

Note on recent developments in money creation in South Africa

by D H Meyer and M A Kock

Introduction

The coronavirus disease 2019 (COVID-19) pandemic has highlighted the role of money and its relationship to price developments in the economy. Central banks create money through increases in banknotes and coin in circulation, while the deposits of private sector banks held at the central bank also add to the monetary base¹, which supports the expansion of credit and broad money.

The composition of South Africa's monetary base

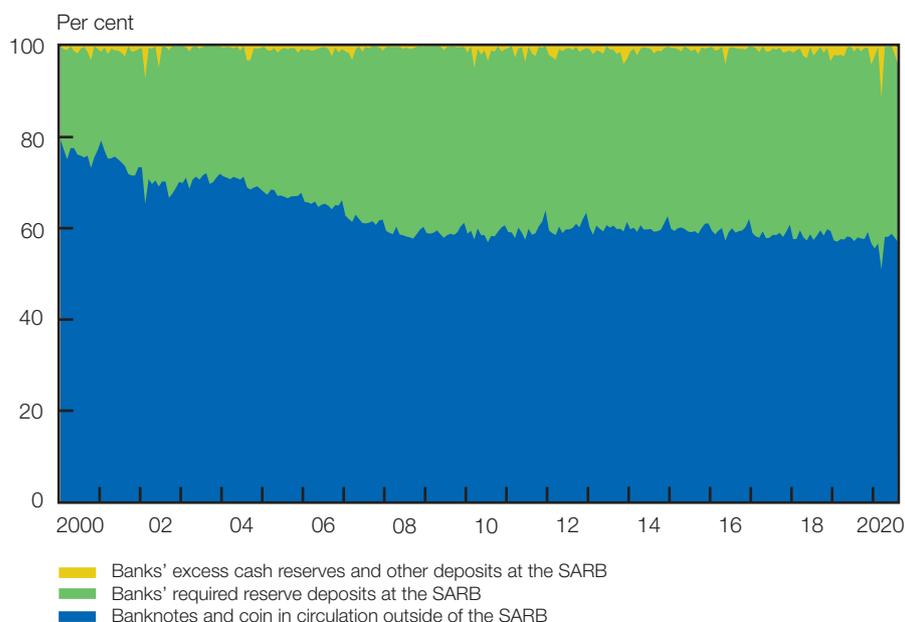
In the year 2000, notes and coin in circulation outside of the South African Reserve Bank (SARB) and bank deposits at the SARB contributed, on average, 76% and 24% respectively to the monetary base. However, these ratios gradually changed, with notes and coin outside of the SARB averaging 59% and bank deposits 41% of the monetary base between January 2008 and July 2020.

The composition of the monetary base is partly determined by the public's demand for banknotes and coin, while the rising contribution of banks' required reserves is mostly a function of the growth in banks' balance sheets up to 2008, after which its relative contribution remained fairly stable.

The monetary base increased almost ninefold from January 2000 to July 2020, with most of the increase attributable to the required reserve balance of banks. Over the same period, the relative contribution of banknotes and coin in circulation, which contributes the most in absolute terms, shrank.

¹ The monetary base is defined as currency in circulation and banks' deposit holdings at the central bank as well as those deposits of money-holding sectors at the central bank that are also included in broad money. Compilers may include additional components in the monetary base, depending on the types of liabilities issued by the central bank and the analytical use of the monetary base. In South Africa, the monetary base, or M0, includes banknotes and coin in circulation outside of the central bank as well as bank deposits with the central bank in national currency. See the *Monetary and Financial Statistics Manual and Compilation Guide 2019* published by the International Monetary Fund (IMF) in 2019, pages 197 to 200. Commercial banks also play a role in the creation of money. After putting aside the required reserve portion at the central bank, the remainder is available for credit extension. Banks are allowed some flexibility to draw down on mandatory deposits, and when these deposits at the central bank are reduced, the money in circulation increases.

Composition of South Africa's monetary base



Source: SARB

2 See the SARB's detailed liabilities and assets on pages S-2 and S-3 in this edition of the *Quarterly Bulletin*.

Composition of South Africa's monetary base²

R millions

	Jan 2000	Dec 2019	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Growth*
Banknotes and coin in circulation outside the SARB.....	27 809	165 574	155 544	160 368	161 787	166 850	175 873	6.3
Private bank deposits at the SARB	7 174	126 306	149 394	115 712	116 358	116 915	131 790	18.4
Required reserve balances.....	7 164	114 320	114 515	115 140	115 888	116 875	117 480	
Excess cash reserves and other deposits**.....	10	11 986	34 879	572	470	40	14 310	
Monetary base	34 983	291 880	304 938	276 080	278 145	283 765	307 663	8.8

* Multiples of the January 2000 value, as at July 2020

** Excluding deposits denominated in foreign currency

Source: SARB

3 The supplementary auctions in March 2020 contributed to a spike in banks' deposits at the SARB during that month. Although not specifically visible in the month-end balance, all-time high cash reserve withdrawals occurred in April 2020 due to a temporary liquidity strain when a supplementary repurchase transaction previously entered into matured.

The monetary base was R15.8 billion larger in July 2020 than in December 2019, amid large fluctuations related to COVID-19-induced liquidity interventions.³ Private sector bank deposits at the SARB increased by R23.1 billion from December 2019 to March 2020. Subsequently, banknotes and coin in circulation increased by R20.3 billion from March 2020 to July, while private bank deposits with the SARB declined by R17.6 billion as excess cash reserves and other deposits shrank.

Changes in the monetary base

R millions

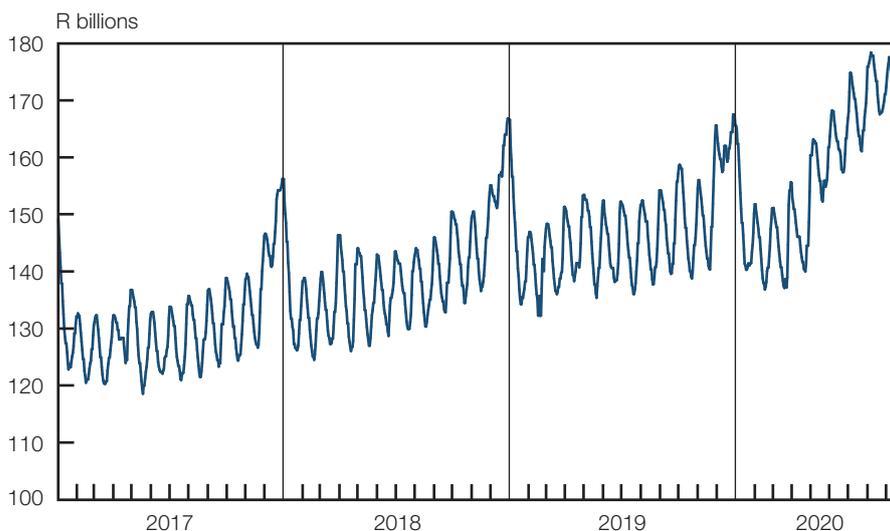
	Dec 2019 to Mar 2020	Dec 2019 to Jul 2020	Mar 2020 to Apr 2020	Apr 2020 to May 2020	May 2020 to Jun 2020	Jun 2020 to Jul 2020
Banknotes and coin in circulation outside the SARB.....	-10 030	10 299	4 824	1 419	5 063	9023
Private bank deposits at the SARB	23 088	5 485	-33 682	647	556	14 875
Required reserve balances.....	195	3 161	625	748	987	605
Excess cash reserves and other deposits*.....	22 893	2 324	-34 307	-101	-431	9 202
Monetary base	13 058	15 783	-28 858	2 066	5 619	23 899

* Excluding deposits denominated in foreign currency

Source: SARB

Not too much should be read into the short-term changes in banknotes and coin in circulation, as the amount is by nature very volatile, with a high degree of seasonality. There are specific periods when the public's demand for notes and coin increases, most notably at year-end and during holiday periods.

Banknotes and coin in circulation outside of the SARB



Source: SARB

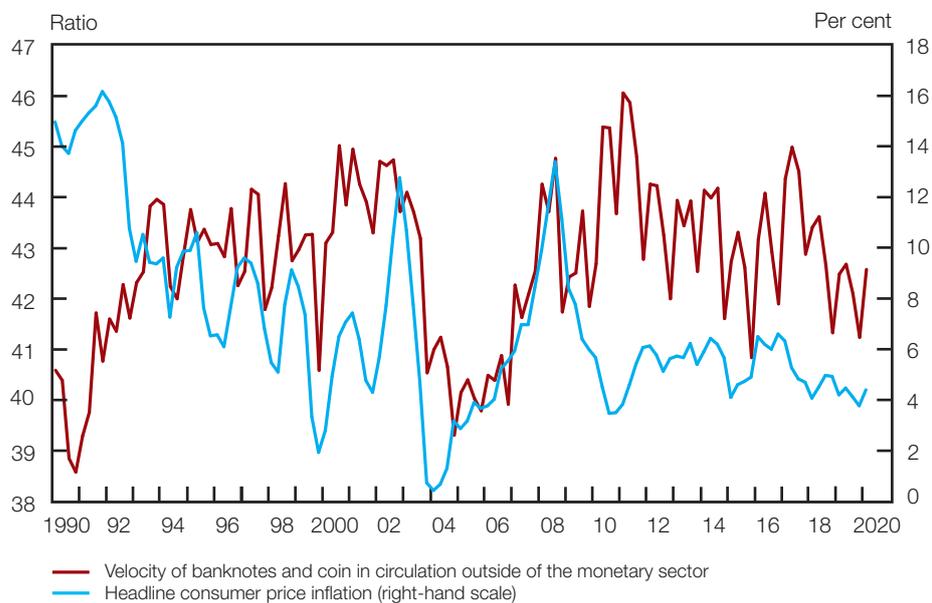
The relationship of the monetary base to other macroeconomic variables

The public's demand for banknotes and coin drives cash in circulation, which could affect changes in the general price level in the economy. However, the velocity⁴ of banknotes and coin in circulation outside the monetary sector⁵ has been trending broadly sideways over the past decade, along with a moderation in consumer price inflation.

4 This is the ratio of the gross domestic product (GDP) at current prices divided by the average value of banknotes and coin in circulation outside of the monetary sector.

5 Banknotes and coin in circulation outside of the monetary sector equal the notes and coin that form part of the monetary base, but exclude the vault cash held by banks to reflect the notes and coin in the hands of the public.

Velocity of banknotes and coin in circulation, and consumer price inflation

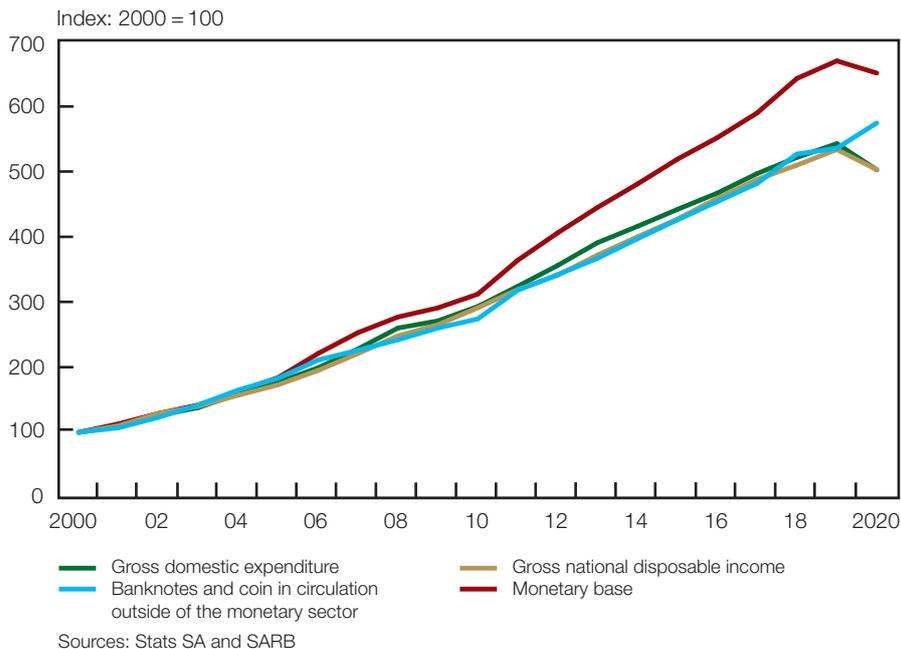


Sources: Stats SA and SARB

When the evolution of gross domestic expenditure and gross national income at current prices is compared to that of banknotes and coin in circulation outside the monetary sector as well as the monetary base, it becomes evident that banknotes and coin increased in step with overall expenditure and income in the economy. This alignment with economic activity was therefore not inflationary.



Expenditure and income versus monetary base

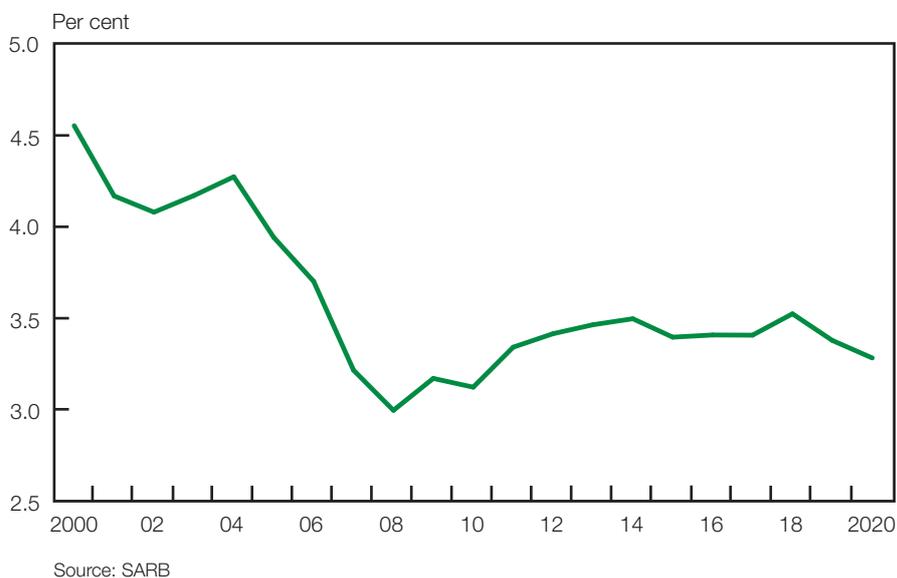


6 The monetary base is a measure of the funding base that underlies the money aggregates, rather than being a money aggregate in itself.

Banknotes and coin in circulation outside of the monetary sector as a percentage of the overall broad money supply (M3) also declined from the early 2000s to 2008, after which it remained fairly stable, not contributing unduly to the growth in money supply.

7 Since January 2000, the banknotes and coin in circulation outside of the monetary sector only accounted for 3.5%, on average, of the money supply (M3).

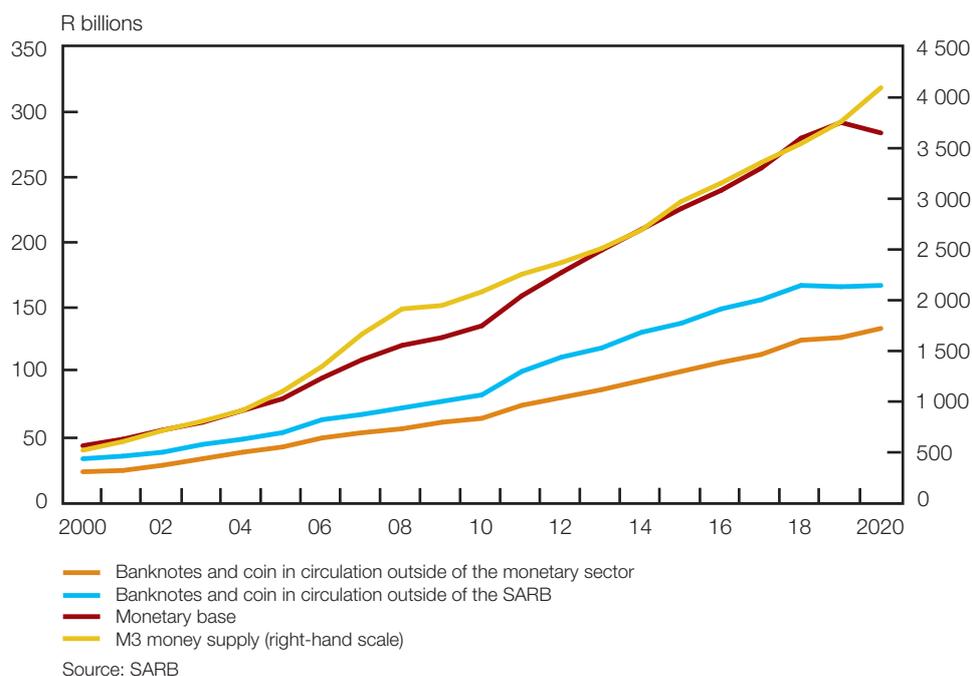
Banknotes and coin in circulation outside of the monetary sector as a ratio of M3



8 For the composition of South Africa's monetary aggregates, see page S-23 in this edition of the *Quarterly Bulletin*. The *Monetary and Financial Statistics Manual and Compilation Guide 2019* suggests that the selection of financial assets to be included in broad money aggregates should focus on their liquidity and usefulness as a store of value in real terms (i.e. their ability to maintain value despite changes in interest rates and prices). The M3 money supply includes notes and coin in circulation *plus* the domestic private sector's cheque and transmission deposits, demand deposits, short- and medium-term deposits as well as long-term deposits with the monetary sector.

It is important to note that the monetary base⁶ and money supply are two different concepts, which share only that portion of banknotes and coin in circulation that falls outside of the monetary sector.⁷ However, the monetary base does affect money supply⁸ through the money multiplier.

Monetary base and money supply



The monetary base and the SARB's liquidity operations

The SARB's portfolio of government bonds grew from R8.1 billion in February 2020 to R38.4 billion in July on account of such purchases to increase money market liquidity. 'Normal' liquidity provision by the SARB – which includes the utilisation of cash reserves, resale agreements and the South African Multiple Option Settlement (SAMOS) system position – increased from R65.8 billion in December 2019 to R103.9 billion in March 2020 before declining to R54.3 billion in July.

Selected SARB assets and liabilities

R millions

	Jan 2000	Dec 2019	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020
Assets							
Government bonds	6 299	8 103	9 222	20 644	30 830	35 890	38 383
Liquidity provided*	6 502	65 849	103 872	77 961	74 566	62 112	54 278
Total	12 801	73 952	113 094	98 605	105 396	98 0002	92 661
Liabilities							
Private bank deposits at the SARB..	7 174	126 306	149 394	115 712	116 358	116 915	131 790

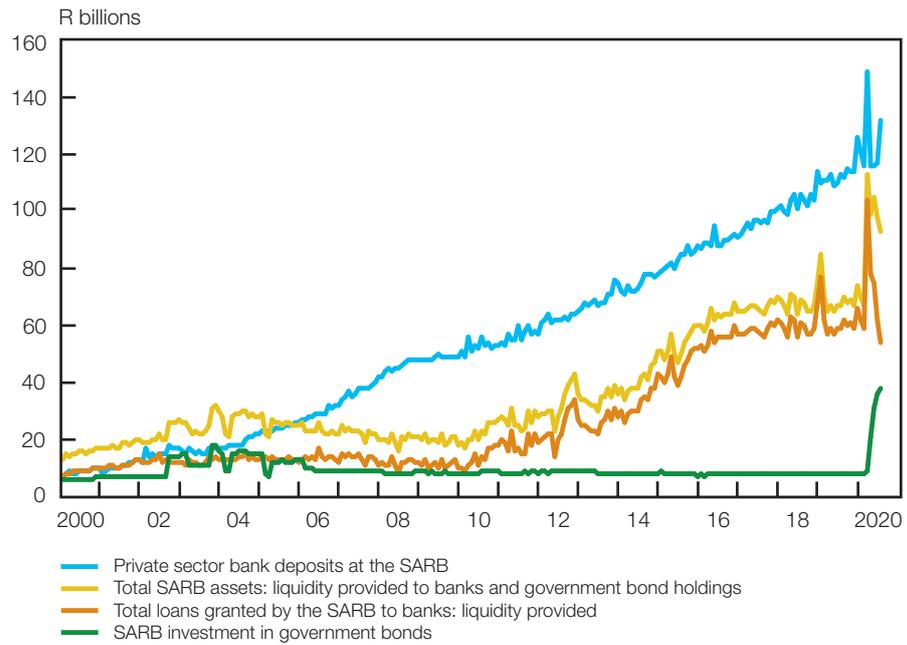
* Utilisation of cash reserves, resale agreements and the SAMOS system position

Source: SARB

Some of the liquidity provided by the SARB to banks finds its way back to the SARB as deposits of private sector banks with the SARB, which then forms part of the monetary base but, by definition, is excluded from the monetary aggregates and overall money supply.



Selected SARB assets and liabilities



Conclusion

Central banks create money under 'normal' circumstances and could also do so, to a much larger extent, under unusual circumstances by providing liquidity as part of efforts to ensure the continued functioning of financial markets. In addition to an increase in banknotes and coin in circulation, the central bank could also extend loans to banks and purchase government securities, both of which might increase bank deposits at the central bank and hence the monetary base, and through that the money supply. The intention is for banks to use the increased liquidity to extend credit to the private sector. However, when conditions allow, and as an interim measure, some excess liquidity may also end up being used to purchase short-term market instruments such as Treasury bills.

The creation of money could be inflationary if it were out of kilter with the demand for money and underlying economic activity, and could also contribute to asset price bubbles. It should therefore be very carefully managed by the monetary authority.