

# OPTIONS FOR A COMMON MONETARY POLICY FRAMEWORK FOR THE SECOND MONETARY ZONE IN WEST AFRICA<sup>1</sup>

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## 1. Introduction

The need to create a zone of monetary stability in the subregion has long been recognised as a necessary step to boost intra-regional trade, catalyse foreign investment and stimulate economic growth. This crystallised in the adoption of a monetary co-operation programme (MCP) of the Economic Community of West African states by the Heads of State and Government in 1987. The MCP was expected to achieve three principal objectives, namely the improvement and strengthening of intra-regional trade, achievement of regional currency convertibility, and establishment of a single monetary zone. To this end, a transitional period (1987-2000) was earmarked for the completion of the requisite legal, administrative and institutional framework for the realisation of these objectives. However, due to lack of political will and leadership, the policies and measures arrived at towards the creation of a common currency in the subregion suffered several setbacks. The lack of commitment as reflected in the delays in the member countries' implementation of programmes resulted in several extensions of the dates for the implementation of major aspects of the programme. Indeed, the dates for completion have been shifted twice (the current deadline is 2004).

Against this background, at the 22<sup>nd</sup> summit of the Authority of Heads of State and Government of ECOWAS in December 1999, a decision was taken to implement a two-track approach to ECOWAS integration programmes to accelerate the integration process in the subregion. Under this approach, a second monetary zone, comprising non-UEMOA countries, would be established by January 2003. The two zones would then be merged into a single zone at a later date.

Ghana and Nigeria held bilateral talks from December 19 to 20, 1999 to discuss strategies and modalities for actualising the objective. The meeting set up two Technical Committees, one on trade and the other on monetary issues to identify ways of accelerating programmes in each sector. The Technical Committee on Monetary Issues held its first meeting in Accra, Ghana from January 24 to 26, 2000, during which models of monetary integration and country experiences were discussed. In addition, macroeconomic convergence criteria were articulated and agreed on. Thereafter, a programme of action to establish a second monetary zone in the subregion was adopted.

Following consultations with the governments of Gambia, Guinea, Liberia and Sierra Leone on the issue, a mini-summit of the Authority of Heads of States and Governments of the six countries was held in Accra, Ghana on April 20, 2000 at which the **Accra Declaration** on the creation of the second monetary zone was signed. The meeting also established a task force to work on the process leading to the establishment of the West African Monetary Institute (WAMI). At the completion of the work of the Task Force, the Authority of the Heads of State of the countries participating in the second monetary zone, signed the statutes of the West African Monetary Zone (WAMZ) and established the West African Monetary Institute (WAMI) during its meeting at Bamako, Mali, in December 2000. WAMI is the forerunner of the Common Central Bank that is expected to commence operations in 2003. Among its functions, WAMI is expected to prepare the framework for monetary and exchange rate management in the zone as well as operational issues, such as currency management, the payment system and bank supervision.

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<sup>1</sup> Expressed views are those of the author and do not necessarily reflect the official views of WAMI.

This paper evaluates the options available to the Second Monetary Zone in West Africa regarding the conduct of monetary policy. The remaining part of the paper is organised thus: Part II contains a brief overview of monetary policy in the subregion. In Part III theoretical issues are discussed, while Part IV examines the channels of monetary policy transmission. Part V dwells on options for a common monetary policy framework for the second monetary zone in West Africa. The paper is concluded in Part VI.

## **2. Monetary policy in the West African subregion: an overview**

The system of monetary control in most West African countries, as in most other developing countries, until recently involved some of the following elements: direct controls on interest rates (including preferential rates for certain loan categories); aggregate and individual bank credit ceilings; selective credit controls and preferential central bank refinancing facilities to direct credit to priority sectors; and high reserve and liquid asset requirements, designed both to absorb liquidity and to provide government deficit finance.

The direct controls exhibited quite a number of shortcomings. It became ineffective over time and constrained efficient resource allocation. Credit ceilings and direct controls force institutions into portfolio positions that they would not otherwise voluntarily have accepted. Thus banks and their customers had incentives to avoid the direct controls. The implicit tax imposed on commercial banks, and by extension, on their customers, by credit ceilings, interest rate controls, and high reserve and liquid asset ratio requirements, encouraged the emergence of other unregulated financial intermediaries and instruments that competed with the regulated ones. This weakened monetary control by eroding the effectiveness of the direct controls and also distorted the monetary indications.

Monetary control was also weakened when credit ceilings involved a build-up of excess liquidity of regulated institutions, as this discouraged deposit-taking by regulated institutions, and in turn inhibited savings mobilisation or caused disintermediation. Basic economics teaches that it is not possible to control the cost and quantity of credit, but the application of direct monetary controls attempts to hold the two variables simultaneously.

In practice, therefore, the efficiency of credit allocations was adversely affected by direct controls. It is difficult to design procedures that do not penalise the more efficient institutions in support of inefficient ones, as this may lead to higher transaction costs and higher lending spreads. High liquid asset ratios created captive markets for government securities and an inappropriate pricing of credit, including a substantive interest subsidy to government. With the direct control, little or no attention was paid to the development of the money and capital markets, despite the fact that they are central to the efficient allocation of resources.

Over the past two decades, all the countries in the West African subregion have undergone a period of structural adjustment and implemented a battery of economic reform packages aimed at establishing a firm platform for sustainable economic development in the long run. In the financial sector, the adjustments were significantly far-reaching. Typically they included the liberalisation of interest rates and the streamlining of liquidity credit management. Thus most of the countries have moved away from direct monetary control through credit ceilings, to indirect monetary instruments, with open market operation as the principal instrument.

With the adoption of indirect instruments in the monetary policy management in the countries of the WAMZ, the monetary authorities in these countries have sought to achieve the objective of monetary policy primarily through the control of monetary aggregates ( $M_1$  and  $M_2$ ) at the level adjudged consistent with a programmed rate of economic growth. In this framework, monetary aggregates have essentially become the intermediate target, to be influenced in turn by controlling the amount of reserve money  $M_0$ , which is the operational target, through open market operations. Monetary management in these countries has consequently relied basically on the linkages between  $M_0$  and  $M_2$  and between  $M_2$  and the ultimate objective. Table I below presents the general framework of monetary policy in most of the WAMZ countries.

**TABLE I:****GENERAL FRAMEWORK OF MONETARY POLICY**

<b>Instruments</b>	<b>Immediate Target</b>	<b>Intermediate Target</b>	<b>Ultimate Target</b>
1 Open market operations (OMO)	Monetary base ( $M_0$ )	Monetary supply	Growth
2 Reserve requirements	Bank reserves	Bank lending	Inflation & employment
3 Discount facilities (money market)	Interest rates Deposit & lending	Interest rates	Balance of payments
4 Moral suasion	Interest rate	Credit	Growth

Thus far, WAMZ countries have continued to rely to a large extent on open market operations as the primary instrument for conducting monetary policy. However, the changing economic and financial realities have necessitated the use of other instruments to reinforce open market operations in some countries. Indeed, in Gambia for instance, the process of financial sector liberalisation was taken one step further by liberalising the capital accounts in the 1990s. The reform package of the financial system in the 1990s removed the restrictions on the establishment of new private banks and non-bank financial institutions, and permitted foreign banks to operate either solely or in joint ventures with national partners. In order to develop a sound banking system, most countries in the zone introduced a new set of measures that included capital adequacy requirements based on the Basel Standard and other prudential guidelines. In some countries, the reforms have also been carried out on the capital market with the aim of shoring up investors' confidence and creating an atmosphere conducive to economic growth.

In all, the adjustment measures, though not deep enough in some countries, have led to significant improvements in the efficiency of resource allocation. At the same time, the economies in the zone have undergone significant structural changes. Financial deepening and the diversification of financial products through innovation have helped to build a considerably larger role for the financial sector. Furthermore, the rapid changes in the global financial environment in recent years have led to a situation in which foreign capital flows have become a major factor in the economic policy of these countries.

### **3. Theoretical issues**

On the theoretical front, views about the importance and impact of monetary policy have almost gone full circle. However, the new neo-classical synthesis seems to suggest a number of broad conclusions on the role of monetary policy in an economy. The first major conclusion is that monetary policy actions can have an important effect on real economic activity persisting over several years, due to the gradual adjustment of individual prices and the general price level. Secondly, even in settings with costly price adjustment, there is little long-run trade-off between inflation and real activity. Thirdly, there are significant gains from greater efficiency in transactions and reductions in relative price distortions. Finally, credibility plays an important role in understanding the effects of monetary policy. These four ideas are consistent with the central banks' pronouncements in a number of countries. The credibility of monetary policy appears intuitively to require a simple and transparent rule.

There is now a broad conclusion in the theory that the formulation and implementation of monetary policy should be such that it supports output at its potential level in an environment of stable prices. The new paradigm suggests that such a monetary policy involves stabilising the average mark-up of prices over marginal cost. In turn this implies a monetary policy regime of inflation targets, which vary relatively little over time. Although price stability has been long suggested as a primary objec-

tive for monetary policy, a number of major issues have arisen about its desirability in practice. These include commodity price shocks, the long and variable lags between monetary policy and its effect on the level of prices, the potential policy trade-off between price and output variability, and the use of a short-term interest rate as policy instrument.

In what follows, an attempt is made to peruse the theoretical exposition. The practitioners of the neo-classical synthesis saw a need for active aggregate demand management. Given the degree of short-term price level stickiness built into the neo-classical synthesis, monetary policy was recognised to have a potentially powerful effect. Yet, in practice, policy advisers working within the synthesis viewed monetary policy as playing a permissive role in supporting fiscal policy initiatives. Furthermore, economists regarded the effect of market rates on the interest-sensitive components of aggregate demand as less important than direct credit effects (Okun, et al., 1969). They assume that monetary policy worked primarily by affecting the availability of financial intermediary credit with particular importance attached to the effect on spreads between market rates and then regulated deposit rates. Monetary policy in the neo-classical synthesis was regarded as a powerful instrument, but one ill suited to controlling inflation or to undertaking stabilisation policy. While monetary policy could control inflation in theory, the practical view was that inflation was mainly governed by psychological factors and momentum, so that monetary policy could have only a very gradual effect. This school of thought submitted that, since monetary policy created distortions across sectors, fiscal policy was better suited to controlling the business cycle.

By contrast, monetarists saw a dramatically different role for monetary policy. They believed that the monetary authority should avoid major monetary shocks to the macro economy, suggesting a rule in which the quantity of money grew at a constant rate sufficient to accommodate trend productivity (Friedman, 1960). In their submission, sustained inflation has little effect on real activity. Friedman (1969) describes a long-run monetary regime that involved sustained deflation, making the nominal interest rate zero and thereby providing for an optimal quantity of money. On the practical front, there were fundamental differences in the suggested role of monetary policy over the business cycle. While the policy advisers of the neo-classical synthesis sought the maintenance of unchanged interest rates as fiscal policy was varied, monetarists thought interest-rate smoothening contributed to fluctuations in real economic activity by making the money stock vary pro cyclically.

In the latter part of the real business cycles, a number of conclusions emerged that are broadly shared by macroeconomists. First, endogenous variation in money supply arising from the actions of private banks and the monetary authority at least partly explain the business cycle correlation of money and output. Second, while the missions of real business cycle models supplemented with a monetary sector can in principle explain the correlation of money and output, they do less well at explaining the cyclical variation in real and nominal interest rates, suggesting that there is more to the cycle than real productivity shocks that cause sympathetic variations in money. Third, the predicted consequences of cyclical variations in expected inflation are quantitatively small within flexible price models, if money demand is modelled via cash in advance or with an explicit transactions technology (Sims, 1992).

The basic macroeconomic framework of the neo-classical synthesis was the 1S - LM Model. The neo-classical synthesis generated a number of advances in the 1950s and 1960s to make this framework more consistent with individual choice and incorporate the dynamic elements that were so evidently necessary for the econometric modelling of macroeconomic time series. Theoretical work rationalised the demand for money as arising from individual choice at the margin, leading to a macroeconomic explanation of the interest rate and scale variable in the monetary sector. The synthesis stimulated advances in the theory of consumption and investment based on individual choice over time. Econometric work on money demand and investment developed dynamic partial adjustment specifications. One of the earliest extensions of the IS - LM model was done by De Leeuw and Gramlick (1968) in what they called the MPS model. The model initially included the core elements of the IS - LM framework, a financial block, an investment block, and a consumption investor block. The structure of production possibilities and the nature of wage-price dynamics were viewed as important but secondary in the early stage of model development.

Relative to other than existing models, the MPS model suggested larger effects of monetary policy because it incorporated a significant effect of long-term interest rates on investment and its estimated lags in the demand for money suggested much faster adjustment than in earlier models.

In its fully developed form the MPS model incorporated several structural features that are worth stressing. It was designed to have long-run properties like those of the consensus growth model of Solow, including the specification of an aggregate production function implying a constant trend in labour productivity growth. Ando (1974) however, explains that the MPS model has a short-run production function which links output to labour input roughly one for one, as a result of variations in the utilisation of capital.

The basic monetarist framework was the quantity equation. According to the quantity theory, nominal income ( $Y_t$ ) is the result of the stock of money ( $M_t$ ) and its velocity ( $V_t$ ):

$$\text{Log } Y_t = \text{log } M_t + \text{log } V_t$$

Monetarists made the quantity theory operational by taking money as autonomous. However, fully operational monetarist analysis also required assumptions about velocity. In most contexts velocity was assumed constant, in others autonomous. But more sophisticated analysis made velocity a function of a small set of macro variables. Anderson and Jordan (1968) quantity equation in a distributed lag context, attempting to capture the dynamic adjustment of money demand and money supply.

The monetarists focused on money rather than credit or interest rate channels as the main issue. Arising from the work of Irving Fisher, monetarists recognised that nominal interest rates contained a real component and a premium for expected inflation. Like other lags, those in expectation formulation were to be long and variable. As a practical matter, though, monetarists regarded most of the variation in long-term rates as reflecting inflation *prima*, giving long rates a relatively minor role in the transmission of monetary policy to real activity.

The introduction of rational expectation into macroeconomics in the early 1970s modified the economic thinking at the time on the role of monetary policy in the economy. Sargent and Wallace (1975) incorporated Friedman's view that perceived variations in money led simply to changes in prices with only misperceived monetary changes having real effects. In addition to the rational expectations thinking, the strong monetary mechanism advocated by McCallum (1980) led to very specific and controversial positions on the role of monetary policy. One, the Central Bank should avoid creating monetary shocks. Two, a wide class of monetary rules led to the same fluctuations in real activity since real effects of perceived variations in money would be centralised by price level movements. King and Plosser (1984), in the early days of a real business cycles (RBC) research programme, observed that a monetary sector was added to explore the types of business cycle correlations between money and output that could emerge if productivity shocks were the main driving force. The effect of inflation tax was, however, explored in the latter period of the RBC research efforts (see Cooley and Hansen (1989)). Over the decade, broad conclusions have emerged that are basically shared by most macroeconomists. Number one, endogenous variations in money supply arising from the joint actions of private banks and the monetary authority at least partly explain the business cycle correlation of money and output.

Number two, as observed by Sims (1992) while missions of RBC models supplemented with a monetary sector can in principle explain the correlation of money and output, they do less well at explaining the cyclical variation in real and nominal interest rates, indicating that there is more to the cycle than real productivity shocks that cause sympathetic variations in money. Number three, the predicted consequences of cyclical variation in expected inflation are quantitatively small within flexible-price models, if money demand is modelled via cash in advance or with an explicit transactions technology. Brainard and Tobin (1963) attempted to unravel the puzzle of how a small movement in the monetary base (or non-borrowed reserves) translate into large changes in demand deposits, loans, bonds and other securities, thereby affecting aggregate investment and output. Their paradigm emphasised the effect of monetary policy on investor portfolios. Fama (1980) in his study on the relationship between financial intermediation and central banks, focused on an investor's port-

folio problem in which an individual must choose which assets to hold given the level of real wealth. Labelling the portfolio weight on asset  $i$  as  $W_i$ , and total wealth as  $w$ , then the holding of asset  $i$  (the asset demand) is just  $X_i = W_i w$ .

In general, the investor is dividing wealth among real assets (real estate, equity and bonds) and outside money. Each asset has stochastic return  $Z_i$ , with expectation  $\bar{Z}_i$ , and the vector of asset return,  $Z$  has a covariance structure  $T$ . Given a utility function as well as a process for consumption, it is possible to compute the utility maximising portfolio weights. These depend on the mean and variance of the returns  $Z$  and  $T$ , the movements of the consumption process call these  $U_c$  and a vector of taste parameters that is label  $\theta$  and assume to be constants. The utility maximising asset demands can be expressed as:

$$X_i^* = W_i^*(Z, T, U_c, \theta) w$$

It is clear from this presentation that asset demand can change for two reasons:

Changes in either the returns process ( $Z, T$ ) or macroeconomic quantities ( $U_c, w$ ) will affect the  $X_i^*$ .

At the abstract level, financial intermediation exists to carry out two functions. First, these intermediaries execute instructions to change portfolio weights. That is, following a change in one or all of the stochastic processes driving consumption, wealth or returns, the intermediary will adjust investor's portfolios so that they continue to maximise utility. In addition, if an investor wishes to transfer some wealth to another for some reason, the intermediary will effect the transaction. The Fama's framework assumed the existence of a monetary authority like the central bank is the monopoly supplier of a nominally denominated asset that is imperfectly substitutable with all other assets. Fama refers to this as the monetary base. He observed that for monetary policy effectiveness, the central bank must be the only supplier of money; and prices must fail to adjust fully and instantaneously. Otherwise, a change in the nominal quantity of outside money (monetary base) cannot have any impact on the real interest rate and will have no real effects.

The view of financial intermediaries that is implicit in the above description serves to underscore the Brainard and Tobin (1963) insight that monetary policy can be understood by focusing solely on the endogenous response of an investor portfolio. Thus, understanding the transmission mechanism requires a demonetisation of how asset holdings change in response to policy actions.

#### 4. Channels of monetary policy transmission

In all, four channels of transmission of monetary policy have been identified in the literature. The first is through the interest rate, which affects not only the cost of credit but also the cash flows of debtors and creditors. Changes in the interest rate alter the marginal cost of borrowing, leading to changes in investment and saving and consequently in aggregate demand. Changes in average interest rates will also have cash flow effects on borrowers and lenders. The second channel is through credit availability. The third is on domestic asset prices while the fourth is through the exchange rate.

##### 4.1 Interest rate channels

In the conventional model of monetary transmission, a shift in policy leads to a change in the money supply, which for a given money demand, leads to a change in money-market interest rates. Changes in policy and interbank rates lead, in turn, to changes in bank loan rates for borrowers, which may affect investment decisions, and in deposit rates, which may affect the choice between consuming now and later. A principal issue in this channel of transmission is the extent to which a policy-induced change in the interest rate most directly under the central bank's control (usually an overnight interbank rate) affects all short-term rates.

Money market interest rates, and in turn spreads in the entire spectrum of interest rates, in particular the long-term interest rates, are most relevant to investment (including housing) or to purchases of durable goods. The propagation of monetary policy actions along the term structure of interest rates depends upon various factors, including the organisation of financial markets and the state of expectations.

In this model, the present value of durable goods is inversely related to the real interest rate. A lower rate of interest increases the present value of such goods and thus increases demand. In this framework, interest-rate-sensitive spending is affected by changes in the marginal cost of borrowing. Changes in interest rates also lead to changes in average rates on outstanding contracts, and these changes increase over time as old contracts come up for renegotiation. Similarly, marginal adjustments in deposit rates will over time change the average deposit rate. These changes in average interest rates will affect the income and cash flow of borrowers and lenders. Policy-induced movements in average interest rates could thus lead to cash-flow-induced changes in spending that could be as important as the substitution effects associated with changes in marginal interest rates. In particular, the position of the balance sheet determines the relative importance of marginal versus average interest rate effects.

In differentiating between the effects of marginal and average interest rates, the distinction between real and nominal rates is important. The real interest rate affects the marginal cost of borrowing that determines spending and saving decisions. While a rise in nominal interest rates that reflects higher inflation expectations (so that the real rate remains constant) will not change the perceived marginal cost of borrowing, it will alter the cash-flow and balance-sheet positions of borrowers as it changes the average rate of interest. It does this because the portion of interest payments associated with the inflation premium represents a prepayment of the real part of the debt, so that changes in inflation alter the effective maturity of loans. These cash-flow effects could have a large impact on aggregate demand.

#### **4.2 Domestic asset pricing channels**

Policy-induced interest rate changes also affect the level of asset prices – principally those of bonds, equities and real-estate. In the economy where long-term fixed interest bond markets are important, higher short-term interest rates may lead to a decline in bond prices. As such markets develop, this channel of transmission may be strengthened. Another means by which asset price changes triggered by monetary policy actions can affect aggregate demand is described by the so-called  $q$  theory of investment pioneered by James Tobin. With an easier monetary policy stance, equity prices may rise, increasing the market price of firms relative to the replacement cost of their capital. This will lower the effective cost of capital, as newly issued equity can command a higher price relative to the cost of real plants and equipment. Hence, even if bank loan rates react little to the policy easing, monetary policy can still affect the cost of capital and hence investment spending. Policy-induced changes in asset prices may also affect demand by altering the net worth of households and enterprises. Such changes may trigger a revision in income expectations and cause households to adjust consumption. Similarly, policy-induced changes in the value of assets held by firms will alter the amount of resources available to finance investment.

A decline in asset prices may have particularly strong effects on spending when the resultant change in debts-to-asset ratios prevents households and firms from meeting debt repayment obligations; it can have similar effects if it raises fears about the ability to service debts in the future. A substantial fall in stock and bond prices, for instance, may reduce the value of liquid assets available to repay loans. As households and firms thus become more vulnerable to financial distress, they may attempt to rebuild their balance-sheet positions by cutting spending and borrowing.

The effects of monetary policy actions on aggregate demand, working through asset prices and balance sheets, may become amplified as the pace of economic activity begins to respond. For instance, increases in interest rates that depress asset prices and weaken balance sheets may lead to an initial decline in output and income. This initial decline in economic activity, in turn, reduces the cash flow of households and firms, further heightening their vulnerability to financing distress, and leading to a second round of expenditure reduction. In this regard, changes in monetary con-

ditions may lead to prolonged swings in economic activity even if the initial monetary policy action is reversed.

### **4.3 Credit channels**

The credit channel assumption maintains that two channels of monetary transmission arise due to informational asymmetries between borrowers and lenders in financial markets. The bank-lending channel emphasises the special role of bank loans, particularly for “bank-dependent” borrowers (e.g. small firms), while the balance-sheet channel operates through the balance-sheet positions of business firms. The bank-lending channel rests on the idea that small firms, facing informational frictions in financial markets, must rely primarily on bank loans for external finance because it is prohibitively expensive for these borrowers to issue securities in the open market. When bank loans are of special importance for bank-dependent small firms, the effects of a monetary contraction may be amplified through the following two channels beyond those working through the interest rate channel: the direct channel operates through the reduced willingness of banks to lend at the going market interest rates owing to institutional factors such as regulatory action and moral suasion to restrain bank lending directly. This channel is direct because it does not depend on the extent to which market interest rates rise.

The indirect channel becomes operative when the increase in market interest rates following a monetary contraction raises loan rates enough both to cover the increase in lenders’ cost of funds as a result of the higher interest rates and to compensate them for the higher default risk. Banks also tend to tighten other non-price terms of lending, such as collateral requirements and the maturity of loans (Morgan (1992)). When either of these two bank-lending channels operates, the banks are forced to reduce their total lending, and in most cases small firms that rely primarily on banks for credit must curtail their spending on investment.

Kashyap and Stein (1994) argue that banking firms may be subject to the same sort of capital market imperfections as their non-financial counterparts. According to their view, if a bank-lending channel is effective, a monetary contraction should have a disproportionately large impact on the lending behaviour of small banks, which are more likely to experience difficulties offsetting a loss of reserves by expanding non-deposit sources of external finance. Consequently, they wish to cut the loan supply by relatively more than do large banks. The balance-sheet channel of monetary policy transmission arises because rising interest rates, following the adoption of a tight monetary policy, directly increase the interest expenses of those non-financial firms that rely heavily on short-term debt to finance inventories and working capital, reducing their net cash flows and weakening their financial positions. Furthermore, rising interest rates are also associated with falling asset prices, which indirectly erode the value of the firms’ collateral.

These effects lead to a reduction in the firms’ net worth, thereby raising the premium for external finance (the wedge between the cost of funds raised externally and the opportunity cost of internal funds). Small borrowers such as small firms are most likely to face a proportionately larger premium for external finance. One possible reason for this is that small borrowers have smaller collaterals in net worth. Therefore, small firms that have relatively poor access to short-term credit markets respond to the deteriorated balance-sheet positions principally by drawing down inventories and by cutting investment spending more than large firms.

It is worth emphasising that the credit channels provide support for an asymmetric effect of monetary policy: the sharpest differences in financing and investment behaviour between large and small firms arise mainly in tight-money periods and in recessions, thereby serving to amplify the impact of monetary policy on real spending and real activity that could be predicted via the interest rate channel.

### **4.4 Exchange rate effects on channels**

One particularly significant price that monetary policy can affect is the exchange rate. Indeed, in many developing countries – particularly those with only rudimentary markets for bonds, equities and real-estate – the exchange rate is probably the most important asset price affected by mone-



tary policy. When the exchange rate is floating, a tightening of monetary policy increases interest rates, raises the demand for domestic assets, and hence leads to an appreciation of the nominal and – at least initially – the real exchange rate.

This appreciation can feed through to spending in two distinct ways. The first is the relative price effect: it tends to reduce the demand for domestic goods, which become more expensive relative to foreign goods, and thus aggregate demand. Secondly, changes in the exchange rate also may exert significant balance-sheet effects. In many countries, households and firms hold foreign currency debt; either contracted abroad or intermediated through the domestic banking system. Unless such debts are fully offset by foreign currency assets, changes in the exchange rate may significantly affect net worth and debt-to-asset ratios, leading to important adjustments to spending and borrowing. Where domestic residents are net debtors to the rest of the world, as in many emerging-market countries, a large appreciation of the exchange rate may lead to an improved balance-sheet position that may give rise to a marked expansion of domestic demand. Thus this balance-sheet effect tends to offset – and in some cases may even dominate – the relative price effect.

In small open economies with flexible exchange rates, like the West African countries, the exchange rate channel is likely to be particularly important because, in contrast to the other channels described above, it affects not only aggregate demand but also aggregate supply. A loosening of monetary policy, for example, may lead to a depreciation of the exchange rate, and an increase in domestic currency import costs, and hence induce firms to raise their domestic producer prices even in the absence of any expansion of aggregate demand. Because exchange rate changes are viewed as a signal of future price movements in many countries, particularly those with a history of high and variable inflation, wages and prices may change even before movements in import costs have worked their way through the cost structure.

When the exchange rate is fixed or heavily managed, the effectiveness of monetary policy is reduced but not entirely eliminated. Often relatively wide margins exist within which the exchange rate can fluctuate. Moreover, if domestic and foreign assets are only imperfectly substitutable, there is some scope for domestic interest rates to deviate from international levels. Therefore, even if the nominal exchange rate is fixed, monetary policy may be able to affect the real exchange rate by acting on the price level. In this manner, monetary policy retains its ability to affect net exports, albeit to a much lesser degree and with much longer lags. However, where domestic and financial assets are close to perfect substitutes, they may be under currency board arrangements or where there is a long tradition of dollarisation, the scope for monetary policy is severely limited.

In countries with either a poorly developed or tightly controlled financial system, interest rates may not move in tandem to clear the market. Thus aggregate demand is often influenced by the quantity of credit rather than its price. It has also been observed that even in the highly liberalised developed markets, credit changes operating in addition to interest rate changes have been identified as important factors influencing economic activity. However, how the above channels function in a given economy depends on its financial structure and macroeconomic environment.

## **5. Monetary policy framework for the West African common central banks: options**

A central feature of the monetary regimes is the use of a nominal anchor in some form to promote price stability. Broadly, there are three basic types of monetary policy regimes:

- Exchange-rate targeting
- Monetary targeting; and
- Inflation targeting.

A nominal anchor is a constraint on the value of domestic money, and in some form, it is a necessary element in successful monetary policy regimes. A nominal anchor can help promote price stability because it helps tie down inflation expectations directly through its constraint on the value of domestic money. It can provide a discipline on policy making that avoids the time-inconsistency problem (see Barro and Gordon, 1983). The time-inconsistency problem arises because there are

incentives for a policy maker to pursue short-run objectives even though the result is poor long-run outcomes, which arise from forward-looking behaviour on the part of economic agents. For instance, expansionary monetary policy will produce higher growth and employment in the short run and so policy makers will be tempted to pursue this policy even though it will not produce higher growth and employment in the long run because economic agents adjust their wage and price expectations upward to reflect the expansionary policy. Unfortunately, the expansionary monetary policy will lead to higher inflation in the long run, with its negative consequences for the economy. It should, however, be noted that the time-inconsistency problem by itself does not imply that a central bank will pursue expansionary monetary policy which leads to inflation. Simply by recognising the problem that forward-looking expectations in the wage-and-price-setting process create for a strategy of pursuing expansionary monetary policy, central banks can decide not to play that game. But, even if the central banks recognise the problem, politicians may still put pressure on the central bank to pursue overly expansionary monetary policy. Thus, overly expansionary monetary policy and inflation may result, so that the time-inconsistency problem is just shifted back one step. Consequently, even if the source of time inconsistency is not within central banks, a nominal anchor may be needed to limit political pressure to pursue overly expansionary, time-inconsistent, monetary policies.

### **5.1 Exchange-rate targeting**

Targeting the exchange rate can take the form of fixing the value of the domestic currency to a commodity such as gold, the key feature of the gold standard. More recently, fixed exchange-rate regimes have involved fixing the value of the domestic currency to that of a large, low-inflation country. As another alternative, instead of fixing low-inflation anchor country, which implies that the inflation rate will eventually gravitate to that of the anchor country, some countries adopt a crawling target or peg in which their currency is allowed to depreciate at a steady rate so that its inflation can be higher than that of the anchor country.

Exchange-rate targeting has several advantages. First, the nominal anchor of an exchange-rate target fixes the inflation rate for internationally traded goods, and thus directly contributes to keeping inflation under control. Second, if the exchange-rate target is credible, it anchors inflation expectations to the inflation-rate in the anchor country to whose currency it is pegged. Third, an exchange rate target provides an automatic rule for the conduct of monetary policy that avoids the time-inconsistency problem. It forces a tightening of monetary policy when there is a tendency for the domestic currency to depreciate, or a loosening of policy when there is a tendency for the domestic currency to appreciate. Monetary policy no longer has the discretion that can result in the pursuit of expansionary policy to obtain employment gains, which lead to time-inconsistency. Fourth, an exchange-rate target has the advantage of simplicity and clarity, which makes it easily understood by the public. A "sound" currency is an easy-to-understand rallying cry for monetary policy. This has been important in France, for example, where an appeal to the "france fort" is often used to justify tight monetary policy. Both France and the United Kingdom, for example, have used exchange-rate targeting to lower inflation by tying the value of their currencies to the German mark. In 1987, when France first pegged its exchange to the Mark, its inflation rate was 3%, two percentage points above the German inflation rate. By 1992, France's inflation rate had fallen to 2%, a level that can be argued is consistent with price stability, and was even below that in Germany. By 1996, the French and German inflation rates had converged, to a number slightly below one per cent. Similarly, after pegging to the German mark in 1990, the United Kingdom was able to lower its inflation rate from 10% to 3% by 1992, when it was forced to abandon the exchange rate mechanism (EMR). Exchange-rate targeting has also been an effective means of reducing inflation quickly in emerging-market countries. An important recent example has been Argentina, which in 1990 established a currency board arrangement requiring the central bank to exchange US dollars for new pesos at a fixed exchange rate of 1 to 1. The currency board is an especially strong and transparent commitment to an exchange rate target because it requires that the note-issuing authority, whether the central bank or the government, stands ready to exchange the domestic currency for foreign currency at the specified fixed exchange rate whenever the public requests it. In order to credibly meet these requests, a currency board typically has more than 100% foreign reserves backing the domestic currency and allows the monetary authorities absolutely no discretion. The early years of Argentina's currency board looked stunningly successful. Inflation, which had been

running at over a thousand per cent annually, fell to under 5 per cent by the end of 1994, and economic growth was rapid, averaging an annual rate of almost 8 per cent from 1991 to 1994.

Despite the seemingly inherent advantages of exchange-rate targeting, it has serious drawbacks. First, an exchange-rate target results in the loss of independent monetary policy. With open capital markets, an exchange-rate target causes domestic interest rates to be closely linked to those of the anchor country. The targeting country thus loses the ability to use monetary policy to respond to domestic shocks that are independent of those hitting the anchor country. Furthermore, an exchange rate target means that shocks to the anchor country are directly transmitted to the targeting country because changes in interest rates in the anchor country lead to a corresponding change in interest rates in the targeting country. For example, in 1990, when East and West Germany were united, concerns about the inflationary pressures arising from the reunification and the massive fiscal expansion required to rebuild East Germany led to rises in German long-term interest rates until February 1991 and to increases in short-term rates until December 1991. The shock to the anchor country in the ERM was transmitted directly to the other countries in the ERM whose currencies were pegged to the Mark because their interest rates rose in tandem with those of Germany. Studies have shown that monetary policy in countries such as France and the UK was far tighter than would have been the case if monetary policy in these countries had been focused on domestic considerations (see Gali and Gerther, 1997). The result was that continued adherence to the exchange rate target produced a significant slowing of economic growth and rising unemployment, which is exactly what France experienced when it remained in the ERM and adhered to the exchange rate peg.

Second, exchange rate targets leave countries open to speculative attacks on their currencies. Indeed, one of the fallouts of the German reunification was the foreign-exchange crisis of September 1992. The tight monetary policy in Germany resulting from German reunification meant that the countries in the ERM were subjected to a negative demand shock that led to a decline in economic growth and a rise in unemployment. It was certainly flexible for the governments of these countries to keep their exchange rate fixed relative to the mark in these circumstances, but speculators began to question whether these countries' commitment to the exchange rate peg would weaken because these countries would not tolerate the rise in unemployment that would result from keeping interest rates sufficiently high to fend off speculative attacks on their currencies. Speculators were in effect left with one-way option: the exchange rate for currencies such as the French franc, the Spanish peseta, the Swedish krona, the Italian lira and the British pound could only go in one direction, namely depreciate against the mark. The result was that in September 1992, a speculative attack on the French franc, the Spanish peseta, the Swedish krona, the Italian lira and the British pound began in earnest. Only France did not decline. The governments in Britain, Spain, Italy and Sweden were forced to devalue their currencies. By the time the crisis was over, the British, French, Italian, Spanish and Swedish central banks had intervened to the tune of an estimated \$100 billion, while the Bundesbank alone had laid out an estimated \$50 billion for foreign-exchange intervention. It was further estimated that these central banks lost \$4 to \$6 billion as a result of their exchange rate intervention in the crisis (Obstfeld and Rogoff, 1995).

The different response of France and the United Kingdom after the September 1992 exchange rate crisis illustrates the potential cost of an exchange rate target. On the one hand France, which had continued to peg to the mark and thus was unable to respond to domestic conditions, found that economic growth remained slow after 1992 and unemployment increased. The United Kingdom, on the other hand, which had dropped out of the ERM exchange rate peg and adopted inflation targeting, had a much better economic performance. For instance, economic growth was higher, the unemployment rate fell, and inflation rates were not higher than France's.

There is an additional disadvantage in an exchange rate target in developing countries that suggests that for them this monetary policy regime is highly dangerous and is best avoided except in rare circumstances. Exchange rate targeting in developing countries is likely to promote financial fragility and possibly a fully fledged financial crisis that can be highly destructive to the economy. Because of uncertainty about the future value of the domestic currency, many influential firms, banks and governments in these countries find it easier to issue debt if the debt is denominated in foreign currencies. This tendency can be further encouraged by an exchange rate targeting regime,

which may encourage domestic firms and financial institutions to issue foreign-denominated debt. The substantial issuance of foreign-denominated debt was a prominent feature of the institutional structure in the Chilean financial markets before its financial crisis in 1982, in Mexico and in East Asian countries before their crisis in 1997.

Furthermore, the depreciation of the domestic currency can lead to deterioration in the balance sheets of the banking sector. In emerging-market countries, banks typically have short-term liabilities denominated in foreign currency, which increases sharply in value when depreciation occurs.

An additional danger in using an exchange rate target is that although it may initially be successful in bringing inflation down, as in Mexico where inflation fell from over 100 per cent before it adopted exchange rate targets in 1998, to single-digit rate by 1994, a successful speculative attack can lead to resurgence of inflation.

## **5.2 Monetary targeting**

The major advantage of monetary targeting over exchange rate targeting is that it enables a central bank to adjust its monetary policy to cope with domestic considerations. It enables the central bank to choose goals for inflation that may differ from those of the other countries and allows some response to output fluctuations. Monetary targeting also has several advantages in common with exchange rate targeting. First, a target for the growth rate of a monetary aggregate provides a nominal anchor that is fairly easily understood by the public and is easily communicated to the public. Also, like an exchange rate target, information on whether the central bank is achieving its target is known almost immediately (announced figures for monetary aggregates are typically reported periodically). Thus, monetary targets can send almost immediate signals to both the public and markets about the stance of monetary policy and the intentions of policy makers to keep inflation in check. These signals then can help fix inflation expectations and reduce inflation. Second, monetary targets also have the advantage of being able to promote almost immediate accountability for monetary policy to keep inflation low and so constrain the monetary policy maker from falling into the time-inconsistency trap.

All the above advantages of monetary aggregate targeting depend on two conditions. One, there must be a strong and reliable relationship between the goal variable (inflation and nominal income) and the targeted aggregate. If there is velocity instability, so that the relationship between the monetary aggregate and the goal variable is weak, then monetary aggregate targeting will not work. The weak relationship implies that hitting the target will not produce the desired outcome on the goal variable and thus the monetary aggregate will no longer provide an adequate signal about the stance of monetary policy. Thus, monetary targeting will not help fix inflation expectations and be a good guide for assessing the accountability of the central bank. The breakdown of the relationship between monetary aggregates and goal variables, such as inflation and nominal income, certainly seems to have occurred even in the US and may also be a problem even for the WAMZ countries that have continued to pursue monetary targeting. The second condition is that the targeted monetary aggregate may not provide clear signals about the intentions of the policy makers and thereby make it harder to hold them accountable. Although narrow monetary aggregates are easily controlled by the central bank, it is far from clear that this is the case for the broader monetary aggregates like M2.

These two problems with monetary targeting suggest one reason why even the most ardent believer in monetary targeting cannot rigidly hold on to their target ranges, but rather allow undershoots and overshoots for extended periods of time. Furthermore an unreliable relationship between monetary aggregates and goal variables calls into question the ability of monetary targeting to serve as a communication device that both increases the transparency of monetary policy and makes the central bank accountable to the public.

The two countries that have officially engaged in monetary targeting for over twenty years starting at the end of 1974, have been Germany and Switzerland. The success of monetary policy in these two countries in controlling inflation is the reason that monetary targeting still has strong advocates and is even under consideration as the official policy regime for the European Central Bank. The key

fact about monetary targeting regimes in Germany and Switzerland is that the targeting regimes are very far from a Friedman-type monetary-targeting rule in which a monetary aggregate is kept on a constant growth rate path and is the primary focus of monetary policy. Indeed, one of the secrets of success of the German policy of money growth was that it often did not feel bound by monetarist orthodoxy as far as its more technical details were concerned (Ofmar, 1996). Thus monetary targeting in Germany and Switzerland should instead be seen primarily as a method of communicating the strategy of monetary policy that focuses on long-run considerations and the control of inflation.

Monetary targeting in Switzerland has been more problematic, suggesting the difficulties of targeting monetary aggregates in an economy which underwent substantial institutional changes in its money markets. In the face of the 40 per cent trade-weighted appreciation of the Swiss franc from 1977 to 1978, the Swiss National Bank decided that the country could not tolerate this high level of the exchange rate. Consequently, in the fall of 1978, the monetary-targeting regime was abandoned temporarily, with a shift from a monetary target to an exchange target until the spring of 1979, when monetary targeting was reintroduced. The Swiss National Bank recognised that its money-growth targets were of diminished utility as a means of signalling the direction of monetary policy.

There are two key lessons that could be learnt from the German and Swiss monetary-targeting experience. First, such a regime can restrain inflation in the longer run, even when the regime permits substantial target misses. Thus, adherence to a rigid policy rule has not been found to be necessary to obtain good inflation outcomes. Second, the key reason why monetary targeting has been reasonably successful in these two countries, despite frequent target misses, is that the objective of monetary policy is clearly stated and both the Bundesbank and the Swiss National Bank actively engage in communicating the strategy of monetary policy to the public, thereby enhancing the transparency of monetary policy and the accountability of the central bank. Indeed, Germany and Switzerland might be thought of as "hybrid" inflation target and monetary target countries, with their strategy closer to inflation targeting than to monetary targeting.

### **5.3 Inflation targeting**

The case for inflation targeting starts from the simple premise that the primary goal of monetary policy in any country ought to be attaining and preserving a low and stable rate of inflation. Inflation targets are designed to help the central bank achieve long-run price stability in three principal ways: by providing a nominal anchor for monetary policy, by improving the transparency and accountability of monetary policy and by enhancing the central bank's inflation-fighting credibility.

The main feature of an inflation-targeting framework is that the central bank is given a clear mandate to concentrate on achieving an explicit inflation target as the overriding objective of monetary policy. The basic ingredient of inflation targeting includes the announcement of a target for future inflation at some low level or range, periodic assessments of expected inflation over the relevant horizon on the basis of a set of variables, and systematic adjustments of the monetary policy instruments to maintain the projected inflation rate in line with the target. Since an inflation-targeting regime is forward-looking it requires a well-functioning inflation-forecasting framework and a relatively active financial market. It should be noted that the inflation target relates to the medium-term rate and that it has been defined either in terms of a point, a band or a ceiling, and that the targeted price index often excludes certain (volatile) components.

Inflation targeting is characterised as a fairly broad framework for the conduct of monetary policy rather than a specific rule. Thus, inflation-targeting central banks maintain significant scope for applying discretion in the conduct of monetary policy, as the inflation targets typically need to be attained only over a multi-year horizon and are in many cases specified in terms of bands rather than point estimates. Furthermore, as inflation targeting does not imply a specific operational rule for the monetary policy instruments used by the central bank, inflation targeting is compatible with different opinions about the appropriate stance of monetary policy. Consequently, good judgement on the part of the central bank is an indispensable element for successful inflation targeting.

The relatively high degree of transparency of monetary policy and accountability of the central bank is another element of inflation targeting. All inflation-targeting central banks have intensified their efforts in communicating and clarifying their monetary policy to the public. These efforts are designed to explain the goals of monetary policy, describe and justify the policy measures being taken and explain the recent performance of monetary policy, always with a focus on future inflation as the fundamental objective of the actions of the central bank. Usually inflation-targeting central banks publish regular and extensive reports on inflation.

The inflation target also provides a yardstick against which the central bank's actions can be judged. The enhanced transparency associated with inflation targeting implies that the central banks have naturally become more accountable about their actions in the public debate and political process.

The first requirement that must be satisfied by any country considering the adoption of inflation targeting, is to have a central bank capable of conducting its monetary policy with a degree of independence. This does not necessarily imply that the central bank must be fully independent, but more modestly, that the monetary authorities ought to be able to gear the instruments of monetary policy toward the attainment of some nominal objectives. Implicit in this requirement is the absence of fiscal dominance. This means that the conduct of monetary policy will not be dictated or severely constrained by developments of a fiscal nature. In broad terms, this implies that the public sector's direct borrowing from the central bank and the banking system will be low or non-existent; that the government will have a broad revenue base and therefore will not rely systematically and significantly on the revenue from seigniorage; that domestic financial markets will have enough depth to absorb placements of public debt instruments; and that the accumulation of public debt will not give rise to explosive or unpleasant dynamics. Failure to comply with these conditions will make the country vulnerable to inflationary pressures of a fiscal origin that, if left unchecked, will often induce the creation of formal and informal indexation mechanisms and impart a high degree of persistence to the nominal variables of the economy (Sergent and Wallence, 1981). A fiscally driven inflation process of this type will undermine gradually the effectiveness of monetary policy to attain any nominal target and oblige the central bank to follow an increasingly accommodative monetary policy. Although the threshold inflation rate at which monetary policy loses most of its role as a nominal anchor and becomes almost fully accommodative is not explicitly defined in the literature, Heymann and Leijonhufund (1995) report some consensus that the country that has experienced an annual inflation rate of 15 – 25 per cent for three to five consecutive years will be unable to rely on monetary policy alone to target any significant and lasting reduction in the rate of inflation.

A second requirement is the absence of any firm commitment by authorities to target the level or path of any other nominal variable, such as wages or the exchange rate. Indeed, a country that chooses a fixed exchange rate system subordinates its monetary policy to an exchange rate objective and is unable to target any other nominal variable on a lasting basis, given the presence of capital mobility.

A third requirement is to define the inflation target. The definition of the inflation target needs to address such issues as the appropriate measure of inflation to target, the list of shocks that may permit the temporary suspension of the target, the choice of a target band or a single point, and the level of the target. The inflation target may be specified in terms of a "headline" or an underlying rate. The headline rate is calculated on the basis of the entire consumption basket of the consumer price index (CPI). Alternatively, it may be more appropriate to define an underlying rate which excludes components of the headline index that are subject to short-run shocks (such as seasonal volatile food prices) that should not precipitate a change in the stance of monetary policy.

To preserve the integrity of the inflation target, any components of the CPI which are to be excluded, should be specified *ex ante* rather than *ex post*. This could take the form of list of "caveats" specifying certain shocks which would induce an adjustment to the target inflation rate. These shocks might include disasters, large changes in the term of trade or indirect tax changes. The extent to which the target inflation is adjusted in response to these shocks should also be pre-specified in broad terms. The inflation target can either be specified in terms of a target band, or a single point. The advantage of specifying the target in terms of a band is that it clearly defines what the central bank is aiming for and provides a conclusive benchmark against which the performance of the central bank could be assessed.

What distinguishes inflation targeting from other frameworks for conducting monetary policy is not as much the accuracy of the forecasting techniques employed in the procedure but the fact that the setting of policy instruments relies on a systematic assessment of expected (future) inflation, rather than on past or current inflation developments or an otherwise arbitrary assumption about inflation. It is because of this feature that inflation targeting is said to address one of the fundamental problems of monetary policy, namely the imperfect control that the central banks have over the current rate of inflation.

The sources of imperfect control are noted to include aggregate demand and supply shocks, instability of intermediate targets (velocity shocks), information asymmetries which manifest in the form of a current rate of inflation that is principally predetermined at the time policy decisions are made, uncertainty about the relative strength of policy instruments and instances of instrument instability (Blake and Westaway 1996). In the end, all of these factors undermine the capacity of monetary policy to deliver a steady and low rate of inflation on a permanent basis.

## BOX INFORMATION

### **International experience with inflation targeting**

Monetary targeting is an indirect approach to controlling the level of prices but inflation targeting is directed at the ultimate objective. Whereas the former relies on the effectiveness of the transmission mechanism to impact on the ultimate target, which is inflation, the latter directly focuses on the ultimate target. Thus inflation targeting is a preferred option. Since inflation targeting was first introduced in 1990 in New Zealand, the framework has been adopted by a number of countries such as Canada (1991), the UK (1992) and Sweden (1993). Other countries in the developing world that have adopted the framework include Chile (1991), Israel (1991); Mexico (1994); Brazil (1999); Thailand (2000) and South Africa (2000). Transition economies, namely the Czech Republic (1997) and Poland (1999) have also opted for inflation-targeting monetary policy frameworks. In practice, some countries have opted for target ranges in specifying their inflation targets, while others prefer a point target or a point target combined with a range. The trade-off in this regard is essentially between the simplicity of a point target, and the degree of flexibility for absorbing shocks beyond the control of the authorities, which a target range permits. The experience of some of the above-mentioned countries with inflation-targeting regimes has shown that no country with an inflation rate above 30 per cent has opted for this type of regime. However, targets have been met in some developing countries where inflation tended to be higher and more volatile at the beginning. In Chile and Israel, for instance, where inflation targets were initially combined with crawling-peg exchange rate regimes, gradual disinflation has been achieved. Chile in the 1990s reduced its targets (initially specified as ranges and later as points) and its measured inflation rate by 1 or 2 percentage points a year to an average rate of 3,8 per cent in 2000. Israel managed to reduce inflation from around 18 per cent in 1991 to about 1 per cent in 1999 and to zero in 2000, despite episodes of inflationary pressure. In Brazil, which only adopted an inflation-targeting regime in June 1999 when the Russian crisis forced it to abandon its crawling-peg exchange rate, the early signs are promising. Inflation was 8,9 percent at the end of 1999, and the first inflation target was met. The more developed countries have however had success with their inflation-targeting regimes. New Zealand reduced its inflation rate rapidly until 1992. Despite a seeming trend reversal in 1995, when the authorities underestimated the strength of inflationary pressures in the economy and then widened their target range to 0 – 3 per cent, inflation returned to this range until recently. Canada also managed to reduce inflation rapidly after implementing inflation targeting in February 1991, and after undershooting the target in 1993/94, has kept inflation in the lower half of its target range ever since. The United Kingdom initially remained within its target range and has since fluctuated close to its point target, while Sweden has achieved its inflation target since it became operational in 1995 with the exception of two periods when inflation was below the lower limit of its tolerance range. Australian inflation was at or just below the lower end of its target point until 1995, after which it breached first the upper and then the lower limit of this target. To date, experience at the international level with inflation-targeting monetary frameworks has been favourable, and inflation has been generally within the targets.

## Conclusion

As indicated earlier, monetary targeting may not be ideal, especially for the WAMZ. First, monetary aggregates are not particularly useful guides for monetary policy unless the relationship between monetary aggregates and inflation is strong and reliable. A stable relationship between money and inflation is, in fact, quite unlikely to exist in the WAMZ, since this relationship has not been particularly reliable in the past in the most of the countries of the WAMZ. Moreover, the ongoing financial deregulation and innovation in the zone will cause major changes in the operation of the financial system in the coming years. Those changes will affect money and asset demand in unpredictable ways, making it likely that the relationship between monetary aggregates and inflation in the zone as a whole will be even more unstable than it has been in the individual countries.

The second drawback of monetary targeting used by most countries of the zone is that monetary targets are likely to prove a less effective vehicle of communication. The two countries that have consistently used monetary targeting, Germany and Switzerland, are held in high esteem despite several slippages. Missing announced targets for monetary growth might thus be far more problematic for the new zone because the public would be less willing to accept its explanations.

However, inflation targeting which is the newest of the monetary regimes has been gaining popularity in recent years and has several major strengths. It enables monetary policy to focus on domestic considerations as does monetary targeting, but is not subject to velocity shock problems; it is readily understood and highly transparent; it allows flexibility and discretion in the conduct of monetary policy, but because it increases the accountability of the central bank it constrains discretion so that the time-inconsistency problem is ameliorated; and it helps shift the public debate to a focus on what monetary policy can do in the long run and thus helps reduce political pressure to engage in time-inconsistent policies.

Although inflation targeting is not without its problems, in contrast to exchange rate and monetary targeting, the monetary authorities do not easily control inflation. This can be a particularly severe problem for countries that are trying to bring down inflation, which might likely experience inflation forecast errors. This suggests that hard targets for inflation might be worth phasing in until there has been some successful disinflation. This was the Chilean approach when she adopted inflation targeting in 1990.

Another potential problem with inflation targeting is that, because of the long lags of monetary policy, inflation outcomes are revealed only after a substantial lag; thus inflation targeting does not provide immediate signals to both the public and the markets about the stance of monetary policy. However, we have seen that exchange rate targets remove the ability of the foreign-exchange market to signal that overly expansionary monetary policies might be in place, while the signals provided by monetary aggregates are unlikely to be very strong because of the instability of the relationship between money and inflation.

The performance of inflation-targeting countries has been very good up to date (see box), enabling them to maintain low inflation rates, something they have not always been able to do in the past, while it also improves the climate for economic growth after the initial disinflation phase is past. It is my considered opinion that the zone should work toward putting in place the infrastructure necessary for the adoption of inflation targeting as the framework for the monetary policy in the medium to long term. In the interim, however, the zone will have to continue using the monetary-targeting framework.



## Selected references

- Anderson, L.C. and Jordan, J. 1968. Monetary and fiscal policy: a test of their relative importance in economic stabilization. *Federal Reserve Bank of St. Louis Review*, November.
- Ando, A. 1917. Some aspects of stabilization policies, the monetarist controversy and the MPs Model. *International Economic Review* 15.
- Blake, A. and Westaway, P. 1996. Credibility and the effectiveness of inflation targeting regimes. *The Manchester School Supplement*, September.
- Brainard W.C and Tobin, J. 1963. Financial intermediance and effectiveness of monetary control. *The American Economic Review*, May.
- Cooley, T.F. and Hansen, G.D. 1989. The inflation tax in a real business like model. *American Economic Review* 79.
- Debelle, G. and Lin, C.H. 1998. Preliminary considerations of an inflation targeting framework in the Philippines. *IMF Working Paper* 98/39.
- De Leeuw, F. and Gramich, G. 1968. The Federal Reserve – MIT economic model. *Federal Reserve Bank Bulletin*, Washington.
- Fama, E.F. 1981. Stock returns real activity, inflation and monetary. *The American Economic Review*.
- Friedman, M. 1969. The optimum quantity of monetary, in *The optimum quantity of monetary and other essays*. Chicago: Aldine Publishing Co.
- Heyman, D. and Leijonhufund, A. 1995. *High inflation*. Oxford University Press.
- Kahn G.A. and Parrish, K. 1998. Conducting monetary policy with inflation targets. *Federal Reserve Bank of Kansas City, Economic Review* (September).
- Kashyap, A.K. and Stein, J.C. 1995. The impact of monetary policy on bank balance sheets. *Carnegie Rochester Conference Series on Public Policy* (42)
- King, R.G and C Plosser. 1984. Money credit and prices in real business cycle. *American Economic Review* 74.
- Lindsey, D.E. and H.C Wallick 1989. Monetary Policy, in *The new Palgrave*, John Eatwell, Murray Milgate and Peter Newman, (eds), New York.
- Mccallum, B.T. 1980. Rational expectations and macroeconomic stabilization policy: An overview. *Journal of Money, Credit, Banking* (12).
- Morgan, D.P. 1992. Are bank loans a force in monetary policy? *Economic Review*, Kansas City 77.
- Onwioduokit, E.A. et al. 1996. Demand for monetary in debt constraint economy: a case study of Nigeria. *CBN Economic and Financial Review* 34.
- Okun, A, Peck, M. and Smith, W. 1969. *The 1969 Annual Report of the Council of Economic Advisors*, Washington.
- Sergent, T. and Wallace, M. 1981. Some unpleasant monetarist arithmetic. *Federal Reserve Bank of Minneapolis Quarterly Review* (Fall).

Sargent, T.J. and Wallace, N. 1975. "Rational Expectation" the optional monetary supply instrument and the optimal money supply rule. *Journal of Political Economy* 83.

Sims, C.A. 1992. Interpreting the macroeconomic time series facts: the effects of monetary policy. *European Economic Review* 36.