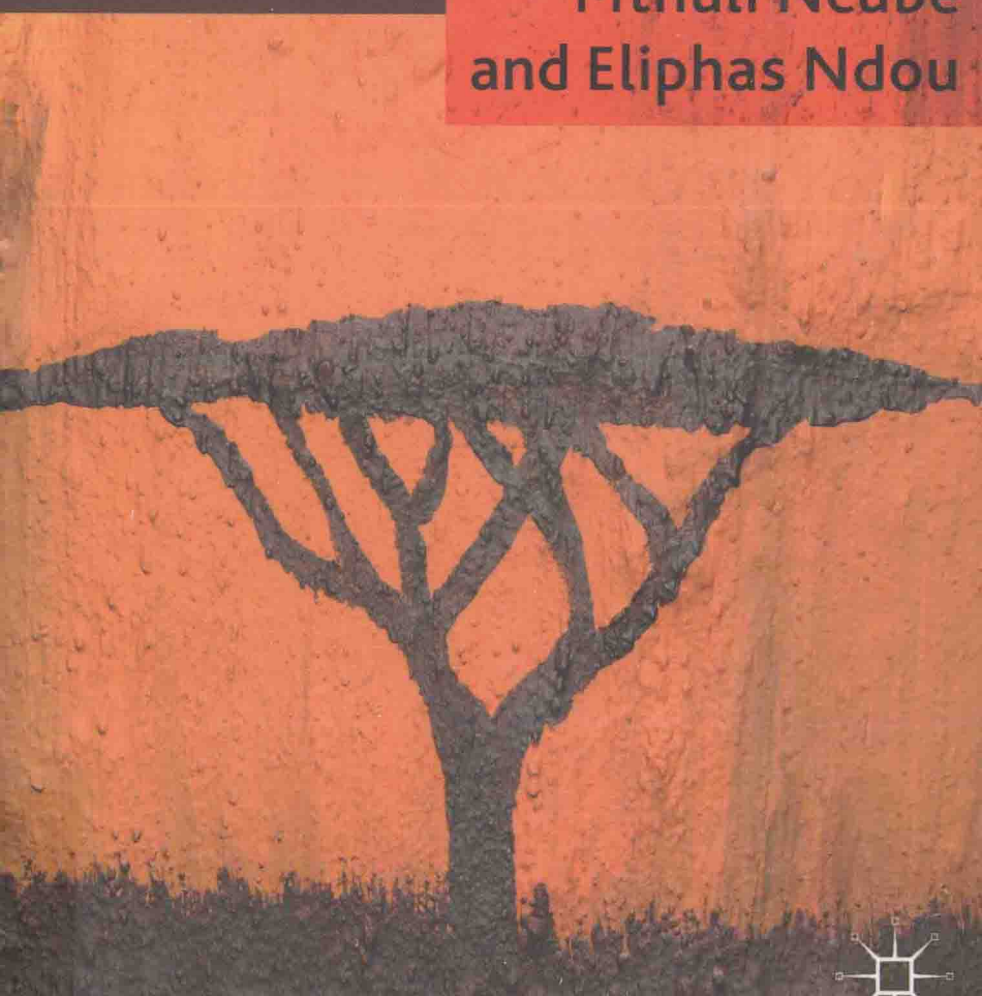
Monetary Policy and the Economy in South Africa

Mthuli Ncube
and Eliphas Ndou



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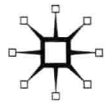

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Preface

This book is made up of four parts covering output, housing, components of the balance of payments, and international transmission. Different VAR approaches are applied to data in order to assess monetary policy conduct in South Africa. The book uses two Bayesian VAR approaches in the form of sign restrictions and Minnesota priors, in addition it estimates over identified and precisely identified SVARs.

Part I examines output in South Africa. Chapter 2 investigates three questions relating monetary policy to the business cycle using a VAR sign restriction approach, dealing in particular with the effect of contractionary monetary policy shocks on output, and the proportions of fluctuations due to contractionary monetary policy shocks relative to other shocks. This chapter also shows some of the actual monetary policy activities that are captured by the approach.

Chapter 3 assesses the importance of price stability as a mandate for monetary policy authorities. It assesses the relationships between inflation, inflation uncertainty, output growth uncertainty and output growth variables. This involves testing the impact of inflation uncertainty on inflation to determine whether the central bank pursues stabilization policies (as suggested by Holland 1995) or goes out of its way to be unpredictable and engineer higher inflation, hoping for output gains (Cuikerman and Meltzer 1986). In addition, the study looks at the indirect channel through inflation uncertainty on both real output growth (Friedman 1977) and its uncertainty, which is expected to be negative, according to Taylor (1979), or positive, according to Logue and Sweeney (1981).

Part II deals with the real estate sector. Chapter 4 estimates an SVAR and quantifies the percentage decrease in consumption expenditure, attributed to the changes in household wealth, due to a contractionary monetary policy shock in South Africa. This compares the significance of indirect effects relative with direct effects. The indirect channel operates through changes in the interest rates on household wealth, the rising interest rates directly reducing current consumption. The direct channel refers to the effects of interest rates on consumption. Chapter 5 assesses the role of disposable income, inflation and house prices on various categories of consumption. The analysis is extended to assess the impact of oil inflation shocks on real variables. Chapter 6 investigates the role

of the mortgage market and the impact of spillover effects from the US housing market on the South African economy. This particularly searches for any evidence of a directional push effect from developments in the US housing market on South African counterparts.

Part III focuses on the trade balance and current account. Chapter 7 examines the differential effects of contractionary monetary policy and exchange rate appreciation shocks on the trade balance. In addition, the analysis further examines the channels through which monetary policy affects the trade balance. Chapter 8 investigates the economic significances of the exchange rate, house prices and equity price appreciation shocks in explaining current account fluctuations, and seeks to find the dominant shock between the real effective exchange rate, house prices and equity price appreciation shocks in terms of the effect on the South African current account balance.

Part IV deals with international spillover effects. Chapter 9 focuses on the transmission of macroeconomic shocks in the United States to the South African economy. This chapter particularly investigates the extent to which macroeconomic fluctuations in South Africa are caused by US shocks. The objective is to demonstrate South Africa's vulnerability.

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List of Abbreviations

ADF	Augmented Dickey–Fuller test
AGOA	African Growth and Opportunity Act
Alsi	All Share Index
BFGS	Broyden–Fletcher–Goldfarb–Shanno algorithm
BIS	Bank of International Settlements
CPI-X	consumer price inflation, excluding mortgage rates
E-GARCH	exponential generalized autoregressive conditional heteroscedasticity
EMU	European Monetary Union
FAVAR	factor augmented vector autoregression
FFR	federal funds rate
GARCH	generalized autoregressive conditional heteroscedasticity
GARCH-M	generalized autoregressive conditional heteroscedasticity-in-mean
GDP	gross domestic product
IFS	international financial statistics
IMF	International Monetary Fund
KPSS	Kwiatkowski–Phillips–Schmidt–Shin test
MFD	Mundell–Fleming–Dornbush
MMR	money market interest rate
MPC	marginal propensity to consume
NEER	nominal effective exchange rate
NGP	New Growth Path
OECD	Organisation for Economic Co-operation and Development
OLS	ordinary least squares
PCE	personal consumption expenditure
PP	Phillips–Perron test
RBC	real business cycle
REER	real effective exchange rate
repo	repo rate or repurchase rate
SARB	South African Reserve Bank
SVAR	structural vector autoregression
SVECM	structural vector error correction model
VAR	vector autoregression
VECM	vector error correction model

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Introduction: South African Monetary Policy Regimes

Since 1970, South African monetary policy has consisted mainly of direct controls, which ranged from credit ceilings to cash reserve requirements and interest rate controls. These direct controls were aimed at curbing the growth of monetary aggregates to deal with inflation (Aziakpono and Wilson 2010). Of note is the recommendation of the De Kock commission, formed in 1977: market oriented monetary policies.[1] The policy recommendations included using a discount policy known as an 'accommodation' policy, which was complemented by open market operations, and variable cash reserve requirements.[2]

Between 1960 and 1981, the liquidity asset ratio-based system was used with quantitative restrictions on interest rates and credit. This was followed by a mixed system during the transition period between 1981 and 1985 (Aron and Muellbauer 2001). Subsequently, between 1986 and 1998, a pre-announced M3 monetary target was used with emphasis on using the discount rate to influence the market interest rate. However, from 1998, the South African Reserve Bank (SARB) used daily tenders of liquidity through repurchase transactions while monetary growth guidelines were announced on a three-year basis, including target ranges for core inflation.[3] Targeting money supply was made difficult due to financial liberalization, which began in the 1980s, and the increasing openness of the capital account since 1995 (Aziakpono and Wilson 2010).

The most recent monetary framework, adopted in February 2000, relates to inflation targeting. The inflation targeting framework use a repo system and initially targeted consumer price inflation (CPI), excluding mortgage rates (CPI-X), which was changed to a headline inflation measure as from January 2009. Under inflation targeting, the SARB framework does not have goal independence but does

have operational independence in monetary policy. The South African government sets and adjusts the inflation target. The SARB's operational independence implies it can elect the use of any available monetary policy instrument in its pursuit of targets. The adoption of the inflation targeting framework heralded the beginning of a change in exchange rate policy: the bank stopped intervening in foreign exchange market but continued to buy foreign exchange to supplement the foreign exchange reserve holdings.

1.1 The exchange rate policy

The South African exchange rate was fixed until 1979, with the rand pegged either to the US dollar or the British pound sterling (Aron and Muellbauer 2001). Moreover, policy-makers determined changes in this rate in discrete steps.[4] Also in 1979 came the emergence of greater flexibility in the exchange rate through the dual currency exchange rate system. After this period, the official exchange rate was announced daily as determined by market forces, while the financial exchange rate was applied to non-resident portfolio and direct investment transactions. The dual system intended to break the direct link between domestic and foreign interest rates, while insulating the capital account from certain types of capital flows. The dual rates were unified following the report of the De Kock commission.[5] After problems with the unified rand between 1983 and 1985, during the debt freeze, the financial rand was reintroduced and capital controls on residents were tightened. The dual currency remained in place until March 1995.

As circumstances required, and for a variety of reasons, the SARB intervened in the spot and forward foreign exchange markets. However, from time to time the bank encountered problems (Aron and Muellbauer 2001). The SARB made use of an oversold foreign exchange position , which usage ceased after the bank abandoned its focus on the exchange rate. Since 1979, foreign exchange markets interventions have occurred despite low reserves, which limited the steps the bank could take to intervene. The interventions between 1979 and 1988 were partly to maintain the profitability and stability of the gold mining industry.[6] However, after August 1989, the SARB actively sought to stabilize the real effective exchange rate (REER) to deal with the international competitiveness of the country's exports.[7] Foreign exchange rate intervention decreased, and was successful at stabilizing exchange in the presence of huge capital outflows in 1994.

The inflation targeting framework adopted in February 2000 saw management of the exchange rate become a low priority issue. In addition,