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# MONETARY POLICY IN SUB-SAHARAN AFRICA

AFRICA: POLICIES FOR PROSPERITY



EDITED BY

ANDREW BERG AND RAFAEL PORTILLO

# MONETARY POLICY IN SUB-SAHARAN AFRICA

## **Africa: Policies For Prosperity Series**

*Series Editors*

Christopher S. Adam and Paul Collier

For the first time in more than a generation, sustained economic growth has been achieved across much of Africa—even despite the downturn in global economic fortunes since 2008—and in many countries these gains have been realized through policy reforms driven by the decisive leadership of a new generation of economic policymakers. The process of reform is continuous, however, and the challenge currently facing this new generation is how to harness these favourable gains in macroeconomic stability and turn them into a coherent strategy for sustainable growth and poverty reduction over the coming decades. These challenges are substantial and encompass the broad remit of economic policy. Each volume in this series brings leading scholars into the policy arena to examine, in a rigorous but accessible manner, the key economic challenges and policy options facing policymakers on the continent.

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#### **Monetary Policy in Sub-Saharan Africa**

Edited by Andrew Berg and Rafael Portillo

# Monetary Policy in Sub-Saharan Africa

*Edited by*  
ANDREW BERG AND  
RAFAEL PORTILLO

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*To Katie, Sarah, and Noah*

*A.B.*

*To Filiz and Deniz*

*R.P.*



## *Foreword*

Contemporary perspectives on the role of monetary policy emphasize three core functions: to deliver low and stable inflation; conditional on this, to moderate fluctuations in the path of domestic output by tightening or loosening monetary conditions as circumstances dictate; and to support the smooth functioning of the payments system and the financial system more generally, so as to promote the efficient market-based allocation of credit and pricing of risk.

How these broad objectives are best met is a subject of extensive and active debate, not least as central banks around the world seek to navigate the low interest rate environment that has prevailed since 2008. Nonetheless, a strong consensus has emerged from this debate in favour of systems of ‘constrained discretion’, usually framed in terms of inflation targeting and commonly found in the industrialized economies and amongst an increasing number of middle-income countries. The ‘discretion’ reflects central banks’ operational independence in the deployment of their policy instruments, while the ‘constraint’ is manifest in an explicit, verifiable, and credible target for inflation (and possibly other economic outcomes), typically set by government. A credible inflation target of this form serves to anchor inflation expectations and to tie the authorities’ hands in a way that minimizes their incentives to act in a time-inconsistent manner. With expectations anchored, space is created for the authorities to pursue output stabilization.

The demands of these frameworks set the bar high and in practice only a few emerging market countries currently clear it. This small band includes a mere handful of African countries although, as described in this book, many more are modernizing their monetary frameworks. The economic history behind this move provides the context both for understanding this journey and for framing the analysis presented in the chapters that follow.

The journey starts in the early post-Independence decades when many Sub-Saharan African countries conducted economic policy in ways that placed infeasible demands on their fledgling central banks, burdening them with broad-based ‘development’ mandates that not only over-powered central banks’ limited instruments and operational capacity but also severely compromised their ability to deliver on their core price stability mandate. Being asked to do ‘too much’ resulted in monetary instruments being deployed to target both the exchange rate *and* the money supply; to target interest rates; and to direct credit to preferred sectors. Moreover, as serious macroeconomic imbalances emerged, especially during the 1980s, many central banks were drawn into attempts to sustain this dis-equilibrium with the result that official exchange rates became progressively overvalued and interest rates increasingly repressed. The resulting anti-export bias, excess aggregate demand, and extreme credit-rationing placed enormous pressure on current accounts, which in turn drew the authorities into ever more distortionary capital- and current-account controls on the balance of payments. In the end, monetary policy neither delivered sustained development outcomes nor did it provide a nominal anchor for inflation.



As the need for deep economic adjustment became increasingly clear and broad-based economic reform and liberalization programmes were put in place through the 1990s, the monetary policy pendulum swung sharply to the other extreme, away from broad development mandates and towards tightly constrained frameworks anchored on floating exchange rates and characterized by strict controls on the growth in money aggregates. These frameworks reflected—and were reinforced by—the theory and practice of ‘financial programing’ that underpinned IMF support for stabilization efforts across the continent. Financial programming embodied a diagnosis that located concerns about macroeconomic stabilization in a structural lack of fiscal control, in other words in problems of fiscal dominance. IMF programmes and associated monetary policy frameworks became increasingly rule-based and focused narrowly on the control of the asset side of central bank balance sheets. Quantitative targets on reserve money growth emerged as the intermediate target of monetary policy and these in turn were secured by tightly binding ceilings on net domestic assets (i.e. credit from the central bank to government), ceilings that were often enforced through crude but effective ‘cash budgeting’ fiscal rules. These structures effectively purged all vestiges of discretion from monetary frameworks.

As it turned out, prevailing global economic conditions were favourable to aggressive price stabilization, but nonetheless African central banks, working in concert with fiscal authorities, were remarkably successful in delivering on the core objective of price stability. Inflation tumbled across the continent so that since the early 2000s, median inflation is now firmly anchored in the mid-single-digit range.

But as inflation has been brought under greater control, central banks in Africa have begun to focus their attention on the other elements of their mandate and in particular on how the gains from the hard-won struggle to limit fiscal dominance can be used to allow monetary policy to play a more supportive role in macroeconomic policy making. Attention is therefore turning to questions of how policy instruments should be deployed to manage short-run volatility in domestic economic activity, in exchange rate movements, and in interest rate instruments themselves; of how institutional reforms can support greater transparency of central bank actions and improved communication of economic analysis and forecasting; and of how the channels of transmission of monetary policy can be better understood and modelled to support policy implementation.

The IMF has been a central player throughout this period of transition, initially as the external ‘agency of restraint’ supporting (and some would say driving) technocrats’ attempts to address fiscal dominance through the 1990s and, latterly as the champion of the move to modernize monetary frameworks and to give operational substance to the model of the independent central bank operating under a regime of constrained discretion.

Much of the work in this book draws on the accumulated experience of the IMF as an institution and of some of their counterparts in African central banks. The result is a superb collection of papers that contribute to frontier research in applied monetary economics and combine this analytical rigour with a deep understanding of how the structural realities of African economies necessarily shape and inform this analysis, whether in understanding the role of food price

shocks, or handling aid flows, or conducting monetary policy when domestic asset markets remain thin, or where information and data are scarce.

As Series Editors, we are delighted with the collection which we believe will be an invaluable resource for researchers and scholars but, more importantly, for practitioners and policymakers in central banks in Africa.

Christopher S. Adam and Paul Collier

*November 2017*



## *Series Preface*

### POLICIES FOR PROSPERITY

Since the mid-1990s the economic prospects for Africa have been transformed. The change has been uneven: some countries remain mired in conflict and economic stagnation. But for many macroeconomic stability has been achieved—even through the global economic crisis—and far-reaching policy reforms have been put in place. For these countries, growth prospects in the early 21st century are much brighter than at any time during the final quarter of the last century. But converting favourable prospects into sustained growth and decisive poverty reduction requires a degree of good luck, good policy formulation, resources, and a lot of good economic management. For policy improvements to be sustained they must be underpinned by more fundamental shifts in political power; sectional interests ruling through patronage must be defeated by the public interest. For the shift in power to be decisive, the achievements of individual reformers must be locked in through the development of institutions. The challenges are formidable: they range beyond the conventional agenda of macroeconomic management, infrastructure provision, and the improvement of the investment climate. For example, land policy, which has usually been left dormant, will need to be rethought in the face of high population growth rates and growing urbanization. Trade and industrial policies will need to be rethought so as to engage more effectively with changing global opportunities. The continent will need to develop adaptive policies in the face of rapid climate change.

Many of the successes of recent decades have been wrought by the progressive leadership of a new generation of policymakers. To build on these successes, this same generation needs both the support of, and restraint by, an informed and engaged society. This is the fundamental philosophy of this series: informed societies are strong societies. If citizens are to hold governments to account, they require information, debate and dispassionate analysis on the challenges and choices confronting countries and their people. This is especially relevant in the realm of economic policy where path-dependency is powerful and the consequences of choices are far-reaching and long-lasting.

In many industrialized economies there is a long tradition of informed debate and analysis sustained in large measure by high-quality financial journalism. In Africa, by contrast, while a dynamic and often fearless free press is now quite widely established, it still lacks a tradition of solid, durable, and independent writing on economic policy. As a result local debate is too often ill-informed or is perceived to be driven by the agendas, and cheque-books, of sectional interests and international organizations.

There is now considerable academic research on the issues that matter for Africa and it could potentially inform Africa's debates. But to date it has been disconnected from them. Increasingly, academics write only for other academics rather than to inform the public. With this series of books we seek to build bridges between the evidence from solid research and contemporary policy debates.

Each book aims to bring together the best international and domestic scholars with policymakers working on economic policy issues across the continent. Throughout, our contributors are required to write with clarity, avoiding academic jargon, but equally avoiding advocacy. Focusing on the key issues that matter for a society, each chapter aims to leave readers better able to draw their own conclusions about important choices.

Christopher S. Adam  
Paul Collier  
Series Editors  
Oxford, July 2014

## *Preface*

This book represents our close collaboration over many years on the topic of monetary policy in sub-Saharan Africa (SSA). It began when we were both in the African Department of the IMF in 2006, and continued through many years at the IMF's research department.

The topic was massively understudied. Without a doubt, the major economic questions in SSA involve health and education, infrastructure, financial development, the effectiveness of the state, and more broadly, the promotion of institutions conducive to development. Even within macroeconomics narrowly construed, fiscal policy drives more volatility than monetary policy, causes more crises, and is more closely linked to these broader issues. But while monetary policy deserves only a small fraction of total attention, it receives much less than that. Almost all economists working on low-income countries naturally focus on 'development economics', which has little room for monetary policy. And almost no monetary economists work on low-income countries, where the data are poor, the share in world GDP low, and the investment required to understand the policy issues and regimes is large. Meanwhile, central bankers and academics from the region face capacity challenges.

Our work received a huge boost when we joined forces with the UK's Department of International Development (DFID), which starting in 2012 financed a research project with the IMF on the macroeconomics of low-income countries, with an important component on monetary policy. Like us, DFID was eager to generate research that was actually used by policymakers in low-income countries. We were thus able to combine academic-style research with applications of this research directly in central banks and with IMF country teams. We also participated in the writing of two major IMF policy papers on monetary policy regimes in low-income countries. This book is largely the fruit of all these efforts.

Our background in advanced-country and emerging markets macroeconomics has shaped our overall analytic approach. One upshot of this experience was a growing dissatisfaction with the usefulness of the quantity-based models that in those days formed the basis of IMF 'financial programming', at least for the purpose of analysing monetary policy in a floating exchange rate context. Another was an appreciation, learned from Douglas Laxton, about the merits of small models as the core of an inflation forecasting and policy analysis system in inflation-targeting (IT) central banks.

One implication of this background is that we tend to see monetary policy issues in low-income countries in SSA as differing in degree, but not fundamentally in kind, from those of more developed countries. There is no sharp analytic divide with Peru and Mexico on one side and Uganda and Mozambique on the other. We thus in general have attempted to start with approaches that have been fruitful in emerging markets and then capture the most important differences in low-income countries.

We have worked closely with many colleagues on these topics over the years. We would like to single out Michael Atangi Ego, Deputy Director of the IMF's

African Department and formerly Executive Director of Research at the Bank of Uganda. For over ten years, and to our great intellectual benefit, we have been discussing the questions at the heart of this book with Michael. And we have worked hand in hand with him when collaborating with colleagues in the African Department of the IMF and in African Central Banks.

We would like to thank many colleagues at the IMF and in academia for their advice, cooperation, and friendship in this endeavor, especially: Chris Adam, Rahul Anand, Olivier Blanchard, Mirek Benes, Ed Buffie, Romain Houssa, Yaroslav Hul, Darryl King, Douglas Laxton, Andy Levin, Nils Maehle, Stephen O'Connell, Maxwell Opoku-Afari, Jonathan Ostry, Catherine Pattillo, Adam Remo, Filiz Unsal, David Vavra, and Felipe Zanna. We would also like to thank our colleagues at various central banks in SSA, including Thomas Kigabo, Adam Mugume, Esman Nyamongo, Governor Benno Ndulu, Former Governor Njunga Ndung'u, and Deputy Governor Louis Kasekende. Our work has benefitted from excellent research assistance over the years, including from Enrico Berkes, Will Clark, Pranav Gupta, and more recently Xi Zhang and Jun Ge, and excellent administrative assistance from Biva Joshi and Stephanie Fallas.

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# Monetary Policy in Sub-Saharan Africa

*Andrew Berg and Rafael Portillo*

## 1 INTRODUCTION

Central banks (CBs) in sub-Saharan Africa (SSA) have made great progress over the past two decades in stabilizing inflation, to single digits on average, in the context of greater central bank independence, support from fiscal-based stabilization efforts, and more sustained and stable growth. They have done so by relying on monetary policy arrangements centred, at least *de jure*, on money targets, often with some form of a *de facto* exchange rate peg.

In about half of SSA countries, a hard peg provides a nominal anchor. In those countries that are the main focus of this book, however, the exchange rate is now at least partly flexible. Especially in these countries, policymakers are beginning to ask more of monetary policy than the achievement of some basic degree of stabilization, and existing regimes have lacked clear and effective policy frameworks. This has affected central banks' ability to steer financial conditions, respond appropriately to shocks, and avoid policy misalignments. Fully aware of these limitations, many central banks are therefore in the process of modernizing their monetary policy frameworks.

In this chapter we provide an overview of the issues facing monetary policymakers as they modernize. For the most part, we draw on the rest of the chapters in this book, as well as on recent efforts at the IMF to develop a view on some of these issues—efforts in which we were involved.<sup>1</sup>

Our focus is on SSA countries excluding South Africa. Monetary policy challenges in the latter country warrant a separate treatment; fortunately, in general its challenges are those of many commodity-dependent emerging market economies, about which there is a voluminous literature. For the most part we concentrate on countries with some degree of exchange rate flexibility, though we also briefly discuss the main challenges facing central banks in countries with hard pegs.<sup>2</sup>

This chapter, and indeed the entire book, represents an effort to bridge the economic and political realities of monetary policymaking in SSA with the lessons from the broader monetary policy literature and experience. Part of the foundation

<sup>1</sup> See IMF (2015a). We also draw extensively on Berg et al. (2015) and Adam et al. (forthcoming).

<sup>2</sup> We do not cover the important topic of the role of central banks in promoting financial stability. See Adam et al. (forthcoming).

of this bridge is built in Section 2, which takes a historical perspective, describing the evolution of the macroeconomic environment and monetary policy landscape over the past three decades. Section 3 first proposes a set of benchmark principles for effective monetary policy regimes. It then discusses some critical features of the SSA economic environment that have shaped existing regimes and which any application of these principles to SSA must confront. Section 4 reviews the monetary policy landscape in countries with flexible exchange rates, while Section 5 considers the modernization agenda. Section 6 briefly considers hard pegs, particularly the CFA zone, while Section 7 discusses a strategy for using models to study monetary policy issues in SSA. Section 8 concludes.

## 2 A BRIEF HISTORY OF MONETARY POLICY IN SSA

### 2.1 From Independence to the 1980s: The Breakdown of Overly Ambitious Monetary Policy Regimes

Central banks in Africa began to emerge in their modern form in the 1950s and 60s as the countries regained their independence from European colonial powers.<sup>3</sup> Pre-independence monetary arrangements were tightly managed by a set of currency boards, mainly anchored to sterling, the French franc, and the South African Rand. In the post-colonial era, the Rand Monetary Area and the CFA franc zone structures remained intact, even as their members attained political independence, and both continue to operate today with almost the same institutional structures they inherited at independence.

In the face of growing opposition amongst emergent nationalist movements, the currency board arrangements with the British Pound were dismantled and gave way to a set of independent central bank institutions. Established at a time where the dominant intellectual climate in economics favoured strong and centralized development planning, the role of these fledgling central banks institutions was very different from today. Along with other visible manifestations of the state, such as a national army, an airline, and a seat at the UN, a national currency and a national central bank, independent from colonial legacy, were seen as a subsidiary tool of national development.

Their distinctive character began to emerge particularly after the collapse of the Bretton Woods system of fixed exchange rates in the early 1970s. Central banks found themselves administering heavily managed exchanged rates, often in situations of severe rationing, so that parallel markets in foreign exchange were widespread; setting administered interest rates, typically far below market-clearing values; directing the allocation of domestic credit between sectors, in many cases through a state-dominated and highly oligopolistic banking system whose operations were often limited to mobilizing private savings for on-lending to government

<sup>3</sup> This section draws heavily on Berg et al. (2015) and Adam et al. (forthcoming), which contain more comprehensive references.

and SOEs at highly repressed rates; and—crucially—providing direct monetary financing of the budget deficit.

By the early 1980s it was clear that many central banks were being asked to do too much and were failing to deliver on most if not all of these multiple objectives, including the core monetary objective of providing an effective nominal anchor for prices. Many countries across Africa faced difficult external circumstances, including low prices for primary export commodities and external and domestic conflict. However, the highly distorted macroeconomic and monetary policy regimes also exerted a serious drag on economic growth and welfare. High and variable inflation became pervasive. Perhaps even more destructive to the broader economy were the flourishing parallel foreign exchange markets that badly distorted incentives for investment and encouraged widespread rent-seeking across the continent.

Central to this failure was the pressure on central banks to finance fiscal deficits from their own balance sheets. With under-developed domestic asset markets and tight controls on capital flows, and widespread financial repression, the demand for money was relatively inelastic. This presented governments with the scope to mobilize substantial seigniorage revenues, an attractive option where traditional tax revenue mobilization capacities were limited. But as controls weakened, and the velocity of circulation rose, inflation began to rise sharply and fiscal balances worsened.

## **2.2 1990s: Fiscal-Based Stabilization Efforts**

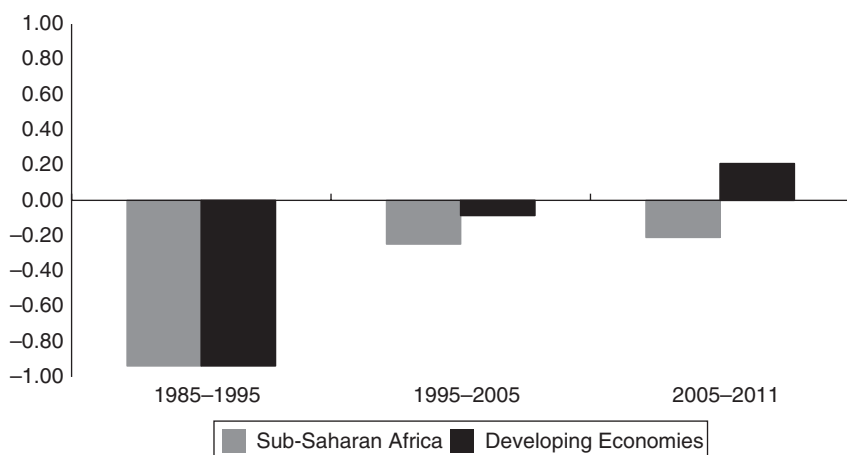
From the mid-1980s to the late 1990s countries began reform programmes, often with exchange rate unifications and movement toward more market-determined, flexible exchange rates, and dismantling of exchange and trade controls (Figure 1.1). As in other developing regions, the number of countries with *de facto* managed or floating exchange rates in SSA increased by about 50 per cent between 1980 and 1990 (Figure 1.2).<sup>4</sup>

The initial conditions of these programmes (heavily managed or even *de facto* pegged exchange rates, pervasive capital controls, and fiscally driven monetary policy) explain the appeal of a monetary policy framework anchored on the control of money-financing of the fiscal deficit. The logic of the ‘monetary approach to the balance of payments’ applies.<sup>5</sup> Typical IMF-Reserve money programming in Africa combined a diagnosis of the stabilization problem that located the fundamental macroeconomic weakness in a lack of fiscal control within an operational framework that targeted domestic credit from the central bank to government. Embedded within broader reform programs aimed at the liberalization of domestic prices, interest rates, and the exchange rate, and supported by substantial donor assistance and official debt relief, reserve money programmes of this kind played

<sup>4</sup> Developing countries include countries classified as emerging markets and developing countries according to the IMF world economy outlook (WEO).

<sup>5</sup> See, for example, IMF (1977).

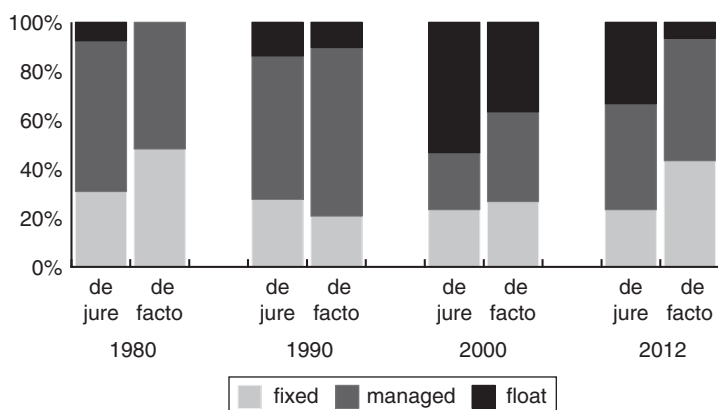




**Figure 1.1.** Capital Account Openness (Chinn-Ito) Index<sup>a</sup> (Period Averages)

<sup>a</sup> Excluding countries fixed exchange rate regimes. A higher number indicates a more open capital account.

Source: [http://web.pdx.edu/~ito/Chinn-Ito\\_website.htm](http://web.pdx.edu/~ito/Chinn-Ito_website.htm)



**Figure 1.2.** Exchange Rate Classification (Sub-Saharan Africa<sup>a</sup>)

<sup>a</sup> excludes CFA Zone countries

Source: AREAER Database, IMF.

a major role throughout the 1990s and early 2000s in restoring macroeconomic stability across the continent.

Other key elements of the two-decade transition were sharp reductions in central bank financing of government and financial liberalizations that eliminated interest-rate controls and introduced competition into the banking sector. With the assistance of IMF-supported programmes, substantial debt relief, and a favourable external environment, domestic credit to government declined from an average of 13 per cent in 1985-95 to 8 per cent in 1995-2005, and has remained

broadly at that level to date. The re-establishment of fiscal control provided support for money-based disinflation programs to bring down inflation to single digits (or near single) in the context of higher economic growth and higher international reserves by the late 1990s, in line with the experience in other developing countries (Table 1.1).

Liberalization of direct controls over the commercial banking system helped alleviate the prolonged financial repression (Adam and O'Connell, 2005).<sup>6</sup> Real interest rates turned positive in 1995–2005, averaging 5 per cent as compared with about -11 per cent in the previous decade. Interest rate spreads, around 11 per cent, have remained high but are comparable to other developing countries (Table 1.2). Bank deposits and private credit as a share of GDP steadily increased during the last three decades (Table 1.2). These developments also coincide with greater use of open market operations by central banks in the region, all of which have increased the role of market signals and the importance of managing expectations in the implementation of monetary policy.

By the early 2000s, then, countries such as Ghana, Nigeria, Uganda, Kenya, Zambia, and Tanzania were beginning to enjoy sustained growth with low and stable inflation.<sup>7</sup> Macroeconomic stability was increasingly accompanied by the deepening and development of domestic asset markets and, in some cases, by moves to liberalize the capital account in order to encourage greater private capital inflows, including into sovereign debt.

### 3 CHALLENGES FOR MONETARY POLICY IN SSA

The story so far is one of success. However, it is incomplete. The reduced role for the exchange rate as nominal anchor and increasingly developed financial markets revealed weaknesses with existing policy frameworks. In particular, the money targeting regimes did not provide effective frameworks for formulating and implementing policy. At the same time, ambitions grew for monetary policy to not just contribute less volatility but to play a greater countercyclical role. More generally, effective monetary policy, including smoother functioning of interbank markets and the provision of clearer interest rate signals, became part of the broader financial development agenda.

Before assessing the current state of affairs, it is useful—and more transparent—to present a benchmark for effective policy regimes. In the decades prior to the global financial crisis there was a revolution in the practice and thinking of monetary policy, which started in small advanced economies and then spread to other countries. The IMF (2015a) recently summarized these lessons into seven principles. First, central banks should have a clear mandate, set in the law, and the operational independence to pursue it. Second, price stability should be the

<sup>6</sup> For countries in SSA with available data (and excluding pegs), the financial reform index reported by Giuliano et al. (2010) more than doubled on average in the decade between 1985–90 and 1995–2000 (the countries are Ghana, Kenya, Madagascar, Mozambique, Nigeria, South Africa, Tanzania, and Uganda).

<sup>7</sup> See for example Kessy et al. (2016).

**Table 1.1.** Inflation in SSA: 1985–95, 1995–2005, 2005–12

	1985–95			1995–2005			2005–12		
	Inflation	Growth	International Reserves	Inflation	Growth	International Reserves	Inflation	Growth	International Reserves
Mean	28.7	2.5	6.8	14.9	4.4	9.0	10.1	5.8	14.0
Median	16.5	3.5	4.6	13.3	4.2	8.8	9.2	5.5	12.7
Standard Deviation	18.8	4.5	3.0	10.6	4.3	3.1	5.1	2.6	2.8
Mean (Developing countries)	27.9	1.3	7.3	17.1	4.4	12.4	8.0	5.5	15.8

*Note:* Excluding countries with exchange rate pegs according to 2013 AREAER.

*Source:* World Economic Outlook Database. Annual data (y/y growth) is used to calculate inflation and GDP growth. International Reserves are in percentage of GDP.

**Table 1.2.** Bank-Deposits, Private Credit, and Spreads: SSA (Mean, in per cent)

	1985–95	1995–2005	2005–10	
	SSA	SSA	SSA	Developing Economies
Bank deposits to GDP	16.8	23.2	29.3	37.5
Private credit to GDP	11.7	14.8	20.5	28.9
Interest rate spreads	11.8	14.0	11.3	9.9

*Note:* Excluding countries with exchange rate pegs.

*Source:* International Monetary Fund.

primary objective of monetary policy, at least over the medium term. Third, central banks should have a numerical medium-term inflation objective to operationalize the price stability mandate and guide policy actions. Fourth, central banks should nonetheless take into account the implications for output and financial stability when making policy decisions. Fifth, central banks should have an effective operational framework, generally centred on the control of short-term interest rates. Sixth, delivering on price stability requires a forward-looking strategy that maps objectives into policy decisions. And finally, a central element of the monetary policy framework is clear communications, to help explain policy decisions and outcomes and provide guidance about the future.<sup>8</sup>

Two questions immediately arise when thinking about the application of these principles to monetary policy in SSA. First, have they been made obsolete by the lessons from the global financial crisis? And second, can they really be imported effectively to SSA countries with such different economies and monetary policy challenges from the countries where they were developed over the past twenty or so years?

The global financial crisis has, if anything, strengthened the value of these principles along certain important dimensions. For example, inflation-targeting (IT) emerging market countries performed better during the financial crisis than non-IT countries, including in responding more quickly to the global downturn and avoiding deflationary inflation expectations.<sup>9</sup> The prospect of deflation in advanced economies has underscored the importance of medium-term numerical inflation targets to help anchor expectations. In addition, the crisis served to reinforce the importance of central bank communications, in particular the use of forward guidance as a monetary policy tool.

The crisis did, however, starkly underscore the limitations of price stability as the sole focus of central bank actions, and the importance of financial stability. Much of the broader post-crisis policy discussion has focused on how to incorporate tools for macro-prudential and how to integrate them with traditional monetary policy tools in service of financial stability.<sup>10</sup> The implications of this debate, especially for Africa and low-income countries more generally, have yet to be fully fleshed out.<sup>11</sup> However, we see the new focus on financial stability and macro-prudential tools as important refinements to pre-crisis arrangements, rather than a complete overhaul. Modernizing policy frameworks along the lines described earlier should remain the priority for SSA central banks, even as they pay greater attention to financial stability issues.

One notable change relative to the pre-crisis consensus has been greater experimentation with new instruments in advanced economies, mainly quantitative easing. We see little scope for the use of these tools in SSA CBs, given the

<sup>8</sup> Inflation targeting clearly embodies these principles, as it was the historical development of this regime that helped clarify these desirable properties of monetary policy. In policy debates in Africa, however, as elsewhere, the term ‘inflation targeting’ has at times been a source of controversy. Some have interpreted it as implying a strict and exclusive concern with inflation, deeming it inappropriate for low-income countries. Others feel that central banks can only adopt ‘inflation targeting’ after a long sequence of reforms. The focus on principles is an attempt to move the debate forward.

<sup>9</sup> See De Carvalho Filho (2011).

<sup>10</sup> See IMF (2013) and IMF (2015b), among many others.

<sup>11</sup> See IMF (2014) and Adam et al. (forthcoming).

lower likelihood of monetary policy being constrained by the zero lower bound on interest rates. This does not imply that SSA CBs limit themselves to a single instrument. CBs in the region, and other developing countries, do (and will continue to) rely on a variety of instruments. These include reserve requirements and sterilized foreign exchange interventions, which should be thought of as a separate tool from short-term interest rates, and used for different purposes. We discuss this issue in more detail in Sections 4 and 5.<sup>12</sup>

The question of the applicability of these principles to SSA economies is a more central one for our purposes. Serious thinking about monetary policy in SSA implies a reasonably accurate view of how these economies work, and in particular about the effects of monetary policy. The range of uncertainties among economists and policymakers is huge. Does monetary policy even matter for output or inflation, for example? Underlying these questions are even deeper ones about whether standard macroeconomics really applies to economies with such different economic structures.

This standard macroeconomics was developed first on the basis of decades or even centuries of experience of fairly stable institutions and consistent data series, and thousands of research papers, in countries such as the United States and the United Kingdom, and then more recently a still relatively large volume of research and experience in emerging markets. And even in these countries, a strong consensus is hard to achieve. Every major recession in advanced countries is accompanied by a torrent of discussion within the economics profession about how the basic models of economics are broken, and about the most basic facts of monetary policy. See, for example, the vigorous recent debate between prominent US economists about whether higher interest rates will raise or lower inflation, or whether inflation responds to output gaps any more, if it ever did.<sup>13</sup>

Low-income economies are certainly different. In a typical SSA country, the bulk of the population works in smallholder agriculture, the formal sector amounts to perhaps 10 per cent of GDP, and there is little in the way of manufacturing exports. So the research agenda is huge and the literature sparse. Subsequent chapters in this book look at some of these key differences and their empirical implications, and adapt modelling frameworks that have been successful in emerging markets to capture the key features of low-income countries and analyse their implications for monetary policy. Here we summarize some of the key points.

### **3.1 The Monetary Transmission Mechanism**

Perhaps the most critical question is about the transmission mechanism of monetary policy. An extremely weak or unreliable transmission of monetary policy to the economy might limit the scope for monetary policy to serve as a

<sup>12</sup> On the topic of reserve requirements, see the discussion in Federico et al. (2014).

<sup>13</sup> On the argument that higher interest rates can help raise inflation expectations when the economy is at the zero lower bound, see Schmitt-Grohe and Uribe (2010). On the slope of the Phillips curve, see Blanchard, Cerutti and Summers (2015) and references therein.

key policy tool for macroeconomic stabilization.<sup>14</sup> Or, perhaps transmission is much stronger from the exchange rate or monetary aggregates to inflation and output than is the case for interest rates, which might have implications for the design of a monetary policy framework.

There are many reasons to think that the transmission mechanism in low-income countries may be different and, in particular, relatively weak. The overall magnitude of the effects on aggregate demand and inflation from monetary policy decisions is likely to depend on the extent of financial deepening. African countries have shallow financial markets, so that changes in financial conditions brought about by monetary policy may directly affect a smaller share of the population. Furthermore, the nature of the policy itself decisively shapes the nature of transmission, and the opacity of existing frameworks may be undermining the effectiveness of policy. Where exchange rates are heavily managed or the capital account closed, transmission through exchange rates is also likely to be attenuated.

Some policymakers and researchers conclude from this assessment that the transmission mechanism is weak or even non-existent. Mishra and Montiel (2013) argue that the impulse responses to monetary policy shocks derived from structural VARs, the tool of choice for identifying the effects of monetary policy shocks, are typically weak and statistically insignificant in low-income countries.

In our view, this evidence may result from difficulties in applying standard empirical approaches to LICs rather than a lack of underlying transmission. Chapter 6 shows that typical features of LIC data, including short sample lengths, measurement error, and frequent policy regime changes can greatly reduce the power of VARs to uncover the monetary transmission mechanism.

In addition, the policy regime itself strongly shapes transmission, rather than or in addition to deeper structural factors. Monetary policy relies on a clear understanding by financial market participants of central bank actions, both current and likely future (the expectations channel). Such a clear understanding is likely not to emerge under existing arrangements in SSA: the combination of money target misses, noisy short-term interest rates, and incipient communications make it difficult to assess policymakers' intentions (more on this in Section 4). Under these conditions, the analysis in Chapter 9 reveals that monetary policy decisions have a smaller impact on longer-term rates, inflation, and output, compared to interest-rate-based frameworks, even when policy intentions are the same, and even when the underlying economic structure is supportive of monetary policy effectiveness. The corollary is that we should expect a strengthening in the monetary transmission as the policy framework becomes clearer.

Arguably, the strongest evidence that monetary policy 'works' in developed countries comes not from VARs but from the history of the Volker disinflation and the Great Depression. Armed with the experience of these episodes, decades of careful research have gone into producing empirical work that yields the 'right' signs. Even in the US, with its uniquely long, stable data series and policy regimes, economists experimented for many years before arriving at acceptable results, e.g. solving the 'price puzzle', that inflation seemed to rise after a monetary policy shock, and the 'liquidity puzzle', that interest rates tended to rise in response to an

<sup>14</sup> See Mishra, Montiel and Spilimbergo (2012), for example.

increase in the money supply.<sup>15</sup> Inspired by this perspective, Chapter 5 looks at the effects of a dramatic tightening in monetary policy in the East African Community in 2011. It finds a well-functioning transmission mechanism, especially in those countries where the stance of monetary policy was communicated clearly, consistent with the previous argument. It also finds that the depth of financial markets is a less clear indicator of the strength of transmission than the clarity of the regime.

It may still be that transmission in LIC is generally weaker and more uncertain than in other countries. This in turn can suggest caution in trying to fine-tune monetary policy. However, this point can easily be overemphasized. First, deep uncertainty about the transmission mechanism is not unique to low-income countries but rather is a general characteristic, perhaps especially of countries implementing new policy frameworks, often in the face of rapid structural change or financial crises. And second, this does not in general justify inaction. Indeed, weak transmission may explain the much larger policy movements that are often observed in SSA countries.

Stepping back, the idea that policy action requires a precise and reliable quantitative understanding of transmission represents an excessively idealized view of the monetary policymaking process. There is a critical element of ‘*tâtonnement*’ for all countries, including low-income countries: assess the state of the economy and the outlook; adjust policy if it seems too tight or too loose; and repeat. For this process only some confidence about the sign of the effect of monetary is critical. And finally, even a weak transmission mechanism leaves monetary policy to play the role of nominal anchor, and doing so in a way that responds effectively to shocks and avoids generating its own argues for the application of the principles discussed above.

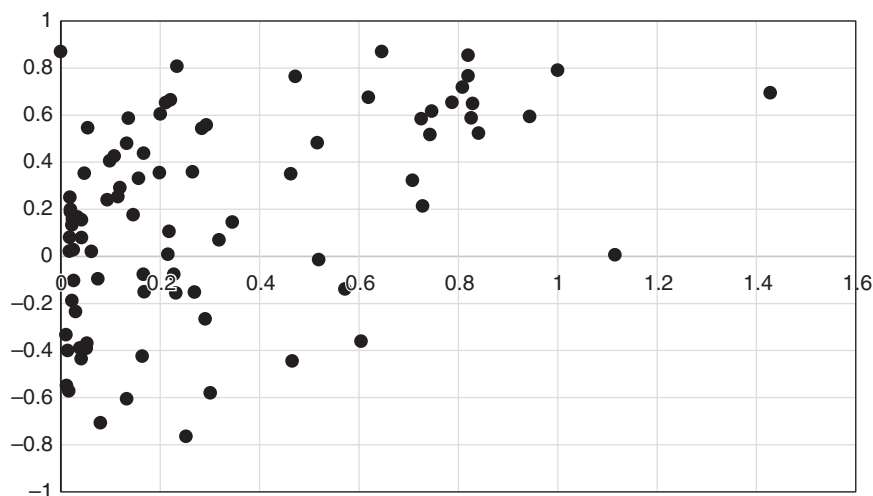
### 3.2 Supply Shocks and Macroeconomic Volatility

The economies of low-income countries are dominated by supply shocks (Chapters 4 and 11). Indeed, it is difficult to identify a Phillips curve-type relationship in the data because of the dominance of supply shocks, which tend to generate a negative correlation between the output gap and inflation in these countries, see Figure 1.3. These supply shocks critically shape the role of monetary policy.

The so-called ‘divine coincidence’ of monetary policy is that, in the face of shocks to aggregate demand, the stabilization of inflation also serves to stabilize output.<sup>16</sup> Supply shocks, in contrast, push inflation up at the same time as they reduce output, presenting a trade-off between output and inflation stabilization. Fortunately, the principles articulated above can help manage this trade-off. Indeed, the difficulties of managing this trade-off, notably in small open commodity-dependent countries such as New Zealand and Canada, were some of the main driving forces behind the evolution in monetary policymaking that is

<sup>15</sup> On these points see Summers (1991), Sims (1992) and Leeper and Gordon (1992).

<sup>16</sup> See Blanchard and Gali (2007).



**Figure 1.3.** Correlation (at Business Cycle Frequency) between Inflation and the Output Gap, Against Income per Capita<sup>a</sup>

<sup>a</sup> Income per capita (2012) is normalized by income per capital for the US

Source: IMF, World Bank Development Indicators, Haver, OECD.

captured in the principles, most notably the emphasis on price stability over the medium-term.<sup>17</sup>

Many of these supply shocks call for adjustments to the real exchange rate. Developing countries with more flexible exchange rate regimes, including in Africa, tend to do a better job of shielding their economies from the effects of these shocks, thanks to the shock-absorbing role of the exchange rate.<sup>18</sup> The challenge under floating regimes is to prevent the fluctuations in nominal exchange rates from spilling over into inflation, especially when a large nominal depreciation is required. In this regard, floats in SSA have a mixed record, with higher average inflation relative to pegs. Of course, a floating regime is not in itself a monetary policy regime, and so countries wishing to reap the benefits of greater exchange rate flexibility must develop well-formulated monetary policy frameworks to keep inflation anchored.

Shocks to international food and fuel prices pose an additional set of challenges. In the African context, food makes up a large share of the consumer basket, so that the direct impact of food price shock is larger. In addition, SSA countries are net food importers on average, and many are net oil importers, so that the inflationary impact from higher international prices could be compounded by the real and nominal depreciation required for external adjustment.<sup>19</sup> These shocks have

<sup>17</sup> This point is argued forcefully in Bernanke et al. (1998).

<sup>18</sup> See Broda (2004) and Edwards and Levi-Yeyati (2005) for evidence on the effect of terms of trade shocks in developing countries across exchange rate regimes, and Hoffmaister et al. (1998) and Ahmad and Pentecost (2010) for similar analyses for sub-Saharan African countries.

<sup>19</sup> See Adam (2011).



therefore been a source of inflationary pressures, especially during 2007–08 and 2010–11. One complication, however, is that the direct effect of these shocks often masks underlying monetary policy misalignments, which then amplifies the overall inflationary effect. This was the case in Kenya during 2011 (Chapter 15).

Domestic supply shocks are an even larger source of inflation volatility. This is because the agricultural sector is heavily exposed to weather-related shocks. One implication is that inflation is inevitably more volatile in low-income countries—SSA countries included—with the larger volatility reflecting supply-side changes to relative food prices (see Chapter 11). Much of this volatility is unlikely to disappear even as countries modernize their policy frameworks.

Capital flows are an additional source of external shocks. SSA countries are less integrated with global capital markets, which, all else being equal, suggests less exposure to shocks stemming from the capital account.<sup>20</sup> However, the experience of Zambia during the global financial crisis, which is discussed in Chapter 17, shows SSA countries are not immune to capital flow reversals, and that the latter can have a large impact on domestic financial systems and the economy. In addition, SSA countries are becoming more integrated, as can be attested in the growing number of countries that have tapped international bond markets, many for the first time, in recent years.<sup>21</sup> Greater exposure to these shocks is thus to be expected in the future.

### **3.3 Fiscal Policy as a Source of Volatility and Pressures on Monetary Policy**

Fiscal dominance—where the need to finance the government deficit through money printing determines the rate of inflation—remains a fundamental challenge to monetary policy in only a few countries in SSA, after the progress described in Section 2 above. In a much larger group of countries, however, fiscal policy can greatly complicate the conduct of monetary policy. Central banks in Africa must contend with highly volatile and pro-cyclical fiscal policy. Sometimes the source of fiscal volatility is a high dependence on revenues from the commodity sector, and the lack of binding fiscal rules to ensure inter-temporal smoothing. In other cases fiscal pro-cyclicality stems from the political cycle. Certain features of African economies, for example the large share of the population that lives on their current income, amplify the effect of these shocks on aggregate demand.<sup>22</sup>

Even if fiscal dominance is a (not-so-) distant memory, the volatility and pro-cyclicality of fiscal policy creates other forms of fiscal pressures on monetary policy. One stems from the cost of monetary operations.<sup>23</sup> This is a source of contention with the government, particularly in cases where the financial system is in a situation of structural liquidity surplus, for example due to sizeable interventions

<sup>20</sup> Measures of de facto financial openness, for example based on the sum of international assets and liabilities in per cent of GDP, also show SSA countries lagging. See Lane and Milesi Ferretti (2007).

<sup>21</sup> See IMF (2013b).

<sup>22</sup> See Chapter 12.

<sup>23</sup> Chapter 2 provides a discussion of these issues in the case of Uganda.

in FX markets, and a legacy of past quasi-fiscal operations have left the central bank with low or negative net worth. In this case sterilization operations, which are necessary to maintain an appropriate policy stance, can sharply reduce central bank profits (seigniorage). In principle, this can be resolved simply by recapitalizing the central bank, for example through the transfer of government bonds. But concerns that the Treasury will use the opportunity to look into the CB's operating expenses, or the mistaken belief that the central bank should not make losses, can often result in a monetary policy stance that is more accommodative than optimal.

Another type of pressure occurs when the central bank does not tighten policy as aggressively as it would like to, out of concern for the effect of that policy on fiscal solvency. Pressures of this type are likely to materialize in regimes, such as IT, in which the central bank takes direct responsibility for short-term interest rates. Avoiding this type of pressure may be one possible reason why many central banks in SSA have yet to formally adopt interest-rate-based frameworks, and why those that do often implement changes to the policy stance without changing the (highly visible) official policy rate.

### 3.4 Management of External Revenues and the Coordination of Fiscal Policy and Central Bank Operations

Central banks in SSA play an important role in managing external government revenues, such as aid and commodity windfalls. As the government's banker, the central bank helps manage the associated foreign exchange, and in its monetary policy-making function it manages the domestic money creation that results from these foreign exchange transactions. In principle, there is a benchmark of separation: foreign exchange from aid or commodity windfalls is sold into the market or to a fiscal entity (such as a sovereign wealth fund), while monetary policy is set through a policy interest rate, and any domestic money supply implications of the foreign exchange transactions are automatically sterilized. In practice, however, the central bank management of foreign exchange frequently becomes entangled with monetary policy.

To take one important example, Berg et al. (2007) document how, during aid surge episodes in several African countries with managed floats (Ghana, Mozambique, Tanzania, Uganda), concerns about real appreciation resulted in large accumulations of reserves. This policy response may have helped contain the appreciation pressures. But it also resulted in a peculiar situation in which the authorities tried to use the aid twice: once to increase government spending with the domestic currency counterpart to the aid inflows, and once to increase the stock of reserves with the dollars. The private sector was crowded out as a result, mainly through higher interest rates (when the accumulation was sterilized) and in some cases also through the inflation tax (when otherwise).<sup>24</sup>

The underlying general point is that central bank active management of foreign exchange reserves is a sort of quasi-fiscal policy that is closely related to other

<sup>24</sup> See Chapter 12, Adam et al. (2009), and Buffie et al. (2008, 2010) on the pros and cons of various policy responses in this context.

aspects of fiscal policy. This raises the issue of whether greater coordination of reserve policy with fiscal policy could help improve macroeconomic outcomes. It is difficult to see how this coordination can take place without affecting central bank independence, however. We return to the closely related issue of exchange rate management in Sections 4 and 5.

#### 4 THE CURRENT MONETARY POLICY LANDSCAPE IN COUNTRIES WITH SOME EXCHANGE RATE FLEXIBILITY

Many policy changes have been institutionalized in SSA through reforms cementing central bank independence and the adoption of new central bank charters. The majority of the central banks in the region have *de jure* (legislated) independence,<sup>25</sup> and their *de facto* independence has been on average (0.26) very close to the developing countries' average (0.25), using the measure in Lucotte (2009).<sup>26</sup> Moreover, 70 per cent of SSA countries had accepted Article VIII of the IMF's Articles of Agreement by the late 1990s (more than 90 per cent as of 2012), committing to refrain from imposing restrictions on payments and transfers for current account transactions and to refrain from discriminatory currency arrangements or multiple currency practices.

The *de jure* policy regime in place in most countries is best characterized as a hybrid regime (IMF, 2008, 2015a). An overview of the objectives and targets of monetary policy in the region reveals a set of managed floaters with a variety of conventional-looking objectives (price and exchange rate stability), but with money aggregates still present as both operational and intermediate targets (Table 1.3).

With this brief overview, we now dig somewhat deeper to look at salient issues with the current state of monetary policy regimes in SSA, using the above principles as an organizing device.

##### 4.1 Legal Frameworks and Operational Independence

The stabilization efforts post-1980s were supported by the adoption of new legal charters in many central banks in SSA. Assessments of central bank independence, however, show many SSA countries lagging behind richer countries. Ghana provides a case in point. A new Act adopted in 2002 established price stability as the central bank's primary objective, granted operational independence, and created a monetary policy committee. The Act did not, however, prohibit the CB from lending to the government, nor did it provide MPC members with sufficient tenure protection.

<sup>25</sup> Central Bank Legislation Database, International Monetary Fund, 2012.

<sup>26</sup> Indices of central bank independence combine assessments of tenure protection of central bank's senior management, operational independence, clearly legally defined objectives for monetary policy, and limits to central bank lending to the government. The construction of the indices is based on the methodology outlined in Cukierman (1992) for *de facto* independence and Cukierman et al. (1992) for *de jure* independence.

**Table 1.3.** De Jure Monetary Policy Frameworks in Sub-Saharan Africa

Regimes	Policy Objectives	Intermediate	Operational Target	Main Instruments
Pegs (23)	Stability of the exchange rate regime (23) Price stability (23) Economic growth (12)	Private sector credit (1)	Exchange rate (23)	Open market operations Foreign exchange sales
Money targeting (18)	Price stability (all countries) External competitiveness (5) Exchange rate smoothing (12) Economic growth (9)	Monetary aggregates (16)	Reserve money (18)	Open market operations (17) Foreign exchange sales (18)
Inflation targeting (3)	Price stability (all countries) External competitiveness (1) Exchange rate smoothing (1)		Interest rates (3)	Open market operations (3) Foreign exchange sales (3)

*Source:* Regional Economic Outlook 2008; International Monetary Fund.

These two issues have come into focus during the recent period of high inflation in that country.

Adherence to existing legal frameworks has also been uneven. Though measures of *de facto* independence are more difficult to estimate, there is plenty of anecdotal evidence. In Zimbabwe the adoption of a new charter granting greater independence to the CB preceded the complete loss of monetary autonomy and the rise in inflation—and subsequent hyperinflation—in that country. Even in countries with more stable inflation, deviations from legal limits to direct central bank financing are common, which attests to the pressures that central banks continue to face.

#### **4.2 Price Stability, the Medium-Term Inflation Target, and the Pursuit of Other Objectives**

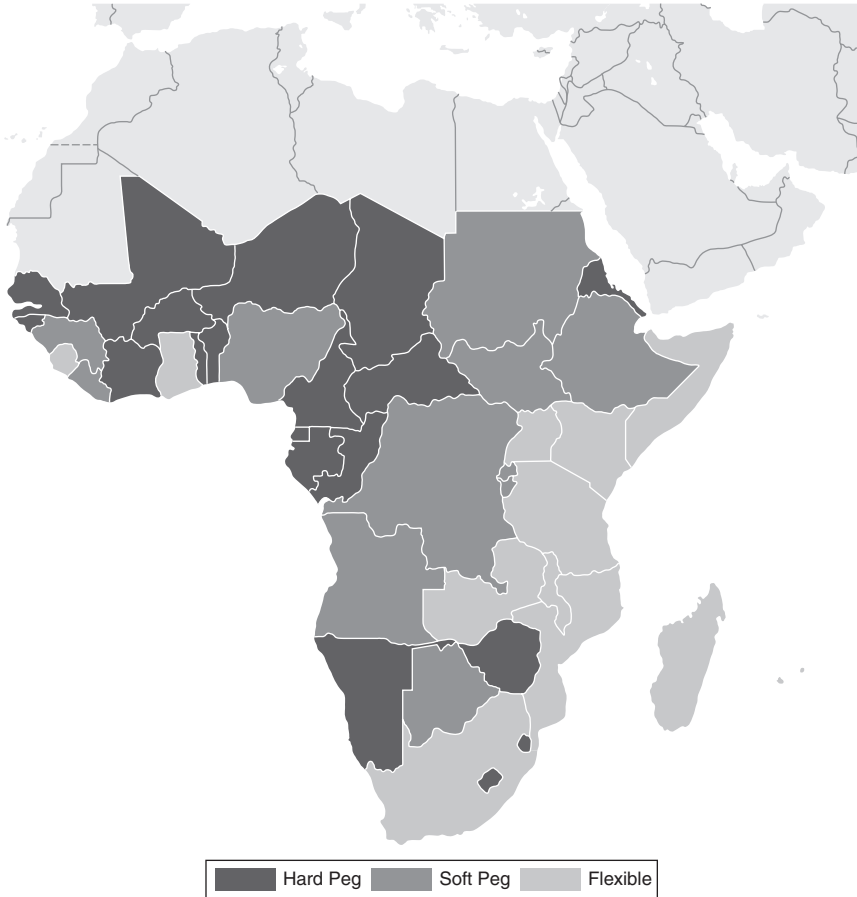
SSA CBs have bought into the idea that price stability is the primary goal of monetary policy, at least *de jure*. In many countries, however, the primacy of price stability remains to be established. Many CBs continue to pursue other objectives, for example supporting growth, financial deepening, or external competitiveness. This multiplicity of objectives and lack of clear hierarchy among them typically results in erratic policies, although to a smaller degree than in the past: the monetary stance is loosened, for example to support financial deepening, only to be tightened later once inflationary pressures appear.

This state of affairs is most visible in the central role that the exchange rate plays in policy frameworks of many SSA countries, including those with *de jure* exchange rate flexibility. Though some attention to the exchange rate is inevitable given its importance for inflation dynamics, in some countries exchange rate stability often takes precedence over price stability (Figure 1.4). The exchange rate serves as the *de facto* anchor, at least temporarily, and operations aimed at influencing the exchange rate end up determining the stance of policy, for example through the use of unsterilized interventions in the FX market. This risks removing the buffering role of the exchange rate and creating exchange rate misalignments, while the disconnect between the *de jure* and the *de facto* frameworks undermines the credibility, transparency, and effectiveness of monetary policy.<sup>27</sup>

There are several related factors that account for the policy confusion. First, with the exception of IT countries, most central banks in the region lack an explicit, medium-term, inflation objective that can discipline policy and operationalize the pursuit of price stability.<sup>28</sup> In its absence, policy is more likely to be driven by political pressures, recent events, or the pressing issue of the day. Second, even if the primacy of price stability is recognized, central banks typically lack a strategy for mapping objectives into policy decisions or for taking other objectives into account in a way that does not undermine price stability. Third, operational

<sup>27</sup> IMF (2016) notes some movement back from *de facto* floats to *de facto* intermediate regimes, particularly in the face of supply shocks in commodity-dependent countries. It also observes relatively problematic macro performance in these countries, on the whole.

<sup>28</sup> To the extent there is an inflation objective, it is more akin to a short-term inflation forecast, which is revised to account for short-term pressures and does not guide policy in a meaningful way.



**Figure 1.4.** De Facto Exchange Rate Classification in SSA

*Note:* Hard peg includes no separate legal tender, currency board, and conventional pegged arrangement; soft peg includes stabilized arrangement, crawling peg, crawl-like arrangement, pegged exchange rate within horizontal bands, and other managed arrangement; flexible includes floating and free floating.

*Sources:* AREAER and IMF staff analysis.

frameworks are not in line with international best practice, which obscures the actual stance of policy and facilitates deviations from policy intentions. We next discuss the last two points in more detail.

### 4.3 Operational Frameworks in SSA CBs

Reserve money targeting (RMT) remains the *de jure* operational framework of choice in SSA, in contrast with the now standard practice of setting operational targets on (and controlling) very short-term interest rates adopted by most

advanced and emerging market central banks.<sup>29</sup> This reflects in part the legacy of IMF-supported programmes, which emphasize targets on central bank balance sheet items as part of their conditionality, and which played an important role in the stabilization of inflation in SSA.

As discussed in Chapter 8, money targeting is implemented very flexibly, with frequent economically significant misses of money targets. These misses mainly seem to represent accommodation of money demand shocks, though some may involve policy shifts. Flexible implementation of money targeting is also evident in the process of adjustment after misses. In ‘textbook’ money targeting, where a constant growth rate of money serves as the ‘nominal anchor’, deviations from targets would be undone in subsequent quarters as the actual stock would be brought back to the predetermined target path. This does not seem to be what happens, however. Rather, the new targets themselves tend to accommodate, at least in part, deviations from previous targets. There is no sign that actual money growth itself moves so as to reduce earlier deviations from target. There is also little sign that inflation responds to these misses, at least in countries with inflation below the low teens.<sup>30</sup>

More recently, many CBs have introduced policy rates to signal the stance of policy, but deviations between policy and actual rates are common, and tensions between money targets and interest rate policy are inevitable. RMT can lead to highly volatile short-term interest rates, as the authorities respond partially and unpredictably to money demand shocks.<sup>31</sup> In addition, tensions between money targets and desired interest rate outcomes frequently lead to complex regulations and interventions in short-term financial markets and a multiplicity of short-term interest rates. All this discourages financial market development (Table 1.4).<sup>32</sup>

In addition, RMT makes the stance of policy noisy and difficult to interpret, both by financial market participants and the central bank itself; this topic is discussed in Chapter 9. Not all money demand shocks are accommodated, so that interest rates are a volatile and imperfect indicator of the current and expected stance of policy. Greater *de facto* flexibility vis-à-vis money targets reduces this volatility but at costs of greater discretion and opacity about the true operational framework. Of course, not all deviations from target represent accommodation of money demand, but it is very hard to tell in any particular situation. The effectiveness of the operational framework is hampered as a result.

An additional layer of complexity is brought about by recurrent interventions in FX markets, which are the main tool for managing the exchange rate in most SSA countries. There is often insufficient coordination between interventions in FX markets and other operations. As a result, interventions influence the stance of policy in unintended and undesired ways.

<sup>29</sup> Targets on reserve money are part of a broader monetary programming exercise in which targets are also set for broad money, which is considered an intermediate target of policy. With a few exceptions, however (e.g., Tanzania), targets on broad money play a smaller role in policy discussions in practice.

<sup>30</sup> Because of this *de facto* flexibility, we see little impact of the introduction of electronic payments systems such as M-Pesa for monetary policy implementation. The much more important implications for financial inclusion and regulation are outside the scope of this book.

<sup>31</sup> Berg et al. (2013) (the working paper version of Chapter 5) describe the implications of strict money targeting for interest rate volatility in Uganda.

<sup>32</sup> See IMF (2015a).

**Table 1.4.** Characteristics of Deviations from Reserve Money Targets for Selected SSA Countries

Country	Share of observations with absolute deviations bigger than 1% (in per cent)	2.5th percentile (in per cent of the target)	87.5th percentile (in per cent of the target)
Kenya	94.9	-6.8	5.7
Tanzania	71.7	-4.9	4.1
Mozambique	94.1	-7.6	5.9
Rwanda	40.0	-1.7	1.1

Source: IMF Staff Calculations.

Given all this flexibility, the difficulty in inferring the stance of policy from the money targets or target misses, and the failure of money targeting itself to provide a nominal anchor, how are we to understand these policy regimes? The answer seems to be that these countries tend to practice an opaque version of 'inflation targeting lite', in which decisions about the setting and achievement of the money targets themselves depend on progress relative to inflation, output, exchange rate, and in many cases other objectives.<sup>33</sup>

One of the effects of the opacity of these regimes, in addition to poor transmission of monetary policy, is that they break the important separation between policy design and policy implementation. In most CBs outside SSA, the former is typically determined by a monetary policy-making committee, following input from the staff of the forecasting, research, or economics teams, whereas the latter is done by the trading desk. Under RMT, it is typically the operations staff who decide whether to hit or miss targets partly for technical reasons, for example not to avoid disrupting money markets. And yet the decision to miss targets has implications for the stance of policy, even if there is no consultation with the monetary policy committee. This creates confusion about the division of labour and governance structure within CBs.

Some of this opacity may be desired by central banks aiming to avoid public responsibility for policy decisions ('We are not setting interest rates so high; it is the markets. We are just following our monetary programme.') In some particular instances this may be a second-best response to political pressures, whereby technocrats can hide behind the obscurity of the regime to conduct policy. However, international experience, and also that of a handful of countries in SSA that have made the most progress with regime reform, such as Uganda (Chapter 2), is that this is very much second best; the effectiveness and independence of policy is best served by adherence to the above principles, even in SSA.

<sup>33</sup> See Stone and Bhundia (2004). Chapter 8 argues that there is little case that monetary aggregates play a special direct role in the transmission of monetary policy. It explores a role for money aggregates in the face of weak real data and uninformative financial markets. Our subsequent thinking, partly captured in Chapter 9 and Chapter 16, as well as in this chapter, is less sanguine about this interpretation and puts more weight on the negative effects of money aggregate targeting on the information content of financial markets. Chapter 14 discusses the influence of our experience working with central banks in this evolution in our thinking.