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Shifting South African Public Sector Borrowing

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ABSTRACT

The South African National Treasury (NT) recently proposed to transfer 30 percent of the unrealized gain on the South African Reserve Bank's (SARB's) gold and foreign exchange reserves, worth about 2.4 percent of gross domestic product (GDP), to the NT. The February budget announcement led government bond yields to decline as market participants foresaw a reduced bond supply and lower NT interest payments of about 0.3 percent of GDP.

The SARB's need to finance any such transfer implies that the transfer *shifts debt from the NT to the SARB*. Because the SARB will pay its current 8.25 percent policy ("repo") rate on the excess reserves that it will use to finance the transfer, the consolidated South African public sector will save less than the 0.3 percent of GDP in interest payments.

Since the NT pays a higher yield on its medium-term debt than the SARB pays on overnight deposits, the debt transfer from the NT to the SARB would reduce interest payments. At current yields, the difference between the government bond yield of about 12 percent and the SARB's overnight repo rate of 8.25 percent is about 4 percent. Thus, the 2.4 percent of GDP transfer could save the consolidated public sector about 0.1 percent of GDP. The lower bond yields that greeted the announcement of the transfer can be understood as a response to a shortening of the duration of the public sector's debt.

Viewing the problem as one of debt management, one can ask whether the SARB most cheaply borrows through excess bank reserves remunerated at its policy rate. Alternatively, it could swap gold for dollars and then dollars for rand in the deep and liquid foreign exchange market. The SARB

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might well borrow rand the cheaper way. For now, excess reserves may be the cheaper way to go, but that could change.

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INTRODUCTION

Ketterle, Maia and Maia (2023, henceforth, KMM) propose a transfer of the unrealized gain on the South African Reserve Bank's (SARB's) gold and foreign exchange (FX) reserves to South Africa's National Treasury (NT). They highlight the latter's legal ownership of the Gold and Foreign Exchange Contingency Revaluation Account (GFECRA), worth 8 percent of South Africa's gross domestic product (GDP). If this were transferred in its entirety to the NT to pay down government debt, the NT could save interest expense of 0.9 percent of GDP. On February 21, 2024, the NT (2024) budget announcement opted for a partial transfer of R150 billion over three years out of the approximately R500 billion reserve, along with a R100 billion transfer to SARB reserves.

This paper underscores that the savings on government interest payable would be largely, but not entirely, offset by extra SARB interest payments on the additional excess reserves that would result from the proposed transfer under current monetary operating procedures (SARB 2022). The key insight is that, from the perspective of the consolidated public sector, the proposal shifts debt from the NT to the SARB, rather than retiring government debt by mobilising some sterile NT asset.

Nevertheless, the shift would allow a saving of interest payments by the consolidated public sector, because the SARB's policy ("repo") rate is well below the yield on the NT's bonds. In particular, the former is 8.25 percent and the latter is about 12 percent. Thus, every 1 percent shift of debt from the NT to the SARB could reduce interest payments by 0.04 percentof GDP, while at the same time reducing outstanding South African government bonds (SAGBs).

KMM argue that their proposal might offer a further advantage, above and beyond the cash flow savings. If market analysts, rating agencies and the International Monetary Fund (IMF) do not consolidate central bank debt with government debt, the transfer would improve the optics of South African government debt, reducing it by the amount of the transfer.[2]

Through the Ketterle, Maia and Maia Proposal Step-by-Step

Following KMM (2023), the SARB's stylized balance sheet has two assets and three liabilities. Its assets are overwhelmingly FX and gold, though it holds R33.5 billion in SAGBs because of market stabilization purchases during the pandemic (Table 1; Fowkes 2022). The SARB's liabilities are 1) interest-bearing excess reserves; 2) currency in circulation and banks' required reserves; and 3) equity and reserve accounts, including the GFECRA of about R500 billion. Filling out a minimalist flow of funds account, the NT holds the GFECRA as a claim on the SARB and is liable for SAGBs. For simplicity, the commercial banks in South Africa hold SAGBs as a stand in for the private sector at home and abroad. These assets, along with excess reserves and required reserves at the SARB, balance deposits and other liabilities.

[2] This advantage is missing from an operation with otherwise identical results, namely so-called QE in which SARB buys South African government bonds by increasing excess reserves. Analysts do not typically exclude government debt held by the central bank in measuring the stock of government debt.

Table 1: Initial condition: selected assets & liabilities of South African Reserve Bank, National Treasury and commercial banks

Note	SARB		National Treasury		Commercial banks	
	Assets	Liab's	Assets	Liab's	Assets	Liab's
Rand depreciation has boosted revaluation gains on the SARB's gold and FX reserves to 8% of GDP, which by law belong to the Treasury	Gold and FX reserves SAGBs	Excess reserves, other interest-paying liabilities Currency & req'd reserves Equity incl. GFECRA	GFECRA	SAGBs	Excess reserves at SARB Req'd reserves at SARB SAGBs	Deposits Other

Note: SARB = South African Reserve Bank; SAGB = South African Government Bonds; GFECRA = Gold and Foreign Exchange Contingency Reserve Account.
Source: Ketterle et al (2023); author's elaboration.

In passing it is worth noting a theoretical oddity of the SARB law. It vests the valuation gains on the FX portfolio in the government while burdening the SARB's income with the negative carry on the FX reserves. Irving Fisher's open interest parity theorem leads one to expect that the valuation gains on the FX portfolio would offset over time the carrying cost to the SARB of financing FX reserves in rand at its repo rate, given higher South African inflation and interest rates than those in the United States or the euro area. One can interpret this as a profit transfer rule: the NT owns the valuation gain while the SARB income must eat the negative carry.[3]

The NT proposal to transfer R150 billion of the GFECRA to the NT changes the accounts as shown in Table 2.[4] The SARB would not touch its FX reserves.[5] Instead, it would replace part of the GFECRA liability with a liability to commercial banks as it paid into the NT's tax and loan accounts at commercial banks. For its part, the NT would give up R150 billion of its GFECRA claim on the SARB in return for the deposit in commercial banks. For their part, commercial banks' balance sheets would grow as they acquired more excess reserves in the SARB as the counterpart of the larger tax and loan account deposit liabilities to the NT.

Table 2: South African Reserve Bank transfers R150 billion of GFECRA to the National Treasury

Operation	SARB		National Treasury		Commercial banks	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
SARB transfers R150 billion of GFECRA to Treasury, which retires debt		-R150 billion GFECRA +R150 billion to commercial banks	-R150 billion GFECRA +R150 billion depo in comm'l banks		+R150 billion depo in SARB	+R150 billion due to Treasury

Note: SARB = South African Reserve Bank; SAGB = South African Government Bonds; GFECRA = Gold and Foreign Exchange Contingency Reserve Account.
Source: Ketterle et al (2023); author's elaboration.

When the Treasury retires, rather than rolling over its maturing debt, it extinguishes these deposits (Table 3). The commercial banks correspondingly give up their holdings of SAGBs in exchange for the deposits of the NT. Thus, both the NT and the commercial banks shrink their balance sheets.

[3] This arrangement may help account for the R150 billion of unremunerated reserves that banks are required to hold, which is almost as large as outstanding currency. These unremunerated liabilities boost the SARB's income, but at the cost of burdening onshore bank intermediation, thereby shifting intermediation offshore and into shadow banks at home (McCauley 2023a;b).

[4] This transfer, along with a transfer of R100 billion to the SARB's reserves, would leave R250 billion in the GFECRA. This would allow for a very considerable appreciation of the rand before the GFECRA were exhausted and the NT's legal obligation to recapitalise the SARB came into play. See below.

[5] See the November 2023 press conference of the SARB Monetary Policy Committee, where the Governor argued against selling any foreign exchange reserves.

Table 3: National Treasury retires R150 billion in maturing debt

Operation	SARB		National Treasury		Commercial banks	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Treasury does not roll over R150 billion in maturing debt			-R150 billion depo in comm'l banks	-R150 billion in SAGBs	-R150 billion in SAGBs	-R150 billion due to NT

Note: SARB = South African Reserve Bank; NT = National Treasury; SAGB = South African Government Bonds.
Source: Ketterle et al (2023); author's elaboration.

The net result of the transfer of the revaluation reserve from SARB to the NT, and its use to pay down government debt, is shown on Table 4. The SARB has an increase in its interest-bearing debt that matches the NT's reduction in outstanding SAGBs, and the commercial banks experience something akin to quantitative easing (QE) as they end up holding more floating-rate claims on the public sector and fewer government bonds. Overall, the net effect is best thought of as a debt management exercise (McCauley and Ueda 2009; Greenwood et al. 2016; Fowkes 2022).

Table 4: Net result of SARB transfer of GFECRA to National Treasury and its debt retirement

Operation	SARB		National Treasury		Commercial banks	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Treasury debt down but SARB pays interest on larger excess reserves. Public sector liabilities are shorter.		-R150 billion GFECRA +R150 billion due to comm'l banks	-R150 billion GFECRA	-R150 billion SAGBs	-R150 billion SAGBs +R150 billion excess reserves with SARB	

Note: SAGB = South African Government Bonds, GFECRA = Gold and Foreign Exchange Contingency Reserve Account.
Source: Ketterle et al (2023); author's elaboration.

Similar to a debt management announcement of the issuance of fewer bonds and more bills, South African government bonds rose in price in the aftermath of the budget announcement including the transfer from the SARB to the NT. Ten-year government bond yields declined by 10 basis points on the news.[6]

The NT's ability to auction fewer bonds will save it about 0.3 percent of GDP in interest payments per annum at yields near 12 percent, but the SARB stands to pay 8.25 percent on the new bank reserves created to finance the transfer. Taking the two together, the transfer will save the public sector only about 0.1 percent of GDP.

The usefulness of the macroeconomic aggregation of the treasury and central bank is undermined not only by their very different borrowing habitats. In addition, the government pays more than the SARB, even at the short end of the yield curve.[7]

A risk cited by a major rating agency (Gupta and Gill 2024) is that the transfer from the SARB to the NT is seen to weaken the central bank. However, the NT's *Budget Review 2024* (2024) stressed that half of the GFECRA surplus would be left to absorb possible losses from rand appreciation. Given the

[6] Colleen Goko, "South African rand jumps as nation taps reserves for debt," *Bloomberg*, February 21, 2024.
[7] Honohan and Orphanides (2022) put the spread between Treasury bill rates and the SARB policy rate in December 2021 at 23 basis points. At the long end of the yield curve, Honohan and Orphanides (2022) report that the Treasury bond yield exceeded the comparable bank rate, that is the interest rate swap rate, by 250 basis points in November 2021.

$62.5 billion of gross reserves at the end of 2023, the R250 billion could absorb a 22 percent rise in the rand against the dollar, euro and gold without the NT having to make up a valuation loss. Another R100 billion would be transfered to the SARB to strengthen its solvency and to defray the expense of servicing the new R150 billion of excess bank reserves. The NT (2024) also laid out principles: no undermining the SARB's "policy solvency," no sales of FX to realise gains, no transfer of a surplus that rand appreciation could plausibly eliminate, no NT use of transfers for anything but the reduction of government debt, and no transfer without an agreement and a relevant schedule.

An Alternative Market for SARB Borrowing?

Are excess reserves the SARB's cheapest source of borrowed rand? If the rationale for the transfer from the SARB to the NT is to locate the consolidated debt on the public sector balance sheet where the interest cost is lowest, it is worth asking this question. An alternative to borrowing at the policy rate payable on excess reserves would be to swap gold for dollars and dollars for rand in two reasonably liquid markets.[8] The gold leg of the swap would lower gross foreign reserves but serve to highlight the usability of South Africa's $8.3 billion of gold at end-2023. This demonstration has value in a world in which many reserve managers have for dubious reasons repatriated much gold from financial centres to home vaults, where the gold becomes illiquid.

Admittedly, the SARB had a recent experience of having to pay up to borrow rand against the US dollar in the FX market. But this bad experience preceded the shift to an abundant liquidity monetary operations regime in 2022 in South Africa (SARB 2021; 2022). In any case, no principled choice need be made between financing via excess reserves or via the double gold-dollar-rand swap: instead, one may let the market speak and borrow in the cheaper market, which may vary over time.

The Options in 2 X 3

The question "What to do with the GFECRA?" is linked to but different from the question "Should some South African public sector debt be shifted to the SARB?" Consider the answers in a two-by-three matrix (Figure 1).

Until the proposal is enacted, matters stand in the top row, middle column, which is labeled status quo. The KMM proposal is in the bottom row, right column. The SARB would cash out the GFECRA to the NT by increasing its debt in the form of excess reserves held by banks paying the policy rate of 8.25 percent. This reduces the NT's debt and interest payments by increasing both at the SARB. The shift matters because the SARB pays a lower rate of interest on its overnight debt than does the NT on its bonds.

In the bottom row, middle column, the SARB could do QE, that is buy SAGBs with more excess reserves. Fowkes (2022) argued against this option. The KMM proposal has the advantage of reducing outstanding SAGBs, which improves the public debt profile as usually presented, that is, neglecting the debt of the SARB.

The top row, right column provides an option of limited importance in South Africa. The SARB could sell its small holdings of SAGBs to the NT at market value and thereby extinguish a corresponding portion of the GFECRA.

[8] FX reserves would be stable with dollars swapped in against the gold and swapped out against rand. The BIS semiannual survey of over-the-counter derivatives reports $644 billion of outstanding gold swaps and forwards at end-June 2023 (https://data.bis.org/topics/OTC_DER/tables-and-dashboards/BIS,DER_D5_2,1.0). The *Central bank triennial survey of foreign exchange in April 2022* showed daily turnover in rand FX swaps of $32 billion (https://www.bis.org/statistics/rpfx22.htm). This is an order of magnitude larger than the R92 billion average daily turnover in the South African repo market in 2021 (South African National Treasury (2022). See Borio et al (2017; 2022) for the FX swap market as the largest dollar debt market.

Figure 1: Options for GFECRA and SARB Borrowing

		What to do with GFECRA?		
		Transfer to SARB	**Nothing**	**Transfer to NT**
SARB borrows more through excess reserves?	**No**	**NT boosts SARB capital by transferring ownership of GFECRA**	**Status quo**	SARB sells R33.5 billion SAGBs to NT in return for R33.5 billion of GFECRA
	Yes	NT boosts SARB capital as above and SARB buys FX with excess reserves.	QE = SARB buys SAGBs with excess reserves	**Ketterle, Maia & Maia (2023): SARB cashes out GFECRA with excess reserves.**

Source: Compiled by author.

A rationale for the left column is to undo the effect of the theoretical oddity noted above. The SARB has paid for much of the GFECRA with the cumulated negative carry of the FX reserves funded with domestic interest-bearing liabilities. In the top row, left column, the NT could accordingly agree to transfer its claim on the GFECRA to the SARB in whole or in part.

The bottom row, left column would combine raising the SARB's capital with an increase in its borrowing. Additional excess reserves could fund acquisition of larger FX reserves. This would provide a larger buffer against strains in South African banks' dollar funding (Das et al. 2023).

The NT's budget proposal balances the options shown in bold type in Figure 1. About half of the GFECRA stays put, about 30 percent goes to the NT, and about 20 percent goes to the SARB. The rationale for the first is to leave a buffer against rand appreciation, the second is to reduce government debt, and the last is to pay the additional interest cost of the excess reserves that will fund the transfer to the NT.

CONCLUSION

The transfer of unrealised valuation gains on SARB's reserves of gold and FX to the NT could reduce the public sector's interest bill and improve the optics of South African government debt. But the operation must be understood as a shift of debt from the NT to the SARB, rather than an exercise in painless debt reduction. It could reduce the public sector's interest bill because it would expose the public sector to more debt at floating rates and because market participants charge the NT higher interest rates than the SARB pays on its excess reserves.

The proposed transfer sets out principles that balance government debt reduction and protection of the central bank's solvency, but it runs risks. One is that the operation is seen as a sleight of hand that makes moves toward fiscal sustainability less likely (Fowkes 2022). A risk currently very much in evidence in Europe is that the interest burden on central bank income arising from remunerated excess reserves comes to be viewed as excessive. If, in response to this view, additional unremunerated required reserves were imposed on banks, this tax could drive bank intermediation offshore and into shadow banks at home.[9]

[9] See McCauley (2023a,b) and McCauley and Pinter (2024).

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