INTERNATIONAL MONETARY FUND

# Monetary Policy Implementation at Different Stages of Market Development

## Country Cases and Appendices—Supplementary Information

Prepared by Staff of the Monetary and Financial Systems Department

Approved by Stefan Ingves

October 2004

Contents Page

Tables



Figures



Boxes

## OVERVIEW

1. This supplement describes the experience of a dozen countries or groupings of countries with the introduction and use of money market operations for the conduct of monetary policy. It includes small countries with limited scope for developing diversified markets, some of which have been able to set up effective monetary policy frameworks, and larger countries which, at some point, were still in the process of establishing a strong market infrastructure to address weaknesses in policy implementation.

2. The countries or grouping of countries are from Africa (Democratic Republic of the Congo, The Gambia, Uganda, and Zambia), Asia (Tonga and Vanuatu), the Western Hemisphere (Eastern Caribbean Currency Union), the Middle East (Egypt and Tunisia), and Europe (Kyrgyz Republic, Malta and Ukraine). They were selected in view of the relevance of their experience to the subject matter of the study, and because information was available from technical assistance reports of the Monetary and Financial Systems Department (MFD), reports from the Financial Sector Assessment Program (FSAP), and other publications and papers such as Occasional Papers and Staff Reports.

3. The review of the country experiences is based on an analysis of developments during periods of time that may differ from one country to another. It aims at depicting the current status of monetary instruments in the various countries, although in some instances, further progress may have been achieved between the completion of the study and its publication. In addition, the paper uses a uniform terminology with regard to monetary instruments, which may not always match the one adopted by countries. The following terminology is used:

- Rules-based instruments. Instruments based on the regulatory power of the central bank. They include: (i) liquid asset ratio, a requirement for a bank to hold minimum amounts of specified liquid assets, typically as a percentage of its liabilities; (ii) reserve requirements, a requirements for a bank to hold minimum balances with the central bank, typically as a percentage of its liabilities; and (iii) standing facilities, which are monetary instruments used at the initiative of banks and bearing a pre-specified interest rate, allowing banks to borrow from (refinance facility) or deposit funds with the central bank (deposit facility).

- Money market operations. Instruments that are used at the discretion of the central bank and bearing an interest rate linked to money market conditions. They include: (i) open market-type operations, which are monetary operations based on auction techniques that are regulated by the central bank. They involve lending/borrowing against underlying assets as collateral; primary market issuance of central bank securities or government securities for monetary policy purposes; and accepting fixed-term deposits; and (ii) open market operations, which are monetary operations conducted by the central bank as a participant in the money market. They involve: buying/selling assets outright on the secondary market; and buying/selling assets under a repurchase agreement in the repo market, or foreign exchange swaps.

# I. EASTERN CARIBBEAN CURRENCY UNION[1]

## A. Path Toward Regional Monetary Integration

4. The successful road toward monetary integration among Eastern Caribbean Countries comprised different relevant stages. During the times of the British colonial territories in the area, notes issued by foreign commercial financial institutions circulated along with coins from the United Kingdom. Between 1910 and 1920, three different Boards of Commissioners of Currency started issuing currency in Trinidad and Tobago, Barbados and British Guyana. The latter led, in 1946, to a unified decimal currency system based on the West Indian dollar and, in 1950, to the British Caribbean Currency Board (BCCB) which had the prerogative to issue notes and coins at an exchange parity of 4.8 West Indian dollars to one pound sterling.

5. After Trinidad, Tobago, and British Guyana exited the board (in 1962 and 1965, respectively), the BCCB was replaced by the Eastern Caribbean Currency Authority (ECCA) in 1965, thereby replacing the West Indian dollar with the Eastern Caribbean dollar at the same parity.[2] Following the pound sterling devaluation of 1967 and Barbados' departure from the ECCA in 1972—to establish its own central bank—the ECCA headquarters was moved to St. Kitts. Concomitantly, the foreign exchange coverage, originally set at 70 percent, was reduced to 60 percent in 1975. The next year, the ECCA shifted the link of the Eastern Caribbean dollar from the pound to the U.S. dollar and assumed a more ambitious and expansive role by becoming a cosignatory for establishing, in 1973, the Multilateral Clearing Facility in the Caribbean Community and Common Market (CARICOM) replacing the existing bilateral clearing agreement.

6. The Eastern Caribbean Central Bank (ECCB) replaced the Eastern Caribbean Currency Authority in 1983. The move followed the launch of the Organization of Eastern Caribbean States (OECS) with the Treaty of Basseterre in 1981 that institutionalized political and economic cooperation among the Caribbean territories.[3] The Eastern Caribbean dollar, the common currency shared by OECS countries, was pegged to the British pound at

---

[1] Prepared by Rodolfo Maino (Senior Economist, MFD), based on Eastern Caribbean Currency Union—Selected Issues (SM/03/16), and "The Eastern Caribbean Currency Union," IMF Occasional Paper 195 (July 2000). The study covers developments up to end 2003.

[2] The ECCA included the Leeward Islands and the Windward Islands with the exception of Grenada which finally joined in November 1968 after originally establishing a political union with Trinidad and Tobago.

[3] The six member countries and two territories of the ECCB are Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines. With the exception of Anguilla they are all members of CARICOM.

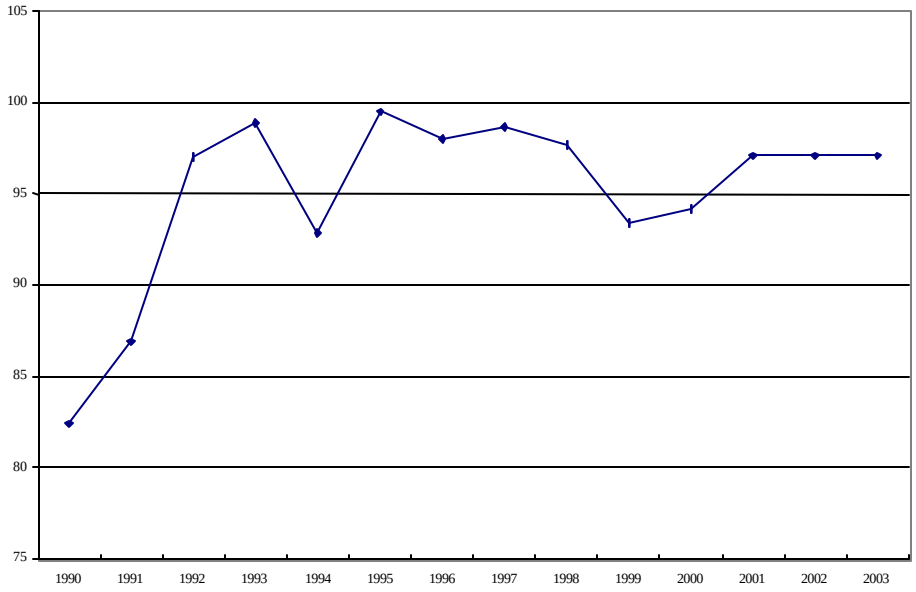
EC$4.80=£1 from 1950 to 1976 and since then to the U.S. dollar at the market cross-rate of EC$2.70=US$1. The recent experience of the peg system shows an unaltered parity of the exchange rate, and a fully self-supported convertibility where member countries have pooled all their foreign reserves.

## B. Monetary Policy Environment

### Institutional framework

7. The quasi-currency board induces stability through a strong foreign exchange position that backs the currency issued. The backing ratio is detailed as external assets net of commercial bank foreign currency deposits with the ECCB, divided by demand liabilities—which implies, in practice, a limit on domestic assets of 40 percent of Eastern Caribbean dollar-denominated demand liabilities. However, the minimum level of pooled reserves can be no lower than 60 percent of its demand liabilities which consists of reserve money—bank reserves and currency. During the last decade, the backing ratio has evolved from 82.1 percent in 1990 to 97.1 in 2003 (Figure 1).

Figure 1. ECCB: Backing Ratio (1990–2003)




8. Participating governments maintain accounts with the central bank through which transactions are effected with other governments and with regional and international organizations. Member countries have unrestricted access to the common reserve pool and the ECCB can only issue the common currency against foreign exchange—with bank notes coded according to the country to which they are issued. Given the currency issued by each member, the ECCB, in its capacity of fiscal agent, can allocate profits to the member governments accordingly and impute reserves for each of them as the sum of currency in

circulation and its net claims on the government and the commercial banks in each of the member countries.

9. The ECCB was established by the Eastern Caribbean Central Bank Agreement Act of 1983 which defines the power and scope of the ECCB. The Uniform Banking Act of 1993 specifies the operational framework for financial institutions.

10. The Articles of Agreement allow the ECCB to provide credit to member countries to assist them with seasonal credit needs (temporary advances) and to service the members' "special deposit" loans—reserve requirements that reached EC$30.8 million at the end of 1998. In addition, the ECCB provides credit in the form of holdings of treasury bills, holdings of government securities and holdings of corporate bonds, with maturities not exceeding 91 days, 15 years, and 10 years, respectively.

11. The Monetary Council and the Board of Directors constitute the two separate bodies in charge of governing the ECCB. The former, which is the most important decision-making authority of the ECCB, consists of one representative for each member state with the chairmanship rotating every year. The Monetary Council meets at least three times a year to set the main guidelines of monetary policy. The ten members of the Board of Directors, including the Governor, Chairman, and the Deputy Governor appointed by the Monetary Council, and one Director chosen by each member, meet five times a year. The Board is in charge of administering the Bank and taking care of international economic relations.

12. As in other currency board experiences, the central bank authorities acknowledge that the main device for the central bank to achieve price stability is to uphold the credibility of the fixed exchange rate regime. In this regard, the bank is also responsible for the regulation of money and credit, the strengthening of credit and exchange conditions, and a robust financial structure aiming at regional growth and economic development. In this vein, member countries were able to smooth differences (risk-pooling) in the timing of inflows into the reserve pool arising from the different composition of member countries' exports. In addition, they are able to achieve economies of scale in central bank operations by smoothing out overhead costs.

13. The ECCB's monetary operations are guided by a monetary program which involves setting up explicit operational ceilings through the allocation of a global limit to members in proportion of each government's share of total regional recurrent revenue. Although this limit has not been clearly defined, it is generally calculated in terms of the monthly average of the monetary liabilities of the previous year and the actual credit available is the amount of the allocation net of all outstanding balances and arrears.

**Fostering fiscal discipline**

14. In order to foster the fiscal prudence and policy coordination that is needed in the context of participation in a monetary union pegged to another currency, the ECCB has designed a set of specific policy rules to this effect. First, the ECCB is helping the governments to institutionalize financial programming as a tool for fiscal management.

Second, in 1995, the ECCB created a two-tranche fiscal reserve facility with the first tranche funded with portions of the profits that the ECCB distributes annually and that government deposits, at their discretion, in facility accounts at the central bank. These resources, however, are freely accessed by governments. The use of the second tranche of this facility has to be approved by the Monetary Council, as these resources have been conceived as savings to be used only in a last-resort case and/or to help deal with natural disasters.

15. In addition, against the background of a deterioration in budgetary positions and uncertain economic prospects for Eastern Caribbean Currency Union (ECCU) members, the ECCB has designed a set of policy guidelines in the form of fiscal benchmarks to ensure long-term sustainability, along the lines of those instituted in the context of the monetary unions in Europe and in West and Central Africa, including such factors as: a government current account surplus of 4–6 percent of GDP; an overall government budget deficit of no more than 3 percent of GDP; total central government debt outstanding of no more than 60 percent of GDP; and debt service payments of no more than 15 percent of current revenue. However, to be fully effective this framework would need to be binding on member states, and the ECCB or the national authorities should have enforcement mechanisms to ensure compliance. Indeed, recently several members of the ECCU have been confronted with serious fiscal crises.

**Monetary policy instruments and issues**

16. The ECCB Articles of Agreement instruct the central bank to extend, discretionally, credit to any participating member under specific conditions. The sum of the maximum amounts that the central bank could lend, including outstanding balances on the "special deposit loans" typically exceeds the 40 percent global limit on domestic assets. The ECCB Articles also authorize the ECCB to use discount and rediscount rates, as well as differential rates and ceilings for various classes of transactions (Box 1). The Monetary Council, the governing body of the ECCB in charge of reviewing regularly the operations of monetary instruments, is also allowed to determine priority areas for credit distribution in cooperation with member governments and to establish a schedule of reserve requirements—including marginal required reserves—depending on the type of deposit.

17. In addition to reserve requirements, the ECCB conducts conventional monetary policy through standing facilities. In this regard, the ECCB is allowed to employ discount and rediscount rates, establish differential rates and ceilings for various classes of transactions, determine priority areas for credit distribution in cooperation with member governments, and establish a schedule of reserve requirements (including marginal required reserves) varying on the type of deposit.

18. Banks interest rates are unregulated. However, a minimum savings deposit rate was established in January 1985 in order to encourage small savers.[4] At the same time, the ECCB started to remunerate banker's U.S. dollar deposits at internationally competitive rates with the aim of encouraging commercial banks to invest foreign currency in the area. In addition, and in order to discourage deposit outflows, the ECCB allows bankers' deposits to be exchanged at the official exchange rate.

**Box 1. ECCB: Monetary Policy Instruments**

**Reserve requirements**

Since inception, a reserve requirement of 6 percent has been maintained on all deposits. Before March 1994, commercial banks were instructed to maintain 6 percent—based on the four preceding weeks—of average deposits, for four consecutive weeks. Nevertheless, the ECCB adopted thereon weekly maintenance periods and started to base required reserves on average weekly deposits. Although reserves at commercial banks are not remunerated, excess reserves are. All reserves are held in EC dollars.

**Standing facilities**

***Rediscount window:*** Since inception in 1988, it works as an incentive for banks to invest in government securities.

***Discount rate***: Last altered in October 2001, this rate is intended to influence banks' lending rates and thereby economic activity. Nevertheless, the discount rate is not being used by banks because it is higher than the rediscount rate for treasury bills.

19. Although the ECCB enjoys emergency powers to intervene in the event of a systemic problem, there is no lender-of-last-resort facility (LOLR) at the ECCB. With a majority share of foreign-owned banks and given the low exposure to international systemic crises undermining the system arising from external shocks, the need to enact a LOLR facility has not been a priority, and there is no explicit system of deposit insurance.

20. Before March 1994, commercial banks were obliged to hold for four consecutive weeks 6 percent of average of all deposits for the four preceding weeks. After that date, the ECCB instrumented weekly maintenance periods by calculating required reserves on average weekly deposits. Although credit ceilings were never used, the ECCB right after its inception, encouraged banks to invest foreign currency within the region by remunerating them at internationally competitive interest rates. Moreover, in order to discourage capital outflows, the ECCB allows deposits to be exchanged upon demand at the official cross-rate.

21. An official interbank market was created in 1986—later reconfigured in October 2001 to allow borrowers and lenders to interact directly without the involvement of the ECCB—to enhance the recycling of liquidity between banks, the lending rates are fixed

[4] The minimum savings deposit rate was set at 4 percent and lowered to 3 percent in September 2002.

at 5.25 percent.[5] There is also an over-the-counter interbank market, with transactions taking place at rates higher than the official interbank rate, on the basis of the lender's assessment of credit risk. There are no securitization requirements in this segment of the interbank market. The authorities are looking for an integration of both segments of the market.

22. The rediscount window for treasury bills established in 1988 under the existing country limits induces trading of government securities, thereby supporting this secondary market. Taking into account its commitment to a high foreign exchange backing ratio, the bank discounts the bills obtained under the existing credit lines to members and uses the window to build up its portfolio of domestic treasury bills. The discount rate is a policy rate that has become somewhat meaningless today. Although it has originally been designed to influence bank lending rates and economic activity, the discount rate usually conveying an announcement effect, has been infrequently changed and it is not tailored as an effective monetary instrument. Consequently, given the Monetary Council's decision to set the discount rate at a higher level than the rediscount rate for treasury bills, banks are not usually interested in this use of the discount window.

### C. Structural Factors and Financial Market Infrastructure

23. The financial system of the Eastern Caribbean states has been dominated by commercial banks (Table 1). From the approximately 43 banks in existence at June 2002, 9 are domestic with 23 percent share of assets, 30 are foreign-owned and 4 are government-controlled accounting for the remaining 17 percent. Seven foreign-owned banks, with headquarters in Canada, Trinidad and Tobago, France and the United Kingdom accounted for more than 50 percent of the assets of banks and other deposit taking institutions as of June 2002. In the financial sectors of Antigua and Barbuda, Dominica, Grenada, St. Lucia, and St. Vincent and the Grenadines, foreign banks enjoy a majority share that ranges from 50 to 90 percent while private domestic banks show a majority share only in Anguilla. In Montserrat the state-owned bank has a majority share, while in St. Kitts and Nevis national banks and foreign banks total the same share amount.

24. On October 19, 2001, the East Caribbean Securities Exchange (ECSE) was officially launched to provide member states a regional trading market for primary and secondary securities—both equity and government and private debt securities. Supported by electronic trading, remote access and regulated by a uniform Securities Act of 2001, the exchange comprises 47 owners of which the ECCB is the largest. Seven companies were listed by the end of 2004, and secondary trading volumes are low. Notwithstanding the little scope for active debt management provided by the currency board, the potential possibility of opening up the ECSE to other countries in the region would enable replacing foreign-currency denominated with domestic debt, thereby ameliorating external vulnerability.

---

[5] Prior to October 2001, loans in this market were guaranteed by the ECCB; transactions were at a fixed rate; and borrowers were requested to provide collateral.

Table 1. ECCU: Financial System Structure

| (June 2002) | Number | Assets (EC$M) | Percent of Total Assets |
|---|---|---|---|
| Banks | 43 | 11,082.7 | 83.8 |
| Private | | | |
| Domestic | 9 | 2,534.3 | 19.2 |
| Foreign | 30 | 6,664.9 | 50.4 |
| State-owned | 4 | 1,883.5 | 14.2 |
| Institutional investors | 122 | n.a. | n.a. |
| Insurance companies | | | |
| Life and retirement | 35 | n.a. | n.a. |
| Nonlife | 75 | n.a. | n.a. |
| Composite companies | 12 | n.a. | n.a. |
| National Insurance Funds | 6 | 1,176.9 | 8.9 |
| Other nonbanks | 107 | 969.7 | 7.3 |
| Total Financial System | 278 | 1,3229 | 100 |

Source: ECCB.

25. While an institutional framework for a regional financial market has been established, financial markets are still segmented by country. Building on low volumes of intra-ECCU financial transactions (apart from trade financing), there has been no tendency for interest rates to converge. At the same time, net holdings of assets by banks with other banks in the ECCU are low, reflecting mainly trade finance transactions. Lastly, there is little cross-country holding of government securities among ECCU members.

26. Notwithstanding some government-controlled banks are currently facing harsh conditions while operating under increasing stress, and the level of nonperforming loans—as a percentage of total loans—hovers around 14 percent in March 2002, the banking system is well-developed, exhibiting a ratio of deposits to GDP in excess of 145 percent.

## D. Conclusions and Lessons

27. The following conclusions and lessons can be derived from the experience of the Eastern Caribbean Countries:

- Despite the turbulence that affected the international financial arena in the last decades, the remarkable monetary stability in the Eastern Caribbean Countries provides an example of successful and long-standing monetary cooperation;

- The monetary and exchange arrangements have served the region well, fostering confidence through stable domestic prices anchored in a peg to the U.S. dollar;

- The monetary framework of the ECCU, by imposing strict limits on the ability of the central bank to extend credit to member countries, has contributed to price, exchange,

and financial stability. On the other hand, fiscal virtue remains a precondition to secure the success of the ECCU; and

- Efforts to expand monetary cooperation through the integration of national money and capital markets paves the way toward an even more robust economic union, by allowing the move from the current segmentation of financial markets to the eventual consolidation of a single, regional, financial space.

## II. DEMOCRATIC REPUBLIC OF THE CONGO[6]

### A. Background

28. For a number of years, the financial system in the Democratic Republic of the Congo (DRC) has operated in a climate of uncertainty due to political instability and fiscal mismanagement, further complicated by limited resources. This has resulted in major dysfunctions and evident weaknesses. In particular, the financial system had become irrelevant in mobilizing savings and providing credit to the economy. In the context of a Staff Monitored Program (SMP) covering the period from June 2001 to March 2002 and of the subsequent PRGF, the authorities have started to implement wide-ranging reforms with the assistance of the Fund technical assistance program. In particular, along with the promulgation of the new law for the central bank enshrining its independence and of the new Banking Law, the Central Bank of the Congo (BCC) has taken measures to remedy these weaknesses and help create the conditions paving the way for a revival of financial intermediation.

29. Despite the significant progress made in macroeconomic stabilization, financial intermediation has not yet resumed in the DRC, reflecting the continued low public confidence in the banking system. Several years of hyperinflation accompanied by a free fall of the exchange rate have undermined confidence in the Congo franc (CGF). Consequently, the banking sector, which forms the bulk of the formal financial sector, has played a limited role in the economy since the late 1980s, early 1990s, with the total assets of the banking sector at less than 5 percent of GDP (Table 2). It may take some time before confidence in the currency returns and the banking sector resumes a significant role.

Table 2. DRC: Financial System Structure

| (December 2002) | Number of Institutions | Total Assets (Percent of GDP) |
|---|---|---|
| Commercial Banks | 14 | 5 |
| Nonbank financial institutions | 5 | Not available |
| Microfinance institutions | 27 | Not available |

Source: Central Bank of the Congo.

30. The rate of financial penetration is very low. The DRC, with a population of about 55 million, has only 35,000 bank accounts, of which almost half are held by businesses. The settlement of transactions which go through the banking system is limited due to the

[6] Prepared by Bernard Laurens (Deputy Division Chief, MFD), based on MFD technical assistance missions of October 2001 and October 2002 (both headed by Bernard Laurens) which took place in the context of the definition and implementation of the PRGF with the DRC, and SM/03/52. The study covers developments up to end-2003.

prevalence of the informal sector, which operates mostly in cash—resulting in CGF bank deposits representing only 22 percent of the money supply in Congo francs. The contribution of the banking system to money creation is marginal and, for the most part, the activity of commercial banks is circumscribed to their role in the collection of government taxes and the payment of government expenditures, as well as opening letters of credit for the financing of exports. Since the commercial banks grant little or no credit to the private sector, money creation has taken place mainly through the issuance of BCC currency.

31. Due to past hyperinflation, there is still a strong preference for foreign exchange as a vehicle for savings, and for the settlement of large transactions. The former is a consequence of currency instability in the past; the latter is due to the absence of large-denomination bank notes in local currency in a context of a virtually nonexistent payment system other than cash. The dollarization of the economy is reflected in the balance sheets of banks, two-thirds of which are in foreign currencies.

32. Financial intermediation has also suffered from weaknesses in policy implementation at the BCC. For a number of years, the BCC has not enjoyed adequate operational autonomy and has had limited resources. Moreover, the low level of financial intermediation has made the use of conventional monetary policy instruments more difficult. This has resulted in major dysfunctions and evident weaknesses which have seriously limited the capacity of the commercial banks to provide financial services. In particular, at times the BCC has not allowed banks to use their free reserves to obtain currency, resulting in nonfungibility between the components of base money. In turn, currency rationing and the associated nonfungibility of base money has resulted in the discounting of CGF deposits in commercial banks, with CGF bank deposits trading against CGF currency at a discount (“*décote”*). In the past the use of currency rationing had been prompted by the apparent inability of the BCC to produce sufficient amounts of bank notes. However, during the recent period it would appear that the BCC has relied on currency rationing as a substitute to conventional liquidity mopping up operations which the low level of financial intermediation made difficult or costly to undertake.

### B. The Central Bank of the Congo

33. With the support of the Fund technical assistance, progress has been made in strengthening the Central Bank of the Congo’s (BCC’s) institutional capacity. During the course of the year 2002, key financial legislation was enacted which reflects international best practices in their respective areas and provides a sound framework for the DRC’s strengthening of the financial sector. In particular, a new law for the central bank was enacted to provide for its independence, and a new banking law has established sound bank licensing, liquidation, and supervisory frameworks.

34. Good progress was also made in strengthening the BCC’s operational capacity. In particular, the BCC put in place key components of a framework to program currency issues; the net income position of the BCC was consolidated in the government position; the central bank also created a Consultative Group on Monetary Policy to strengthen policy design and

implementation; at the same time, it adjusted interest rates to bring them in line with downward price developments, while maintaining them positive in real terms.

35. However, the long-standing problem of the nonfungibility between the components of base money has remained. In practice, the BCC has not been able to guarantee the convertibility in currency of the banks' free reserves, and the rate of the discount (*décote*) has been very volatile and at times high (up to 40 percent) in response to changes in the balance between the supply and demand for bank money.

36. The BCC has not been able to rely on conventional monetary instruments due to the low level of financial intermediation, and it has frequently resorted to the practice of rationing currency, and some of the monetary instruments used by the BCC to regulate overall liquidity in the system have caused distortions or have been costly. Until the end of 2002, certificates of deposits (CDs) had been used to "buy" currency from the market.[7] However, as their remuneration was brought in line with inflation, demand for CDs evaporated, since it no longer incorporated the implicit cost of the *décote*. Operations of the BCC on the *décote* market were used to replace CDs, whereby the BCC was receiving CGF notes against CGF bank money.[8] These operations proved to be costly, and they resulted in an increase of bank's reserves with the BCC and the correlated increase in the rate of the *décote*. The rate of the *décote* dropped in July as the BCC started to "liquefy" bank's reserves. Recourse to décote operations in September–October 2002 lead again to a sharp increase in the *décote* rate. Finally, while currency issues would have been less costly than *décote* operations, the BCC indicated that it did not have the foreign exchange to pay for the related expenses. In addition, currency issues could have led to additional demand for foreign exchange, while the *décote* operations resulted in the injection of bank money which could only be used for the payment of taxes. Therefore, currency issues would have needed to be supplemented with sterilization operations. One cannot rule out that the two operations combined could have generated costs in line with those of the *décote* operations.

### C. Monetary Policy in the Context of Low Financial Intermediation

**The problem**

37. Given that the discount (or *décote*) has inhibited the operations of the financial system, the return to the fungibility of base money is a necessary initial condition to developing financial intermediation in the DRC. In particular, the nonfungibility of base

[7] CDs were issued to finance the budget. However, they could only be purchased with cash, thus allowing the BCC, in its capacity of fiscal agent, to "buy" currency from the market which it could use for the payment of the government's expenses.

[8] BCC's operations on the *décote* market involved purchases of foreign currency or CGF banknotes against payments in CGF bank money at a premium.

money has had adverse consequences at the micro level of financial intermediation. Commercial banks need to make a distinction between customer deposits made in cash (cash deposits), and customer deposits resulting from transfers through the payment system (bank money deposits), the counterpart of which consists of reserves with the BCC. Therefore, three payment instruments in local currency circulate in the DRC: currency, cash deposits, and bank money deposits. While currency and cash deposits are traded at par (provided that the former are placed with a solvent bank), at times, bank money deposits are traded at a discount as compared with currency or cash deposits. The level of the *décote* varies depending on the supply (payments in bank money made by the BCC) and demand for bank money deposits (capacity of taxpayers to settle their taxes in bank money).

38. The nonfungibility of base money has also had adverse consequences at the macro level of financial intermediation. First, it has acted as a barrier to the provision by the commercial banks of payment services—for instance, checks are not accepted unless the beneficiary is willing to take the risk of having to pay the *décote* to obtain currency. Moreover, it is a barrier to banks' provision of credit to the economy. Currency is now the principal medium of settlement of economic transactions. The inaccessibility of banks' free reserves imposes an additional liquidity constraint since commercial banks cannot guarantee at all times and upon request the availability of currency to the beneficiary of a loan, even if they have free reserves with the BCC. In this context, arbitrage activity between cash and bank money may become a lucrative business.

39. In the Congolese context, the activities of the financial system are limited to the provision of payment services. The bulk of CGF transactions which are intermediated by the financial system are related to government receipts and expenditures. Therefore, any imbalance between supply and demand of CGF banknotes reflects imbalances in the public sector which are not covered by the issuance of banknotes by the BCC, hence the *décote*.[9] Indeed, in the context of a balanced budget for the public sector, the BCC should not need to have recourse to the rationing of currency. The BCC should be in a position to meet all payments requested by the government. However, the BCC has had to resort to currency issues to meet essential government expenditures, and it has not issued currency to meet the demands of commercial banks, with the result that free reserves at the BCC have accumulated (reinforcing the nonfungibility of base money) and the *décote*.

40. The imbalances in the public sector may originate from three sources. First, some payments executed by the BCC on behalf of the government are not reflected in the budget. Second, not all of the operating losses of the BCC are accounted for in the budget in a timely manner. Finally, financial institutions which participate in the collection of taxes have retained part of the government's revenues to cover expenditures which are not recorded in the budget. The weaknesses in the information systems at the BCC, in the financial

[9] "Public sector" encompasses the government budget, the BCC, and other government entities (i.e., commercial banks) which utilize, in one way or another, the payment systems.

institutions, and in the public sector have prevented an assessment of the size of these outflows.

**Establishing the initial conditions**

41. A revival of financial intermediation is critical for the success of the reform agenda currently being implemented by the authorities. In particular, it is necessary to release some of the constraints that the BCC faces in the implementation of monetary policy, in particular with regard to the control of overall liquidity conditions in the economy. More broadly, the banking system needs to support the private sector so that it becomes the engine of growth.

42. To enable banks to increase their role in payment systems, the décote must be eliminated. This is a necessary condition for smooth operation of the payment systems between solvent banks. It is also a necessary (but not a sufficient) precondition for resuming money creation (i.e., provision of credit to the private sector) in local currency.

43. Following corrective measures implemented by the authorities in November 2002, the décote was virtually eliminated. In order to prevent the décote from appearing again in the future, the BCC needs to provide bank notes on demand to the banks which have positive reserve balances. As the BCC discontinues reliance on the rationing of currency, it will need to rely on a monetary instrument to sterilize any injection of liquidity in the system which is not consistent with the monetary program. The introduction in late 2002 of BCC short-term bills has provided the BCC with such a monetary instrument (Box 2).

**Box 2. DRC: Monetary Policy Instruments**

**Reserve requirements**

Set at 2 percent of local and foreign currency-denominated deposits; they are held in local currency. This instrument has had limited impact in the past given the low level of deposits and the size of banks' free reserves. Making foreign currency deposit subject to reserve requirements would help contain currency substitution by reducing the bias against local currency deposits.

**Standing facilities**

***Liquidity providing***: commercial banks may obtain rediscount credit or emergency funding from the BCC against trade bills as collateral. However, in view of the low quality of trade bills, the BCC is considering restricting collateral accepted at the standing facilities to foreign exchange (i.e., short-term foreign exchange swaps).

***Liquidity absorbing***: This facility involves short-term BCC bills issued on demand to banks and direct investors. BCC bills offer a competitive rate of remuneration which takes into account interest rates on the dollar and inflationary expectations.

44. In the context of the current policy framework, where fiscal consolidation is one of the cornerstones of the program, strict adherence to the monthly treasury cash flow plan should prevent the buildup of imbalances in the system. This is particularly important since, at least until financial intermediation has deepened, the ability of monetary policy to

compensate for fiscal imbalances, even temporary ones, in a timely fashion may be limited. Therefore, the execution of the cash plan at the ministry of finance needs to be closely coordinated with the liquidity forecasting exercise undertaken by the BCC. This is particularly important given the potential for excess liquidity to result in downward pressures on the exchange rate and upward pressures on inflation due to the high level of the pass-through.

45. A better identification and quantification of the causes of the imbalances in the public sector will facilitate the coordination of monetary and fiscal policies, by allowing the monetary and fiscal authorities to identify early on in the process deviations from the monetary program, so that they are in a position to decide on corrective measures in a timely and coordinated fashion. Consequently, actions have been taken to rehabilitate the accounts of the BCC in order to better assess its financial position; to strengthen banking supervision in order to assess potential sources of outflows through the financial institutions participating in the collection of public sector revenues; and to strengthen public accounting procedures to enable the ministry of finance to more effectively monitor the government's account on the books of the BCC.

46. The return to the fungibility of base money will result in an increase of deposits for transactions purposes, allowing the banks to resume their participation in money creation. In such a context, the BCC will be able to use the range of refinancing instruments already at its disposal. In particular, within the target for base money provided for in the monetary program, the BCC will be able to supply banks with reserves through short-term foreign exchange swaps.

47. The restoration of the fungibility between the components of base money will involve shifting from the currency programming framework currently in place to a base money programming framework. In order to expand the current monetary programming framework, the BCC will need to strengthen the lines of communication between the various operational BCC Directorates, and between the BCC and the ministry of finance. Such a framework will allow the BCC to analyze the autonomous sources of demand and supply of base money, and to decide on the discretionary monetary operations to keep base money in line with assumptions in the monetary program. Such a framework can also be utilized for ex post analysis of actual flows, enabling the BCC to understand past trends and decide on corrective actions to be taken as required.

### D. Financial Intermediation and Dollarization

48. Past macroeconomic instability and weak BCC policies have not only marginalized the banking sector, but also have led to the development of multiple forms of dollarization in the DRC (Box 3). Bank deposits represent only about 2 percent of GDP, 80 percent of which

is denominated in foreign currencies.[10] Total bank reserves of Congo francs with the BCC exceeded the level of loans in CGF, and bank money in CGF is for the most part used in the context of the operations on behalf of the government. Transactions in the economy are also highly dollarized: they are either executed in dollars or indexed to the dollar. Accordingly, any excess supply of local currency, in light of limited demand, has a direct inflationary impact due to the high pass-through of exchange rate changes into prices, given that such excess supply results in an additional demand for foreign exchange in the market.

**Box 3. DRC: Forms of Dollarization**

Dollarization may be partial (the local currency is the legal tender but financial or real transactions can be denominated in dollars) or total (another currency—typically but not necessarily the U.S. dollar—is the predominant or exclusive legal tender). Within partial dollarization one can distinguish: *payments* dollarization (or *currency substitution*), that is the use of foreign currency for transaction purposes; *financial* dollarization (or *asset substitution*), that is, residents' holding of financial assets or liabilities in foreign currency; and *real* dollarization, or the indexing, formally or de facto, of local prices and wages to a foreign currency.

While data on residents' holdings of currency in foreign currency is not always available, dollarization can be assessed by analyzing the balance sheets of domestic banks, via the ratio of on-shore foreign currency deposits to total on-shore deposits. Loan dollarization reflects deposit dollarization but is often less intense, reflecting banks' holdings of large liquid dollar assets. Loan dollarization is generally lower than deposit dollarization reflecting the holding by banks of often sizable liquid correspondent accounts or sovereign assets abroad.

_____

Source: "Financial Stability in Dollarized Economies," IMF (2003)

49. Dollarization of deposits has occurred mostly through unremunerated foreign currency-denominated demand deposits. These deposits reflect a reluctance to hold balances in domestic currency for transaction purposes because of high inflation, rather than interest rate arbitrage. As they are converted into Congo francs, they can be utilized in the settlement of transactions.

50. In a context of limited financial intermediation, dollarization of large transactions is also encouraged by the low purchasing value of CGF banknotes. This is because the face value of banknotes in CGF was not adjusted according to the evolution of prices in the economy. For instance, the note with the highest face value (CGF 100) is equivalent to less than US$0.30. Only six years ago in 1998 when this note was introduced, it was worth as much as US$70.

51. As financial intermediation is developed, it is important to be aware of the costs and risks that increased dollarization could bring to the financial system. First, dollarization reduces the seignorage base which is associated with the issuance of domestic currency. Second, there is evidence that dollarized financial systems are increasingly vulnerable to

[10] At the end of 2001, average foreign currency deposits to total deposits in Africa reached 33.2 percent (see "Financial Stability in Dollarized Economies," IMF, forthcoming).

solvency and liquidity risks as the degree of financial dollarization increases, while real dollarization lags behind. In particular, higher bank loan dollarization could increase the risk of deterioration in the quality of bank portfolios as loans would not necessarily be issued to borrowers with foreign exchange income. Dollarization also imposes limits on the central bank's lender-of-last-resort function in the event of a run on foreign currency deposits which could destabilize the banking system (including the local currency segment). Therefore, as financial intermediation is developed, it is important to avoid certain actions which might further reinforce dollarization in the DRC, and take measures supportive of a reintermediation in local currency.

52. Monetary policy may affect the degree of financial dollarization through the interest rate spread between currencies. The authorities should, however, resist using interest rates to prop up the exchange rate. Such a strategy could generate difficulties in the long run. In particular, it would increase the lending rate for domestic currency, thus encouraging dollarization of loans with unfavorable consequences for the vulnerability of the financial sector to sudden exchange rate fluctuations, as indicated above. Therefore, monetary policy should continue to be guided by price stability objectives.

53. In low-income countries, as is the case in the DRC, most of the deposits in commercial banks are demand deposits maintained primarily for transaction purposes. Therefore, a process of reintermediation in local currency will need to be supported by the development of an efficient payments and settlement infrastructure for local currency denominated transactions. In addition, as the RDC consolidates the gains made in stabilizing the macroeconomic framework, the demand for savings instruments in local currency will rise. In such a context, the offer by the BCC of a short-term instrument, as discussed above, will help the process of reintermediation in local currency by restoring parity between the CGF and the dollar at a given inflation rate and anticipated depreciation in the exchange rate.

54. Regarding currency in circulation, the face value of CGF banknotes must be re-evaluated with a view to ensuring a better match with the needs that arise for transaction purposes. Bank notes of larger denominations than those currently in use should be introduced as soon as possible so as to allow the use of the Congo franc in large transactions. At the same time, the BCC will need to provide banknotes of smaller denominations which are still in use by a large fraction of the population.

55. Finally, it is important to recognize that the capacity to find outlets for stable demand deposits and to generate revenue will also depend on the environment in which credit activity is carried out. Accordingly, it is essential that the DRC authorities make every effort to build the pillars of sound banking activity by complementing the new banking law that has been promulgated with the following measures: (i) completion of bank restructuring; (ii) establishment of prudential regulation and bank supervision processes in line with international standards; (iii) completion of public enterprise sector reform; (iv) creation of a business environment conducive to the development of an efficient private sector; and (v) promotion of an appropriate legal framework governing contracts and efficient judicial administration.

## E. Conclusions and Lessons

56. The following conclusions and lessons can be derived from the experience of the Democratic Republic of the Congo:

- Despite the significant progress made in macroeconomic stabilization, dollarization of the economy, and of the financial system have remained high. Furthermore, financial intermediation has not resumed and the commercial banks continue to play a limited role in the payment system and in providing credit to the economy. Consequently, the conduct of monetary policy has been difficult, and fiscal discipline has been key to the stabilization of the macroeconomic framework;

- Discontinuing reliance on the rationing of currency by the BCC as a monetary policy instrument, which has resulted in the nonfungibility between the components of base money, is a necessary initial condition for monetary policy to be a relevant exercise;

- As the BCC discontinues reliance on the rationing of currency, it will need to rely on monetary instruments to sterilize any injection of liquidity in the system which is not consistent with the monetary program;

- While the BCC started offering short-term bills to the banks to adjust overall liquidity in the system, until financial intermediation has deepened, the ability of monetary policy to compensate for even temporary fiscal imbalances in a timely fashion may be limited. Therefore, the execution of the cash plan at the ministry of finance needs to be closely coordinated with the liquidity forecasting exercise undertaken by the BCC; and

- Further progress in centralizing all the operations of the public sector into the budget would facilitate the conduct of monetary policy, as would enhancing the quality of financial data. Progress in these areas, by facilitating a timely identification of the sources of public sector outflows, will enhance the coordination of monetary and fiscal policies, and facilitate systemic liquidity management by the BCC.

# III. EGYPT[11]

## A. Path to the Adoption of Money Market Operations

57. Until the early 1990s, Egypt's banking system was highly controlled and the financial system was characterized by a high degree of governmental planning and control. The Central Bank of Egypt (CBE) maintained interest rate and credit controls on the banking system. Banks were subject to specific credit limits, and public enterprises received loans on preferential terms. Highly negative real rates of return on domestic savings deposits contributed to a heavily dollarized economy. By 1990/91, slightly more than half of all deposits were denominated in foreign currency. Banks were subject to a relatively high reserve requirement of 25 percent on domestic currency liabilities, and a somewhat lower 15 percent on foreign currency deposits, which encouraged foreign currency holdings. Government deficits were largely financed by the CBE, which thereby accumulated a large stock of unmarketable government securities with a low interest rate.

58. Faced with high inflation, fiscal imbalances and weak economic performance, the authorities began an economic reform program in early 1991, designed to enhance market forces in financial markets and in monetary policy implementation. An auction for 91-day treasury bills was introduced in January 1991, with auctions of 6-month and 12-month bills introduced within the following 15 months. At the same time, bank lending and deposit rates were liberalized, and within the next two years credit ceilings on bank lending were removed. The reserve requirements were reduced to 15 percent from 25 percent on domestic currency deposits and to 10 percent from 15 percent on foreign currency deposits. In addition, CBE lending to banks was tightened by introducing a penalty rate on such lending of 2 percent over the most recent treasury bill auction rate. The reform program also included introduction of prudential regulations for banks and strengthened bank supervision. In addition, a number of banks were recapitalized and the elimination of preferential lending schemes reinforced market forces in the allocation of credit. The program, including fiscal and monetary reforms, led to a number of positive effects: inflation dropped dramatically, real interest rates became positive, and the share of foreign currency deposits in broad money declined significantly as confidence increased. The comprehensive package of reforms resulted in a turnaround in perceptions of the Egyptian economy, contributing to sizable and persistent capital inflows.[12]

---

[11] Prepared by George Iden (former Senior Economist, MFD), based on MFD work in the context of the FSAP for Egypt and the December 2002 MAE technical assistance mission to Egypt on strengthening the institutional framework for implementing monetary policy that was headed by Kal Wajid. The study covers developments up to end 2004.

[12] For detailed discussion of the Egyptian reforms and their positive effects, see Alexander, Baliño, and Enoch (1995); and Handy and others (1998).

## B. Monetary Policy Environment

### Institutional environment and monetary policy framework

59. During the 1990s, the primary objective of the CBE with respect to monetary policy was to "ensure the stability of the Egyptian currency." In practice, this meant fixing the nominal exchange rate of the Egyptian pound with respect to the U.S. dollar, a policy that succeeded in reducing the inflation rate from around 20 percent to the low single digits for a sustained period. However, excessive credit growth during the late 1990s combined with external imbalances precipitated a series of devaluations (in the context of an exchange rate band system) starting in 2001, followed by a move to a more flexible exchange rate regime in 2003.[13]

60. In parallel to the moved away from giving priority to the exchange rate as the nominal anchor, the CBE has made preparations to implement an inflation targeting framework. Such a framework is expected to be in place in the medium term. During the transition period, the CBE is adopting an implicit inflation targeting regime where M2D (M2 domestic) is used as an intermediate target. In addition, the CBE has established a monetary policy committee (MPC) that consists of 9 members: the governor and his two deputies, and 6 other members chosen on the basis of their expertise in the areas of monetary economics and financial intermediation. The conduct of monetary policy is vested in the MPC.

61. The government enacted a revised banking law in 2003 (the Law on the Central Bank and the Banking and Monetary System), which specified that the objective of monetary policy was to "achieve price stability [...] in the framework of the Government's general economic policy." The current presence on the CBE's Board of Directors of three members representing the Ministries of Finance, Planning, and Foreign Trade may dilute the central bank's independence somewhat, although they are only three individuals out of a total Board membership of 15. The CBE is independent in terms of instruments and the numerical representation of targets. The targets themselves should be jointly agreed upon by the central bank and the government.

## C. Financial Market Infrastructure

62. Egypt has some 57 banks (Table 3), although the commercial banking sector is dominated by 4 state-owned banks. The latter account for slightly more than half of total commercial bank assets and a somewhat higher share of deposits since these banks have a

[13] The real effective exchange rate depreciated by over 40 percent between mid-2002 and early-2004.

relatively large deposit base.[14] The dominance of the state in the banking system has, and continues to, act as a significant impediment to the role of market forces in the intermediation of funds and the allocation of credit.

Table 3. Egypt: Financial System Structure

| (June 2004) | Number | Assets (LE millions) | Percent of Total Assets |
|---|---|---|---|
| Banks | | | |
| Private | 49 | 269,586 | 40.2 |
| Domestic (private & joint venture) | 35 | 232,745 | 34.7 |
| Foreign (branches of foreign banks) | 14 | 36,841 | 5.5 |
| State-owned | 7 | 363,555 | 54.3 |
| Commercial | 4 | 322,470 | 48.2 |
| Specialized | 3 | 41,085 | 6.1 |
| Institutional investors 1/ | | | |
| Insurance companies | 20 | 18,614 | 2.8 |
| Pension funds 2/ | 617 | 14,199 | 2.1 |
| Collective investment schemes 3/ | 15 | 2,669 | 0.4 |
| Money market mutual funds 3/ | 6 | 1,170 | 0.2 |

1/ The equity market capitalization (market value of shares) amounted to L.E. 172 billion or 36.4 percent of GDP at end June 2004.
2/ Refers to private funds supervised by EISA.
3/ Actually in business.

63. Approximately 14 banks engage in an active interbank money market. These banks account for about 85 percent of the market. Generally, the interbank loans are not collateralized, although there is an active repo (repurchase agreement) market among banks as well. The interbank interest rate is volatile and reacts strongly to changes in excess reserves, in contrast to the interest rate on treasury bills which is very sticky and often goes for long periods with very little movement.

64. Treasury bills are auctioned regularly—weekly for 91-day bills, nearly weekly for 182-day bills, and occasionally for one-year bills. The mode of the auctions is a variable-priced one in which the bidders pay the price that they successfully bid. The treasury bills are mainly held by commercial banks, and by the CBE. The auctions are conducted by the CBE on behalf of the MOF. The results are reported in the newspaper, with the reported yield as the weighted average of the successful bids. Interest rates in these auctions have at times in the past shown very limited variability. Moreover, the rates in the treasury bill market generally do not appear to reflect movements in rates in the interbank market. Since

[14] Plans to privatize these banks have been prepared. In particular, the authorities have announced in September 2004 that one of the public sector banks, which was identified, was scheduled to be privatized.

the move to a more flexible foreign exchange regime in early 2003, treasury bill rates have been much more flexible, and by May 2003 had moved up to the 12–13 percent range in line with rates in the interbank market.[15]

65. The MOF issues fixed rates bonds sporadically. Outstanding maturities include 3-, 7-, and 10-year bonds. There is a legal limit of LE 15 billion on new outstanding bonds that are nontaxable. Bonds can be traded over the stock exchange, but volumes are light. The secondary market for government securities is relatively shallow. Bonds must be traded on the stock exchange. The introduction of an electronic book entry system for treasury bills in June 2002 appears to have encouraged secondary market development. In addition, on July 2004 the CBE started a primary dealers systems, with 13 banks approved to operate as primary dealers. A unit has been set up in the MOF to consider primary dealer applications from banks. Primary dealers that are banks are expected to be regulated by the CBE, and nonbank primary dealers by the Capital Market Authority.

66. Regarding the foreign exchange market, in conjunction with the move to a more flexible exchange rate already mentioned, the CBE began allowing a subset of banks to trade foreign exchange on an informal, voluntary basis. An interbank convention on foreign exchange trading has been adopted and ratified by banks in 2004. It is expected that formalizing the foreign exchange interbank market through the adoption of the convention will help minimize this risk of a resurgence of a large parallel market spread and its attendant effects on confidence.

### D. Monetary Policy Instruments

67. As shown in Box 4, the CBE has a number of money market instruments. It has not used explicitly administrative measures for almost a decade. The discount window is available for each bank to discount treasury bills up till maturity without any limitations; banks use it only occasionally, in part because of the relatively high cost. Repo operations, which were first introduced in 1993, have been used extensively by the CBE to inject liquidity in a flexible way since the short maturity of the repos has enable the CBE to reduce liquidity quickly by simply waiting for outstanding repos to mature. In order to deal with a situation of liquidity surplus in the system, in September 2002 the CBE introduced deposit auctions. This was an important addition to the CBE's set of monetary instruments, since before that it had essentially no instrument to withdraw liquidity, and in 2004 the CBE started absorbing liquidity with reverse repos based on Treasury bills as collateral. Furthermore, in view of the volatility of the interbank overnight rate, the Monetary Policy Unit of the CBE is exploring the possibility of introducing a corridor for interbank market

[15] The upward trend in interest rates helped to stabilize the exchange rate and the premium in the parallel market fell steadily and essentially disappeared by October 2004, together with strong current account inflows.

rates, and work is also underway on refined methods to assess the stance and effectiveness of monetary policy.

### Box 4. Egypt: Monetary Policy Instruments

**Reserve requirements**

Set at 14 percent for Egyptian pound deposits and 10 percent for foreign currency deposits (with maturities of less than three years in the first case only). Reserves on domestic deposits are not remunerated; those on foreign currency deposits are remunerated at LIBOR. Use of treasury bills to satisfy the reserve requirement was discontinued in March 2003. Vault cash does not count toward required reserves. Reserve averaging is permissible over a two-week maintenance period.

**Standing facilities**

***Discount window:*** it is occasionally used, in part because if its high cost to banks.
***Overnight repo facility:*** accessible by all banks at most once during any week and within a LE 100 million ceiling. The rate charged is the discount rate.

**Money market instruments**

***Central bank deposit auctions*** were introduced in September 2002 as open market type operations. They may be announced on any weekday and in practice occur about three times a week, although the frequency varies. Fixed volume auctions are offered. Discretion is used in determining the maturity of auctions, although generally longer maturities are offered when there is a greater need to absorb liquidity. In particular, maturities were increased from one- and two-weeks initially, to four-week, then three- and six-months in response to increased need to absorb liquidity.
***Treasury bill auctions:*** the CBE can ask the MOF to issue treasury bills in excess of its needs and to deposit the proceeds in an account with the CBE; however, this technique is rarely used.
***Repo operations:*** the CBE uses repos to provide temporary liquidity to banks, with treasury bills as collateral. Duration ranges from one to 14 days.

***Reverse repo operations***: the CBE uses reverse repos to absorb liquidity from banks, with treasury bills as collateral. Reserve repos were introduced in 2004 and they are gradually replacing CBE deposit auctions.

## E. Conclusions and Lessons

68. The main lessons from Egypt's experience with reliance on money market operations for the conduct of monetary policy are the following:

- Past attempts to manage interest and exchange rates have limited the scope for reliance on money market operations for the implementation of monetary policy. The move to a flexible exchange rate regime in 2003, which led to interest rate flexibility, has allowed greater reliance to be placed on money market operations.

- Similarly, the planned privatization of one of the big four public sector banks can be expected to increase the effectiveness of money market operations for the implementation of monetary policy, since the measure will enhance the market orientation of Egypt's financial sector.

- The CBE was able to gradually modernize and strengthen its instruments, in particular to address the challenges to liquidity management arising from liquidity surplus in the system. The CBE first introduced deposit auctions, and subsequently supplemented those operations with reverse repo operations.

# IV. THE KYRGYZ REPUBLIC[16]

## A. Monetary Policy Environment

### Background and motivation for adopting money market instruments

69. At the time of independence in 1991, the Kyrgyz Republic had a planned economy modeled after the former Soviet Union. The National Bank of the Kyrgyz Republic (NBKR) allocated credit according to the financial plan among banks and sectors. Interest rates were controlled, and the currency was the Russian ruble.

70. Market-related reforms were introduced beginning in 1992–93. In May 1993, the Kyrgyz Republic was among the first republics of the former Soviet Union to introduce its own currency, the som. Market reforms were introduced to improve efficiency, including removal of controls on interest rates. A reserve requirement system and credit auctions were introduced in 1992 and 1993, respectively, to manage overall liquidity in the system, and by mid-1994 virtually all of the refinancing was being auctioned. Treasury bill auctions were introduced in 1993, although most of the domestic credit for the government was financed by the NBKR.

71. As the interbank market developed, banks began relying on it for their liquidity needs, and the NBKR began phasing out the credit auctions which were stopped completely in January 1997. NBKR subsequently introduced a Lombard facility and also an emergency credit facility. In 1997, repos were introduced. In 2000, central bank bills were introduced as an instrument of monetary policy, and the NBKR began holding weekly auctions. Also, that year, the NBKR introduced foreign exchange swaps which have at times been used extensively as a monetary tool since then.[17] In 2001, the reserve requirement was reduced from 20 percent to 10 percent.

### Frameworks for monetary policy implementation

72. The primary objective of the NBKR, as defined in the Law on the National Bank of the Kyrgyz Republic of 1992 (and confirmed in a new law adopted in 1997) is to maintain price stability. Under that legislation, the NBKR was granted operational independence.

---

[16] Prepared by George Iden (former Senior Economist, MFD), based on MFD work in the context of the July 2001 technical assistance mission on monetary operations that was headed by Greta Mitchell Casselle; MFD work in the context of the FSAP for The Kyrgyz Republic; and on EBS/01/85, SM/03/47, and SM/03/43. The study covers developments up to end 2003.

[17] In 2001, for example, the NBKR conducted swap transactions totaling approximately US$38 million, with average maturity of five days.

Specifically, all government agencies were prohibited from interfering with issues under the jurisdiction of the NBKR including monetary policy implementation.

73. In the Kyrgyz Republic, monetary policy is implemented in the context of a managed floating exchange regime with no preannounced path for the exchange rate, whereby the NBKR intervenes in the market with a view to smoothing fluctuations in the value of the som and to meeting international reserve targets. The Kyrgyz Republic accepted Article VIII in March 1995, thus permitting exchange rate convertibility for current transactions. However, it maintains controls on capital transactions.

74. The NBKR uses broad money including foreign currency deposits as its intermediate target and the monetary base as its operational target. The monetary aggregates are targeted on a quarterly basis, while the weekly operations target is excess reserves in the banking system.

**Macroeconomic performance**

75. The Kyrgyz Republic is relatively small, with a population of about 5 million. Total GDP in 2001 was approximately US$1.5 billion, and per capita GDP was about US$300 per year. The Kyrgyz Republic's macroeconomic performance has been strong in recent years. Like other countries of the former Soviet Union, following its independence, the Kyrgyz Republic suffered a period of high inflation and falling output. Inflation was over 2000 percent in 1992 and about 1000 percent in 1993. However, the Kyrgyz Republic stands out as one of the pioneers of economic reform, and in 1994 and the following years, inflation has been on a downward trend with the exception of the inflationary shock from the Russian financial crisis of 1998.[18] The inflation rate declined significantly over the past three years. The 12-month inflation rate fell to 3.7 percent in 2001 from 9.6 percent in 2000 and 39.9 percent in 1999, mainly reflecting appropriately tight monetary and fiscal policies. The fiscal adjustment in 2001 was impressive, with the deficit falling from 9.2 percent of GDP in 2000 to 5.0 percent in 2001. The current account deficit declined to 1.0 percent of GDP in 2001 from 5.7 percent in 2000 (versus 15.0 percent in 1999). The real GDP growth rate was approximately 5½ percent per year in 2000 and 2001.

**Structure of the financial system**

76. The financial sector is dominated by a banking sector with weak penetration. As of end-December 2001, the total assets of the banking system were equivalent to only about 7 percent of GDP (Table 4). Banks in the Kyrgyz Republic have shown a limited capacity to attract deposits, and lending is geared to the short term, owing to underdeveloped credit skills, and low confidence in the banking system. Banking sector problems have arisen frequently since 1993, when solvency problems first emerged after the NBKR tightened

[18] For a discussion of the Kyrgyz experience in the early years following independence, see Snoek and van Rooden (1999).

monetary policy to control inflation. In 1995, regulations were introduced requiring on-site inspections and provisioning for doubtful loans, which led to the revelation that about one-half of all commercial banks had negative net worth and about 60 percent of the banking sector's loans were considered unrecoverable.

Table 4. The Kyrgyz Republic: Financial System Structure

| | July 2002 | |
|---|---|---|
| | Number of Institutions | Assets (million Soms) |
| Commercial Banks | 19 | 5,897 |
| Assets-to-GDP (percent) | 7.4 | |
| Deposits-to-GDP (percent) | 3.5 | |
| Special credit institutions | 10 | |
| *of which* KAFC | | 1,005 |
| Credit unions | 357 | 311 |
| Insurance companies | 24 | 124 |
| *of which* State-owned | – | |

Source: NBK and Ministry of Finance

77. In late 1995, a comprehensive financial sector reform program was introduced, aimed at liquidating and restructuring insolvent banks and improving the legislative and regulatory framework. The program incorporated a wide range of measures including a new Central Bank Law, a Banking Law, a Bankruptcy Law, and a mandatory chart of accounts for all banks. By mid-1998, these reforms led to improvements in bank intermediation, including the emergence of a small core of healthy banks. Nevertheless, weaknesses remained, including insufficient and poorly enforced bank regulation and supervision, due in part to weaknesses in financial reporting by banks.

78. Against this background, the economy and the banking system were hit by the Russian crisis of 1998, which had a negative impact on the banking system, both directly and indirectly through the subsequent devaluation of the som, the collapse of one of the largest industrial conglomerates, and the bankruptcy of two of the country's largest banks. The Russian crisis also revealed the gaps in institutional capacity and corporate governance, delays in the development of financial and legal infrastructures, deficiencies in banking supervision, and the lack of banking services.

79. As of July 2002, 19 commercial banks were operating in the Kyrgyz Republic, including several subsidiaries of foreign banks. The NBKR is encouraging consolidation of these banks. During 1999 and 2000, banks experienced substantial declines in asset quality. However, over the past year gross nonperforming loans as a percentage of total loans have stabilized at about 13 percent (about 5 percent net of provisions), bank capitalization has increased substantially, and banks have generally returned to profitability. Two banks, accounting for approximately 14 percent of total bank assets, are state-owned, with the remainder privately owned. The banking sector is not highly concentrated, with the three largest banks accounting for only about 31 percent of total bank loans.

80. The volume of funds intermediated by the commercial banking sector is still very limited. Banks lend funds in both national and foreign currency, primarily to a few enterprises in the industrial and services sectors. There is an acute shortage of basic financial services, including depository and payment services and credit for the majority of the population. Services are especially limited or nonexistent in rural areas.

81. The Basel standards on capital adequacy were adopted in June 1995, and new regulations passed in December 1998 increased capital requirements to establish a new bank. The NBKR, which is responsible for banking supervision, has had difficulties with regulatory enforcement. At least part of the problem arises because of weaknesses in the judicial system which have resulted in pressures brought on the courts by vested interests. Other weaknesses can be traced to accounting problems and to the need to improve the legislation covering bankruptcy and liquidation. There has been some recent progress, however, since in 2002 a new law was enacted which requires the courts to accept the balance sheets of commercial banks as certified by the NBKR in bankruptcy cases.

82. The capital market in the Kyrgyz Republic is at an early stage of development and is not a significant source of funds. The Kyrgyz Stock Exchange (KSE) opened in May 1995, but market capitalization has grown slowly, from the equivalent of US$4 million at end-1999, to US$33 million in May 2001 (2¼ percent of 2001 GDP).

83. The market for government debt securities is underdeveloped. The treasury bill market contracted sharply after the Russian crisis in 1998, with the volume of treasury bills held by commercial banks falling from approximately som 490 million in June 1998 to som 86 million in June 1999. Confidence in government securities has suffered because the government has not always paid promptly when debt matures, In addition, the market for government debt was soured by an episode a few years ago when a bond issued by a government entity failed and the government did not stand behind the bond. The market has begun to recover, with banks' holdings of treasury bills increasing to som 255 million at mid-2001 and to som 460 million in June 2002, but this was still equivalent to only 0.5 percent of estimated 2002 GDP. In December 2002, in the context of the regularization of financial relations between the NBKR and the Ministry of Finance, an additional som 850 million of treasury bills were issued. In addition, all noninterest-bearing securities held by the NBKR were restructured according to a MFD technical assistance mission's recommendations.

84. While payments on maturing treasury bills have always been met in a timely fashion, banks and other investors for a time lost confidence in the treasury bills. Several factors may have contributed to the apparent lack of confidence and/or inefficiencies in treasury bills management. In particular, trust in som-denominated government debt became weaker after a default in 1998 by a public enterprise believed to have had a government guarantee. In addition, interest payments on a few issues of government bonds and bond redemptions have sometimes been late.

## B. Monetary Policy Instruments

85. The NBKR uses money market instruments, and has developed several such instruments to manage liquidity (see Box 5). In part because of the thin markets for government and NBKR securities, the NBKR relies heavily on foreign exchange spot and swap transactions as instruments of monetary policy. The NBKR's other instruments are reserve requirements, weekly auctions of NBKR bills, and repo operations. In addition, the NBKR has a noncollateralized overnight lending facility for banks. In order to sterilize a recent inflow of foreign exchange, the government increased its deposits with the NBKR in view of the limited potential for conventional open market operations.

86. The NBKR has not developed its liquidity projections, and does not forecast liquidity on a daily basis. One of the main weaknesses in the liquidity projections exercise is the absence of adequate short-term projections of the government's cash flow. Consequently, interbank interest rates have sometimes been particularly volatile, and exhibit seasonal patterns.[19] The NBKR does not attempt to maintain an interest rate corridor for rates in the interbank market. In addition, income averaging for the reserve requirement scheme is also not sufficient to stabilize interbank rates.

## C. Market Infrastructure

87. The NBKR's development and use of money market instruments is particularly constrained by shallow financial markets. In addition to the relatively small size of the stock of government securities (approximately 5 percent of GDP), one of the main reasons for the thin market in government securities is that the bulk of the domestic public debt is held by the NBKR in the form of noninterest-bearing securities with no specified maturity. As of mid-2001, non-NBKR investors held government securities amounting to only about 0.8 percent of GDP, while the NBKR held government securities amounting to approximately 4 percent of GDP.[20] The market for NBKR bills is even shallower than the market for government securities, with the outstanding stock of NBKR bills amounting to approximately som 16 million or less than 0.1 percent of GDP.

---

[19] A change in the NBKR's procedures for setting interest rates on "overnight" credits, which took place in March 2002, may have contributed to a recent reduction in volatility in interbank rates.

[20] According to an agreement between the NBKR and the Ministry of Finance, these government securities will be transformed into marketable treasury bills, and medium term government bonds which will gradually be redeemed over a ten-year period. The remuneration on the bonds will be approximately inflation plus one percent, and they can be used for repo operations.

### Box 5. The Kyrgyz Republic: Monetary Policy Instruments

**Reserve requirements**

Set at 10 percent of all deposit balances, except domestic interbank deposits. Requirements are the same for domestic and foreign currency deposits, and reserves for foreign currency deposits are held in domestic currency. They are computed over a two week period, and reserve averaging is permitted. They are remunerated based on the weighted average deposit rate for each bank.

**Standing facilities**

NBKR maintains a noncollateralized overnight lending facility for banks. Lending must meet reserve requirements, and is stands at a penalty rate of 1.2 times the average rate at the previous auction for the 28-day NBKR bills. Risk for the NBKR is minimized by the manner in which the facility for selling NBKR bills is operated. NBKR funds are added to a bank's account as the last transaction of one day and withdrawn as the first transaction the following day.

**Money market operations**

***NBKR bills*** are auctioned weekly, on a very limited basis; treasury bills are also auctioned weekly. Both auctions are at a variable price.

***Repo and outright transactions in government securities*** are conducted on a limited basis, due to the limited quantities of government and central bank securities. The NBKR's portfolio included som 2.38 billion in nonmarketable debt, in accordance with the Law "On Restructuring the Government's Debt to the NBKR," and which the NBKR used in reverse repo transactions for monetary purposes.

***Spot and especially swap operations in foreign exchange market*** are frequently used for monetary purposes. ***Government deposits with the NBKR*** have been varied for liquidity purposes, because of limited quantities of securities for conventional open market operations.

88. While steps have recently been taken that will increase the amount of treasury bills in the system, the thin market in for these bills has in the past contributed to a scarcity of suitable collateral, both for NBKR lending operations and for the interbank market; and has constrained the NBKR's use of repo operations (and reverse repo operations) as an instrument of monetary policy. In addition, the segmented interbank market, caused in part by the presence of weak banks, has interfered with the proper distribution of liquidity injections among banks. The Kyrgyz Republic is also highly dollarized, with approximately 60 percent of deposits in foreign currency; currency holdings somewhat exceed deposits, reflecting a low, though somewhat improving, level of trust in banks.

## D. Channels of Transmission of Monetary Policy

89. The two main channels through which monetary policy changes are transmitted are foreign exchange market adjustments and credit availability and cost. Buying foreign exchange or engaging in swap operations tends to increase domestic liquidity. Also, since The Kyrgyz Republic has a flexible exchange rate system, an expansive monetary policy would tend to depreciate the som, which would stimulate exports and retard imports. A contractionary policy would have the reverse effects. The effects would also be felt through the banking system: expansionary policy would increase the level of excess reserves, which would put downward pressure on the interbank interest rate and reduce the cost of lending.

There would also be effects on the level of credit, resulting from changes in the availability of credit.

### E. Conclusions and Lessons

90. The main lessons from The Kyrgyz Republic's experience with reliance on money market operations for the conduct of monetary policy are the following:

- Money market operations have been conducted in the context of a shortage of securities and conventional collateral by means of foreign exchange operations, especially foreign exchange swaps. More recently, authorities have taken steps to increase the quantity of treasury bills through phased securitizing of government debt held by the NBK.

- Monetary policy implementation has been hindered by weak liquidity projections, in part because of undeveloped projections of budgetary flows.

- The small stock of marketable government and central bank securities and resulting thin markets have retarded NBKR's development of open market operations and have limited collateralized lending including repo and reverse repo operations. However, authorities have taken steps gradually to increase the stock of marketable government securities.

# V. MALTA[21]

## A. Path to Reliance on Money Market Instruments

91. Malta's gradual process of financial liberalization started in 1990 and is to be fully completed upon EU accession in 2004. Policy measures included the elimination of price controls, liberalization of interest rates, lifting of capital controls, introduction of market-based monetary policy instruments, and reduction of the government's involvement in the financial sector. At the outset, interest rates were controlled and rigid. Nominal rates have hardly changed over nearly three decades. The Central Bank of Malta's (CBM) only other monetary policy instruments, in addition to interest rate controls, were liquidity requirements. All deposit money banks were state-owned, which severely reduced the scope for competition. Financial markets were nonexistent. No interbank borrowing took place and there was no real market for government securities and the few other instruments. The banking sector was very liquid as a result of balance-of-payments surpluses.

92. Financial market liberalization preceded capital account liberalization. The reforms of the heavily regulated financial system commenced in a favorable economic environment with large levels of international reserves, low inflation, and a low level of public debt. The first steps taken by the CBM between 1990 and 1994 included tying bank lending rates to the CBM's discount rate; eliminating preferential lending arrangements (except for mortgage rates that remained in effect for social reasons until April 2000); and removing ceilings for bank deposit rates (but at the same time setting minimum rates for savings deposits). Trading of government stocks and equities commenced on the Malta Stock Exchange in 1992. The formerly administered treasury bill rates were determined by auctions. A new Banking Act was approved that brought banking legislation in line with EU practice. The amended CBM Act empowered the CBM with more authority to carry out monetary policy, but fell short of providing it with full independence.

93. Capital account liberalization which commenced in the early 1990s was extended, and Malta took further steps to liberalize and develop the financial system. The government reduced its equity participation in the banking system to ultimately a 25 percent stake in one commercial bank by 1999. Lending and deposit rates were gradually liberalized. Remuneration of banks' excess reserves was eliminated, and reserve requirements were made more flexible by allowing reserve averaging and lengthening the maintenance period. The weekly trading sessions for government securities on the Malta Stock Exchange (MSE) were replaced by daily sessions. Treasury bill auctions were conducted regularly and longer maturities were introduced. On the foreign exchange market, the CBM started to quote exchange rates on a real-time basis in 1995. It introduced foreign exchange swaps as an additional tool.

---

[21] Prepared by Andrea Schaechter (Economist, MFD), based on MFD work in the context of the FSAP for Malta. The study covers developments up to end 2003.

## B. Monetary Policy Environment

### Institutional framework

94. The newly amended CBM Act, effective as of October 1, 2002, assigns the CBM the primary objective of price stability. Before the amendment, the Act assigned the CBM multiple objectives but the CBM interpreted its mandate to maintain price stability by using the exchange rate as the nominal anchor. The amendments, all in line with requirements for EMU membership, have also strengthened the legal and operational independence of the CBM, and explicitly prohibit central bank financing of public sector deficits.

95. The Governor of the CBM is solely responsible for decisions on monetary policy. He is advised by the newly established Monetary Policy Advisory Council. The Governor and Deputy Governor are appointed by the President of Malta, on advice of the Prime Minister, for a period of five years, and are eligible for reappointment. Together with three other directors they form the Board of Directors. The other three directors are appointed by the Prime Minister for a period of five years and are also eligible for reappointment.

### Monetary framework

96. The CBM operates monetary policy within a framework of an exchange rate peg. The Maltese lira has been pegged to a currency basket since 1972. The weights of the three currencies currently in the basket (euro, U.S. dollar, and pound sterling) reflect Malta's external trade pattern. The lira was devalued only once, after the ERM crisis in 1992. The exchange rate peg has contributed to moderate inflation in Malta. Since 1996, inflation averaged 2.6 percent, close to that of the currency basket countries.

97. The CBM's flexibility in conducting monetary policy is also constrained by a required minimum reserve cover for CBM liabilities. Under the CBM Act, the CBM is obliged to maintain foreign exchange reserves at a minimum of 60 percent of the CBM's liabilities (monetary base plus other deposit liabilities). The CBM's stock of official reserves has over many years fully covered the monetary base and recently increased due to the balance-of-payments surplus (143 percent at end-2002). Official reserves in terms of broad money stood at 29 percent at end-2002 and cover about 9 months of imports.

### Macroeconomic performance

98. Malta's economy is highly dependent on a few sectors, such as tourism and manufacturing, and is thus heavily influenced by external developments. Malta is a small island economy with a population of 395,000 and a GDP per capita of over US$9,200 (one of the highest among the EU accession countries). Tourism accounts for about 30 percent of GDP and manufacturing for about 25 percent. Electronics products make up 75 percent of manufactured exports. The government's involvement in the economy remains high, notwithstanding the ongoing reform strategy of reducing the government's stake in enterprises. Public administration and state-owned enterprises account for about 23 percent of GDP and employ about one-third of Malta's work force.

99. Strong growth in deposits combined with a slowdown in credit expansion have led to a rapid build-up of liquidity in the banking system since 2001. The growth in deposits has accelerated to annual rates exceeding 10 percent due to widening interest rate spreads over the basket currencies, the weak performances of equity markets, the lack of alternative investment vehicles in Malta, and a tax amnesty in 2002 that encouraged some capital to flow back to Malta. On the other hand, the sluggish economy has markedly weakened the demand for credit, especially in the private sector, to growth rates below 3 percent in 2002 (compared with more than 10 percent in each of the previous four years).

**Structure of the financial system**

100. The banking sector is by far the largest segment in Malta's financial sector (Table 5). It also dominates the insurance and securities industries, through subsidiaries and affiliates in these sectors. Malta has not experienced any banking crisis in the past. The banking sector consists of a domestic and an international component that operate independently of one another. The domestic component is highly concentrated, and consists of four banks. Two of them are roughly the same size. They dominate the system, representing more than 90 percent of domestic system assets, with similar shares of the deposit and loan markets for residents. The two large banks also dominate the insurance and securities industries, through subsidiaries and affiliates in these sectors. Government involvement in the banking system has been significantly curtailed. The international component consists of nine international banks and one offshore bank that deals with nonresidents in foreign currency. Except for one bank, the international banks consist mostly of branches and subsidiaries of Austrian and Turkish banks, which have established offices in Malta mainly for tax purposes. There are no significant links to the domestic banking system. The last offshore bank is relinquishing its offshore status at end-2003.

Table 5. Malta: Financial System Structure

| (2002) | Number | Assets (Lm millions) | Percent of Total Assets | Percent of GDP |
|---|---|---|---|---|
| Deposit money banks | 5 | 3,911 | 58.0 | 232.1 |
| International banks | 9 | 2,569 | 38.1 | 152.5 |
| Off-shore banks | 1 | 266 | 3.9 | 15.8 |
| Insurance companies 1/ | 21 | 251 | 3.8 | 14.9 |
| Life | 5 | 168 | 2.6 | 10.0 |
| Nonlife | 16 | 82 | 1.3 | 4.9 |

Source: Central Bank of Malta and Malta Financial Services Authority.

1/ Since three insurance companies are composite companies, the subtotals of life and nonlife companies do not add up to the total insurance companies. Data for assets are end-2001.

101. The level of financial intermediation in Malta is relatively high: M2 exceeds 150 percent of GDP and credit extended to the private sector exceeds 90 percent. To a very large extent, this results stem from the many years of stability in the banking system, which has not experienced any major crises or economic/financial shocks.

102. The Maltese banking system is healthy but exposed to the country's narrow economic base. Bank loan portfolios are highly concentrated. Loans to the tourism, retail trade, manufacturing, ship repair/shipbuilding, and construction are the most important industrial sectors plus loans to households. Lending to nonresidents is insignificant, and more than 95 percent of lending to residents is denominated in Maltese lira.

## C. Market Infrastructure

### Maltese lira money markets

103. Turnover in Maltese lira money markets is very low due to the excess liquidity in the banking system and the small number of banks. Money markets consist of an unsecured cash market and a treasury bill market. There are no interbank repo or sell/buy-back markets, and no other instruments such as commercial papers or certificates of deposits. In the past, the lack of legislation that recognizes netting in times of bankruptcy has prevented the development of a repo market, but new legislation has been put in place since 2003.

104. Interbank lending is unsecured and has been dormant since 2001. Turnover in 2002 was only 6 percent of GDP, less than half of the already low turnover in 2001. All four banks have credit lines with each other which are typically reviewed on an annual basis. Deals are arranged over the telephone. The CBM monitors interbank exposures by requiring banks to report their deals. Interbank transactions are highest for the one week maturity bracket.

105. Interbank interest rates are closely aligned with the CBM Central Intervention Rate. They have exhibited hardly any volatility because all banks tend to be on the same side of the market. In September 2002, the CBM launched the weekly fixing of interbank rates MIBOR (Malta Interbank Offered Rate) and MIBID (Malta Interbank Bid Rate) in the following tenors: overnight, one week, one month, two months, three months, six months, nine months, and one year. The rates have so far been purely indicative, since no trades have been conducted. Nevertheless, the fixing should prove useful once liquidity conditions change and should then be conducted on a daily basis.

106. The Maltese Treasury holds weekly auctions for treasury bills with a 91-day maturity. Auctions are held even when the government has no borrowing requirement to maintain some liquidity in the treasury bill market and set a yield curve. Treasury bills with other maturities (one to 12 months) are held less frequently. The CBM does not participate in primary auctions. At the beginning of 2003, there were 15 issues of treasury bills outstanding with remaining maturities from 4 to 164 days and a total value of Lm 219 million. The Treasury has a threshold of Lm 300 million in treasury bills it can issue without parliamentary approval.

107. The vast majority of treasury bills (about 87 percent) are held by banks. The minimum bidding volume in the primary auctions has been raised to Lm 20,000 in 2002 in line with the authorities' policy to focus on the wholesale market. Due to the high excess liquidity in the banking system and the small number of investment vehicles, banks tend to hold t-bills until maturity. The turnover on the secondary market for t-bills is therefore very

low at 7.2 percent of GDP in 2002. Most t-bill transactions are with the CBM (43 percent), which quotes bid and offer prices for treasury bills. Treasury bills are not dematerialized (but dematerialization is planned) and trading is over-the-counter and unregulated.

108. In the government securities (treasury bills and government bonds) market the CBM aims to ensure liquidity, install investor confidence (in particular for retail investors), and thereby contribute to orderly conditions and stability. To achieve these objectives the CBM quotes bid and offer prices based on yields with a yield spread of five basis points for wholesale transactions and ten basis points for retail transactions. The CBM cannot bid in the primary market, but serves as a buyer for any investor who would like to receive proceeds before maturity date. The CBM then make the bills purchased available for sale.

109. However, the CBM's pricing role in the government securities market appears to cause some confusion among some market participants. Even though the CBM follows the prices established at the primary auctions and carefully observes market transactions and adjusts its prices accordingly, the pricing pattern has been surprisingly steady. This has created a perception among some market participants of an attempt to stabilize the government securities prices. Such suggestion could call to question how solid the yield curve is beyond the range of active treasury bill maturities.

**Government stock market**

110. Secondary market trading in government securities is very thin. Government stocks are traded on the Malta Stock Exchange. Trading volumes shrunk significantly in 2002 to only 2.4 percent of GDP. Given the build-up of liquidity in the banking system, the poor performance of equity markets, and widening spreads between Maltese and foreign government bond yields in recent years, new issues of government securities have been heavily oversubscribed, and investors have been reluctant to trade them afterward in the secondary market. Also undermining secondary market liquidity has been the highly fragmented nature of debt stock (36 bonds outstanding at end-2002), the participation of the government Sinking Funds in the government debt market, and the previously mentioned pricing role of the CBM in government securities.

**Foreign exchange markets**

111. The most active financial market in Malta is the foreign exchange market with a turnover of 167 percent of GDP in 2002. However, given the openness of the Maltese economy this turnover rate is still relatively low. More than 95 percent of all transactions are spot. As in most countries, forward contracts typically have maturities between 3 to 12 months. Transactions between banks and the public account for about two thirds of all foreign exchange operations, transactions between foreign exchange bureaus and the public for about 4 percent. Currently, most banks are close to the regulatory limit for open foreign currency positions and therefore pass on any additional open foreign exchange position to the CBM. Bid-ask spreads between credit institutions have narrowed to about 0.37 percent compared to 0.25 percent for transactions with the CBM. A wider bid-ask spread for

government and parastatals of 0.5 percent (compared to 0.25 percent for banks) provides some incentive for them to deal with banks. However, when the size of their transactions is too large, they directly deal with the CBM.

## D. Monetary Policy Instruments

### Auctions of term deposits and repurchase agreements

112. The CBM's main monetary policy instruments to steer the short-term interest rates are auctions of term deposits and repurchase agreements with securities. Depending on the liquidity situation of the banking system, every Friday the CBM conducts either of those two operations (Box 6). They have a 14-day maturity and are settled on the same day. Auctions are at variable rates with each bank having to pay its successful bidding rate (American style auction). However, the rates are within a narrow corridor of five basis points above the CBM central intervention rate for repos and five basis points below the central intervention rate for term deposits. The CBM honors all bids in this corridor, except when it views the bidding amount as clearly inconsistent with its liquidity forecast. Its liquidity management approach is therefore accommodating. In 2001, when Malta experienced a balance of payments deficit, the CBM predominantly conducted liquidity injecting operations. With the turnaround of the balance of payments situation, the CBM has conducted only liquidity absorbing auctions of term deposits. Typically, three out of the four eligible counterparts participate in the operations.

**Box 6. Malta: Monetary Policy Instruments**

**Reserve requirements**

Set at 4 percent of deposits, and remunerated at a fixed rate of a 2.7 percent (cash in vault is not counted as eligible asset). Averaging provisions apply. CMB may impose penalties for noncompliance of up to five percentage points above CBM's rate applied to its overnight standing lending facility.

**Standing facilities**

An overnight deposit facility is combined with an overnight lending facility ("standby loan") to form a corridor of 350 basis point for interbank market rates. A pool of collateral for the lending facility is pledged in advance in favor of the CBM, allowing the lending facility to be activated automatically to cover end-of-day overdrafts.

**Money market instruments**

***Auctions of term deposits:*** Conducted regularly (weekly), with 14 days maturity, using multiple-rate interest rate tenders. Main discretionary instrument in situation of excess liquidity.

***Repo operations***: Conducted regularly (weekly), using multiple-rate interest rate tenders. Acceptable securities include treasury bills and bonds. Main instrument when the system is short of liquidity.

113. Securities that can be used for repurchase agreements are government bonds and t-bills, but the CBM Act also allows acceptance of other eligible assets. In practice, the CBM requires the use of government bonds unless a bank does not have enough governments bonds in its portfolio. In that case t-bills may be used, which are in certificate form, provided

that actual transfer of ownership is effected on the same day. The only risk control measures are initial margins of 2 percent. However, the CBM plans to introduce valuation haircuts and variation margins similar to those used by the ECB. Until 2003, when relevant legislation was published, the lack of legislation recognizing netting in times of bankruptcy has prevented the development of an interbank repo market.

**Standing facilities**

114. The CBM's standing facilities create a 350 basis point wide corridor for the overnight money market rate. The lower boundary is set by the CBM's overnight deposit facility. This facility is available to deposit money banks upon request at the end of the day. Maltese banks are using the overnight deposit facility frequently at the end of the reserve period. This is the result of the limited options to use short-term liquidity given the smallness of the financial system and most banks being on the same side of the market. Deposits with the deposit facility averaged Lm 10.5 million per month (2001–2002). This compares to about Lm 125 million of required reserves on average.

115. The CBM's overnight lending facility sets the upper limit for overnight money market rates. It is available either upon request by banks or can be used automatically when the settlement account is overdrawn at the end of the day. For that purpose, banks have pledged a pool of securities in favor of the CBM. The marginal lending facility has been used only occasionally (in four separate months over the past 2½ years) with borrowing averaging Lm 2.6 million per month, lower than deposits with the CBM.

**Reserve requirements**

116. Banks operating in Malta are required to hold 4 percent of deposits and other liabilities with the CBM. Required reserves are remunerated at a fixed rate of 2.7 percent. Required reserves have to be held in the currency that is used as the accounting base of the bank.[22] Vault cash is not counted as an eligible asset. Required reserve are calculated based on the average of the end-of-month balance of the two months proceeding the maintenance period, and full averaging over the holding period is allowed. Reserve shortfalls used to be given a fixed penalty rate of 8 percent. Under the amended CBM Act, the CBM may impose a penalty of up to five percentage points above its marginal lending rate.

**Foreign exchange operations**

117. The CBM maintains the peg to the currency basket by standing ready to buy and sell (spot) the basket currencies in the market and by maintaining an appropriate interest rate spread to reflect the risk premium. The CBM quotes real-time exchange rates for spot and

[22] This policy is relevant for former offshore or international banks that have acquired a license to operate in Malta (rather than only operating *from* Malta). Holding required reserves in the currency that they use as their accounting base reduces exchange rate risk.

forward trades and stands ready for spot transactions in the three currencies of the basket. The bid-ask spreads for spot deals are 0.25 percent, for forward deals 0.25 percent plus the premium or discount depending on the interest rate differential.

### E. Conclusions and Lessons

118. The following conclusions and lessons can be derived from Malta's experience with reliance on money market instruments:

- Low inflation rates have been the result of successfully pegging the currency, and a consensus about the importance of the peg to achieving price stability. The lack of CBM independence (until the 2002 CBM Act amendments), including the possibility to finance fiscal deficits through the CBM and the assignment of multiple objectives through the CBM Act, was not misused. Capital controls, which were recently lifted, also facilitated maintaining the peg.

- The sequencing—first liberalizing financial markets, later eliminating capital controls—proved fruitful and helped to avoid any currency or banking crisis. However, the approach was very gradual, stretching over more than a decade.

- The combination of weekly auctions of term deposits or repos, standing facilities at penalty rates, and reserve averaging allowed effective liquidity management. However, trading activities in the money market has remained low, due to excess liquidity of the banking system and the small size of the market.

- Certain institutional elements impede market development: (i) CBM's operations in the government securities markets may have led to the perception that it still seeks to manage interest rates across the yield curve. Such suggestion could call to question how solid the yield curve is beyond the range of active t-bill maturities; (ii) dematerializing t-bills would encourage the development of a repo market; (iii) impediments to the use of repos have just been eliminated and should help to build up a repo market; and (iv) public debt management could be used more effectively to help develop more liquid securities markets, for example, through the reduction in the fragmentation in the debt stock.

- The privatization of the deposit money banks, in particular, the sale of one large bank to a foreign owner, has increased the degree of competition. Nevertheless, interest rate volatility has been minimal.

# VI. THE GAMBIA[23]

## A. Background

119. Reliance on money market instruments to conduct monetary policy was introduced in The Gambia in the mid-1980s, following the serious economic imbalances that had resulted from the directed lending policies started in the mid-1970s.[24] By 1985, the Gambian Cooperative and Development Bank (GCDB), which had been established to implement the directed lending policies, was faced with mounting nonperforming loans which, coupled with insufficient collection efforts and inadequate provisioning, created a continuous need for financing from the Central Bank of The Gambia (CBG). The development model pursued by the government of using policies and institutions to provide directed and subsidized credit to preferred sectors became unsustainable.

120. In June 1985, The Gambia began implementing a comprehensive adjustment program (the then Economic Recovery Program (ERP)) that included reforms in the financial sector, encompassing both institutional and policy reforms. Institutional reforms were directed mainly at restructuring the GCDB and resolving the issue of its nonperforming loans. Policy reforms were aimed at liberalizing the financial sector with the purpose of promoting the development of a more competitive banking system and efficient financial markets.

121. One of the first steps in the reform process was the passing of the Central Bank of The Gambia Act (CBG Act) and the Financial Institutions Act. The CBG Act was designed to strengthen the role and authority of the CBG so as to improve its ability to formulate and implement independent monetary policy and to regulate and supervise the financial system. With this mandate, the CBG began the process of moving from administrative measures to

---

[23] Prepared by Stephen Swaray (Senior Economist, MFD), based on MFD work in the context of the December 2001 mission to discuss medium-term technical assistance needs to serve as input into a three-year Technical Cooperation Action Plan (TCAP), and the subsequent April and October 2002 technical assistance mission (both headed by Udaibir Das), on strengthening the central bank and the financial system. The study covers developments up to end 2003.

[24] The decade between 1975 and 1985 witnessed a decline in real growth, accelerating inflation and a deteriorating external payments position, in response to a variety of external shocks coupled with the implementation of inappropriate policies. In particular, the government started to intervene actively in the development process through the establishment of financial institutions designed specifically to provide subsidized directed credit to the groundnut sector, the major cash crop of the country. The financial system and monetary policy became relegated to a role of mobilizing the savings of the population and providing the allocation of credit to the preferred agricultural sector.

money market operations to conduct monetary policy. By May 1986, all interest rates were freed and the CBG began to rely more on the primary sales of treasury bills as its main instrument of liquidity management.

122. To further improve liquidity management, by September 1990, the CBG started issuing its own bills, the CBG-bills, with characteristics identical to those of the treasury bills and using auctions of a similar format. The CBG also introduced a rediscount window to provide financing to banks. In 1992, a uniform unremunerated reserve requirement was introduced for all Gambian financial institutions. Since 1992, the CBG has not made further significant changes to its monetary policy instruments. It still continues to rely primarily on primary sales of treasury and CBG-bills as the main instruments of monetary policy. However, the experience of The Gambia with reliance on money market operations in 2002-2003 has been mixed. Weak internal controls in the CBG combined with a poor conduct of monetary policy and insufficient authority over interest rate policy in the face of large fiscal slippages, have led to a continuous decline in the effectiveness of money market operations during this period. Monetary policy targets were missed frequently and excessive money supply drove up inflation and caused a slump of the local currency in the foreign exchange market. The loss of confidence in the CBG's conduct of monetary policy aggravated the deterioration in the monetary environment. In the beginning of 2003, the CBG had to increase reliance on reserve requirements (by significantly increasing the minimum requirements) in order to curb excessive growth in reserve money while interest rates were increased gradually from 15 percent in July 2002 to 31 percent in August 2003.

## B. Monetary Policy Environment

### Institutional framework

123. Although the basic objective of the CBG Act was to strengthen the role and authority of the CBG in the formulation and implementation of monetary policy, the institutional framework for the conduct of monetary policy in The Gambia is still not clearly defined. The objectives of, and roles and responsibilities for, monetary policy are blurred. The CBG Act sets out the principal objectives of the central bank as: (i) to regulate the issue, supply, availability, and international exchange of money; (ii) to promote monetary stability; and (iii) to promote a sound financial structure and credit and exchange conditions conducive to the orderly and balanced economic development of the country. There is no established priority among these objectives other than an implied order of importance based on the order in which they are stated. The law does not also ensure the autonomy of the CBG since the Minister can override CBG policy and force the CBG to carry out the policy of the Minister without requiring any disclosure or time limit in the override authority. In addition, the law requires many of the CBG's monetary policy decisions to be referred to the Minister for approval. In addition, there has been a lack of internal controls in CBG operations, especially its foreign exchange operations. Currently, the CBG does not have any formal investment guidelines of policies governing its foreign exchange operations and does not have a robust segregation between front and back office functions. In this regard, the use of outright sales and purchases of foreign currencies to monitor overall liquidity in the system has been

problematic. In light of the foregoing, it is clear that the CBG lacks full autonomy and it is doubtful, therefore, whether the CBG is sufficiently well positioned to conduct monetary policy effectively.

**Monetary framework**

124. Among its multiple objectives, the CBG has chosen price stability as the principal operational objective of monetary policy, subject to which it also aims to support the broad policy goals of strengthening the external balance and promote economic activity. To achieve this main objective, the CBG conducts monetary policy within a reserve money framework. Net domestic assets of the CBG, together with net foreign assets and net claims on government, are the central benchmarks that guide the conduct of monetary policy.

125. The long-term liquidity targets of the CBG to achieve its objective are in place, and are currently derived in the context of the PRGF. However, a forward-looking, short-term liquidity forecasting framework is in an undeveloped stage, and its development would require improved coordination between the CBG and the Ministry of Finance together with substantial improvements in the Ministry's own internal reporting system. Although the CBG takes the exchange rate into account in its monetary policy decision making, its stabilization does not appear to be a principal monetary policy objective.

**Macroeconomic performance**

126. Economic performance in The Gambia since the introduction of money market operation to conduct monetary policy has been mixed. While GDP growth has been predominantly strong and inflation moderate, there have often been significant slippages in the implementation of the budget, which have led the government to continue to borrow heavily from the domestic banking and public enterprise sectors to finance its fiscal deficit. The fiscal deficit (excluding grants) has varied between 3½percent of GDP and 8¾percent over the years. The fiscal slippages have necessitated increased recourse to government domestic financing, which has raised the stock of domestic debt to about 33 percent of GDP. Due to the rapid expansion in credit to the government, the treasury bill rates have remained high, varying between 12.5 percent and 15 percent; although, recently they have increased to 24 percent. Lending rates have also been consistently in excess of 25 percent.

127. On the external front, the external current account deficit excluding official transfers has also remained high over the period, averaging around 11.8 percent of GDP. Partly as a result of this, the Gambian currency (the dalasi) has been depreciating—in 2001 and 2002 by 12 and 27 percent respectively in U.S. dollar terms (end-of-period rates).

128. The persistent weak fiscal performance has been the main source of pressure on monetary aggregates and on interest rates. Inflation performance, just like overall economic performance, has been mixed. Inflation in 1994 fell to 1.7 percent but increased to almost 7 percent on average in the period following an instance of political instability. After the return to constitutional government, inflation moderated once more, reaching 1 percent by

end-2000. In 2002, however, inflationary pressures developed with inflation in that year averaging 8.6 percent (compared to 4.5 percent in 2001 and 0.9 percent in 2000 while end-of-period inflation reached 13 percent (compared to 8.1 percent in 2001 and 0.2 percent in 2000). In addition, the CPI-index in The Gambia possibly understates actual inflation since it is based on outdated weights stemming from a 1976 household survey for the low-income Banjul population. This is also indicated by the strong growth of broad money and reserve money of more than 20 percent on average over the past 4 years, and the depreciation of the dalasi by about 50 percent in SDR and U.S. dollar terms. It is evident from the foregoing that the CBG has been facing a difficult macroeconomic environment within which to implement monetary policy, particularly on account of weak fiscal performances.

129. The persistent weak fiscal performance has been the main source of pressure on monetary aggregates and on interest rates. In 2002, broad money rose by 35 percent, compared to a target of 13 percent. Some 24 percentage points of the increase in broad money stemmed from a mushrooming in credit extension to the private sector apparently associated with speculation in real estate and foreign exchange. This excessive credit growth was sustained by a rise in reserve money of 34 percent, a substantial proportion of which appears to have resulted from liquidity injections by the CBG associated with foreign exchange losses.[25] Corrective action by the CBG was late and initially inadequate: the treasury bill rate was raised gradually from 15 percent in June 2002 to 25 percent in June 2003 while minimum reserve requirements were extended to include foreign currency deposits and increased from 14 percent to 16 percent in April 2003. However, broad money growth failed to slow down and annual growth reached 52 percent while private sector credit more than doubled in the year to end-June 2003. In July, the CBG further increased minimum reserve requirements to 18 percent and the treasury bill rate was raised to 31 percent in August. The foregoing shows that the CBG has been facing a difficult macroeconomic environment within which to implement monetary policy, particularly on account of weak fiscal performances.

**Structure of the financial system**

130. By every indicator, the financial system of The Gambia is small and underdeveloped.[26] It comprises the Central Bank of The Gambia (CBG), 6 commercial

[25] Some of these losses result from seasonal smoothing operations by the CBG coupled with the rapid depreciation in the dalasi exchange rate. In addition, a number of foreign exchange transactions involved extremely wide spreads, implying that the transactions counterparties earned large profits at the expense of the CBG.

[26] A small financial system is usually defined by M2 smaller than US$1 billion, which is the size of a small bank in an industrial country. The World Bank Financial Sector Discussion Paper No. 6 lists about 60 such countries—The Gambia among the smallest ones, with M2 only slightly above US$100 million.

banks, 11 insurance companies, 52 Village Savings and Credit Associations (VISACAs), and numerous microcredit institutions. There are also 11 foreign exchange bureaus operating under license from the CBG, and an active unofficial market.

131. The banking sector overwhelmingly dominates the financial system,[27] although it is small in both absolute and relative terms. Total banking sector assets are equivalent to about 40 percent of GDP. Total loans, however, are only equivalent to 9 percent of GDP only (Table 6). All banks in The Gambia are now virtually privately owned.[28]

Table 6. The Gambia: Banking System Structure

| (2001) | Millions of Dalasis | Millions of U.S. Dollars | Percent of GDP |
|---|---|---|---|
| Total Assets | 2,903 | 172 | 47 |
| Total Loans | 750 | 44 | 12 |
| Total Deposits | 1,864 | 110 | 30 |
| GDP | 6,125 | 362 | |

Sources: CBG and staff estimates.

132. The banking system is highly concentrated, with the largest bank in the country dominating the market both in terms of deposits (52 percent) and of loans extended (38 percent). The top three banks account for 86 percent of the market in terms of loans and 95 percent in terms of deposit. The balance sheet structure of Gambian banks reflects the highly embedded credit risk in the economy, a preference for liquid, low-risk assets, and the intermediation of official and private transfers. As of June 2002, loans accounted for less than one-fourth of banks' total assets, reportedly reflecting mainly the dearth of bankable projects and creditors' inability to exercise their rights. The largest portion of bank assets—about one-third—was placed in treasury bills. As a result, liquidity in the banking system as a whole is high, even though there are significant bank-to-bank variations.

133. The banking sector has been very profitable, with average after-tax profits at about 4.6 percent of assets at end-2001. The high level of profitability derived by banks from treasury bill holdings has so far provided no incentives to reduce rates or spreads for private lending.

134. All banks have significant open foreign exchange positions, with long positions ranging from 20 percent to 53 percent of their capital. In the existing environment, with the

[27] Banking system assets account for about 97 percent of total financial sector assets. Of the rest, 2 percent belong to insurance companies and 1 percent to microfinance institutions.

[28] The government's direct participation in banks is now limited to the 10 percent it holds in one bank. Of the six banks, foreign individuals and companies own at least 70 percent shares in three of them and substantial amounts (30 percent and over) in the others.

domestic currency depreciating, the returns on investments in foreign currency are a sizeable source of the banks' income. It also means, however, that the banks are vulnerable to unexpected exchange rate movements. Moreover, the banks are exposed to adverse movements in exchange rates through their impact on the credit risk of their borrowers.

## C. Market Infrastructure

### Interbank money market

135. Six banks dominate the money market in The Gambia. A dalasi interbank market does not exist in the real sense of the term, except for a few ad-hoc interbank transactions. The banks invest their excess funds in treasury bills, and despite a 3 percent margin between the treasury bill rate and the CBG refinance rate, banks seldom deal with each other and they prefer to use the CBG's refinance facility despite its high cost. The participation of nonbank public institutions, particularly social security funds, in treasury bill auctions has increased, but total investments are still insignificant and purchased bills are almost without exception held till maturity.

136. Competition in the money market is very limited. First, the demand for short-term funds is limited and the number of potential participants is very small. Second, most activities in the short-term market are centered on trade, primarily re-exports. As a result, all banks are "on the same side" of the market in that they are all influenced by the same seasonal, cyclical, or external factors. The structure of the banking system and the uniform effects of seasonal, cyclical, or external events on all participants are the main reasons for the lack of an interbank market.

### The foreign exchange market

137. Like the interbank money market, the interbank market for foreign exchange has played a limited role in distributing foreign exchange in the economy. The structure of the foreign exchange market in The Gambia consists of the central bank, commercial banks, exchange bureaus and moneychangers.[29] While the central bank and the commercial banks handle mainly large transactions, involving international financial transactions, exchange bureaus deal mainly in cash. Large traders who use these exchange bureaus to acquire the needed foreign exchange directly from the public often directly "own" the latter. Partly as a result of the prevalence of cash transactions on the foreign exchange market, specifically for

[29]Both the banks and the bureaus are licensed by the CBG to deal in foreign exchange and to participate in the foreign exchange market. Moneychangers were licensed starting in 2002. There are also money transfer offices (like Western Union), which operate without direct transfer of foreign exchange into the country. The bulk of foreign exchange inflows, mainly remittances, have been channeled through Trust Bank, which also serves as an agent for Western Union.

the re-export trade and large bank charges, the exchange bureaus have become the preferred depository or sources of foreign exchange.

138. The foreign exchange market is completely liberalized, and since 2001, commercial banks are allowed to accept foreign currency deposits. CBG maintains exposure limits for the banks and the exchange bureaus for prudential purposes. Any amount above the limit must be offered for sale within seven days of the weekly meeting of the foreign currency review committee that is chaired by the CBG and includes representatives of the commercial banks and the foreign exchange bureaus. Banks and exchange bureaus would normally be expected to submit their bids for purchases and sales together with the desired exchange rate, at the weekly meeting of the official market participants. In practice, there is more demand than the supply of foreign currency, since all market participants prefer to buy foreign exchange at the same time at the interbank rate, and therefore, absent of selling activity. In this context, the interbank market resembles more of an auction system. As in the interbank money market, banks and exchange bureaus prefer to deal directly with the CBG.

139. CBG's foreign exchange transactions have, however, not been subject to suitable internal controls, and have contributed to undermining the effectiveness of outright purchases and sales of foreign currencies as an instrument to influence overall liquidity conditions. As mentioned above, a major part of liquidity injections in 2002 stemmed from losses that the CBG incurred by conducting foreign exchange transactions.

**Government and central bank debt market**

140. The CBG issues treasury bills on behalf of the government for purposes of financing the deficit. Treasury bills are auctioned at 91-, at182-, and at 364-day maturities—the 1-year maturity being a recent innovation. Bills are auctioned as a block, with bidders choosing the maturity desired. The CBG auctions treasury bills at a uniform price and, because of the prevailing climate of excess liquidity, accepts all bids. The amount of bills outstanding as at end-2001 was D 2 billion, of which over 50 percent were 91-day bills, although the share of 182-day bills has been increasing. Commercial banks hold just over 50 percent of all treasury bills outstanding. The secondary market is modest and primarily consists of the rediscount facility at the CBG and its sales of rediscounted bills.

141. The CBG also issues its own bills with 91-day and 182-day maturities, of which the three-month bills account for the vast majority. Central bank bills are the same as treasury bills except for the issuer. The bulk of central bank bills are owned by commercial banks. There is no organized securities market in The Gambia.

## D. Monetary Policy Instruments

142. The CBG has essentially three instruments to manage banking system liquidity: primary market sales of treasury and central bank bills and secondary market sales of treasury bills from its own portfolio and at its own discretion to absorb liquidity; a rediscount window, which is a standing facility, used at the initiative of banks and nonbanks; and

reserve requirements, which are been used increasingly actively (Box 7). Due to current liquidity conditions, most operations exist to absorb liquidity and are carried out through primary sales of treasury and central bank bills, while rediscount operations and secondary sales of treasury bills are quite limited. Banks are also subject to a liquid asset ratio, which currently does not represent a constraint and is primarily used as a prudential instrument. In effect, primary sales of treasury and central bank bills represent the main monetary policy instrument in The Gambia.

**Box 7. The Gambia: Monetary Policy Instruments**

**Liquid asset ratio**

Set at 30 percent of deposits. Eligible assets mostly include treasury and central bank bills.

**Reserve requirements**

Set at 18 percent of deposits, in the form of unremunerated deposits with CBG.

**Standing facilities**

***Rediscount window***: Allows banks to obtain funds on demand against accepted collateral (treasury and central bank bills). No limit to access, as long as bank complies with liquid asset ratio. Rate applied is sets above treasury bill rate (currently 300 basis points).

**Money market instruments**

***Primary market sales of treasury and central bank bills***: Issued using uniform price auction in maturities of 91, 182, and 364 days; issued on a fortnightly basis. This is the main discretionary instrument of liquidity management.

***Secondary sales of treasury bills***: Consist of sales of rediscounted bills; used to absorb liquidity from market in between primary market sales of securities.

143. The amount of bills issued in the primary market at any given time (usually a combination of both treasury and central bank bills) is composed of both maturing bills (to be rolled over) and an extra amount for monetary policy purposes. The extra amount is placed into a special account—the "sterilized account"—at the CBG. The special account is, in principle, supposed to be blocked so that inflows to it are sterilized. In practice, however, the treasury draws on this account, as funds are needed. These treasury withdrawals have been seriously undermining the CBG's monetary policy actions but the CBG has insufficient autonomy to stop the process, which, from the treasury's point of view, is required by the high fiscal deficit. The CBG does not also have the resources to pay interest on a large amount of its own bills. Occasionally, the CBG uses sales of treasury bills from its own portfolio as an instrument to absorb liquidity in between auctions. But as indicated, this portfolio is small, thereby limiting the effectiveness of secondary market sales of treasury bills as an instrument of monetary policy.

144. The CBG maintains a standing facility—the rediscount window—through which banks, at their discretion, can obtain cash for their bill holdings from the CBG. These discounts are without limit as long as a bank holds bills above the minimum liquid asset

ratio. Under these operations, the ownership of the collateral is transferred to the central bank for its whole residual maturity. Financing, therefore, is granted for a period corresponding to the maturity of the underlying collateral. The interest rate charged is the rediscount rate, currently at 19 percent, three points above the treasury bill rate.

145. In June 1998, reserve requirements were unified across deposits and were set at a rate of 14 percent of total deposits. In 2003, the CBG reverted to the use of reserve requirements as an active policy device. During the first half of this year, reserve requirements have gradually been increased to 18 percent and were extended to include foreign currency deposits.

**Interest rates**

146. The treasury bill rate is the key interest rate in The Gambia, since most other interest rates are linked to it. This rate varied little up to 1998 but, since then, it has risen to 14 percent in 1999 from 12.5 percent and further to 23 percent since 1999. The treasury bill rate was increased further to 26 percent in July 2003 and then to 31 percent in August 2003. The rediscount rate is set at 3 percentage points above the treasury bill rate; the CBG's secondary market rate for selling bills is 1 percentage point below the treasury bill rate, and the "bank rate" is 2 percentage points below the treasury bill rate. The bank rate is the rate for lending to parastatals and for emergency loans.

147. The spread between lending and deposit rates has also remained unchanged at about 13–14 percentage points, which is even higher than in other countries in the region. The high spreads can be explained by a combination of factors, including the high credit risk inherent in the economy, the inefficient legal and institutional framework, the oligopolistic nature of the banking system, and its small size.

148. The CBG is concerned about the level of nominal and real interest rates. The current high rates, in addition to putting pressure on the budget, also hamper economic activity, and may pose a severe threat to the banking system, since the only borrowers willing to pay such high real interest rates are usually very risky ones. However, this must be balanced against the CBG's commitment to keeping inflation low.

## E. Conclusions and Lessons

149. The following conclusions and lessons can be derived from the experience of The Gambia with reliance on money market instruments:

- Following financial sector reforms of the early 1990s, inflation performance in The Gambia was encouraging, suggesting that progress in the implementation of monetary policy can still be achieved in small, underdeveloped, and concentrated financial systems with the use of very simple money market operations—mainly primary sales of treasury and central bank bills, a refinance window, and occasional secondary market sales of treasury bills.

- These strong performances were, however, against the background of an increased buildup of domestic debt and persistently high interest rates (including treasury bill rates), as a result of continued sales of sizeable amounts of treasury and CBG bills in pursuit of a tight monetary policy stance. Since most interest rates are linked to the treasury bill rate, all interest rates have remained high in real terms, which has posed a significant challenge to monetary policy.

- More recently, weak internal controls in the CBG, combined with a weak monetary policy and insufficient authority over interest rate policy in the face of large fiscal slippages, have led to a continuous decline in the effectiveness of money market instruments to conduct monetary policy.

- Finally, the experience of The Gambia shows that expansionary fiscal policy constitutes a setback to effective monetary policy and to sustaining continuous periods of low inflation in the context of shallow markets.

# VII. TONGA[30]

## A. Adoption and Reversal of Reliance on Money Market Operations

150. Shortly after it was established in 1989, Tonga's central bank (the National Reserve Bank of Tonga—NRBT) shifted from administrative measures to money market instruments to conduct monetary policy. However, when confronted with a rapid credit growth in 1994 and 1995, the NRBT had to resort to administrative measures owing to its inability to support the financial costs that involved a tightening of monetary policy.

151. In the first half of 1990s, the NRBT gradually shifted reliance from administrative measures to money market instruments to conduct monetary policy: interest rate controls were progressively phased out and fully liberalized in 1991 and credit controls, assuming mainly the form of a maximum loan-to-deposit ratio were eliminated in 1993. Concomitantly, the NRBT introduced three new policy instruments: noninterest rate bearing reserve requirements (at 5 percent of banks' deposits); issuance of NRBT notes on weekly basis;[31] and a refinance standing facility.

152. At the same time, the NRBT allowed entry in the market of two foreign commercial banks, with a view to increasing competition. Subsequently, commercial bank credit to the private sector increased significantly during the period 1993–1995, and international reserves declined markedly, calling for a tightening of monetary policy.

153. The attempt to tighten monetary policy in 1995 revealed the weak financial position of the NRBT. Lack of revenues and no financial support from the government, in a context where the NRBT needed to issue significant amounts of notes to tighten overall liquidity conditions, would have resulted in large operating losses. Several factors were responsible for the NRBT's weak financial condition, including the following. At the creation of the NRBT, currency in circulation was covered by claims on the government, which did not yield a return. Also, the amount of paid-up capital was very limited, and substantial resources were absorbed in the construction of a new headquarters building.[32] Ultimately, the NRBT resorted to higher reserve requirements (the ratio was raised from 5 to 10 percent in 1995) and moral

---

[30] Prepared by Kentaro Iwatsubo (Summer Intern, MFD) and George Iden (former Senior Economist, MFD), based on a February 1999 MAE technical assistance mission to Tonga, led by Hidaeki Suzuki; and on SM/03/24 and SM/03/8. The study covers developments up to end 2003.

[31] Initially only 56-day maturity notes were offered at a 4.5 percent interest rate. In 1994, securities with maturities between 28 days and 5 years were added. More than 90 percent of the securities were acquired by commercial banks.

[32] For a more detailed discussion, see "Tonga—Selected Issues and Statistical Appendix," SM/03/24, January 2003, p. 5.

suasion to dampen credit growth. In 1998, the NRBT was forced to discontinue issuing the more expensive 3-month central bank bills (at 5.5 percent).[33] In 1998–1999, in addition to informal credit ceilings, the NRBT raised the reserve requirement ratio further from 10 percent to 12 percent, increased the NRBT's minimum lending rate (MLR) from 7 percent to 9 percent, and imposed a 30 percent deposit cash margin on all new loans with the exception of export and tourism sector loans. Subsequently, the growth of credit was contained and official reserves stabilized in 1999, allowing the removal of the 30 percent cash margin. However, in response to a loss of official reserves, the reserve requirement ratio was raised from 12 to 15 percent and the MLR was further increased to 12 percent in 2000.[34]

154. In the course of 2000, faced with higher reserve requirements, banks reduced their holdings of NRBT bills to fund an expansion of credit, which in turn resulted in pressures on the international reserves. Eventually, the NRBT had to impose formal credit ceilings, which have been since then the main monetary policy instruments in Tonga. Concomitantly, the NBRT discontinued the issuance of NBRT notes because of the financial cost involved in their placement.

## B. Monetary Policy Environment

### Institutional framework

155. In Tonga, monetary policy is implemented in the context of a pegged arrangement with a horizontal band, whereby the value of the pa'anga is determined based on a weighted basket of currencies comprising the Australian dollar, the Japanese yen, the New Zealand dollar, and the U.S. dollar.[35] The exchange rate is managed on a day-to-day basis by the Reserve Bank on the basis of the movement of the basket of currencies. With foreign exchange control regulations, Tonga is in a position to maintain some monetary policy independence.

156. The monetary objectives of the NRBT are defined as promoting monetary stability and the soundness of the financial system, and fostering conditions for economic development. The NRBT aims at maintaining low inflation, and gross foreign reserves equivalent to three months of total imports or above. In addition, the NRBT recognizes that exchange stability is essential for the price stability in Tonga given the high passthrough of

[33] The NRBT also stopped issuing one-month NRBT bills (at 3.5 percent) in 2001.

[34] The deposit and lending rates by commercial banks in Tonga have been very sticky; consequently, changes in the MLR hardly affected commercial banks' behavior.

[35] The pa'anga was pegged to the Australian dollar until 1991. The Asian crisis and the sharp drop in reserves in 1997–98 led the authorities to introduce a 2 percent band in March 1998. In 2000, the band was widened to 5 percent and the Japanese yen was included in the currency basket since Japan became more important as a trading partner.

the exchange rate to the price level given that more than half of the items on the CPI basket is composed of imported goods.

157. The NRBT pursues these objectives in close consultation with the government. Most changes in monetary and exchange rate operations require approval of the executive branch of government, making the NRBT subject to political pressures.[36] In particular, the exchange rate has not always reflected the economic fundamentals due to political pressures to prevent the depreciation of the pa'anga to contain inflation. At times, pressure to prevent a depreciation of the currency has come from corporations with foreign debt denominated in U.S. dollars. Furthermore, the limited operational autonomy of the NRBT has at times resulted in direct central bank lending to the government, in particular as it is called to buy any unsold portion of the government securities offered to investors to finance the budget. The interest rates on government bonds are based on the yields curve of deposit rates in the market adjusted for tax-exemption and risk premium. The associated reserve money creation has contributed to the excess liquidity, in a context of limited policy instruments at the disposal of the NRBT to sterilize excess liquidity in the system.

**Macroeconomic performance**

158. Although the real GDP growth temporary strengthened to 6.5 percent in 1999–2000, it slowed to only 0.5 percent in 2000–01 and is estimated at 1.6 percent in 2001–02. The contraction of the economy occurred because of a decline in the level of activity in the agricultural sector. An increase in the current account deficit to 8.1 percent of GDP in 2000–01 led foreign reserves to fall to the level of 1.75 months of imports, which was about half of its level in 1998–1999. During the period 2000–01, the pa'anga depreciated against the U.S. dollar by a total amount of 20.8 percent, which consisted of the normal basket movements of 6.8 percent and the balance due to adjustments by the NRBT. Since more than 50 percent of the CPI basket is based on imported commodities, the inflation rate increased from 5.3 percent in 1999–2000 to 7 percent in 2000–01 and 10.4 percent in 2001–02.

159. The sharp depreciation of the pa'anga against the U.S. dollar was necessary for dampening foreign reserve losses in the wake of fiscal and monetary expansion in 2000–01. Since Tonga had no flexible monetary policy instruments, exchange rate movements have sometimes helped to affect aggregate demand through the impact of import prices on real income. However, the exchange rate adjustments, used as a monetary policy instrument, are not necessarily effective because depreciation would easily lead to a further inflation.

---

[36] The NRBT Governor is appointed for a period of five years and is eligible for reappointment. Responsibility for policy and affairs lies with the Board of Directors, which comprises the Governor and six other directors appointed by the executive branch.

**Structure of the financial system and market**

160. Tonga's financial sector is composed of five institutions: the NRBT, three commercial banks, and one state-owned development bank (Table 7). Until 1993 only two banks operated in Tonga, including a state-owned development bank established to promote rural development by investing resources obtained mainly from external borrowing. Another of the commercial banks established in 1993 was a branch of a foreign bank; the other was a locally incorporated bank. A small insurance sector completes the financial sector.

Table 7. Tonga: Financial System Structure

| (2001) | Assets (millions of pa'anga) | Percent in Total Assets | Percent of GDP | Number of Institutions |
|---|---|---|---|---|
| Commercial banks | 200.4 | 81.6 | 72.3 | 3 |
| State-owned development bank | 45.1 | 18.4 | 16.3 | 1 |
| Insurance companies | n.a. | n.a. | n.a. | 6 |
| Total | 245.5 | 100.0 | 88.6 | 10 |

Sources: Tonga authorities and Fund staff estimates.

## C. Monetary Policy Instruments

161. In conducting monetary policy, the NRBT attempts to monitor the net domestic assets of the banking system. Limiting domestic credit expansion is considered essential to dampen the demand for imports and prevent a deterioration of international reserves. Following the unsuccessful attempt to rely on OMO, the NRBT now relies on a combination of credit ceilings and reserve requirements to achieve its intermediate objectives (Box 8).

162. In a context of a structural excess liquidity, the short-term liquidity facility does not play any operational role, and the NBRT does not have a discretionary instrument to absorb excess liquidity since it discontinued issuing NBRT notes in 2001. Changes in reserve requirements ratios have been used to influence the demand by the financial system for central bank reserves above the clearing balancing needed for settlement purposes. They were instrumental in mopping up structural excess liquidity that build up in relation to direct NBRT credit to the government.

163. Following a period during which the NRBT relied on moral suasion to monitor the growth of bank credit, in 2002 the NRBT introduced formal individual credit ceilings on the commercial banks and the state-owned development bank.[37] The recourse to credit ceilings became necessary due to the absence of effective money market instruments to regulate overall liquidity of the banking system. In particular, the high costs involved in issuing

[37] The NRBT did not specify sanctions for noncompliance with the credit ceilings. The June 2002 experience shows that two banks complied, while the other two did not.

NBRT notes, in a context of a weak financial position of the NBRT, were no longer a viable option. Meanwhile, rapid credit growth has highlighted the limited effectiveness of administrative measures and the need to restore conditions for using money market operations.

**Box 8. Tonga: Monetary Policy Instruments**

**Credit ceilings**

They are imposed on the net domestic assets of each individual bank, within a global ceiling on net domestic assets of the banking system. Credit ceilings are set quarterly by the NRBT and they have been the main monetary policy instruments in Tonga since 2000.

**Reserve requirements**

Introduced in 1993; they are not remunerated. The ratio was raised from 5 to 10 percent in 1995, to 12 percent in 1998, and to 15 percent in 2000.

**Standing facilities**

***Short-term liquidity facility:*** Allows the banks to borrow from the NRBT for a short term (normally for less than a month), using government bonds or the NRBT notes to the NRBT as collateral. The discount rate charged by the NRBT on these short-term loans is 17 percent per year during the first 10 days, and 19 percent thereafter, as of August 2002.

**Money market instruments**

***Central bank bills***: NRBT bills were introduced in the mid-1990s; they were discontinued in 2001 owing to the high cost for the NBRT associated with their placement. The NBRT bills were replaced by treasury bills, and the associated costs are thus now financed by the government budget.

## D. Channels of Transmission of Monetary Policy

164. The credit ceilings have been the main monetary policy instruments since 2000 due to the NRBT's inability to support the financial costs associated with money market operations for liquidity management.[38] The weak financial position of the NRBT stems from high interest payments and administrative expenses.

165. The NRBT experienced the most significance losses in the period 1996–1998, associated with the issuance of NRBT notes. In those years, interest payments rose from 46.8 percent of operating income in 1996 to a peak of 63.9 percent in 1997, and to 55.3 percent in 1998. Administrative expenses also represented a large share of operating income over the previous 8 years. Those expenses rose from 27.9 percent of operating income in 1995 to 47.7 percent in 1997, and to 42.3 percent in 1998. More recently, administrative expenses dominated the other items of the NRBT's operating expenditure,

[38] Excess liquidity resulted from credit expansion associated with operations with the government and public enterprises.

rising to 46.8 percent of operating income in 1999, compared with 38.9 percent in the case of interest payments.[39]

166. Interest rates do not play a significant role in monetary operations in Tonga because the NRBT has taken the stance that it cannot afford to conduct open market operations since 2001. The interest rates charged on government bonds have not reflected the movement of inflation, and recently have been far below the inflation rates. One important implication is that interest rate policy has failed to support the government's more flexible exchange rate policy, and consequently excess demand has continued and foreign reserves have declined. The NRBT is required to buy any unsold portion of government bonds, with the result that it has to issue reserve money to finance government operations. This has contributed to inflation and to a loss of foreign reserves.

### E. Conclusions and Lessons

167. Tonga's experience illustrates that in a context of a weak financial position of the central bank, reliance on money market operations faces difficult challenges:

- In the absence of budgetary support, the central bank was unable to absorb excess liquidity, and therefore relied on financial repression to conduct monetary policy.
- The NRBT resorted to bank-by-bank credit ceilings because of its inability to support the cost associated with money market operations.
- Although recently the government has been a net creditor to the banking system, political interference in the conduct of monetary policy has at times weakened the effectiveness of monetary policy when the central bank has had to finance the government and public enterprises by issuing reserve money, which would eventually lead to a further inflation.
- In the context where the central bank could not rely on money market operations, the depreciation of the currency may have helped reduce aggregate demand, and prevent foreign reserve losses, but at the expense of higher inflation.

[39] In 2002, the government approved a proposal to strengthen the NRBT through a recapitalization, reflecting the cost of monetary policy in the budget for 2002–03 and subsequent years.

# VIII. TUNISIA[40]

## A. Path to Reliance on Money Market Operations

168. Throughout the 1970s and until the mid-1980s, Tunisia's monetary policy relied on credit and exchange and capital controls. Credit controls involved bank-by-bank credit ceilings, interest rate controls, and mandatory requirements for banks to channel credit to strategic sectors. Exchange and capital controls were used to ensure that domestic savings would be used to finance domestic investments rather than the acquisition of foreign assets. These policies led to macroeconomic imbalances and the emergence of serious problems in the banking system as the system for controlling and funneling credit to strategic sectors proved increasingly inefficient. In the mid-1980s, the authorities responded with the implementation of wide-ranging stabilization and structural reforms. Key objectives of the reforms were to reduce direct government intervention, strengthen the role of market forces in the allocation of financial resources, improve the capacity of financial institutions to mobilize domestic savings, and enhance competition among banks and strengthen their financial soundness.

169. The initial phase of financial reforms (1987–93) culminated with the completion of current account convertibility (Table 8). Liberalization of lending rates was initiated early on in the process and followed a gradual path; the requirement of prior approval for granting bank loans was eliminated and the regulatory constraints imposed on the balance sheet of commercial banks were relaxed. Concomitantly, comprehensive bank prudential regulations were introduced. Early in the reform process the Central Bank of Tunisia (BCT) modernized its monetary policy framework: the role of the rediscount window was reduced, and reliance on money market operations to conduct monetary policy was gradually enhanced. At the time of acceptance of the obligations of Article VIII of the Fund's Articles of Agreement in January 1993, lending rates had been almost completely liberalized, the prudential framework for the banking system had been significantly strengthened, in line with the recommendations of the Basel Committee on Banking Supervision, and progress had been made in liberalizing the trade regime. However, capital controls were pervasive; banks were still subject to the mandatory lending requirement to priority sectors and to limitations on their ability to undertake foreign currency-denominated transactions. The authorities intend to eventually adopt a floating exchange rate regime.

---

[40] Prepared by Bernard Laurens (Deputy Division Chief, MFD), based on MFD work in the context of the FSAP for Tunisia, and subsequent papers by Bernard Laurens and Abdourahmane Sarr (MCD) on capital account liberalization issues, and Tunisia's monetary framework, which were issued respectively as a Selected Issues Paper in the context of the 2002 Article IV Consultation, and a joint MED-MFD Supplement to the Staff Report for the 2003 Article IV Consultation. The study covers developments up to October 2004.

Table 8. Tunisia: Adoption of Money Market Operations

| Year | Monetary Sector | Financial Sector | External Sector |
|---|---|---|---|
| 1987 | Liberalization of deposit and lending rates begins. | Introduction of comprehensive bank prudential regulations. | |
| 1988 | Rediscount operations limited to priority sector loans. Money market operations are started. | BCT prior approval for granting bank loans is eliminated. | |
| 1989 | Reserve requirements are reactivated. | Introduction of treasury bill auctions. | Creation of money market in foreign exchange. |
| 1991 | | Relaxation of mandatory bank holdings of government securities. | |
| 1992 | Interest rate ceiling set at TMM + 3 percentage points. Reduction scope for preferential credit rates | Strengthening of prudential regulations for the banking sector. | |
| 1993 | | Adoption of new auditing standards for the financial statements of banks. | Article VIII accepted. |
| 1994 | | New banking law sets framework for a more market oriented system. Audits of commercial banks completed; restructuring plans implemented. Introduction of negotiable t-bills. | Creation of interbank foreign exchange market. |
| 1996 | Lifting of all lending rates controls. Elimination of mandatory lending requirements to priority sectors. | | |
| 1997 | BCT intervention in money market becomes main monetary instrument. | Privatization of *Banque du Sud* | Forward covers introduced. Maximum buying/selling spread for spot transactions eliminated. |
| 1998<br>1999 | | Strengthening of prudential norms for the banking sector. | |
| 2000 | | Merger of *Banque de Dévelopement Économique* (BDET) and *Banque Nationale de Développement* (BNDT) and merger with *Société Tunisienne de Banque* (STB). | |
| 2001 | Efforts to strengthen liquidity forecasting framework. Three month reserve repos introduced | Enactment of new banking law. Introduction of liquidity ratio. | |
| 2002 | Amendment of the reserve requirements system. | Privatization of U*nion Internationale de Banque* (UIB) | |
| 2003 | Introduction of OMO. | Framework for repos is introduced. | |

Source: IMF Country Report No. 02/120 and BCT.

170. Following current account convertibility, greater emphasis was placed in shifting to greater reliance on money market operations to conduct monetary policy (1994–present). Soon after the completion of current account convertibility, the authorities introduced a spot interbank foreign exchange market (1994). Following the lifting of all restrictions on lending rates and the elimination of mandatory lending requirements to priority sectors (late 1996), intervention in the money market became the main monetary instrument of the BCT (early 1997). The implementation of a plan to restructure NPLs to public enterprises resulted in a strengthening of the financial structure of the banks (allowing the minimum capital adequacy ratio to be raised from 5 to 8 percent). Gradually, banks were allowed greater freedom in undertaking foreign currency operations. In parallel, the stock market was modernized, thus allowing corporations to diversify their funding sources, and encouraging the public to invest in the market.[41] Trade liberalization continued, in particular through the negotiation of a free trade agreement with the European Union. Finally, efforts were made to modernize the institutional and operational framework for public debt management.

## B. Environment for Monetary Policy Conduct

### Institutional framework

171. The primary objectives of the BCT as defined in its charter include preserving the value of the currency and supporting the economic policies of the government. The latter objective has motivated the implementation of an activist monetary policy aimed at supporting the development needs of Tunisia. Until late 1996 commercial banks were subject to mandatory lending requirements to priority sectors and lending rates were regulated. Following the lifting of these controls, interventions in the money market became the main monetary instrument, but BCT's policies continued to encourage lending to certain sectors until October 2002, and short-term interest rates exhibited a remarkable stability, at least until the end of 2000.[42]

172. A statutory limit on the amount of government securities the BCT can hold for monetary policy purposes may have encouraged reliance on private paper in the conduct of

---

[41] Measures were adopted in 2001 requiring all securities issued in Tunisia, regardless of nature, to be registered in book entry format. Furthermore, the management and administration of securities accounts traded on the market can only be carried out by credit institutions. Consequently, authorized intermediaries are subject to the supervision of the BCT and of the Financial Market Board, each in its mow area of competence. In the same context, a code grouping all legislation governing mutual investment funds was issued in 2001. Other measures over the recent years included easing of conditions for opening stock savings accounts to encourage the public to open such accounts.

[42] IMF Country Report No. 02/119.

monetary policy, including bank claims on strategic sectors, thus reinforcing credit policy considerations in the conduct of monetary policy.[43] Such a limit would also place a constraint on the ability of the BCT to conduct open market operations with government securities.

**Monetary framework and macroeconomic policies**

173. During the past decade or so, monetary policy in Tunisia has been implemented in the context of a managed floating exchange regime whereby the BCT intervenes in the market with a view to maintaining a stable real exchange rate against a basket of currencies weighted according to the country's main trading partners and competitors. This policy amounted to a constant real exchange rate rule according to which the authorities adjusted periodically the nominal exchange rate so as to maintain the real exchange rate constant. This approach has allowed the main exporting sectors to record good performances. In the most recent period, guiding its exchange rate policy the BCT has also begun to take into account a broader set of indicators to gauge the competitive position of producers.

174. At the same time, extensive restrictions on capital inflows and outflows were aimed at ensuring that domestic funds financed domestic investments.[44] This policy allowed the BCT to pursue an independent monetary policy that has been very prudent over the period: the BCT focused on setting the target rate of expansion in credit to the economy around the rate of nominal GDP growth. The objectives set by the authorities were met over the last decade or so; credit to the economy has been broadly in line with domestic demand; and the authorities have shown their willingness to tighten monetary policy in order to moderate domestic demand when necessary.

175. Fiscal management was also significantly strengthened over the past decade: the consolidated central government budget deficit declined from 6 percent of GDP in 1991 to 2.4 percent in 2001. This adjustment was even sustained during the periods when private demand was growing quickly, between the periods 1991–93 and 1997–99. Public debt has been stable at about 60 percent of GDP since the mid-1990s.

176. During the past decade or so, the conjunction of constant real exchange rate targeting with very prudent monetary and fiscal policies, restricted capital flows, and comprehensive structural improvements has resulted in successful macroeconomic performance. In particular, inflation declined from over 5 percent in the early 1990s to 1.9 percent in 2001; real GDP and real export growth averaged 4.8 percent and 7.4 percent during the last decade.

---

[43] BCT's holdings of government securities are limited to 10 percent of recurrent government revenues.

[44] While the convertibility of the dinar is at a very advanced stage for nonresidents, capital controls for residents are pervasive.

**Structural factors**

177. Tunisia's financial system is dominated by the banking sector, in which state ownership continues to be extensive (Table 9). The state has majority positions in three of the largest commercial banks, a newly created bank specializing in microfinance, the largest insurance company, and two specialized insurance companies. It also operates the social security institutions that dominate the provision of retirement benefits, and has 50 percent participations in the development banks. A comprehensive program aiming at the modernization and restructuring of the banking sector began in 1997. It has involved the privatization of several commercial banks; the merger of several development banks and their transformation into full fledged commercial banks.[45] The other components of the financial system have grown significantly, but remain small compared with the banking sector.

178. Despite measures to encourage financing from the securities markets and alternative source of funding, bank credit continues to be the predominant source of external finance for Tunisian enterprises. Consequently, the level of private sector indebtedness is very high. Moreover, corporate debt is predominantly short-term, and long-term credits are indexed to short-term money market rates, making the cash-flow position of borrowers highly sensitive to changes in the level of interest rates.[46]

Table 9. Tunisia: Financial System Structure

| (December 2003) | Assets (millions of dinars) | Percent in Total Assets | Percent of GDP |
|---|---|---|---|
| Commercial banks | 23,415 | 75.1 | 72.8 |
| *Of which State-controlled* | *10,634* | *34.1* | *33.0* |
| Development banks | 987 | 3.2 | 3.1 |
| Offshore banks | 1,765 | 5.7 | 5.5 |
| NBFIs 1/ | 1,203 | 3.9 | 3.7 |
| Insurance companies 2/ | 1,300 | 4.1 | 4.0 |
| Pension funds 2/ | 2,500 | 8.0 | 7.7 |
| Total | 31,170 | 100.0 | 96.8 |

Source: Tunisian authorities.
1/ NBFIs include leasing and factoring companies, and merchant banks.
2/ As of end 2000.

[45] Noteworthy is the privatization of UIB in November 2002, involving the sale of a controlling share to foreign investors.

[46] In a sample of 1500 enterprises, the average debt-asset ratio exceeds 65 percent, and it reaches 80 percent in the construction sector; two-thirds of corporate debt is short-term.

179. Tunisia's strong macroeconomic performances contrast with the relatively weak financial position of the banking system: nonperforming loans (NPLs) are high (NPLs net of provisions account for 15,10 percent of total loans at the end of 2003) and stress tests show a large exposure to credit risk.[47] While no empirical evidence is available, one could argue that the credit policy considerations in monetary policy conduct may have delayed the development of the credit culture. The resulting substandard allocation of credit to the economy may have led to higher credit risk and NPLs. The longstanding involvement of the government in the financial sector may have contributed to lack of efficiency and distortions in credit allocation.

### C. Market Infrastructure

180. The money market, which is composed of the interbank market and markets for certificates of deposits, commercial paper, and treasury bills, remains shallow. In particular, turnover in the interbank market has been low and volatile, mainly as a result of banks' easy access to liquidity from the BCT, as mentioned above, as well as the rigidity of interest rates.

181. Starting in 1989, the government began to reduce reliance on captive sources of funding. However, the lack of a firm commitment to market funding of the budget, and weak institutional arrangements for public debt management has resulted in limited success of the auctions which at times had to be postponed, and a shallow secondary market. In order to confront financing requirements that could not be met through securities issues, on several occasions the Treasury resumed reliance on captive funding sources. In turn, the limited and uncertain supply of securities has been a deterrent to secondary market trading as it has encouraged investors to hold the securities until maturity. Secondary market trading is also hindered by weak commitment on the part of the primary dealers to promote market development; accounting rules which do not require valuation of securities at market value; and a long delay in the settlement and delivery of securities (four days). However, the introduction, in 2003, of a legal framework for repo transactions should encourage market development.[48]

---

[47] On the positive side the sector's profitability is high and the system is protected from external competition due to extensive capital controls. Furthermore, to help banks improve the financial soundness of their portfolio and strengthen their financial position, greater flexibility was introduced in the conditions for writing off doubtful claims, by reducing from four to two years the period to allow the write-off of frozen claims.

[48] The legal framework defines a repo as a transaction involving the purchase of securities with transfer of full ownership, at a price agreed on at the time of the initial purchase, and the commitment on the part of the seller/buyer to buy back/hand back the securities at a date and price agreed on at the time of the initial transaction.

## D. Channels of Transmission of Monetary Policy

182. Most deposit and lending rates in Tunisia are (de facto) indexed on the money market rate. Therefore, changes in official interest rates are reflected quickly in other interest rates throughout the financial system. Given that bank credit continues to be the predominant source of external finance for Tunisian enterprises, the transmission of monetary policy through the interest rate channel is potentially strong, in that changes in official interest rates can quickly alter the cash-flow position of borrowers by altering the average cost of borrowing through the re-pricing of banks' loans.

183. This responsiveness may have generated some reluctance on the part of the monetary authorities to make interest rate changes. It is worth noting that interest rates in Tunisia have shown very limited volatility during the past ten years, although it must also be added that inflation has remained low during this time.

184. This state of affairs suggests that the BCT has not relied on interest rate signals to regulate overall monetary conditions and to respond to shocks. Instead, monetary policy has affected aggregate demand by altering the quantity or availability of credit. In this context, the direct involvement of the government in the loan market (through the development banks and the public commercial banks) may have been instrumental in the conduct of monetary policy in a context in which interest rates were not, or could not be, actively used.

## E. Monetary Policy Instruments

185. The BCT has developed a comprehensive set of rules and money market instruments to manage banking system liquidity (Box 9). The weekly seven-day tender for repurchase operations is the main discretionary instrument. It is supplemented by standing facilities which allow banks, at their own initiative, to obtain or place liquidity at the official (but at penalty rates compared to those reflecting market conditions) intervention rates, and by nonremunerated reserve requirements. The combination of the weekly tender for repurchase operations with the standing facilities creates a corridor for money market rates.

186. Typically, the Tunisian banking system has an aggregate liquidity deficit and is reliant on refinancing from the BCT. This is due to the liquidity-absorbing effect of autonomous factors of liquidity generated by banknotes in circulation, and the liquidity-absorbing effect of reserve requirements. In this environment, the BCT acts as a supplier of liquidity (through the standing facilities and the discretionary monetary operations) and thus steers money market interest rates. However, at times the system has experienced a structural liquidity surplus owing to large capital inflows. While the BCT has the appropriate instruments to deal with excess liquidity (in particular deposit auctions), it has complicated monetary policy implementation because of the multiple objectives of the central bank.[49]

[49] Nondebt creating capital inflows (mostly FDI) were about US$650 million in the year 2000, about 40 percent of which were from the privatization of public enterprises.

**Box 9. Tunisia: Monetary Policy Instruments**

**Reserve requirements**

They are calculated as monthly averages. They must amount to 2 percent of domestic currency denominated sight and term deposits and similar instruments (i.e., certificates of deposits) with an initial maturity below three months; 1 percent for term deposit and similar instruments with initial maturity between three months and less than two years; and 0 percent for term deposits and similar instruments of two years or more. They are not remunerated, and they are not actively used as a monetary policy instrument.

**Standing facilities**

***One- to seven-day reverse repurchase operations***: Bank may request liquidity against delivery of collateral at a premium over the official intervention rate (+ 100 basis points). Accepted collateral includes treasury bills, and banks' claims on priority and other sectors.

***End-of-day (overnight) settlement operations***: Banks may request liquidity against delivery of collateral, or place liquidity at the official intervention rate plus/minus a spread. Accepted collateral includes treasury bills, and banks' claims on priority and other sectors.

**Money market operations**

***Weekly seven-day tender for repurchase operations***: The BCT invites bids for seven-day repurchase operations. The BCT decides on the amount to be injected and the bids are allocated using a multiple price auction (as of June 2004). Accepted collateral includes treasury bills, and bank claims on corporations which are deemed to be financially sound.

***Deposit auctions:*** When the banking system as a whole is overly liquid, deposit auctions are used instead of credit auctions to mop up excess liquidity. Bids are ranked and accepted according to the rate that is proposed (interest rate auction); they cannot exceed that of the weekly seven-day tender for repo operations.

***Three-month reverse repurchase operations***: the BCT invites bids for three-month reverse repurchase operations. Accepted collateral includes treasury bills only.

187. Weekly seven-day tenders for repurchase operations are the main discretionary instrument for liquidity management. Until June 2004, participating banks bid the amount of money they wished to transact at the fixed interest rate specified in advance by the BCT (fixed-rate auction). Since June 2004, the BCT is using a multiple rate auction system, whereby banks bid for the amount and the rate and the BCT charges the rates offered. In the event that bids received from participating banks exceed the volume of liquidity the BCT is prepared to provide, the BCT proceeds to a pro rata allotment of the individual bank bids depending on the ratio between total bids and total liquidity to be allotted.

188. Given the shallowness of the interbank market, the BCT has not been in a position to receive signals on the level of market rates. Furthermore, given the room for independent monetary policy, the BCT could have deviated from monetary and foreign exchange conditions in foreign financial markets. However, BCT's interest rate policy (in particular, the policy decisions regarding the official intervention rate) was cautious: deviations from conditions in foreign financial markets were avoided, and domestic interest rates have been kept positive in real terms throughout the 1990s.

189. Until recently, BCT's readiness to systematically meet bank requests under its standing facilities, combined with a narrow corridor for interbank market rates, had prevented the development of the interbank market. The credit policy considerations in the conduct of monetary policy have also prevented market development.[50] In addition, weak capacity to carry out liquidity forecasts has made it difficult for the BCT to take an active stance in managing overall liquidity in the system. In particular, the volume of credit auctioned to the banks in the seven-day tender for repurchase operations (volume tender) has been determined by a prediction of banks' expected demand rather than by monetary policy considerations. Therefore, if the demand of credit is overestimated, the remaining liquidity is left unsold. Conversely, if the demand for credit is underestimated, the credit is pro-rated to the banks on the basis of their respective bids. Banks in need of additional BCT credit can have recourse to the refinance standing facilities and obtain additional liquidity.

190. Reserve requirements have not been used actively for liquidity management purposes. Averaging provisions over a one-month period with regard to compliance allowed credit institutions to smooth out daily liquidity fluctuations (i.e., those arising from the fluctuation in the autonomous factors of liquidity).

191. The de facto reliance on the standing facilities to manage overall liquidity in the system has led to a dominant position of the BCT in the interbank market. In particular, the narrow corridor for interbank market rates has resulted in limited incentives for interbank trading and has inhibited the development of liquidity management skills in the banks.

### F. Conclusions and Lessons

192. The main lessons from Tunisia's experience with reliance on money market operations to conduct monetary policy are the following:

- In the context of a predetermined exchange rate, monetary policy independence was retained due to the maintenance of capital controls. The targeting of a rate of expansion in credit to the economy provided the anchor for price expectations;

- The use of monetary policy to encourage lending to all sectors regarded as central to Tunisia's development strategy, together with limited progress in modernizing public debt management, has delayed reliance on open market operations. However, the BCT was able to ensure an adequate provision of credit to the strategic sectors of the economy without jeopardizing price stability;

---

[50] The following changes in the implementation of monetary policy in 2001 have led to a more active monetary policy: (i) end-of-day settlement operations are conducted at rates which differ from the official intervention rate (± 1/16 percent); (ii) introduction of 3-month reverse repo operations; and (iii) broadening of the range of collateral for BCT refinancing (treasury bills, claims on priority sectors and claims on other sectors in equal shares).

- The BCT retained control over the main components of its balance sheet. However, rationing rather than competitive mechanisms were used for base money allocation;

- The structural liquidity deficit of the banking system has facilitated reliance on rationing for liquidity management, including the ability to target multiple objectives (i.e., price and quantities);

- While capital controls allowed the conduct of an independent monetary policy, interest rate management was cautious;

- State ownership in the financial system may have facilitated achieving credit objectives. However, high NPLs in a context of high growth suggest that this policy mix may have amplified credit risks for the banking system;

- From an operational perspective, reliance on money market operations for monetary policy conduct calls for development of the money and government securities markets, and strengthened liquidity forecasting arrangements; and

- As Tunisia moves to greater exchange rate flexibility and to capital account liberalization, greater interest rate flexibility will be needed. In this context, money market operations (i.e., open market operations) for the allocation of base money will need to be further developed. The BCT has already started moving in this direction.[51]

[51] See "Tunisia—Strengthening the Monetary Framework and Instruments," prepared by Monetary and Financial Systems and Middle Eastern Departments, July 2003.

# IX. UGANDA[52]

## A. Adoption of Money Market Operations

193. Uganda has been relying on money market operations since the beginning of economic reforms which started in the late 1980s. Critical elements of the reform efforts were a substantial withdrawal of government from commercial activities and the elimination of controls on prices, interest rates and bank credit. Similar reform efforts were also brought to bear on the trade and exchange regimes culminating in the current account convertibility in 1993 and the liberalization of the capital account in 1997.

194. Overall macroeconomic performance has been robust with economic growth in excess of 6 percent over the last decade. Inflation was substantially reduced from the double-digit figures of the early 1990s to less than 4 percent on average during the last four years. The large inflow of donor funding has resulted in the buildup of significant import cover (up to 6 months of imports of goods and nonfactor services), and this has substantially reduced the size of the emerging budget deficits and related government borrowing.[53] Donor support and prudent macroeconomic policies contributed to sustained high rates of economic growth and low inflation referred to above.

195. Reliance on money market operations has not been without challenges especially in the context of an underdeveloped financial market and the need for substantial sterilization operations to address the liquidity implications of the release of donor funds. Yet another challenge for the Uganda authorities has been pressure for the real exchange rate to appreciate consequent on the large external inflows. Uganda has a floating exchange rate. However, the large donor inflows have often generated pressures for an appreciation of the Uganda shilling and this complicates the exchange rate policy as the authorities are concerned about the implications for competitiveness and adjustment to other shocks. Additional pressures are generated on domestic liquidity as the government spends the funds. Unlike many developing countries, Uganda's monetary policy operations have not been subjected to undue fiscal dominance, thanks to donor assistance for budgetary operations. Treasury bill operations have been primarily for liquidity management.

---

[52] Prepared by Obert Nyawata (Senior Economist, MFD), on the basis of MFD work in the context of the FSAP for Uganda, and the technical assistance missions of August 2001 and January 2002 (both headed by Abdessatar Ouanes), and of March 2004 (headed by Stephen Swaray) on monetary policy implementation. The study covers developments up to end 2003.

[53] Over 50 percent of government's expenditures has been covered by donor funds.

## B. Institutional Framework for Monetary Policy

196. The Ugandan Constitution stipulates that the Bank of Uganda (BOU) shall promote and maintain the stability of the value of the currency and in addition encourage and promote economic development through effective and efficient operation of a credit system. The BOU Statute states the objectives of the central bank are to maintain monetary stability and external reserves, as well as to participate in Uganda's economic growth and development programs. At the same time, the BOU believes the overriding objective of monetary policy is to contain annual inflation at below 5 percent while maintaining a flexible exchange rate that is responsive to changes in Uganda's terms of trade.

### Structure of financial sector

197. Although the BOU has managed to attain its main policy objective (low and stable inflation), it operates in the context of a low level of monetization and a shallow financial market. Cash constitutes about one quarter of broad money, which is only about 15 percent of GDP, and assets of the financial system are only about 30 percent of GDP.

198. The financial sector is dominated by commercial banks. As of December 2003, it consisted of 15 commercial banks, of which 11 are foreign banks, 7 nonbank credit institutions, 9 securities firms and finance companies, 19 insurance companies, 2 pension funds, and 83 microfinance institutions and credit unions (Table 10). Commercial banks account for slightly over 80 percent of total system assets while other financial institutions play only a minor role. The banking sector is characterized by a large share of foreign ownership and high loan and deposit concentration. The four largest banks in the system, one previously state-owned, accounted for about 70 percent of total sector assets, 63 percent of total loans, and 71 percent of total deposits.

Table 10. Uganda: Financial System Structure

| (December 2003) | Assets (billions of shillings) | Percent in Total Assets | Number of Institutions | Percent of GDP |
|---|---|---|---|---|
| Commercial Bank | 2,990 | 83.5 | 15 | 22.6 |
| Nonbank credit institutions | 144 | 4.0 | 7 | 1.1 |
| Insurance companies | 115 | 3.2 | 19 | 0.8 |
| Pension funds | 293 | 8.2 | 2 | 2.5 |
| Microfinance and credit unions | 40 | 1.1 | 83 | 0.3 |
| Total | 3,582 | 100.0 | 126 | 29.5 |

Source: Bank of Uganda

199. The increase in treasury bill issues at times exerted upward pressure on interest rates and added to the already strong disincentives to private sector lending development.[54]

[54] Outstanding treasury bills rose from less than 2 percent of GDP prior to 1999 to over 5 percent of GDP in 2001, with issuances persistently exceeding redemptions.

The rise in interest rates as well as the volume of treasury bill issues implied an increase in the interest payments on treasury bills, adding to budgetary costs. In fiscal year 2000/01, interest costs accounted for 5.4 percent of budgetary revenues. Although small relative to GDP, interest costs increased from 0.15 percent in 1999 to 0.89 percent of GDP in 2002.

## C. Monetary Policy Implementation and Instruments

200. To achieve its objectives, the BOU has set a monetary program that is consistent with the economy's overall macroeconomic framework. Uganda has introduced major changes in its monetary policy framework in order to contain the excessive volatility in interest rates that resulted from liquidity management operations particularly in 2000 and 2001. These operations were conducted mainly through a mixture of foreign exchange interventions and treasury bill auctions with the latter bearing the greater part of the burden during the early stages. The volatility in interest rates abated due to the BOU's increased reliance on short-term instruments for day-to-day liquidity management (repos) and the use of a judicious mix of treasury bill auctions and foreign exchange interventions for sterilization operations. In practice, the BOU's money market interventions now seek a gradual rather than abrupt attainment of the reserve money path determined by the monetary program. The new monetary policy framework has entailed changes in the use of various instruments. In addition to the reserve money target, the BOU monitors a broad range of variables.

201. The large capital inflows associated with donor assistance have called for large-scale sterilization operations in the form of outright sales of foreign exchange and treasury bills auctions. Foreign exchange sales have tended to appreciate the exchange rate, thereby adversely affecting the country's competitiveness. In addition, volatility in the exchange rate causes exporters and importers to speculate on the value of the shilling.

202. Foreign inflows have, on occasion, slowed the depreciation of the real exchange rate, thereby impairing the scope for adjustment to terms of trade shocks in order to safeguard export competitiveness. Initially the BOU responded by reducing its foreign exchange sales to the market in order to allow the exchange rate to depreciate in response to the terms of trade shock and shifted the burden of liquidity absorption to treasury bills. Subsequently the BOU somewhat shifted the burden toward more foreign exchange sales in the policy mix for sterilization operations.

### Structural excess liquidity problem

203. Sustained capital inflows have at times complicated the BOU's conduct of monetary and exchange rate policies. On the monetary front, the challenge for the BOU has been to preserve its inflation objective by neutralizing the effects of the government-injected liquidity as donor funds are released in the system. This has been done through sterilization operations which, at times, have resulted in interest rate volatility due to weaknesses in the monetary management framework, together with a shallow money market.

204. While it lasted, the volatility of interest rates undermined the BOU's capacity to signal a clear and consistent policy stance. For example, the BOU's two policy rates—the rediscount and bank rate which are set at a margin over the treasury bill rates—became ineffective as monetary policy signals, as they reflected the volatility of Treasury bill rates.[55] The re-discount rate has become the policy rate that the BOU uses to signal its desired monetary policy stance.

205. Interest rate volatility also undermined the BOU's ability to extract meaningful information on monetary conditions from the market. Both the monetary authorities and the financial system lacked a benchmark interest rate to which returns on loans and other financial assets could be linked and from which liquidity overhangs could be gauged.

206. Interest rate volatility, which was caused by the large fluctuation of bank reserves, had implications for the conduct of monetary policy.[56] In particular, the sharp movements in bank reserves mean that the excess funds are not lendable and therefore pose little threat of transmission through the credit channel of monetary policy. This has allowed the BOU some flexibility in conducting sterilization operations, while at the same time not being too complacent about the potential surge in credit and its inflationary consequences.

207. Swings in bank reserves stem from factors that are endogenous and exogenous to the interventions of the central bank. On the one hand, the limited development of the financial markets makes it difficult for banks to manage liquidity effectively. The bunching of capital inflows—which are dependent on disbursements related to projects implemented by NGOs and government investment expenditures—results in the sporadic conversion of large sums of foreign exchange into shillings, and sporadic exchange rate volatility.

**Monetary policy transmission**

208. High credit risk, combined with inefficiencies in the banking and payment systems and poor physical infrastructure, generally impedes monetary policy transmission and the supply of credit to the private sector, particularly in rural areas as in Uganda. Money and securities markets are highly illiquid, owing to the lack of creditworthy counterparties in the financial system. Under such circumstances, commercial bank liquidity and interest rates become volatile, reflecting the size and bunching of foreign currency inflows and outflows along with weaknesses in the management of liquidity.

209. When this situation occurs, the interest rate and credit channels of monetary policy do not function as well as might be expected in a well-developed financial market. With the

[55] Subsequent to a more active use of repos for short-term liquidity management, interest rate volatility declined. The policy changes were introduced in the context of MAE technical assistance to the BOU after an FSAP mission.

[56] Excess reserves have fluctuated between 10 to 50 percent of required reserves.

elimination of financial repression and improvement in the liquidity management framework, the signaling role of interest rates has now been restored and changes in policy rates are increasingly transmitted to the entire spectrum of interest rates and the entire yield curve.

210. Small as it is, credit to the private sector is of some significance to prime corporate borrowers and may also influence the transmission of monetary policy, though to what degree remains an empirical issue. Repos have become the instrument of choice for day-to-day liquidity management, with a judicious mix of foreign exchange operations and Treasury bill issues addressing the sterilization needs.

## Monetary policy instruments

211. Since the initiation of reforms, the BOU shifted to a combination of rules-based instruments and money market operations to conduct monetary policy (Box 10). The monetary policy instruments at its disposal include reserve requirements; standing facilities (rediscount window for treasury bills, a refinance standing facility); and discretionary and money market operations (treasury bills, repurchase agreements, and foreign exchange sales). In addition, the BOU has been a significant participant in the foreign exchange markets, in conjunction with its need to undertake sterilization operations as part of the conduct of monetary policy. In practice, the BOU has relied on a mix of treasury bill issuance and foreign exchange sales for its sterilization operations.

### Box 10. Uganda: Monetary Policy Instruments

**Reserve requirements**

Reserve requirements are set at 10 percent for demand deposits and 9 percent for term and savings deposits, with a two-week maintenance period. They are not remunerated and are held in domestic currency for both local and foreign currency deposits. Reserve averaging is permitted up to 50 percent of the required reserves.

**Standing facilities**

***Rediscount window for treasury bills:*** For bills with remaining maturity of 91 days or less. The re-discount rate is now the policy rate that is fixed by the BOU to signal its desired monetary policy stance. The rediscount rate is based on four primary market observations of the 91-day t-bill auction rate plus a policy margin.

***Automatic borrowing window****:* Accessible at the discretion of banks up to 5 percent of required reserves and up to five days. Collateral includes only treasury bills with remaining maturity of 91 days or less. The interest rate is equal to the rediscount rate plus a 1-percent margin.

**Money market instruments**

***Weekly treasury bill auctions****:* Issued solely for monetary policy purposes and the costs are accounted for in the government's annual budget. Bills are issued with maturities of 91, 182, 273, and 364 days.

***Repos:*** Repos are decided based on liquidity conditions and are used for fine tuning operations.

***Sales of foreign exchange***: Sales of foreign exchange are being used in tandem with treasury bill auction for sterilization purposes.

212. The BOU's has developed a liquidity management plan which separates the management of short-term "temporary" and long-term "structural" liquidity resulting from government domestic expenditures financed through foreign donor inflows. The BOU uses repos for fine-tuning "temporary" liquidity variations and a mix of foreign exchange sales and net treasury bill issuance to sterilize structural liquidity, with clear signaling of sterilization and intervention actions in the foreign exchange market. Overall, these actions have resulted in lower volatility of interest rates and helped anchor market expectations.

## D. Conclusions and Lessons

213. The following conclusions and lessons can be derived from the experience of Uganda with implementation of monetary policy:

- Fiscal dominance has not been a problem in Uganda, mainly because of sources of foreign financing. Treasury bills are solely for liquidity management. In this context, prudent macroeconomic policies have enabled Uganda to control inflation.

- Financial liberalization, increased confidence in the banking system, and improved liquidity management practices have enhanced the signaling capabilities of interest and exchange rates.

- Notwithstanding ongoing challenges, the BOU has stayed the course on money market instruments. There has been no tendency for policy reversals. Uganda's experience demonstrates that a combination of rules-based instruments and money market operations can be effective even under conditions of limited market development, provided supporting policies are in place.

- Over time, self-liquidating repo transactions can help to counter seasonal and short-term swings in liquidity, and repos are now being more actively used to deal with day-to-day liquidity management, while treasury bill issues and foreign exchange operations are used for sterilization operations.

- The BOU has responded to the potential for interest volatility from a mechanical adherence to a base money path by smoothing its liquidity management operations in a manner that does not amplify interest rates volatility. Greater emphasis on sterilization through sales of foreign exchange (thus lower net treasury bill issuance) has allowed a steadier execution of the base money program.

- Uganda's experience also illustrates the importance of the central bank communicating with the market clearly. At times, market volatility was a reflection of uncertainties in the perception by the market of the intentions of the central bank. Conversely, at periods where there was clarity, market stability increased. The shallowness of the market may have amplified the response of the market to shocks.

# X. UKRAINE[57]

## A. Path to Reliance on Money Market Operations

214. The introduction of money market operations to conduct monetary policy in Ukraine followed the move to replace the karbovanets with Ukraine's permanent currency, the hyrvnia, in 1996. Due to the political importance attached to the monetary conversion, the authorities made a concerted effort to ensure its success. In particular, great significance was attached to the stability of the exchange rate in the period preceding the announcement of the conversion. In effect, this gave the National Bank of Ukraine (NBU) the political mandate for tight financial policies during 1996.

215. With this mandate, the NBU began a process of financial liberalization, including the gradual introduction of money market operations to conduct monetary policy and the phasing out of directed credit and bank-by-bank credit ceilings. The main monetary instruments that were introduced at these beginning stages were: reserve requirements, a variety of money market operations, and a limited standing facility. The political mandate for tight policies, the resulting fiscal adjustment, and growing activity in the nascent domestic treasury bill market allowed the NBU to limit its credit expansion to government. It also reduced pressures on the commercial banks to provide directed credits. As a consequence of these developments, the exchange rate remained broadly stable throughout the year, and in September 1996, Ukraine introduced its new currency.

216. Ukraine's progress toward financial liberalization was disrupted by the financial crisis that hit many Asian economies during the second half of 1997 and Russia in mid-1998. The reversal of investor sentiment and the ensuing capital outflows put monetary policy under pressure. In 1998, when the crisis broke, the confidence of domestic and foreign investors in Ukraine was weakened, and in particular, demand for Ukrainian government debt collapsed. A significant depreciation of the hryvnia followed, and a vicious cycle emerged of flight from government securities and rising real interest rates. With reduced access to international and domestic creditors, the government once again relied heavily on borrowing from the NBU to finance the budget deficit and to service public debt. This borrowing was in the form of NBU purchases of government securities in the primary market for treasury bills.

217. Starting in 2000, Ukraine managed to recover substantially from the Russian crisis and achieve significant growth in its own economy. However, the government securities market was slow to recover following the rescheduling of government debt in 1998.

---

[57] Prepared by Stephen Swaray (Senior Economist, MFD), based on MFD work in the context of the FSAP to Ukraine, and on MFD technical assistance mission of April 2004 (headed by Inci Otker-Robe). The study covers developments up to October 2004.

Furthermore, the low level of treasury bills outstanding limited the scope for reliance on some of the money market instruments that the NBU had developed.

## B. Monetary Policy Environment

### Institutional framework

218. The NBU's responsibilities for the formulation and conduct of monetary policy are defined by the Constitution, passed in 1996, and the Law of Ukraine on the National Bank of Ukraine (NBU law), passed in 1999. According to the NBU law, the NBU's primary objective is to ensure the stability of the Ukrainian monetary unit. The NBU law also requires the bank to support other government economic and financial objectives, such as promoting macroeconomic stability, economic growth, and employment, under the condition that this support does not create a conflict with the primary objective of the NBU.

219. In pursuing the goal of stability of the monetary unit of Ukraine, the NBU has chosen to target the nominal exchange rate rather than reserve money.[58] In granting operational responsibility to the NBU for the conduct of monetary policy, the law authorizes the NBU to use a range of specified monetary policy instruments, and to take other measures as necessary, to achieve its objective.

### Macroeconomic performance

220. The onset of the Russian crisis disrupted the good macroeconomic performances recorded in the mid-1990s: gross international reserves fell sharply, and the sharp depreciation of the hryvnia during this period led to an upturn in inflation. However, fiscal policies were restrained, and, subsequently, macroeconomic balance was restored. The currency was allowed to float in 1999, and since 2000 the monetary policy framework has been characterized by a de facto fixed exchange rate against the U.S. dollar. Ukraine's macroeconomic performance since 1996 has gone through periods of stability, interspersed with crises, reflecting in part the poor policy environment and in part, adverse economic shocks. Fiscal and monetary policies have been inconsistent, and Ukraine's initial defense of its exchange rate in mid-1998 proved counterproductive. However, the country achieved significant economic progress and access to international markets were regained with the Eurobond issues in 2003 and 2004.

---

[58] The NBU has been pursuing a nominal exchange rate target to a large extent due to undeveloped monetary transmission mechanisms and unpredictable dynamics of the money demand. The authorities have argued that exchange rate stability was desirable in an open economy like Ukraine since in the short run the exchange rate has a direct impact on inflation.

**Structure of the financial system**

221. The Ukrainian financial system is small and concentrated in commercial banking. Assets in Ukraine's 158 active banks amounted to 40 percent of GDP at end-2003 (Table 11). The other financial subsector of significance is insurance, where premiums account for about 2.0 percent of GDP in 2002. Other financial institutions such as pension funds, credit unions, and leasing companies together account for less than 1 percent of GDP.

Table 11. Ukraine: Financial System Structure

| | 2001 | 2002 | 2003 |
|---|---|---|---|
| Banks | | | |
| Number of banks | 152 | 157 | 158 |
| Total assets (in millions of hryvnia) | 47,204 | 67,774 | 104,873 |
| In percent of GDP | 23.4 | 31.1 | 39.7 |
| Insurance | | | |
| Number of insurance companies | 328 | 338 | 357 |
| Total assets | 3,007 | 5,300 | 9,030 |
| Premium revenue (in mill. of hryvnia) | 3,031 | 4,442 | 9,135 |
| Number of investment and mutual funds | 362 | - | - |
| Total assets (in mill. of hryvnia) | - | - | - |
| Number of pension funds | 15 | 23 | 47 |
| Total assets (in mill. of hryvnia) | 60 | 55 | - |
| Number of credit unions | >400 | >450 | - |
| Total assets (in mill. of hryvnia) | 50 | 90 | - |

Sources: NBU and Ministry of Finance.

222. The banking system is composed mainly of a large number of private banks, and concentration is low by international standards. The ten largest banks hold 54 percent of assets as of December 2003. There are two wholly owned state banks, which together account for about 10 percent of total bank assets. Foreign involvement in the sector has been relatively modest, particularly in comparison to other countries in Central and Eastern Europe. Besides the seven wholly owned foreign banks, there are another 13 banks that are partly foreign, which together account for 16 percent of total bank assets.

223. The growth of banking aggregates between 1998 and 2003 was remarkably high. The rapid rise in deposits indicates macroeconomic stability, increased public confidence in the banking system, and a significantly reduced use of cash relative to bank money. However, per capita bank deposits in Ukraine are still far lower than in comparator countries. Credit expansion has been even faster than the expansion in deposits, as the ratio of stock of credits to stock of deposits rose from 103.7 percent in 1999 to 115.2 percent in 2003. [59]

[59] Commercial bank credit to the economy grew by 62 percent, 41 percent, 48 percent and 64 percent between 2000–2003, respectively, while deposits grew by 47 percent, 32 percent, 43 percent and 58 percent, respectively.

224. The long period of economic instability promoted dollarization, but in the more stable recent conditions, dollarization of deposits has fallen much faster than the dollarization of loans. At the end of 2003, 32 percent of deposits and 38 percent of bank loans were denominated in foreign currencies, compared to 44 percent and 45 percent, respectively, at the end of 1999. The wide differentials between hryvnia and foreign currency interest rates, coupled with a stable exchange rate made loans in dollars seem very attractive to borrowers.[60]

## C. Money Market Infrastructure

### The government domestic debt market

225. The market for Ukrainian government domestic securities is thin and fragmented, and the volume of securities suitable for secondary market trading is small. About two thirds of domestic government securities are restructured bills which are held by the NBU. Furthermore, the small stock is fragmented into large numbers of issues with different maturity dates, and most issues are small in size[61], making secondary trading difficult. Turnover in the secondary market has been small and volatile despite a well-functioning on-line automatic quotation and trading system (PFTS) and adequate depository facilities offered by NBU.

### The interbank money market

226. The interbank market in Ukraine has been characterized by high volatility of hryvnia interbank rates.[62] Furthermore, interbank lending has been concentrated in short maturities, and the market is segmented. These deficiencies have weakened the monetary transmission mechanism. In particular, a number of commercial banks have maintained substantial excess reserves.

227. Over the years, causes of the poor functioning of the interbank market have been related to credit risk, in a context where there has been limited amounts of securities to be used in repurchase transactions or as collateral.[63] In addition, the NBU did neither intervened

---

[60] Interest rate spreads between loans in domestic and foreign currency were 6.9 percent in 2003, 10.5 percent in 2002, 18 percent in 2001 and 21.3 percent in 2000 (December data).

[61] For example, 66 new issues were sold in 2003.

[62] For example, the overnight rate rose from 8.1 percent at end-May 2001, to 35.1 percent at end-June 2001. The volatility declined somewhat since then until another spike occurred in November 2003.

[63] As of end 2003, treasury securities amounted to HRV 2.6 billion. Total domestic government securities held outside the central bank amounted to 1.5 percent of the GDP, of which more than 90 percent was held by banks.

actively to offset fully exogenous liquidity shocks, nor did the NBU standing facilities serve effectively to limit interbank interest rate fluctuations, in part because many banks lacked eligible collateral and the NBU imposed limits on the use of these facilities. Finally, some problems in the interbank market have emerged due to unanticipated effects of the successful introduction of the single treasury account and delays in establishing the proper coordination of liquidity management between the monetary and fiscal authorities.

### D. Monetary Policy Implementation and Instruments

228. Since gaining independence in 1991 up to 1996, monetary policy in Ukraine relied on administrative measures designed to provide credit to preferred sectors of the economy at subsidized interest rates as well as to provide liquidity to finance the government's substantial budget deficit. The commonly used instruments were directed credit, refinance credit, interest rate controls, and bank-by-bank credit ceilings. During this period, the economy performed poorly: inflation was consistently in triple digits or more (by 1993, it was 10,000 percent), and output was continuously contracting—the cumulative decline in reported GDP is estimated at more than 50 percent through 1996.[64]

229. In 1996, Ukraine introduced its own permanent currency. The importance attached to a successful introduction of the hryvnia resulted in a substantial easing of pressure for directed lending by commercial banks and the NBU. Moreover, demand for refinancing credit in 1996 was very moderate as banks exhibited caution in their general lending activity to the nongovernmental sector, in part because of their own fragile state. Instead, banks preferred to maintain large holdings of unremunerated excess reserves.

230. In parallel, the NBU began the process of financial liberalization, including the gradual introduction of money market operations to conduct monetary policy and the phasing out of directed credit and bank-by-bank credit ceilings. Concurrently, basic market infrastructure, including a treasury bill market, was developed to facilitate reliance on money market operations to conduct monetary policy. At the end of the process, the NBU could rely on a combination of rules-based instruments (reserve requirements) and money market operations to manage longer-term trends in liquidity (Box 11).[65]

---

[64] Poor economic performance has also reflected unsuccessful fiscal and tax reforms.

[65] Refinancing facilities are subsumed under the heading "money market instruments" since these instruments are at the initiative of the NBU.

## Box 11. Ukraine: Monetary Policy Instruments

**Reserve requirements**

Reserve requirements used to be set at differentiated rates depending on maturity and currency denomination. Effective October 1, 2004 demand deposits are subject to 8 percent and time deposits to 7 percent requirement (both domestic and foreign currency deposits). Reserves must be held in domestic currency over an averaging period of one month. As of August 2004, banks are required to maintain a daily minimum balance of 70 percent of required reserves (earlier 60 percent minimum and before that full averaging was allowed). The NBU has been lowering the reserve requirement in line with the reduction in inflation.

**Standing facility**

***Discount rate*:** The discount rate serves as (de jure) benchmark interest rate for money market participants set by the NBU to benchmark the cost of money. As such, it is the lowest of the NBU's lending rates, but no transactions are carried out at that rate.

***Deposit facility:***
Interest rates are fixed by the NBU. Only banks that do not borrow from the NBU can use the deposit facility. Maturity ranges are 2–7 days, 8–21 days and 22–30 days.

**Money market instruments**

***Refinancing facilities:*** Three types of regular refinancing facilities are available to commercial banks: secured overnight loans, unsecured overnight loans, and refinancing up to 365 days. Collateral accepted by the NBU is limited to government securities for the overnight credit, but a broader list of collateral is accepted for loans in other maturities. To use these facilities, banks must meet specific conditions relating to capital, and solvency, and have a good track record of loan repayment to the NBU. The use of these facilities is limited and stricter criteria are applied for unsecured overnight credit than other credit. The total amount of refinancing cannot exceed a certain percentage of the commercial bank's paid-up capital. Interest rates on refinancing loans cannot be lower than the NBU's discount rate. The interest rates on overnight loans are set by the NBU, while loans on other maturities are provided with price or quantity tenders. Effective March 2004, the NBU set the rates daily depending on the liquidity conditions in the market and differentiating the interest rate on secured and unsecured overnight loans.

***NBU's Certificate of Deposits (CDs)***: CDs with maturities from 1 to 180 days can be auctioned to commercial banks to mop up excess liquidity in the system. Interest rates on CDs are set by the NBU. CDs can be traded in the secondary market and be used as collateral in the interbank market.

***Repurchase (repo) and reverse repo operations:*** Repos and reverse repos can be used to fine-tune liquidity on a day-to-day basis, either to absorb or provide liquidity against government securities (foreign exchange can be accepted in bilateral repos). They may be sold on a bilateral basis or through auctions.

***Outright purchases or sales of securities:*** The NBU can conduct outright operations with government securities. Purchases of securities can be conducted on a bilateral basis or through an auction mechanism and sales through an auction mechanism. The NBU holds only restructured debt in its portfolio.

***Foreign exchange market operations:*** Foreign exchange operations have been used as a monetary policy instrument, to regulate liquidity in the system. In fact, foreign exchange intervention has been the main instrument of liquidity management.

231. While the NBU could also use open market operations, involving the buying and selling of treasury bills in the secondary market and repurchase (repo) or reverse repo operations, such money market operations were not used frequently.[66] The NBU's toolkit also includes standing facilities. The interest rates on these facilities have been set administratively by the NBU. The NBU has also intervened in the foreign exchange market and this became eventually its main instrument of monetary policy.

232. Reflecting the generally good performance of the budget and the rapid expansion in the treasury bill market, the NBU was able to effectively regulate liquidity and conduct monetary policy during 1996 and part of 1997. Policy was tightened at the beginning of 1996 through increases in the required reserve ratios for both domestic and foreign currency deposits in an effort to reduce quickly excess reserves at commercial banks. This action was followed by tight credit policies as the NBU restricted refinancing by limiting the number of auctions and the use of its refinance standing facility, and by periodic NBU sterilization operations to offset its frequent net purchases in the exchange market. The NBU maintained its relatively tight credit policy during the first nine months of 1997, while strong participation of nonresidents in the treasury bill market allowed the budget to be financed without recourse to borrowing from the NBU.

233. Most nominal interest rates (which by then had been completely freed) began to fall in 1996 as inflation came down sharply. Average commercial bank lending and deposit rates declined following several reductions in the statutory NBU refinance rate during this period. Nongovernmental borrowing did not increase in response to the fall in the commercial bank lending rates, however, because of the cautious lending policies of commercial banks. Indeed, with the yield on 3-month treasury bills remaining high, commercial banks found holding treasury bills an attractive alternative to extending loans. It is not clear whether this crowded out lending to the nongovernmental sector, since the commercial banks had previously kept large unremunerated excess reserves. The volume of treasury bills sold increased steadily, reflecting in part the rapid rise in the participation of nonresident investors in the market, particularly in the second half of 1996 through the third quarter of 1997.

234. The onset of the financial crisis that hit many Asian economies during August and September 1997 influenced investor perceptions of Ukraine. The foreign exchange and treasury bill markets became increasingly erratic during the fourth quarter of 1997 and investors started withdrawing due to concerns regarding the stability of the exchange rate and Ukraine's ability to repay. During this period, the NBU sold a considerable amount of foreign reserves to protect the exchange rate. At end-October, the authorities announced a number of measures to ease pressures in the foreign currency market and help keep the hryvnia within its band. These included increased interest rates,[67] tightened reserve

[66] The NBU has started to use more actively reverse repos and to issue CDs since mid-2004.

[67] The statutory refinance rate was raised three times in October–November 1997, from 16 to 35 percent, and 12-month treasury bill yields were increased from 27 to 38 percent.

requirements, large-scale open market operations, and measures to enhance the attractiveness of treasury bills (including lowering the cutoff price and shortening their maturity). However, these measures were not sufficient to stem the loss of reserves associated with the decision to maintain the band.

235. The reversal of investor sentiment and the ensuing capital outflows put monetary policy under considerable pressure. When the crisis broke, the confidence of domestic and foreign investors in Ukraine was weakened, and in particular, demand for Ukrainian government debt collapsed. A significant depreciation of the hryvnia followed, and a vicious cycle emerged of flight from government securities and rising real interest rates. With reduced access to international and domestic creditors, the government had to rely on borrowing from the NBU to finance the budget deficit and to service public debt. The flight from government debt and the rising real interest rate eventually led to the rescheduling of about US$5 billion worth of outstanding government securities, and a substantial reduction in their net present value.

236. Over the period 2000–2003 monetary policy actions were aimed at maintaining a stable exchange rate against the U.S. dollar, building up external reserves while keeping monetary expansion in line with the growth and inflation objectives. Reflecting the generally good performance of the external sector during this period, the NBU enhanced its purchase of foreign exchange from the interbank markets. As a result, net international reserves grew from US$-0.6 billion at the end of 2000 to US$5.1 billion by the end of 2003. Part of the liquidity generated from these purchases remained unsterilized, and consequently, monetary aggregates were expansionary.[68] The expansion in monetary aggregates was, however, accommodated by strong growth in real money demand stemming from the higher than expected growth of real GDP, regained confidence, and the phasing out of large amounts of noncash (barter) transactions. Annual inflation fell from 19.2 percent at the end of 1999 to 6.1percent at the end of 2001, to -0.6 percent at the end of 2002 and rose to 8.2 percent by the end of 2003. The nominal exchange rate depreciated only marginally from 5.22 hryvnia to the U.S. dollar at the end of 1999 to 5.30 at the end of 2001 and to 5.32 hryvnia to the U.S. dollar at the end of both 2002 and 2003.

237. In line with reduced inflation, the NBU cut its discount rate several times (from 45 percent at the beginning of 2000 to 7 percent at the end of 2003). Similarly, the NBU cut its overnight lending rate from 30 percent to 8 percent by the end of 2003. It also lowered the reserve requirement from 17 percent in 1999 to 7 and 8 percent, for time and demand deposits, respectively (effective October, 2004). Because of the reduced cost of funds to the banks and the expansion in liquidity, nominal interest rates for loans in domestic currency to the economy declined from a weighted average of 52 percent in 1999 to 18 percent at the end

[68] Base money grew by 40.1 percent, 37.4 percent, 33.6 percent and 30.1 percent between 2000 and 2003, respectively, while broad money grew by 45.5 percent, 41.9 percent, 41.8 percent and 46.5 percent, respectively.

of 2003. Overall, over the period 2000–2003, the NBU was able to maintain the stability of the exchange rate, build up its external reserves, and achieve a decline in inflation.

### E. Conclusions and Lessons

238. Ukraine's experience reveals that reliance on money market operations to conduct monetary policy may be complicated by the following factors:

- Fiscal dominance: monetary policy performed poorly in all those years in which the NBU was used to meet the financing needs of the budget.

- Poor target choice: the initial defense of the exchange rate at the onset of the Russian crisis, which later proved counterproductive, complicated the successful implementation of monetary policy.

- Underdeveloped government domestic debt market: the underdeveloped debt and securities market and the absence of a sufficient amount of securities with which to conduct sterilization and collateralized operations effectively rendered many of the money market operations inoperable.

- Deficiencies in the interbank market arising largely from weaknesses in the banking system, the absence of suitable instruments to use as collateral, and the poor intervention strategy of the NBU. Deficiencies in the interbank market weakened the monetary transmission mechanism and complicated reliance on money market operations to conduct monetary policy.

- However, Ukraine was able to effectively conduct monetary policy between 1996 and 1997 and achieve a significant reduction in inflation over the period, largely by the use of simple rules-based and open market type instruments, including reserve requirements, a Lombard facility, credit auctions, and primary market outright transactions in government securities. Similarly, during the period 2000–2003, the NBU was able to maintain the stability of the exchange rate, build up its external reserves, and achieve a decline in inflation.

# XI. VANUATU[69]

## A. Path to Reliance on Money Market Instruments

239. Since its independence in 1980, monetary management in Vanuatu has long been underdeveloped. In 1988 the Reserve Bank of Vanuatu (RBV) started to impose a reserve requirement on all banks, the so-called Statutory Reserve Deposit (SRD), which requires them to keep 10 percent of all demand, time, and saving deposits of residents in vatu with the RBV. This requirement was primarily intended for prudential reasons. The RBV also had a lender-of-last resort facility (the Advance Facility) which was more often used by nonbanks than banks.

240. Early in 1998, the financial system came under stress when social unrest prompted the government to allow the public to withdraw their retirement savings from the Vanuatu National Provident Fund (VNPF). In response to a sharp rise in liquidity in the financial system, the RBV introduced liquidity asset ratios, the so-called Prescribed Reserve Asset (PRA) requirement. The PRA required banks to hold 16 percent of vatu deposit liabilities in the form of Government securities and/or the RBV notes. In addition, the RBV raised the base-lending rate of the Advance Facility by five percentage points to almost 11 percent, to indicate to the market that it was prepared to defend the exchange rate of vatu. The commercial banks followed the RBV's move and increased their deposit and lending rates.

241. Because this action was not sufficient to absorb excess liquidity, the RBV also started to issue its own securities, the RBV notes. These measures produced positive results: the financial system stabilized, confidence in the vatu was recovered, and official reserves were significantly increased. At the end of 1998 the RBV started to phase out the PRA requirement, still retaining the SRD requirement. However, the design of the SRD requirement was modified. The SRD requirement had been based on all the demand, time, and saving deposits of residents in vatu, but the new SRD included 50 percent of residents' demand deposits in foreign currency. At the same time, reserve holdings no longer had to be held in a blocked account at the RBV, and the banks are allowed to meet the reserve requirement on average during the maintenance period.

242. The introduction of the PRA was intended to facilitate the placement of government bonds by creating a captive market, rather than for monetary policy purposes, in a context where the payments by the VNPF were financed largely through the liquidation of their holding of government bonds and the issuing of new government bonds. As an instrument of monetary policy, the usefulness of the PRA was limited. A change in the PRA requirement

---

[69] Prepared by Kentaro Iwatsubo (Summer Intern, MFD) and George Iden (former Senior Economist, MFD), based on "20 Years of Central Banking in Vanuatu," Reserve Bank of Vanuatu; a February 1996 MAE technical assistance mission, George Iden, mission chief; and on SM/02/344 and SM/02/350. The study covers developments up to end 2003.

was likely to affect interest rates which, in turn, influence the demand for credit and, therefore, monetary conditions. However, the quantitative effect of a change in the PRA on interest rates and, subsequently, monetary conditions, was difficult to determine. The quasi-absence of a secondary market in the government securities and the shallowness of the financial sector also made it difficult to use the PRA as an effective monetary policy instrument.

243. At the same time, the RBV became more active in the primary market of RBV notes. The RBV notes have become the most tractable instrument of monetary operations since its introduction in 1998. Two new credit facilities were also introduced: the Rediscount Facility and the Repurchase Facility. These facilities made the Advance Facility superfluous and therefore the latter was abolished in May 1999. In the meantime, the rediscount rate became the RBV's benchmark rate.

## B. Monetary Policy Environment

### Institutional framework

244. The primary objective of the RBV, as explicitly stated in the Reserve Bank Act, is to promote monetary stability. Monetary stability is defined as a stable value of money both at the domestic level (price stability) and at the external level (exchange rate stability).[70]

245. The RBV Act specifies that the RBV and the Ministry of Finance (MoF) are both monetary institutions. There is a close working relationship between these organizations, which can be characterized as being on equal terms. A representative of the MoF is a member of the Board of the RBV; and the RBV is represented as an advisor in committees advising the government on macroeconomic, monetary and budget affairs. However, Article 25(h) of the RBV Act gives the Minister of Finance the power to give directives to the RBV, with which the RBV must comply. Legally, then, the RBV is not an autonomous institution. In practice, however, the RBV has a high degree of autonomy, in particular with regard to the formulation and implementation of monetary policy.[71]

246. The government's fiscal position has sometimes contributed to excess liquidity in the financial system, which in turn has reduced the effectiveness of monetary policy. The government has an advance facility with the RBV, and continuing resort to this facility in the last few years, due to cash flow problems, has sometimes contributed to excess liquidity. In 2003, the advance facility was reduced from VT 500 million to 400 million. Coordination

[70] See "20 Years of Central Banking in Vanuatu," the Reserve Bank of Vanuatu, 2000.

[71] As an illustration of its intervention in monetary policy, when the government did not agree with the RBV's decision to devalue the vatu in 1998, it revoked the decision of the RBV within a few days.

between monetary and fiscal policies and the relationship between the RBV and the Ministry of Finance have thus been especially important where financial markets are shallow.

**Monetary framework**

247. In Vanuatu, monetary policy is implemented in the context of a fixed exchange rate regime under which the value of the vatu is determined on the basis of an undisclosed transactions-weighted (trade and tourism receipts) basket of currencies of Vanuatu's major trading partners. The RBV quotes rates daily for vatu. Buying and selling rates of vatu against the currencies in the basket are quoted once a day with margins ranging between 0.25 and 0.3 percent around the middle rate. In general, the RBV has not intervened in the foreign exchange market to defend the exchange rate but could do so if necessary.

248. There are no capital controls in Vanuatu and therefore not much room for an independent monetary policy. Within the exchange rate regime, the RBV attempts to guide monetary developments, including domestic credit conditions. The RBV formulates a target for its international reserves (at least six months of imports). In order to maintain official reserves at adequate levels, besides conducting monetary policy, the RBV has issued several guidelines for foreign exchange sales to the banks.[72]

**Macroeconomic performance**

249. Vanuatu maintained macroeconomic stability with moderate inflation and a GDP growth rate of 4¼ percent during the period 1991–1995. Several shocks, however, resulted in a deterioration of overall macroeconomic performance from 1996 to 2000, with the growth rate declining to 1½ percent. In the mid-1990s, political instability eroded investor confidence.[73] Following social unrest in January 1998, the government decided to permit unconditional withdrawals of retirement savings of the Vanuatu National Provident Fund (VNPF). The payouts of funds by VNPF led to a sharp rise in liquidity in the banking system. Only part of the liquidity was sterilized by the RBV. The decision and the attempt to devalue the vatu fueled devaluation expectations of the local currency, which caused large capital outflows.[74] Because of the VNPF crisis, the official reserves of the RBV decreased

[72] During the financial crisis in 1998, the RBV issued a guideline that it would sell foreign exchange to the banks for current transactions only. In addition, in June 2001, the RBV enforced a regulation that it would sell foreign exchange to the banks in minimal amounts of US$1.0 million per client. In September the amount was lowered to US$250,000.

[73] After the general election in 1995, the government changed three times in 1996 and continued instability led to the dissolution of Parliament in 1997.

[74] In the aftermath of the Asian financial crisis in 1998, several countries such as Papua New Guinea, Fuji, and the Solomon Islands devalued their currencies by 20 percent. Shortly afterward, because of the Vanuatu National Provident Fund (VNPF) crisis the RBV followed

(continued)

dramatically, from the equivalent of around six months of imports to less than three months of imports.

250. In recent years, the political situation has not been very stable, with frequent changes in the government, and economic growth has not fully recovered. Favorable weather conditions and major public investment boosted growth to 2.5 percent in 2000. However, two cyclones in 2001 resulted in significant crop loss, with real GDP contracting by nearly 2 percent. Inflation remains subdued, increasing from 2½ percent in 2000 to 3½ percent in 2001, largely due to the impact of oil prices on utility and transportation costs.

**Structure of the financial system and market**

251. Vanuatu's financial sector includes the Reserve Bank of Vanuatu (RBV), four commercial banks (a government-owned bank, a locally owned bank, a subsidiary of a foreign bank, and a branch of a foreign bank), a number of trust and insurance companies, the Vanuatu National Provident Fund (VNPF), and several smaller financial institutions. In 2001, following a merger, the number of commercial banks dropped to four. At present, the largest bank has almost 70 percent of total assets of the banks. Moreover, one of the remaining four banks is an "exempted bank," which means that it has a domestic banking license but is not allowed to do business in local currency. Vanuatu also has a prominent offshore financial center (OFC), which in 2001, comprised 36 banks with offshore banking licenses, and 16 insurance companies (see Table 12). After the International Banking Act was implemented, the number of offshore banks as of October 2003 is now 24, and 10 applicants are currently under review.

252. Offshore banks are regulated by the International Bank Act (2002) and are supervised by the RBV, as are domestic banks. Offshore banks are not allowed to accept local deposits from, or make loans to, residents in Vanuatu. Prior to 2003 when the new act came into effect, offshore banks were supervised by the Financial Service Commission.

253. As of end-December 2001, the total assets of the financial system were about 387.9 billion vatu, equivalent to 1,219.8 percent of GDP (see Table 12). If offshore banks are excluded, however, the total asset drops to 50.4 billion vatu, equivalent to 158.5 percent of GDP. Given the restrictions which apply to the ability of the offshore banks to deal in domestic currency and to do business with the domestic banks, the commercial banks play a dominant role in the domestic financial system and the offshore banks have no direct impact on the conduct of monetary policy.

---

suit. However, the Government immediately revoked the RBV decision on the grounds that the devaluation could have a potentially high cost if it were to spark an inflation-wage spiral.

Table 12. Vanuatu: Financial System Structure

| (2001) | Assets (billions of vatu) | Percent in Total Assets | Number of Institutions | Percent of GDP |
|---|---|---|---|---|
| Commercial Bank | 43.1 | 11.2 | 5 | 147.2 |
| *of which: State controlled* | *2.7* | 0.7 | 1 | 8.5 |
| Nonbank financial institutions | – | – | – | – |
| Offshore banks | 337.5 | 87.9 | 36 | 1061.3 |
| Insurance companies | 0.5 | 0.1 | 3 | 1.6 |
| Pension funds | 3.1 | 0.8 | 1 | 9.7 |
| Total | 384.2 | 100.0 | 45 | 1219.8 |

Source: Vanuatu authorities.

254. The activities of the offshore banks, nevertheless, are likely to have an indirect impact on monetary conditions. The "trust funds" accepted from nonresidents are usually deposited with one of the domestic banks. The banks, in turn, deposit the funds with banks abroad, primarily with their European or Asian offices. However, a small segment leaks into the domestic system, which then becomes part of the money supply. Domestic banks sometimes make loans in foreign currency to residents, mainly for expatriates and local businesses engaged in foreign trading, but the amount of foreign currency loans is small.

### C. Monetary Policy Instruments

255. The developments during the financial turmoil in 1998 made the RBV aware of the necessity to strengthen monetary arrangements. Since then, the RBV developed several money market instruments to manage overall liquidity in the system (Box 12). Open market operations in RBV notes have been the main discretionary instrument since 1998; they are supplemented by the Statutory Reserve Deposit (SRD), and two standing facilities.[75]

256. The SRD requirement applies to all demand, savings, and time deposits of residents in vatu, and to 50 percent of the residents' demand deposits in foreign currency. The rationale for including only the foreign currency demand deposits is that they are almost entirely held by residents for payments of current transactions in foreign currency (mainly imports), while the time and saving deposits in foreign exchange can be reasonably assumed to be deposited through Vanuatu's offshore financial center. By including foreign currency deposits in the reserve requirements, the RBV can limit the availability of the banks' liquidity for private sector lending and reduce excess liquidity. Therefore, the RBV is in a better position to control monetary developments.

[75] From 1988 to 1998 the SRD was the only monetary policy instrument.

257. Banks are free to choose the currency in which they hold the required reserves, that is, in vatu or the currency in which the deposits are held. However, until today banks have always held the required reserves in vatu.

**Box 12. Vanuatu: Monetary Policy Instruments**

**Reserve requirements**

Reserve requirements are calculated as monthly averages, and must amount to 10 percent of deposits. The current RR requirement includes 50 percent of residents' demand deposits in foreign currency as well as all the demand, time, and saving deposits of residents in vatu. This was the only monetary instrument for about a decade, since it was first in place from 1988 until 1998.

**Standing facilities**

***Discount Facility:*** Banks can sell (rediscount) treasury bills and/or RBV notes with an up to 90-day maturity to the RBV.

***Repurchase Facility***: Banks sell government bonds and/or RBV notes to the RBV and subsequently buy back the securities at a specified date and price. In the period between the sale and the repurchase of the securities, the RBV provides the bank with temporary liquidity. The discount rate applies to these operations.

**Money market operations**

***RBV notes***: The RBV intermittently auctions these RBV notes, which have maturities of 28, 91, 119, and 182 days. The RBV notes with maturities of 119 and 182 days were introduced in April 2002. The RBV issues the notes to absorb excess liquidity. Since 1998, monetary policy is mainly conducted by open market operations in RBV notes. (The RBV notes of 119 and 182 days are no longer issued, since competition in the financial sector is low and results in high interest costs for the RBV).

258. RBV notes are auctioned through a variable-rate tenders system whereby the allotment interest rate is equal to the interest rate offered by each individual bid. Auctions are held on an irregular basis. The RBV notifies banks and nonbanks of the tender of the notes several days in advance through advertisements in the local newspapers. The decision to issue a given amount of RBV notes to achieve a desired level of the money supply (intermediate target) depends on the reserve money program run by the RBV.

259. The RBV did not attempt to use the SRD for short-term liquidity management, and the level of the ratio has not been adjusted since 1998. In case of unwarranted high (low) liquidity, the RBV can absorb (inject) liquidity from (into) the financial system through issuing higher (lower) amounts of RBV notes. Under circumstances of very tight liquidity, the RBV might decide not to hold auctions.

260. There is no secondary market in RBV notes in the sense of banks trading among themselves. However, the notes can be and are rediscounted or used in repo transactions with the RBV. Since their introduction, RBV notes have been partially successful in absorbing excess liquidity from the financial system. Due to the ever-increasing liquidity in 1998 and

early 1999, the RBV was forced to issue increasing amounts of notes, which were almost all absorbed by the banking system.

261. The Rediscount and Repurchase Facility can be also used by the RBV as monetary instruments to affect the total amount of liquidity through setting an upper limit to the credits or by changing the rediscount rate. These facilities are designed to provide liquidity to the banks in the event of temporary liquidity needs. The rediscount facility makes it possible for the banks to sell (rediscount) treasury bills and/or RBV notes with 90 days or less to maturity. Through the repurchase agreements, the RBV offers the possibility for banks to borrow for a short period of time from the RBV using treasury bills and/or RBV notes as collateral.

### D. Channels of Transmission of Monetary Policy

262. The interest rate applied to borrowing under the Rediscount and Repurchase Facility is the rediscount rate. By making this more or less expensive, the RBV is able to affect liquidity in the financial system. The transmission of monetary policy through the interest rate channel has been successful to a limited degree in Vanuatu. The main reasons include the high structural liquidity in the financial system and the relatively limited competition among banks. In addition, banks are very cautious in extending new loans. Consequently, banks can sometimes be slow to follow interest rate changes by the RBV.

263. The first, and for a long time the only, credit facility through which the banks could borrow from the RBV was the Advance Facility. Since its introduction in the 1980s, the rate charged for borrowing under the facility was the RBV's official interest rate ( the base-lending rate). Borrowing under the facility was not encouraged. In fact, the rate incorporated a penalty element to ensure banks in need of short-term liquidity turned first to the interbank market before seeking funds from the RBV.

264. During the time the Advance Facility was in force, banks often had ample liquidity needs, discouraging them from having recourse to the RBV's credit facility. Even under the circumstances, the signaling role of the base-lending rate remained unimpaired. This was clearly demonstrated during the financial crisis in 1998. Although the Advance Facility was abolished on May 1999, like the base-lending rate, the rediscount rate of the Rediscount and Repurchase Facilities incorporates a penalty element. The RBV uses the rediscount rate as a key variable in monetary operations.

### E. Market Infrastructure and Liquidity Surplus Problem

265. As described earlier, there is no secondary market in RBV notes. The government security market is also very limited, with virtually no secondary market.[76] In general, the

[76]In early 2003, the RBV and the Ministry of Finance agreed on the issuance of a substantial amount of treasury bills (VT 400 million, of which approximately half were already issued as

(continued)

absence of secondary markets in government securities and the RBV notes has not impinged on the effectiveness of monetary policy since RBV has been in a position to achieve its goals by the combination of the SRD and regular issuance of RBV notes in the primary market. However, at times the issuance of RBV notes has not always been fully effective in mopping up excess liquidity. For purpose of risk management or other reasons, banks with excess liquidity may decide to hold the liquidity rather than invest in RBV notes. So far the resulting excess liquidity in the system has not been a source of inflation given the investment opportunities in Vanuatu.

## F. Conclusions and Lessons

266. The main lessons from Vanuatu's experience with monetary policy implementation are the following:

- The shallowness of Vanuatu's interbank market and the small number of banks have inhibited the effectiveness of money market operations. However, the combination of reserve requirements and open market type operations have in general allowed the monetary authorities to manage overall liquidity conditions satisfactorily.

- In the context of shallow financial markets, coordination of monetary and fiscal policies is especially important. A good relationship between the central bank and the ministry of finance fosters such coordination.

- Absence of secondary markets for government and central bank securities did not prevent effective liquidity management. Auctions of the short-term central bank notes, coupled with averaging provisions for the reserve requirements, proved to be an effective mix of instruments.

- Excess liquidity in the system has put banks in a situation in which they can decide freely how to use and allocate these resources. However, prudent management on the part of the banks has prevented an expansion of domestic credit and inflationary pressures.

---

of May 2003). These bills, used as collateral, assisted banks in accessing credit facilities of the RBV.

# XII. ZAMBIA[77]

## A. The Path to Reliance on Money Market Operations

267. Zambia's path to reliance on money market operations to conduct monetary policy has been similar to that of many other countries in sub-Saharan Africa. Following independence, the Zambian economy was dominated by state enterprises, administered prices, and trade protection. The financial sector and monetary policy in this environment were geared toward the provision of subsidized credit to the state enterprises. Monetary policy relied on administrative measures on credit and capital controls, involving credit ceilings, interest rate controls, and exchange controls, in order to channel resources to the preferred state enterprises. After nearly two decades of controls, macroeconomic performance deteriorated sharply and major problems emerged in the financial sector such that by the early 1990s, it was clear that the policy of direct lending and the provision of subsidized credit to preferred sectors had become unsustainable.

268. At the beginning of 1992, Zambia embarked upon a program of financial liberalization as part of an overall macroeconomic reform program. The first step in the process of financial reform was the freeing of interest rates followed by those of wages and prices. At the same time, a program of privatization was instituted. The external sector was also liberalized in stages between 1992 and 1994 beginning with the dismantling of controls on capital account transactions and followed by gradual, but eventually complete, deregulation of capital controls.

269. Money market operations were first introduced in 1993, with the implementation of treasury bill auctions, followed in 1995 by daily auctions of credit and deposit to commercial banks. They were soon complemented by the introduction of rediscount facilities and active management of the statutory reserve requirements.

## B. Monetary Policy Environment

### Monetary objectives and operating targets

270. The Bank of Zambia (BoZ) defines price stability as the ultimate objective of monetary policy. In order to achieve this objective the authorities implement a reserve money program, where commercial banks cash balances in the BoZ settlement account (excess reserves) are the operating target and reserve money is the intermediate target. Direct

---

[77] Prepared by Marco Arnone (Economist, MFD) and Stephen Swaray (Senior Economist, MFD), based on MFD work in the context of the FSAP to Zambia, the June and October 2001 technical assistance missions on monetary and financial sector issues. (both headed by Thordur Olafsson), and the January and September 2003 technical assistance missions on monetary and foreign exchange operations (both led by Susana Crossa Sosa) The study covers developments up to end 2003.

quantity targeting is therefore preferred to an interest rate target, given the difficulty of setting the interest rate consistent with the inflation target and the high volatility of the expected inflation.

271. The BoZ pursues its objective of price stability in the context of a managed float with no preannounced path for the exchange rate, and with a target for reserve money as the nominal anchor. Quite often, however, the central bank focuses excessively on exchange rate stability (as reflected in frequent foreign exchange auctions and interventions), concentrating less on conventional monetary policy. This attachment to multiple policy goals has at times generated some inconsistencies between the stated objective of price stability and exchange rate stability.

**Structure of the financial sector**

272. The financial system in Zambia is small and underdeveloped, and operates in the context of a low level of monetization. The ratio of M2 to GDP has been at a level of only about 15–20 percent over the last five years, compared with an average of about 35 percent for sub-Saharan African countries as a group. The system is dominated by the banking sector with assets amounting to about 90 percent of total financial system assets (Table 13). In terms of foreign equity participation, about three-fourths of banking system capitalization is foreign. Dollarization is also high: about half of deposits and one-third of loans are in foreign currencies.

Table 13. Zambia: Financial System Structure

| (December 2001) | Number of Institutions | Assets (in billions of kwacha) | Assets (Percent of GDP) |
|---|---|---|---|
| Banks | 15 | 3,460 | 26.5 |
| Nonbank Financial Institutions | | | |
| Development and Savings Banks | 2 | 253 | 1.9 |
| Building Societies | 3 | 37 | 0.3 |
| Leasing Companies | 10 | 95 | 0.7 |
| Microfinance Institutions | 98 | … | ... |
| Exchange bureaus | 45 | … | ... |
| Other (investment/venture) | 4 | … | ... |
| Pension funds | 17 | 590 | 4.5 |
| Insurance companies | 6 | 96 | 0.7 |
| Total | | 4,531 | 34.6 |

Sources: Bank of Zambia and Lusaka Stock Exchange.

273. The Zambian banking system comprises 15 commercial banks with assets equivalent to about 30 percent of GDP in 2001 (Table 13). The largest domestic bank is state-controlled, although it is in the process of being privatized. It holds about one-fifth of the banking system deposits, has the largest branch network and second largest customer

base. Four large banks which are subsidiaries of multinational banks (SMBs) hold 63 percent of assets and 71 percent of loans. Their market share increased in the late 1990s as a result of a flight to quality following the failure of nine local banks during the period 1994–1998. Other commercial banks are small, with the five smallest banks accounting for less than one percent of banking system assets. The banks participate intensively in investments in government securities and foreign exchange trading, which are their main sources of revenue.

274. The nonbank financial sector, including two development and savings banks, three building societies, and a handful of leasing companies, is small both in absolute terms relative to the size of the economy. The stock market is equally as small, with stock market capitalization equivalent to about 8 percent of GDP in March 2002

### C. Market Infrastructure

275. The money market in Zambia is traditionally concentrated in the overnight maturity segment, although there have been improvements in the longer-term maturity segment with more active use of loans of 2- to 14-day maturity (term money market). Use of longer-term maturity is, however, sporadic. Total loans amounted to K 3.4 trillion (equivalent to around US$750 million) or 26 percent of GDP in the first six months of 2002.

276. The interbank market is usually characterized by excess liquidity. The lack of short-term liquidity instruments to manage short-term liquidity, together with insufficient BoZ smoothing operations and a punitive rediscount rate, has induced banks to hold liquid funds in their current account at the BoZ. Short-term liquidity is also demanded since banks want to have the possibility of buying foreign exchange at very short notice. Operating in a context of excess liquidity means that the BoZ has to constantly withdraw liquidity to meet its operating target (commercial banks' current account with the BoZ). This has tended to constrain liquidity management because the BoZ does not have a sufficient amount of government securities to sterilize the excess liquidity.

277. The overnight interbank money market has also been characterized by significant interest rate volatility, due to a variety of reasons. Including limited windows for funds at the BoZ, a costly rediscount facility, volatile flows of cash between the government and the private sector, and market segmentation.[78] The interbank rates also show a high degree of seasonality related to government flows and tax payments, with spikes concentrated at the end of (almost) each month. This seems to indicate a cyclical reduction of available liquidity in the interbank market at the end of each month; as a consequence, a statistically predictable component of the liquidity forecasting exercise might not be adequately taken into consideration.

[78] For instance, overnight rate ranged between 7 and 130 percent in 2001, and between 9 and 80 percent in the six months to June 2002.

278. The interbank market is supplemented with a government securities market (Box 13). The primary market is organized by the BoZ, which maintains and processes all transactions relating to these securities through its book entry system. Although the BoZ is supposed to act only as the government debt-issuing agent, it has, in practice, a large degree of flexibility in deciding the terms at which securities are auctioned: it decides on the amount of securities that it intends to issue and determines the cut-off rate. Up to March 2001 tenders of government securities were managed as uniform-price auctions, in which bidders paid the price of the lowest acceptable bid. Since then, a multiple-price tender system has been instituted. Bids at the cut-off price are prorated based on the size of bids. The BoZ's rather large responsibility in deciding the terms at which securities are auctioned has removed from the government much of the incentive for efficient liquidity forecasting and cash flow management. This in turn has hampered the ability of the BoZ to forecast and fine tune liquidity in the system.

**Box 13. Zambia: Government Securities Market**

In 1993, as part of a larger program of financial liberalization, the Government of Zambia introduced an auction arrangement for pricing and distribution of government securities. The objective of this reform was to enable the government to cover its expenditures in a way that was less distorting than other alternatives (direct advances from the BoZ or distorted taxation) and to enhance the development of financial markets by providing an instrument of collateral, a benchmark interest rate, and a means of managing liquidity.

The market securities underwent significant changes, including the introduction of a multiple-price format for tender sales and opening the tenders to corporations and individuals. The range of securities has been expanding over time, with treasury bills issued in maturities of one to nine months, and government bonds issued in maturities of one to two years. Off-tender (noncompetitive) sales of government securities have also been introduced to cater for the small investor who is unable to meet the minimum requirement bid size for the auction. The largest holders of government securities have been banks (around 70 percent) followed by pension funds.

A secondary market for government securities does exists, although it is very thin, and prices are determined by negotiation between interested parties rather than two-way pricemaking.

279. A secondary market for government securities does exist, although it is very thin, since investors—individuals, corporations or banks—prefer to hold securities till maturity. Commercial banks typically purchase the securities to first meet the liquid asset ratio, and second, as an alternative investment to low quality private sector lending opportunities. Other investors hold the securities because the interest payment offers sizable revenue.

## D. Channels of Transmission of Monetary Policy

280. The foregoing analysis of the structure of the financial sector and the existing market infrastructure in Zambia reveals a case in which the traditional monetary transmission mechanisms do not operate as effectively as might be expected in a more developed financial system. While it has been possible to transmit some monetary policy signals through the interest rate channel, via the treasury bill rate, the other channels (credit, exchange rate and asset prices) have been either very weak or nonexistent.

281. The most important direct signal the BoZ provides to the market is related to the t-bill auction, held weekly. The auction rate is the base for the determination of the Bank Rate, which in turn is used by the commercial banks to guide them in setting deposit and lending rates. However, even in this case, bank lending rates, while being flexible upwards in response to movements in the treasury bill rate, are rigid downward, indicating sluggishness in the transmission mechanism of monetary policy. The oligopolistic market structure in the banking sector is largely the root cause of these rigidities.

282. The interest rate channel, through the money market, has not functioned as strongly as expected. As has been indicated, the interbank money market in Zambia is characterized by high volatility of interest rates and average excess liquidity. The high volatility of interest rates has been attributed to the limited availability and high cost of BoZ liquidity facilities, volatile flows of cash between the government and the private sector, and market segmentation. In addition, monetary operations as implemented in Zambia do not provide sufficient guidance to the short-term money market as to the policy stance of the BoZ. Monetary operations tend to provide policy signals from the three-four weeks maturity onward, leaving the shortest end of the money market—especially the overnight interbank—to fluctuate wildly, in the range of ten to over eighty percent. These deficiencies have tended to weaken the interest rate monetary transmission channel.

### E. Monetary Policy Instruments

283. In light of the limited effectiveness of transmitting monetary policy signals in Zambia through traditional market-based channels and in light also of the fact that the framework for monetary policy is itself still in transition, the BoZ has had to rely on a combination of rules-based instruments and money market operations to conduct monetary policy. The most important instruments that have been used include reserve requirements (RR), a minimum liquid asset ratio (LAR) (Box 14). In particular, the level of reserve requirements have been increased on repeated occasions to adjust structural liquidity imbalances. A wide range of money market instruments have been introduced in order to reduce reliance on the RR and LAR and because changes in these instruments require substantial portfolio adjustments, which are not easy to implement at short notice. However, repo operations have only been conducted infrequently as the BoZ does not have enough treasury bills in its portfolio to withdraw the excess liquidity from the market on a regular basis.

### Box 14. Zambia: Instruments of Monetary Policy

**Liquid asset ratio**

Banks are required to hold 35 percent (from 25 percent in 2001) of their kwacha deposits in liquid form (cash and excess reserves with the BoZ or in treasury bills). Averaging provisions over the weekly maintenance period apply.

**Reserve requirements**

They apply to kwacha and foreign currency deposits, and are held as a nonremunerated kwacha and foreign currency deposit with the BoZ. The ratio is subject to frequent changes in response to liquidity developments in the system. (The RR was increased from 8 percent to 11 percent in December 2000 and to 15 percent in January 2001, then lowered to 10.5 percent in March and increased again to 12.5 percent in June and 15 percent in December, before being increased again to the current 17.5 percent in December 2002 There is a seven-day maintenance period and averaging provisions apply.

**Standing facilities**

***Discount facility:*** If the market is short of liquidity, banks can rediscount treasury bills at the BoZ with a penalty rate. During a given month, banks are permitted to discount bills in an amount up to 10 percent of their regulatory capital. Above this limit, an additional penalty of 7 percent is applied. Because the overall penalty is usually very high and complex to calculate, banks are reluctant to make use of this facility.

**Money market instruments**

***Deposit auction:*** To absorb excess liquidity the BoZ may decide to auction (multiple price tender) deposits to banks. The BoZ retain the right to reject offers that are, in its judgment, not consistent with market fundamentals. The maturity of deposits depends on how long the BoZ estimates that the excess liquidity situation will prevail. To date, these auctions usually have been undersubscribed, despite the banks' excess liquidity.

***Credit auctions*:** To provide credit to the banks. In recent period, this facility has seldom been used given the structural excess liquidity in the system.

***Outright sales/purchases of government securities*:** The BoZ may withdraw or inject liquidity through outright sales or purchases of government securities.

***Repurchase Operations:*** In 2002, the BoZ started using repurchase (repo) operations (maturity of two- to twelve-week) on government securities to withdraw liquidity. Ultimately repo operations are expected to replace the BoZ term deposit auctions. Repo operations have only been conducted infrequently as the BoZ does not have enough treasury bills in its portfolio to withdraw the excess liquidity from the market on a regular basis. The repo documentation in place also allows the BoZ to conduct reverse repo operations, which could replace the credit auctions.

## F. Conclusions and Lessons

284. The following conclusions and lessons can be derived from the experience of Zambia with reliance on money market operations to conduct monetary policy:

- Money market instruments have not seem to have led to a significant reduction in monetary growth, but inflation has been reduced.

- Monetary transmission mechanisms have not operated as effectively in Zambia as they otherwise should have in an oligopolistic market structure coupled with excess

liquidity in the banking system, which has resulted in rigidities in market rates and prevented the transmission of monetary policy signals.

- An overall lack of credibility in the financial sector reform process and frequent backtracking have affected market sentiment and created great difficulty in bringing money supply and inflation under tighter control.

- Money market operations have had limited effectiveness in stabilizing banking system liquidity due to attempts to achieve multiple objectives, which have resulted in inconsistencies between the stated objective of price stability and a de facto objective of exchange rate stability.

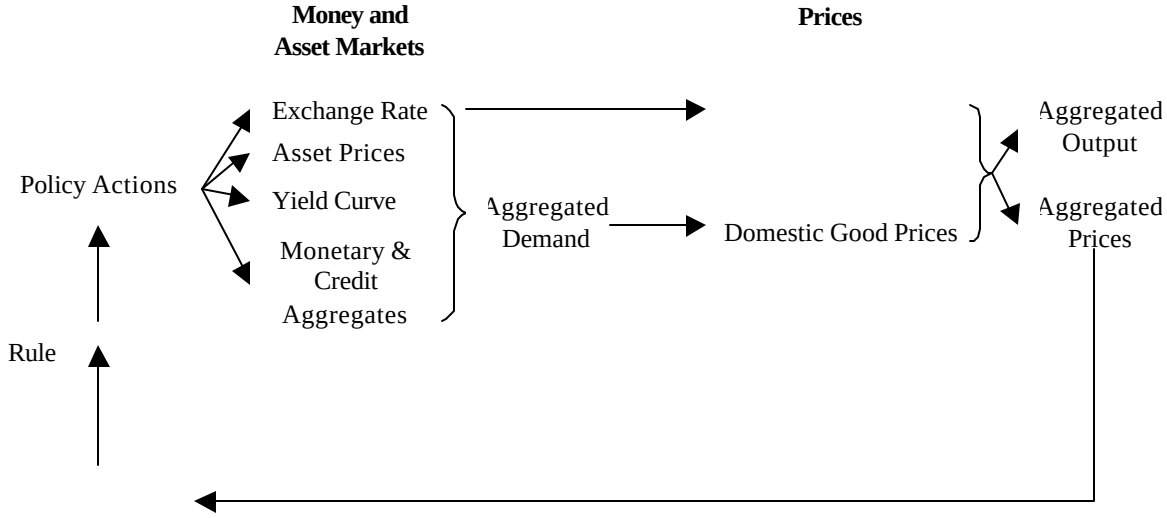
- A long history of hyperinflation in Zambia has given rise to the persistence of inflationary expectations, which have made it difficult to achieve single digit inflation.

- The high degree of dollarization has imposed significant constraints on the implementation of monetary policy by creating an environment where there is large volatility in exchange rate movements.

## THE CHANNELS OF TRANSMISSION OF MONETARY POLICY[79]

285. Key to conducting monetary policy effectively is an efficient transmission mechanism through which monetary policy actions work their effects on aggregate demand in an economy and ultimately inflation. The nature, speed, and intensity of the transmission from the variables directly under the control of the central bank—for example, short-term interest rates or base money—to those variables that most directly affect conditions in the nonfinancial sector—loan rates, deposit rates, asset prices—determine not only the extent of the overall effectiveness of monetary policy but also the type of instruments that can be used effectively.

Figure. Stylized Representation of the Channels of Transmission




286. The functioning of the transmission mechanism, and hence the effectiveness of monetary policy, in a given economy depends on the structure of the economy and its financial system. In particular, several factors are at play here—the degree of competition in the banking sector, the extent of access to alternative domestic funding sources, the depth of money and capital markets, the extent of government involvement in financial markets, liquidity of the financial system, the degree of financial intermediation, the prevailing exchange rate system, the extent of liberalization of current and capital accounts, and the degree of development of the foreign exchange market are all important issues that influence the speed and intensity of the transmission mechanism, and therefore the extent to which

[79] Prepared by Bernard Laurens (Deputy Division Chief, MFD), with inputs from Rodolfo Maino (Senior Economist, MFD), and Alina Carare (Economist, INS). See also Kamin, Turner, and Van't Dack (1998), and Taylor (1999).

monetary instruments can be relied upon to transmit monetary policy signals through the normal channels.

**Interest rate channel**

287. Monetary transmission through the *interest rate channel*, regarded by many as the main channel of monetary policy transmission, occurs when changes in the monetary policy stance induce changes in the overall level of interest rates in the economy, and those in turn affect the overall level of absorption, through their effects on the demand for credit and the available income of borrowers and lenders. Changes in interest rates alter the marginal cost of borrowing, leading to changes in investment and savings, and thus to variations in aggregate demand; they have also a cash flow effect on borrowers and savers.

288. Predictability of the response of lending and deposit rates to changes in money market rates will depend on the degree of competition in the banking sector, the extent of access to alternative domestic funding sources, and the depths of money and capital markets. In competitive markets for credit, changes in the overall level of interest rates are likely to affect lending and deposit rates rapidly. Conversely, in a highly concentrated banking sector with a small number of banking institutions, oligopolistic pricing makes the response of lending and deposit rates to changes of money market rates sluggish and asymmetric. In addition, the presence of state-owned or state-subsidized banks under little pressure to maximize profits, and under pressure to achieve political goals could diminish the responsiveness of lending and deposit rates to monetary policy.

289. The behavior of lending and deposit rates may also depend on the extent to which households and firms have access to alternative domestic funding or investment sources, most notably through security markets. The alternative sources of financing or investment for households and firms tend to limit the monopolistic power of banks. Moreover, if the banking sector and the securities markets are well integrated and if bank loans, bonds, and stocks are close substitutes, then banks may be forced to enhance the responsiveness of the interest rates under their control.

290. The depth of money and capital markets can also have an important bearing on how policy-controlled rates affect lending and deposit rates, and the ultimate objective(s) of the central bank.[80] A shallow or noncompetitive financial market can amplify volatility of money market interest rates. If money market rates are highly volatile, banks may not adjust lending and deposit rates quickly to those rates, for administrative or customer relations reasons.

**Asset price channel**

291. Monetary transmission through the *asset price channel* occurs when changes in the monetary policy stance affect asset prices in the economy (in particular equity or the value of

[80] See BIS (1998) for a discussion on the ultimate objective(s) of the central bank.

collateral) which in turn induces changes in consumption and investment through the wealth effect and the implications on the financing cost of investments.

292. The main factor influencing the effectiveness of the asset price channel is the level of development and importance of bond, equity and real estate markets in the economy. Where long-term bond markets are important, for example, an increase in short-term interest rates normally leads to a decline in bond prices, and, consequently, aggregate demand due to reduced wealth. The more developed are such markets, the stronger will be the effectiveness of this channel in transmitting monetary policy signals.[81]

293. The composition of financial portfolios also affects the effectiveness of the asset price channel. Where most savings are intermediated through the domestic banking system, and relatively small portions of households or corporate portfolios are invested in securities whose value varies with market conditions, the more restricted is the impact and intensity of the asset channel. On the other hand, the more diversified household and corporate portfolios are, the more sensitive such portfolios are to monetary policy actions affecting asset values.

**Exchange rate channel**

294. Monetary transmission through the *exchange rate channel* occurs when changes in the monetary policy stance lead to changes in the exchange rate. This affects the competitiveness of domestically-produced goods and services vis-à-vis goods and services produced abroad and hence the relative demand for both categories.

295. The exchange rate channel of monetary policy does not exist under a fixed exchange rate regime; among exchange rate regimes that allow flexibility, the exchange rate channel will work more strongly the higher the degree of exchange rate variability that the regime allows. In addition, an absence of capital controls and a foreign exchange market characterized by substitutability between domestic and foreign assets increases the role played by the exchange rate channel. For economies with underdeveloped financial systems, the exchange rate channel becomes irrelevant due, usually, to controls on foreign exchange operations. The greater the substitutability between domestic and foreign assets, the greater the response of the exchange rate to policy-induced changes in interest rates, and hence the larger the impact of monetary policy through that channel.

**Availability of credit channel**

296. Monetary transmission through the *availability of credit channel* occurs when changes in the monetary policy stance affect the quantity of credit that is available, regardless of (or in addition to) what happens to interest rates. The credit channel emphasizes how

[81] Key traits of developed markets are the existence of active secondary markets which are responsive to alternative asset prices, and the ability to borrow against such assets through swaps or collateral arrangements.

asymmetric information and the cost for enforcing contracts may create agency problems in markets. Two channels of monetary transmission arise: the bank lending channel, which looks at the impact of monetary policy on the capacity of banks to lend to firms, and the balance sheet channel which looks at the impact of monetary policy on the capacity of firms to borrow from markets in response to change to their net worth arising from monetary policy decisions.

297. The financial condition of a country's banking system is one of the most important factors influencing the transmission of monetary policy signals through the credit channel. The financial condition of the banking system is an important determinant not only of the cost but also of the availability of bank loans. If the financial position of the banking system is weak, reflected by low capital/asset ratios and/or high nonperforming loans, banks will tend not to respond to monetary policy impulses, and the weaker the financial system the more likely the asset price channel is to be irrelevant. Weaknesses in the banking system can also be reflected in terms of asymmetries of information and limited enforceability of contracts. Where such asymmetries exist or there is weak governance and judicial structures limiting the enforcement of contracts, banks may also not respond to monetary policy impulses.

**Structural factors**

298. In addition to the foregoing channel-specific factors, there are also a number of other factors of a macroeconomic nature that have a significant influence on the efficiency of the channels of transmission. The extent of government intervention in financial markets may influence the monetary transmission channel in three ways: through explicit or implicit interest rate controls or other limits on financial market prices, through explicit or implicit limits on bank lending and through selective credit policies. Any of these situations is likely to impede the smooth functioning of markets, the transmission of monetary policy signals through them, and hence the conduct of monetary policy with market-based instruments.

299. Structural excess liquidity in the financial system also impairs the effectiveness of the transmission channel of monetary policy. Although they do not do so directly, the policy measures taken by central banks to sterilize excess liquidity may weaken the transmission channels. The high cost of mopping up excess liquidity has at times prevented central banks from raising their policy interest rates. This is especially the case when the financial position of the central bank is weak such that high sterilization costs may result in large losses for the central bank which are not directly and timely reflected in the government's budget, a situation which in itself would result in an injection of liquidity into the system. In this context, the constraint imposed on interest rates may distort the optimal interest rate policy, and hence the effectiveness of monetary policy through the normal channels. The use of liquid asset ratios (LARs) to sterilize excess liquidity may also lead to distortions in interest rates by creating a captive market for the assets which are eligible to fulfill the requirement. High and nonremunerated reserve requirements to sterilize excess liquidity may also lead to distortions as the implied tax affects only the deposit taking financial institutions and their customers, and not other parts of the financial system.

## ELIGIBLE ASSETS: THE EXAMPLE OF THE ECB AND THE BANQUE DE FRANCE[82]

### The ECB's system of eligible assets

300. The Statute of the European System of Central Banks requires all Eurosystem credit operations to be based on adequate collateral. The list of eligible assets provides a list of all assets which can be used as underlying collateral, and which fulfill the eligibility criteria. Two categories of assets are eligible for Eurosystem monetary policy operations and intra-day credit: tier-one assets, which are marketable debt instruments fulfilling the uniform euro-area-wide eligibility criteria specified by the European Central Bank (ECB), and tier-two assets, which are additional marketable and nonmarketable assets which are of particular importance for national financial markets and banking systems.

301. Debt certificates issued by the ECB qualify as tier one assets. For other debt instruments, the eligibility criteria aim at ensuring that they meet high credit standards, they are transferable in book-entry form, and listed or quoted on a regulated market. Tier one assets are eligible for all monetary operations which are based on underlying assets.

302. National central banks may consider as eligible other assets, tier two assets, which are of particular importance to their national financial systems. The eligibility criteria are established by the national central banks, subject to the minimum eligibility criteria established by the ECB. They include either debt instruments or equities of entities which are deemed to be financially sound, and easily accessible to the national central bank. Tier two assets are not normally used in Eurosystem outright transactions. In addition, four national central banks have included nonmarketable instruments in their national lists of tier two assets (Table 1a).

303. The Banque de France has carried out credit risk assessment since it was set up some 200 years ago.[83] These assessments are currently expressed by way of ratings, which indicate companies' ability to meet their financial commitments.

304. Ratings were originally intended to facilitate the implementation of monetary policy: by awarding ratings to companies, the Banque de France was able to make a selection from among the collateral for bank refinancing presented by commercial banks and only retain the claims on companies with the highest ratings.

---

[82] Prepared by Bernard Laurens.

[83] See Banque de France (2003).

Table 1a. Eligible Assets in Germany, France, Austria, and Ireland

| | Germany | France | Austria | Ireland |
|---|---|---|---|---|
| Type of Assets | Trade bills, bank loans to corporations | Bank loans to corporations | Bank loans to corporations | Mortgage-backed promissory notes |
| Minimum Residual Maturity | 1 month | More than 2 days | 10 days | 1 day |
| Maximum Residual Maturity | 6 months for trade bills. 2 years for bank loans | Less than 2 years | 2 years | Duration of refinancing operation |
| Credit Assessment of Enterprise by the Central Bank | At least one debtor evaluated as eligible | Debtor of bank loan evaluated as eligible | Debtor of bank loan evaluated as eligible | Issuers' credit ratings is assessed as well as quality of pool of loans |

Source: European Central Bank website.

**The Banque de France rating system**

305. Ratings remain useful in this perspective, notwithstanding the Banque de France's participation in their Eurosystem since 1999. Central bank refinancing based on bank loans still represents 40 percent of the total volume of collateral used by French banks (including for monetary policy operations and the allocation of intraday loans in the large-value payment system). The remaining 60 percent consists of negotiable securities issued by French and foreign public and private issuers.

306. Designed to meet the requirements of monetary policy, the Banque de France's information system has been progressively opened up to the banking industry at its request, and now acts as a banking information service: ratings are thus used by commercial banks for business development purposes and for monitoring client risk.

307. The General Secretariat of the Commission Bancaire also uses company ratings when conducting off-site controls and on-site investigations of credit institutions, for ratings constitute reliable indicators of bank portfolio quality.

308. Banque de France rating is a concise expression of all the economic and financial information gathered on nonfinancial companies; it reflects the Banque de France's overall assessment of the company to meet its financial commitments at a horizon of two years.

309. The rating is given by the Banque de France on the basis of the analysis of data including accounting and financial data from the company's accounting documents; data relating to bill payment incidents and bank liabilities reported by credit institutions; legal information (i.e., judgments handed down by commercial or civil courts ruling on commercial cases); and information relating to companies' economic and financial environment, in particular their managers, stakeholders and affiliated companies. It is communicated to the company and to credit institutions governed by the French Banking Act

for their own use only; these institutions may neither publish them, nor pass them on to third parties, especially to information agencies.

310. The Banque de France rating has three elements: a rating indicating the level of turnover; a credit rating expressing the assessment made of the company; and a payment rating indicating the company's ability to make payments on time.

311. The credit rating given to affiliated companies takes account of the financial position of the economic group to which they belong when the Banque de France has access to consolidated accounting documents or is able to carry out a reliable financial survey of the group. Holding companies are therefore given a credit rating known as a group rating, after the Bank has analyzed the financial position of the group as a whole and other available information on the holding company. Subsidiary companies are given one of the following three credit ratings depending on their position within the group: a “group” rating (based mainly on the analysis of consolidated accounts); an “influenced”rating (based on the comparison of company accounts and consolidated accounts); and an “autonomous” rating (based on the analysis of company accounts).

312. Five credit ratings are available: (i) a credit rating 0 is awarded to companies for which the Banque de France possesses no recent accounting documents and about which it has received no unfavorable information; (ii) a credit rating 3 is an excellent rating reserved for companies enjoying the best Banque de France assessment of their creditworthiness, and whose ability to meet their financial commitments is guaranteed beyond any possible doubt; (iii) a credit rating 4 is given to companies that are able to satisfactorily meet their financial commitments, notwithstanding certain factors of fragility or uncertainty; (iv) a credit rating 5 is given to companies whose ability to meet their financial commitments gives cause for concern for any of the following reasons: an imbalance in the financial structure, low earnings, a significant amount of payment incidents, legal representatives or financial links with other companies that give cause for concern; and (v) a credit rating 6 is attributed to companies whose ability to meet their financial commitments gives cause for serious concern due to any of the following reasons: extreme imbalances in the financial structure, persistently poor results for three straight years, occurrences such as the loss of half of the equity capital, legal proceedings, legal representatives prompting particularly serious concern, the company's inability to meet its commitments, and similar factors.

313. There are three payment ratings: (i) payment rating 7 indicates that, in the last six months, payments have been made on time, or that incidents reported during that period are of little importance and do not reflect real cash flow difficulties; (ii) payment rating 8 indicates that the company’s cash flow difficulties do not appear to cast serious doubts on its creditworthiness; and (iii) payment rating 9 is given when reported payment incidents denote serious cash flow difficulties and seriously jeopardize the company’s solvency. Payment ratings 8 and 9 are attributed primarily on the basis of the bill payment incidents reported to the Banque de France.

314. In order to make a comprehensive assessment of a company, the Banque de France rating also takes into account the information available on its management, as long as this information is in the public domain. In the specific case of sole proprietorships, the Banque de France awards a legal entity rating to the sole proprietorship and a natural person rating to the sole proprietor while complying with the general principle of repercussions and transparency between the two ratings. The Banque de France rating given to natural persons exercising a management function or to sole proprietors, is expressed by the figures 000, 040, 050, or 060. Sole proprietors are informed of any ratings other than 000: (i) 000 rating: the information collected by the Banque de France on the manager or the sole proprietor gives no cause for concern; (ii) 040 rating: the information calls for vigilance;[84] (iii) 050 rating: the information gives cause for concern;[85] and (iv) 060 rating: the information gives grave cause for concern.[86]

315. An important difference between the Banque de France rating and ratings provided by ratings agencies is that rating agencies generally assess the risk on issues rated on markets and take into account the guarantees received, while the Banque de France analyze the intrinsic situation of companies or groups of companies without taking guarantees into account. In addition, there are few companies excluding banks and insurance companies that are awarded a rating by a major international agencies (in 1999, 4,781 companies world-wide, of which around 60 were located in France); many more firms receive a Banque de France rating (180,000 per year in France).

[84] This rating is given to a manager who holds office as a legal representative in a company that has been put into judicial liquidation within the last five years, or in at least two companies which have payment ratings 9; a sole proprietor whose company has been given a credit rating 4, or a payment rating 8 accompanied by a credit rating 0.

[85] This rating is given notably to the following individuals: a manager who holds office as a legal representative in two companies that have been put into judicial liquidation within the last five years, or to a manager required to pay the debts of the legal entity, whatever the amount of the pecuniary liability; a sole proprietor whose company has been given a credit rating 5, or a payment rating 9 accompanied by a credit rating 0.

[86] This rating is given notably as follows: a manager who holds office as a legal representative in three companies that have been put into judicial liquidation within the last five years, or who is personally the subject of a decision of the courts; a sole proprietor whose company has been given a credit rating 6.

**ENHANCING LIQUIDITY MANAGEMENT AND FORECASTING**

316. The central bank needs to develop a framework to monitor and forecast short-term liquidity developments in the system on a continuous basis, so that its discretionary operations are consistent with its ultimate and intermediate objectives. The main purpose of establishing a framework to monitor and forecast short-term liquidity developments is to create an information set which puts the central bank into a position to smooth changes in liquidity conditions (with a view of creating stable liquidity conditions and limit market volatility) and to ensure that its monetary operations are consistent with the monetary program (Table 2a). By allowing the central bank to take well informed monetary decisions, such a framework will allow the central bank to communicate with the market in an effective manner and, through an appropriate communication policy, help market participants to clearly distinguish between changes in the monetary policy stance and temporary "noises."

Table 2a. Standardized Central Bank Balance Sheet

| Assets | Liabilities |
|---|---|
| Liquidity providing OMO/OMO type operations | Bank's holdings on current accounts (Required reserves and excess reserves) |
| Refinance standing facility | Liquidity absorbing money market operations |
| Credit to the government | Deposit standing facility |
| Net foreign assets | Banknotes in circulation |
| | Net government deposits |
| | Other factors (net) |

**Can be rearranged as follows**

LIQUIDITY SUPPLY/ABSORPTION THROUGH MONETARY POLICY OPERATIONS

| | | |
|---|---|---|
| | "Liquidity providing money market operations" | ***Discretionary Operations*** |
| *Minus* | "Liquidity absorbing money market operations" | |
| *plus* | "refinance standing facility" | ***Standing Facilities*** |
| *minus* | "deposit standing facility" | |

**Equals**

AUTONOMOUS FACTORS
"banknotes in circulations"
*plus* "government deposits"
*Minus* "credit to the government"
*minus* "net foreign assets"
*plus* "other factors (net)"

**Plus**

RESERVES
"banks' holdings on current accounts"

Source: IMF's Monetary and Exchange Affairs Department (2000) (as of 2003 the Monetary and Financial Systems Department), and European Central Bank (2001)

317. The experience of countries shows that forecasting the effects of the government's operations on liquidity poses the greatest difficulties. A lack of cooperation between the

treasury department and the central bank as well as the specific organization of the spending procedures are often the main impediments for accurate projections of government cash-flows. In addition, in countries with exchange rate pegs and large foreign exchange interventions, net foreign assets may be volatile and difficult to predict. However, since foreign exchange operations are typically settled with a lag of two days, there is some room for the central bank to adjust unwanted liquidity fluctuations. Similar challenges can be posed for currency projections, particularly when a country is on the path of remonetization after a period of high inflation. Overall, experience indicates that establishing a strong liquidity forecasting framework may be a lengthy process, in particular as this requires concomitant progress in establishing frameworks for forecasting government cash flows (a task which typically is carried out by the Treasury), and in forecasting foreign assets and currency in circulation.

318. Appropriate arrangements are also needed to absorb unexpected liquidity shocks in the system. It is in this context that the buffer function of reserve requirements and standing facilities plays a critical role. In particular, averaging provisions for reserve requirements allow banks to smooth out daily liquidity fluctuations since transitory reserve imbalances can be offset by opposite reserve imbalances within the same maintenance period. This mechanism also works to the benefit of the central bank as it reduces the need for frequent intervention in the market that may otherwise be warranted due to deviations from liquidity forecasts.[87] Similarly, standing facilities, by allowing banks at their own discretion (subject to a penalty in terms of cost/yield) to make deposits at the central bank, or to receive short-term liquidity from the central bank, play a stabilizing role and reduce the need for frequent central bank discretionary monetary operations.

[87] The buffer function is important in the early stages of the implementation of a liquidity forecasting framework as the quality of the forecasts might be low at the beginning.

### CROSS-COUNTRY EXPERIENCES WITH A LIQUIDITY SURPLUS

319. In Mexico, the central bank has been using mandatory remunerated deposits to attain a creditor position in the money market. In 1997, Banco de México's stance in the money market went from creditor to debtor, essentially due to the considerable amount of foreign assets accumulated in the course of the year. In order to strengthen monetary policy tools, Banco de México's Board of Directors decided that , as of September 1998, credit institutions would be under the obligation of establishing deposits at the central bank, with an indefinite maturity. The distribution of such deposits among credit institutions would be carried out according to their total liabilities, and they would be remunerated at the 28-day interbank loan rate. Afterwards, Banco de México would replace any liquidity withdrawn on the grounds of the establishment of said deposits, by means of very short-term open market operations. By means of these combined measures, Banco de México moved towards attaining a creditor stance in the money market, allowing increased control on short-term interest rates.

320. Spain experienced excess liquidity during 1973–92 due to Bank of Spain (BOS) net lending to the government and capital inflows. Excess liquidity was sterilized to control inflationary tensions, and after joining the EU in 1986 to prevent excessive appreciation of the peseta. The BOS used several nonmarket instruments to generate an operational deficit. Changes in nonremunerated reserve requirements were frequent from 1973 to 1981. By 1978 the authorities settle on a 5.75 percent ratio and adopted as a principle not to change the ratios for short-run control purposes. However, in 1979, banks were required to place special deposits with the BS remunerated at below-market rates, replaced later on with much higher special remunerated required reserves. After 1990, nonremunerated required reserves were gradually brought down to the current 2 percent level. Remunerated reserve requirements were substituted with mandatory holdings of BOS bonds (below market rates). However, there was also room for the use of market-instruments.

321. Systemic liquidity increased in the Netherlands after 1987 due to foreign exchange operations of the De Nederlandsche Bank N.V. (DNB) and decreases in Treasury balances. These developments would have led to considerable and prolonged money market surpluses. The DNB considered such surpluses would difficult the targeting of short-term interest rates, and the defense of the guilder. To create an operational deficit that facilitated the defense of the guilder, the DNB used two instruments: mandatory market-rate- remunerated deposit facility, and issuance of DNB bills. The deposit facility was introduced in 1988. The amount to be deposited at the facility (money market cash reserve) was fixed at the start of every cash reserve period, based on short-term liabilities. The short period of the facility, one to two weeks, facilitated adjustments to ensure operational shortages. Banks could use the amounts of their individual cash reserve accounts as collateral at the central bank. In 1994, the DNB also started issuing six-month certificates of deposit at market rates to mop up liquidity on a monthly basis.

322. During the late 1980s and mid-1990s, East Asian countries experienced large capital inflows that were absorbed by a range of sterilization and administrative measures. In 1993,

one-third of the net capital inflows into the APEC developing countries were absorbed by the central bank in foreign currency reserves. Many APEC countries reduced liquidity in the system by switching government deposits from the commercial banks to the central bank. In Malaysia, the authorities transferred government and public pension fund deposits from the banking system to special accounts in the central bank. Public firms in Indonesia were obliged to convert their commercial bank deposit into Bank Indonesia certificates. In Thailand, government deposits at the central bank increased from 25 percent of total deposits in 1987 to 82 percent in 1992. Increases in statutory reserves were used in the Philippines, Malaysia, and Korea. Both the Korean and Malaysian authorities also conducted open market operations to sterilize liquidity.

## SELECTED COUNTRY EXPERIENCES WITH INTERBANK MARKET DEVELOPMENT

323. The experiences of India, Italy, Korea, Thailand, and Turkey are analyzed regarding the involvement of the central bank in the process, participants in the interbank market, and the degree of centralization of the interbank market.[88]

### Involvement of the central bank

324. The development of the interbank market is a stage-by-stage process and the experience of Italy, Korea, Thailand and Turkey show that the central bank can play an active role in using the interbank market as a "playground" where monetary policy operations can be conducted and in which it could become an important player.

325. In Turkey, in the 1980s the banking system was highly segmented, with public banks reluctant to lend to private banks, including because of political considerations. Similarly, private banks tended to minimize their transactions with other commercial banks owing to competition, in a context where many of them belonged to different industrial groups. Competition and rivalry between industrial groups often led to a reluctance of their banks to deal with each other directly. As a result, activity in the interbank market was very limited. However, banks were willing to participate if the central bank was the counterpart. This situation prompted the central bank to develop a framework for an interbank market in which it was acting as a blind broker, that is, as the counterpart of all transactions: it operated as a broker in that it borrowed only when it could on lend the proceeds at the same interest rate. In order to cover the credit risk, all transactions intermediated by the central bank had to be backed by acceptable collateral, such as government securities.

326. In Thailand, a repurchase market with the central bank was created in 1979 with a view to further developing the fledging money market and provide the central bank with a mechanism to monitor and, if necessary, intervene in the market. Participants were allowed to place buying and selling orders with the central bank, indicating the amount, interest rate and maturity of the desired transactions. Then, the central bank tried to match the orders and determine a single "market" repurchase rate (that is, a fixing). If needed the central bank intervened to absorb or inject liquidity.

327. In Italy, although and over-the-counter interbank market was operating for a long time, the central bank was prompted to take action because oligopolistic behavior led to segmentation of the market. Also, the subsequent excessive volatility of the market was an impediment to using interest rates as a channel of transmission of monetary policy. In 1990, the central bank promoted the establishment of a screen-based interbank market, to which participation was on a voluntary basis. This was accompanied by a modernization of the

---

[88] Prepared by Bernard Laurens based on Mehran, Laurens, and Quintyn (1995) for Italy, Korea, Thailand, and Turkey, and Reddy (1999) for India.

payment system, enabling real-time and direct movement of funds on bank's centralized accounts with the central bank.

328. In Korea, in the late 1980s, the central bank promoted the establishment of brokers and dealers for call transactions in order to enhance the adjustment function of the interbank market and break the segmentation of the existing call market between bank and nonbank financial institutions (NBFIs).

**Participants in the interbank market**

329. The interbank market is the segment of the money market where financial institutions can trade their deposits held at the central bank. Consequently, participation in the interbank market is generally confined to financial institutions with a current account at the central bank, and it may or may not include NBFIs, depending on whether or not they are authorized to maintain current accounts with the central bank. In Korea, however, although NBFIs did not maintain a settlement account with the central bank, they were allowed to participate in the interbank market. While participation of NBFIs could have contributed to enhancing market liquidity, eventually it resulted in market segmentation, because of differences in the pattern of transaction behavior. The integration of the interbank market with the over-the-counter market between NBFIs was eventually achieved at the end of the 1980s with the nomination of brokers and dealers for call transactions as mentioned above.

330. In India, call money market was predominantly an interbank market until 1990. The Reserve Bank's policy relating to entry into the call money market was gradually liberalized to widen and provide more liquidity. In particular, entities that could provide evidence of surplus funds were permitted to route their lending through Primary Dealers (PD). The minimum size of operations for routing transactions was also gradually reduced in order to increase the number of participants. In this context, banks and PDs are operating as both lenders and borrowers, while a large number of financial institutions and mutual funds are operating only as lenders. In May 2001, the central bank started phasing out his participation in the call market. The move has been made to develop a pure interbank call money market and to facilitate a further deepening of the term money market.

**Degree of centralization of the interbank market**

331. Although central banks play a catalytic role in interbank market development, typically they do not intend to centralize transactions on their books. When it occurs, as in the case of Turkey with the establishment of the "official" interbank market intermediated by the central bank, direct transactions among banks should be permitted. Moreover, the establishment of a centralized interbank market in Turkey was seen only as a temporary arrangement to "educate" participants and thus facilitate direct transactions. In the case of Italy, participation in the centralized market was on a voluntary basis, and the market operated outside the central bank, which only provided settlement arrangements in support of market transactions.

## REFERENCES

Alexander, William E., Tomás J. T. Baliño, and Charles Enoch, 1995, *The Adoption of Indirect Instruments of Monetary Policy*, IMF Occasional Paper No. 126 (Washington: International Monetary Fund).

Baliño, Tomás J.T., and V. Sundararajan, 1997, " Design of Instruments Mix and Coordination of Instruments Design," in *Instruments of Monetary Management: Issues, and Country Experiences* (Washington: International Monetary Fund).

Bank for International Settlements, 1998, "The Transmission Mechanism of Monetary Policy in Emerging Market Economies," Policy Paper No. 3 (Basel).

_____, 1999, "Monetary Policy Operating Procedures in Emerging Market Economies," Policy Paper No. 5 (Basel).

Banque de France, 2003, "La Cotation Banque de France et le ratio McDonough," Bulletin de la Banque de France No. 112 (April).

European Central Bank, 2001, "The Monetary Policy of the ECB," European Central Bank (Frankfurt).

Handy and others, 1998, *Egypt Beyond Stabilization, Toward a Dynamic Market Economy*, IMF Occasional Paper No. 163, IMF, May 1998, pp. 56–64.

Kamin, Steven Kamin, Philip Turner, and Joseph Van't Dack, 1998, "The Transmission Mechanism of Monetary Policy in Emerging Market Economies: an Overview" in *The Transmission of Monetary Policy in Emerging Market Economies*, BIS Policy Papers No. 3 (Basel: Bank for International Settlements).

Khan, S. Moshin and Carmen M. Reinhart, eds, 1995, *Capital Flows in the APEC Region*, IMF Occasional Paper No. 122 (Washington: International Monetary Fund).

Mehran, Hassanali, Bernard Laurens, and Marc Quintyn, eds., 1995, "Interest Rate Liberalization and Money Market Development: Selected Countries Experiences," (Washington: International Monetary Fund).

Monetary and Exchange Affairs Department (IMF), 1997, "The Use of Standing Facilities," in *Indirect Monetary Management: Country Practices and Operational Features*, MAE Operational Paper OP/97/04 (Washington: International Monetary Fund).

_____, 2000, "Liquidity Forecasting," MAE Operational Paper OP/00/07 (Washington: International Monetary Fund).

332.

_____, 2002, "Establishing Initial Conditions in Support of Inflation Targeting," MAE Operational Paper OP/02/1 (Washington: International Monetary Fund).

Reddy, Y.V., 1999, "Development of the Money Market in India," speech by Dr. Y.V. Reddy, Deputy Governor, Reserve Bank of India, at the Fifth J.V. Somayajulu Memorial Lecture at Madras, India, on February 1.

Sundararajan, V., Peter Dattels, and Hans Blommestein, 1997, "Coordinating Public Debt and Monetary Management," (Washington: International Monetary Fund).

Taylor, John B.,1999, "The Monetary Transmission Mechanism and the Evolution of Monetary Policy Rules," paper presented at the Third Annual International Conference of the Central Bank of Chile on "Monetary Policy: Rules and Transmission Mechanisms," September 20–21.