policy Implementation Framework. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/what-we-do/financial-markets/monetary-policy-implementation-framework#:~:text=The%20SA%20Reserve%20Bank's%20tiered,rate%20less%20one%20percentage%20point (Accessed: 20 June 2024).

SARB (n.d.-j). Prudential Regulation. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/what-we-do/Prudentialregulation (Accessed: 20 June 2024).

SARB (n.d.-k). Financial Stability. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/what-we-do/financial-stability (Accessed: 20 June 2024).

SARB (n.d.-l). Committee Structures. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/what-we-do/financial-stability/committee-structures#:~:text=Financial%20Stability%20Committee%20(FSC)&text=The%20FSC%20is%20an%20internal,of%20its%20financial%20stability%20mandate (Accessed: 20 June 2024).

SARB (n.d-m). Resolution Authority. South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/what-we-do/resolution-authority (Accessed: 20 June 2024).

SARB (n.d.-n). Selected Historical Rates, South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/what-we-do/statistics/key-statistics/selected-historical-rates (Accessed: 20 June 2024).

SARB (n.d.-o). The Gold And Foreign Exchange Contingency Reserve Account, South African Reserve Bank. Available at: https://www.resbank.co.za/en/home/what-we-do/financial-markets/The-Gold-and-Foreign-Exchange-Contingency-Reserve-Account (Accessed: 20 June 2024).

Shikwane, J., de Beer, A. and Meyer, D. (2020) Note on South Africa's liquidity measures in response to the COVID-19 pandemic. South African Reserve Bank. Available at: https://www.resbank.co.za/content/dam/sarb/publications/quarterly-bulletins/articles-and-notes/2020/10089/Note-on-South-african-liquidity-measures.pdf (Accessed: 12 May 2024).

South African Government (1989). South African Reserve Bank Act. Available at: https://www.gov.za/sites/default/files/gcis_document/201503/act-90-1989.pdf (Accessed: 12 May 2024).

South African Government (1996). The Constitution of the Republic of South Africa, 1996: as adopted on 8 May 1996 and amended on 11 October 1996 by the Constituent Assembly (2015). Pretoria: Department of Justice and Constitutional Development. Available at: https://www.gov.za/documents/constitution/constitution-republic-south-africa-04-feb-1997

South African Government (2021). Reserve Bank on potential exit options in African Bank Holdings Limited. Media Statement. Available at: https://www.gov.za/news/media-statements/reserve-bank-potential-exit-options-african-bank-holdings-limited-01-jun-2021#:~:t (Accessed: 20 June 2024).

Stats SA (2017). The South African economy shrinks by 0,7%. Statistics South Africa. Available at: https://www.statssa.gov.za/?p=9989 (Accessed: 20 June 2024).

Stats SA (2019). Inflation the lowest in over eight years. Statistics South Africa. Available at: https://www.statssa.gov.za/?p=12768 (Accessed: 20 June 2024).

Stats SA (2022). Consumer Price Index: July 2022. Statistical Release P0141. Statistics South Africa. Available at: https://www.statssa.gov.za/publications/P0141/P0141July2022.pdf (Accessed: 12 June 2024).

Toyana, M. (2020). 'Reserve Bank bails out CPD as Land Bank defaults on loans'. Business Day, 3 July. Available at: https://www.businesslive.co.za/bd/economy/2020-07-03-reserve-bank-bails-out-cpd-as-land-bank-defaults-on-loans/ (Accessed: 12 May 2024).

Trading Economics (n.d.). South Africa Interest Rate, Trading Economics. Available at: https://tradingeconomics.com/south-africa/interest-rate (Accessed: 20 July 2024).

Tshimomola, G. (2023) 'Gumani Tshimomola: The Reserve Bank is waging war on the working class'. Business Day, 11 May. Available at: https://www.businesslive.co.za/bd/opinion/2023-05-11- gumani-tshimomola-the-reserve-bank-is-waging-war-on-the-working-class/ (Accessed: 12 June 2024).

US Department of State (n.d.) 'The End of Apartheid'. Available at: https://2001-2009.state.gov/r/pa/ho/time/pcw/98678.htm (Accessed: 20 June 2024).

Van der Merwe, E.J. (1999). 'Monetary policy operating procedures in South Africa'. BIS Policy Papers, 5. Pp 235–236. Available at: https://www.bis.org/publ/plcy05l.pdf (Accessed: 20 June 2024)

World Bank (n.d.) GDP growth (annual %) – South Africa, World Bank Group Data. Available at: https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2017&locations=ZA&start=2009 (Accessed: 12 June 2024).

World Economic Forum (2023). Fostering Effective Energy Transition 2023, World Economic Forum. Available at: https://www.weforum.org/publications/fostering-effective-energy-transition-2023/in-full/south-africa/ (Accessed: 13 May 2024).

7. Appendix

Ratio Analysis Methodology

The methodology applied for the ratio analysis is taken from Bagus and Howden (2016). To determine liquidity within the system the following three ratios are used:

$$\textit{Liquidity ration I}\ [\%] = \frac{\textit{gold}}{\textit{monetary base}}$$

$$\textit{Liquidity ration II}\ [\%] = \frac{\textit{gold} + \textit{foreign reserves}}{\textit{monetary base}}$$

$$\textit{Liquidity ration III}\ [\%] = \frac{\textit{gold} + \textit{foreign reserves} + \textit{government bonds}}{\textit{monetary base}}$$

In addition to this, the value of the monetary base was calculated using the equation set out by the SARB, which defines monetary base as “Total banknotes and coin in issue and circulation outside of the SARB, net of issuance and removal from circulation, plus banks’ required cash reserves as well as their excess cash reserves and other deposits at the SARB in rand” www.rabiatransitions.org