



6 ~ Monetary and Exchange Rate Policy

6.1 Introduction

Monetary, financial and exchange rate policies in Zambia went through two phases after independence. The first phase, until the late 1980s, was characterised by extensive intervention in the economy, the financial sector included, in order to support the government's growth policies. However, regulation and state intervention were not supported by a solid taxation system, the institutional strengthening of the state or the diversification of the country's economic base. During this period, the Zambian state was interventionist, but not strong. It was institutionally weak, and unable to impose a consistent set of economic priorities upon conflicting social interests.

The most important feature of the second phase, since the late 1980s, was the implementation of an orthodox programme of economic reforms guided by the IMF and World Bank. The financial sector, the exchange rate and the foreign currency flows were liberalised, and inflation control has become the main objective of monetary policy. These policies were associated with successes, including the reduction of inflation from 160 percent per annum to twenty

percent, substantial expansion of the financial system, and stabilisation of the nominal exchange rate. For the future, the international financial institutions (IFIs) and the government of Zambia aim to consolidate these reforms. Their main objectives are to increase confidence in the economy, reduce inflation to single digit levels, and raise savings and investment in order to achieve annual GDP growth rates of five percent per annum. For the long term, the policy would create the institutions needed to support economic development in Zambia, including, for example, a bank-based financial system, stock markets and venture capital funds, and monetary policies based on floating exchange rates, inflation targeting and central bank independence.

This chapter shows that the outcome of the reforms has been partial and uneven. Although institutional development and the elimination of high inflation have strengthened important areas of the Zambian economy, certain aspects of the adjustment and stabilisation programmes may have reached their limits; both in terms of their capacity to deliver their stated goals, and to contribute to the achievement of pro-poor objec-

tives. These limitations help to explain the feeble and unstable growth rates of the Zambian economy over the last fifteen years, and the concentration of income and wealth that has accompanied the reforms. They also help to explain the partial dollarisation of the economy and the financial fragility of the public sector, especially the domestic debt overhang.

The country continues to have severe balance of payments problems, and it remains heavily dependent on international aid. Financial system development has been skewed towards the wealthier regions, and the supply of financial services still bypasses the agricultural sector and the poor. Finally, the internal market remains unable to generate the supply responses required to address these structural weaknesses. The mission concludes that the so-called reform process has been insufficient, partly because of poor design. In practice, reform implementation and the pursuit of business confidence have occasionally become ends in themselves.¹⁰¹ This is undesirable, because the economic policy-making process should include checks and balances facilitating policy evaluation and the fine-tuning of underperforming policies. The government of Zambia has often been left with no alternative but to implement limited or failing policies with increasing determination, despite their disappointing outcomes.

There is scope to deploy a new, pro-poor economic strategy, using alternative policy tools to pursue socially desirable objectives. The policy changes of the past have failed to induce the rates of economic growth. These changes have also not been conducive to the improvement of Zambia's human development; or, even to sustain life expectancy in the country, which is the minimum requirement for the improvement of human welfare.¹⁰² Given economic policies and the prevailing distribution of income and wealth, Zambia will fail to achieve the MDG. This failure raises two important questions: were the reforms appropriate in the first place, and, if so, why

did they fail to achieve the expected outcomes. This chapter addresses these questions through assessment of the government of Zambia's monetary, financial and exchange rate policies.

This chapter assumes, first, that the state, civil society organisations, trade unions and other stakeholders should contribute to decisions regarding the allocation and use of social resources. This is especially necessary when there may be coordination failures or when the private sector systematically fails to target resource use towards socially desirable goals. This does not suggest that negotiations or state intervention through dialogue, regulation, intervention or public-private partnerships must lead to superior outcomes. However, it is evident that the state is the only social institution potentially accountable to the population through the democratic process. Institutions accountable to other stakeholders can also give an important contribution to the selection of economic policy priorities in Zambia.

In order to implement pro-poor policies, co-ordinate private sector activity and increase the democratic accountability of the state, the government of Zambia needs to have additional political space to select its own priorities and identify the most suitable tools in each case. Zambian state institutions have both the expertise and the sensitivity to local realities and popular demands that are needed to drive endogenously generated pro-poor policies. In this sense, policy ownership must come from within.

Ownership and good governance cannot be limited to, or measured, by the incorporation of goals and methods selected by the IFIs and the donor agencies. Ownership and good governance require effective control over projects, budgets and modes of delivery, and the ability to select the most desirable policies in the light of Zambian national interests. International organisations such as UNDP should support the pro-poor policies and choices of the Zambian government, and assist the

achievement of these desirable outcomes, without seeking to control either the choice of priorities or the selection of policy tools by the government of Zambia.

The second assumption is that there is gross underutilisation of resources in Zambia. There is also ample scope for the collaboration between the government of Zambia and the private sector in order to mobilise these resources to achieve pro-poor goals. Given the level of poverty in Zambia, the urgent needs of the population and the enormous potential of the country, it is important to identify forms of collaboration between private enterprise and the state with a view to achieving socially desirable goals. Collaboration is not only feasible; it is also imperative.

On the one hand, untrammelled private sector activity in Zambia has often not been conducive to, or even fully compatible with, pro-poor outcomes. On the other hand, a pro-poor development strategy cannot be implemented by the state in isolation from the private sector. A strategic partnership between state institutions and private enterprise is essential for effective resource mobilisation and the achievement of pro-poor objectives. In other words, a strong private sector is possible only when the state is strong, and the strength of both depends, to a large extent, on the adequacy of the macroeconomic policies.

For monetary, financial and exchange rate policy, this chapter claims that government of Zambia objectives have been constrained at two closely related, but analytically distinct, levels. First, they are limited by the country's poverty and institutional underdevelopment and, second, by the variance between policies and their stated goals. This chapter reviews both sources of weakness, and outlines an alternative monetary, financial and exchange rate policy framework supporting a pro-poor development strategy for Zambia. These suggestions are offered in the form of a menu of policy choices for consideration by the authorities. These policies can contribute in two ways to the

achievement of pro-poor goals. First, they will expand the government of Zambia's fiscal space, which is essential in order to channel resources to pro-poor development projects. Second, they will create incentives for the targeting of private sector resources in support of the country's pro-poor development strategy.

The third assumption underpinning this chapter is that fiscal, financial, monetary and exchange rate policies should be nested in a consistent and pro-poor enabling macroeconomic environment. This environment needs to include the country's industrial policy strategy, focusing on the development of complementary sectors, the achievement of balance of payments stability and the development of non-traditional competitive advantages supporting the reduction of poverty. These objectives cannot be easily achieved in Zambia at the moment, because the social demands upon the state are too large, the international environment is frequently too hostile, the available resources are too meagre, and the institutional framework is not always conducive to the achievement of socially desirable goals. The policy suggestions offered in this chapter aim to consolidate internal and external balance (low inflation, domestic debt sustainability, exchange rate stability, balance of payments equilibrium and the reversal dollarisation), protect Zambia from adverse external shocks, transfer policy levers to the domestic authorities, increase the degree of intersectoral policy co-ordination, and link macroeconomic stability with the achievement of pro-poor goals, in order to deliver economic prosperity and higher living standards for the majority of the population.

6.2 Changes in the Policy Regime ('Reforms')

The Zambian Financial System

The liberalisation of the Zambian financial sector had two main objectives; first, to increase the scope for market mechanisms to determine the allocation of resources

and, second, to facilitate the adoption of market-based monetary policy instruments, reducing the scope for the monetisation of fiscal deficits and curtailing their inflationary impact.¹⁰³ The first stage of the reforms was the liberalisation of interest rates and the introduction of government securities auctions, in 1993. These securities included T-bills of 28, 91, 182 and 273 days and government of Zambia bonds of 12, 18 and 24 months. The Bank of Zambia uses securities auctions both for liquidity management purposes and to influence market interest rates, since the T-bill rate is commonly used by the commercial banks as the benchmark for the price of loans. The Bank of Zambia started open market operations in 1995, and repurchase (repo) operations in 2002.¹⁰⁴ In 1998, the Bank of Zambia listed government bonds on the Lusaka Stock Exchange for secondary trading, in order to promote the development of the secondary market and increase the responsiveness of the money market to monetary policy. This initiative was largely unsuccessful, and secondary market activity remains extremely low.¹⁰⁵

In mid-2003, the Zambian banking system included the Bank of Zambia¹⁰⁶ and fourteen commercial banks with a branch network of 140, and holding ninety-one percent of the financial system's assets. Only one bank was state-owned (the Zambia National Commercial Bank, ZNCB, which was being privatised). Six were private foreign banks, two were foreign state-owned banks, and the others were locally owned. The subsidiaries of transnational banks accounted for three-quarters of the capitalisation of the banking system, and controlled sixty-five percent of assets, eighty-five percent of loans, sixty-four percent of deposits and seventy-three percent of the industry's earnings (see Tables 6.1-6.3). The Zambian financial sector also included the state-owned National Savings and Credit Bank (NSCB) and the Development Bank of Zambia (DBZ), three building societies,

several Microfinance institutions, bureaux de change, leasing and insurance companies, pension funds and the Lusaka Stock Exchange.¹⁰⁷

The financial sector reforms led to the opening of several banks, many with poorly qualified staff and insufficient capital. The number of banks increased from six, before the reforms, to twenty-five in December 1994, with 188 branches.¹⁰⁸ In the same period, the Bank of Zambia reduced the statutory reserve ratio from thirty percent to three percent. The ensuing liquidity surge, and insider lending, imprudent foreign exchange operations and high levels of non-performing loans created difficulties in several institutions. There were thirteen bank failures in the late nineties, costing the government in excess of K90 billion. Several failures remain unresolved. In response, the Bank of Zambia tightened up the regulations on capital requirements and foreign exchange trading, and increased the statutory reserve ratio to eleven percent in 2000, and to 17.5 percent in 2002. This ratio was cut to fourteen percent in October 2003, in order to foster the reduction of the lending rates. This move was consistent with the Bank of Zambia policy of increasing its reliance on indirect (market-based) monetary policy instruments, rather than direct regulation of the financial sector.¹⁰⁹

The real interest rates on government securities have normally been positive, and the commercial lending rates are consistently high. However, the real deposit rates tend to be negative (see Figures 6.1 through 6.3). They may have discouraged savings in the banking system and created incentives for other forms of saving, especially foreign currency deposits. Partly for this reason the financial system is highly dollarised, with approximately half of bank deposits and one third of loans in foreign currency (see Figures 6.4 and 6.5).¹¹⁰

The government of Zambia Financial Sector Development Plan (FSDP) admits that the Zambian financial sector has developed unevenly, and that it plays only a

limited role in the economy. Symptoms of these limitations are the lack of financial intermediation, low market liquidity, high interest rates, high bank costs, absence of long-term lending, underdevelopment of the secondary markets and low public confidence. There is also limited access to financial services in the rural areas, and for the low and middle income earners. The ratio of M2 to GDP in Zambia has been around fifteen to twenty percent, which is in the middle range for the sub-Saharan African region (in the early eighties, M2 reached thirty-five percent of GDP).

However, private sector credit was only six percent of GDP in 2001, one of the lowest ratios in the region. In contrast, public sector credit, at fourteen percent of GDP, was relatively high by sub-Saharan African standards. Moreover, Zambian banks hold more foreign assets than banks elsewhere in Africa. Bank earnings depend heavily on fees, the margin between the loans and savings rates, loans to blue chip companies and foreign exchange and government securities trading.¹¹¹

The FSDP attributes these imbalances to high inflation, crowding out of the private sector by the government, the lasting impact of the failure of several institutions and the regulatory shortcomings of the Bank of Zambia, the Securities and Exchange Commission, the Pensions and Insurance Authority, the Zambia Competition Commission and the Patents and Companies Registration Office. Zambian financial institutions are exposed to high risks due to the economy's dependence on copper, the accumulation of public sector arrears and the potential volatility of the interest rates and exchange rates (see section 6.3).¹¹²

In order to address these limitations, the FSDP proposes, first, the development of a financial safety net including the Bank of Zambia as lender of last resort, the introduction of a deposit insurance scheme and the reform of the regulatory and supervisory system, including revisions of the Bank of Zambia Act, the Banking and Financial

Services Act, the Building Societies Act, the Companies Act, the Securities Act, the Pension Scheme Regulations Act, the Insurance Act and related legislation. It also proposes the creation of a credit reference bureau and improvement of bank capacity to assess credit and loan performance.¹¹³

Second, improvements are necessary in cash management by the government and the private sector, and better co-ordination between fiscal and monetary policy. Problematical cash management by the Ministry of Finance and National Planning (MoFNP), the Zambia Revenue Authority (ZRA) and the Bank of Zambia cause large swings in the money market and volatility in the interbank interest rate. It also forces the commercial banks to hold large balances in their settlement accounts.¹¹⁴ Moreover, the lack of a developed secondary market leads to liquidity surges at the maturity of the government securities,¹¹⁵ and weaknesses in the payments system cause delays in the remittance of tax revenues to the Bank of Zambia, creating a fiscally costly float in the financial system.

Third, it is necessary to develop the capital market, which will require the involvement of the state at several levels.¹¹⁶ Government bonds with longer maturities should be introduced, because there was no pricing benchmark for long-term financial instruments. Regulation will be needed to permit trading in financial instruments such as bills of exchange and acceptances, and large corporations should be offered incentives to fund long-term projects through bond sales. Incentives will also be needed for the development of the stock markets and venture capital funds. The capitalisation of the Lusaka Stock Exchange was limited to US\$ 220m in March 2002 (eight percent of GDP). This is among the lowest in Africa, in spite of government support and donor technical assistance. Between its creation, in 1994, and December 2003, the number of companies listed on the Lusaka Stock Exchange grew only from seven to eleven, and four companies had their shares

quoted. Only a small number of companies made more than ten percent of shares available for trading.¹¹⁷ As to the venture capital funds, it is hoped that they will provide long-term capital to small and medium sized businesses in Zambia.¹¹⁸

Fourth, the FSDP recommends the revision of the Bank of Zambia Act in order to grant independence to the Bank of Zambia.¹¹⁹ Finally, the fiscal deficit should be reduced to 1.6 percent of GDP by 2006, in order to reduce the inflationary pressures in the economy (if they are financed through borrowing from the Bank of Zambia) or crowding out (if they are financed through domestic borrowing). As part of the effort to curtail the fiscal deficit, the remaining state-owned enterprises (SOEs) should be privatised, the government arrears (estimated at K600 billion) should be eliminated, the government's credit facility at the Bank of Zambia (fifteen percent of the previous year's revenue collection) should be curtailed, and the maturity of the Bank of Zambia bridge loans to the government should be reduced to less than one month.

Balance of Payments and Exchange Rate Management

The economic reforms included the complete liberalisation of imports and the capital account of the balance of payments and the abolition of exchange controls in order to improve resource allocation and attract foreign savings. Zambia adopted a managed floating exchange rate system in 1994, and the public is allowed to hold foreign currency accounts with the commercial banks. It was expected that these arrangements would provide incentives for the internalisation of the foreign exchange holdings.¹²⁰

The Interbank Foreign Exchange Market (IFEM) system was introduced in July 2003. Under this system, the exporters deal directly with the banks (primary dealers), and the banks are obliged to quote two-way prices. This should allow information to flow more symmetrically, encourage competition and reduce market distortions.

The exchange rate was relatively stable after the introduction of the IFEM, and the bid-offer spread narrowed from four percent to approximately three-quarters percent (look back to Figure 2.11 for exchange rate movements). The Bank of Zambia intervenes in the spot market only to smooth out fluctuations of the kwacha and to accumulate foreign exchange reserves, but it does not aim to influence the underlying market trends (which would be impossible, because the Bank of Zambia reserves are sufficient only for 1.5 months of imports).¹²¹

In spite of these achievements, there are three serious problems in the foreign exchange market. First, foreign currency supply is heavily concentrated in a small number of exporters and foreign donors.¹²² Second, the absence of a developed forward and swap market impedes the expansion of hedging by the private sector,¹²³ and, third, it is necessary to contain the process of dollarisation which took root during the late nineties. Under high inflation, domestic transactions were increasingly denominated in dollars, for example, in the real estate and cellular telephone sectors.

Dollarisation is undesirable because it compromises the effectiveness of monetary policy and creates liability mismatches that can be conducive to large capital losses to the private sector or to state institutions, or both. Although it is now illegal for Zambian citizens to make payments using foreign currency, the FSDP does not offer a clear programme of de-dollarisation.¹²⁴

Inflation Policy

As the country's balance of payments problems worsened during the seventies and eighties, the Zambian government increased its domestic and external borrowing in order to sustain the level of economic activity and finance the rising SOE deficits. Unfortunately, the copper prices and domestic demand failed to react. The combined pressures of the balance of payments problems, fiscal deficits, adverse climatic conditions and the costs of being a frontline state

fuelled a severe inflationary process in Zambia in the late eighties. Other problems followed. In order to finance the elections, the government monetised a large deficit in 1990-91. The simultaneous liberalisation of several markets created an inflation bubble, which was fed by the drought and the financial crisis. Monetary control helped to reduce inflation, which dropped to around twenty percent (see Figures 6.6 and 6.7).¹²⁵

With the reforms, price stability, rather than output growth, became the main monetary policy objective. This shift was formalised by the Bank of Zambia Act (Bank of Zambia 1996), which states that the Bank of Zambia 'shall formulate and implement monetary and supervisory policies that will ensure the maintenance of price and financial systems stability so to promote balanced macro-economic development'. The government and the Bank of Zambia set an annual inflation target, and the Bank of Zambia manages monetary policy with a view to achieving that target with IFI support. Essentially, the Bank of Zambia imposes quarterly targets for monetary base (reserve money) growth, which are enforced through fiscal austerity (a cash budget system has been in place since 1993) and direct and indirect monetary policy instruments, including auctions of T-bills and government of Zambia bonds, repos, changes in statutory reserve and core liquid asset ratios as well as foreign exchange operations (see Annex 6A.1).¹²⁶

In spite of the Bank of Zambia efforts, the inflation targets have been missed every year for several reasons, including inflation inertia, unfavourable expectations, poor fiscal performance, dollarisation, currency depreciation and adverse terms of trade and supply shocks.¹²⁷ In spite of this, increasing efforts have been made to reduce inflation to single digit levels in the near future and to consolidate the monetary policy framework through Bank of Zambia independence and its increasing reliance on indirect instruments of monetary policy. This should eventually permit the adoption of a fullyfl-

edged inflation targeting regime (ITR), where the manipulation of interest rates is sufficient to control the rate of inflation.

Pro-Poor Policy Alternatives

Before the economic reforms, long-term development projects and the expansion of productive capacity, agriculture and non-traditional exports were financed, with significant insufficiencies, by the state-owned banks, foreign debt, and inflation. This financing model had important fragilities, and it was disassembled in the nineties by a combination of privatisations, the closure of several state-owned institutions and institutional changes.

Unfortunately, the Zambian financial system remains small, inefficient, high cost, shallow, short-sighted and speculative. It is also highly concentrated and dominated by foreign banks. The financial institutions tend to offer short-term loans backed up by readily available collateral for trading and working capital, and personal credit for formal sector workers, who do not exceed ten percent of the active population.¹²⁸ The banks also finance the public deficit and participate actively in the foreign exchange market, but they do not tend to fund the expansion of priority economic areas. The 'commercialisation' (i.e., privatisation) of ZNCB is unlikely to address these shortcomings, as it will inevitably be denationalised, and the long-term survival of its branch network cannot be guaranteed.

In spite of these limitations, the financial sector reforms achieved three important goals. First, they transferred part of the state capacity to co-ordinate economic activity and allocate resources inter-sectorally and inter-temporally (the balance between investment and consumption and the composition of investment) to the private sector. Second, they embedded private sector interests in the policy-making process, through the decisive role of the commercial banks in the pricing of government securities, the determination of interest rates and the financing of the public

sector expenditures. Third, they enhanced the role of the private financial institutions in the foreign exchange market and, therefore, in the country's relations with the rest of the world.

Financial sector control of the key sources of capital has increased this sector's influence over state policies above and beyond its limited resources and the ambiguous outcome of its activities from the point of view of the poor. In spite of its disproportionate leverage over economic policies and outcomes, the financial sector remains structurally dependent upon the state. This is not only because of the institutional and regulatory framework in which it operates, rather because its main sources of revenue depend heavily upon the state: the provision of finance for the public sector and the remaining SOEs, government securities trading, personal loans to civil servants, currency trading backed up by the Bank of Zambia, and so on. In short, the financial system drains public funds and social resources, and systematically fails to channel them to priority and welfare-enhancing economic sectors.

These structural and policy shortcomings make it difficult for the government of Zambia to implement a pro-poor economic development strategy. The shift to indirect monetary policy instruments will increase further the degree of financial system control of social resources, and there is no guarantee that higher liquidity (e.g., through the cumulative reduction of compulsory reserves) will lead to an increase in the supply of loans to priority sectors.¹²⁹

In this sense, the Zambian financial system is only partially fulfilling its essential function of making resources available for production and funding socially desirable investment projects.

A pro-poor development strategy will require incentives for investment in priority sectors, especially agriculture, non-traditional exports, housing and infrastructure. The theory underpinning the reforms implies that bank lending is a rational

decision based on collateral and expert assessment of specific projects. This is insufficient, because it ignores the environment in which investment takes place. Investment, especially in large or infrastructural projects, can have a significant impact on the composition of growth and the direction of the development process. By the same token, economic growth can support investment projects that may not be viable otherwise. This does not imply that all projects can be equally profitable, but that investment co-ordination can improve loan performance and contribute to the achievement of socially desirable goals.

It follows that the MoFNP should select the sectors that might benefit from additional loans.¹³⁰ Credit flows to these sectors can be fostered through tax rebates, the reduction of compulsory reserve requirements (possibly in excess of the value of the loans, up to a certain limit), adjustments in the calculation of risk-weighted capital in order to favour long-term investment in socially desirable sectors, and loan protection to deflect part of the cost of loan defaults in priority sectors away from the banks. The government could also fund, through bond sales, a specialist agency to trade priority loan packages, in order to help dilute the banks' credit risks.¹³¹ In addition to targeting priority areas, incentives should also be available for microcredit, especially in rural areas, due to its potential contribution to nutrition and other basic needs. In this case, commercial banks could be offered tax and other incentives to make microcredit loans available, or be given the alternative of using part of their compulsory reserves in Microcredit operations.

One important limitation to the achievement of these socially desirable goals is the concentration and internationalisation of the Zambian banking system.¹³² Large and competitive state-owned banks can help to address these limitations. These banks can introduce competitive pricing practices into the financial market, and limit the bias of the transnational banks towards high value

transactions that bring little benefit to the poor. They can also satisfy the needs of markets that tend to be ignored by the private institutions, for example housing and small-scale farming. State institutions dedicated to these markets can be either founded or capitalised (where they already exist), for example through bond sales, possibly on the international market. Additional resources to support the achievement of pro-poor goals could be generated through a small tax (between 0.1 and 0.5 percent) on all financial transactions, including payments by cheque, transfers of funds and purchases of financial assets. These funds could be dedicated to specific projects, for example the capitalisation of microcredit institutions, the treatment of HIV/AIDS or infrastructure provision.

The cost of these regulatory changes for the banks can be reduced by the institutionalisation of the Bank of Zambia's lender of last resort function, the institution of a deposit safety net and the development of the secondary market, which will allow the banks to exit undesirable positions more easily. One step towards the consolidation of the secondary market is for the Bank of Zambia to include government of Zambia bonds in the core liquid assets of the banks, and to start rediscounting these bonds. In contrast, the LuSE has not been able to deliver its promised benefits, and the support it has received from the government of Zambia may need to be reassessed.¹³³ It would also probably be wasteful for the state to invest in the creation of venture capital funds, since there is little realistic prospect that they will bear fruit. It may be more rewarding for Zambia to invest the state resources consumed by LuSE in agriculture research units to develop seeds, fertilisers and pesticides suitable for the climate and soil of different regions of Zambia.

In addition to addressing the insufficiencies of the Zambian financial system, a pro-poor economic strategy needs to be supported by suitable monetary and fiscal

policies. Zambian monetary policy was heavily constrained by the domestic public debt (DPD) overhang, including more than K4 trillion in outstanding securities and K2 trillion in other liabilities, including arrears, unpaid pensions contributions and contingent liabilities (see Table 6.4). The DPD has been rising rapidly and, although its level remains sustainable, its rapid growth indicates that this may not always be the case. DPD interest payments alone consume ten percent of the budget and three percent of GDP. These figures are highly sensitive to the level of the interest rates, because the average maturity of the DPD is very short. At this stage, the DPD is a potential threat to macroeconomic stability. The debt is also distributionally regressive, because the interest payments tend to benefit the financial sector and the financial asset-holders, which do not include the poor. There is currently no strategy in place to manage the growth of the DPD or to address the accumulation of arrears, other than to seek fiscal restraint.¹³⁴ These problems need to be addressed urgently, in order to secure macroeconomic stability in the medium and long-run, and expand the fiscal space required for the success of the government's pro-poor programmes.

To begin, the domestic arrears include a wide range of liabilities of various state institutions.¹³⁵ Some were contracted legally but remain unpaid because of technical difficulties; others may have been contracted without the consent or even the knowledge of the authorities in charge of the budget. Certain expenditures were justified by the needs of the ongoing programmes, whereas others need to be explained more fully before payment. From the point of view of the private sector creditors, the arrears are partly a promise to pay for services delivered, and partly a speculative claim on public resources.

Attempts to address the accumulation of arrears should include legislation abolishing the cash budget system, which has been partly responsible for the diffusion of

6

unsound and occasionally dysfunctional fiscal practices.¹³⁶ In addition to this, it is necessary to enforce a stricter commitment to the budget approved by parliament. On this basis, legislation can be introduced to penalise more severely the misuse of public funds, including unauthorised expenditures. The existing arrears should be considered on a case by case basis. This can be done by a specialist agency at the national level, or by specialist divisions within the key expenditure units. In each case, the provenance of the debts needs to be assessed. Discounts may be negotiated and payment could be made in cash, T-bills or long-term bonds, or the claims could be taken to court for adjudication. A special judicial channel could be created to assess these cases rapidly, fairly and consistently.

The pensions system also needs a large injection of resources, which may be funded by a combination of long-term bond sales and tax or social security contributions payable primarily by the prospective beneficiaries: formal sector workers and the state sector employees. Higher VAT on superfluous goods and services could supplement these sources of funds, for example, on luxury autos, air travel, electronic products and gourmet foods.

Improvements are also needed in the government's cash management, in order to reduce resource waste and the disequilibria in the interbank market. Currently, the banks can wait four days before transferring tax payments to the ZRA. At the same time, different government agencies maintain a large number of separate accounts in the commercial banks. These difficulties can be resolved relatively easily. All funds belonging to central government institutions should be transferred to the Bank of Zambia, to be held at a single Treasury account. Payments drawing on this account need proper authorisation, which can help to limit the misuse of public funds.

Finally, the commercial banks should transfer ZRA funds to the Treasury account daily (if necessary, on the basis of estimated

values), or as rapidly as the Bank of Zambia considers operationally feasible.

The expansion of the fiscal space in order to finance pro-poor and other priority economic programmes will also require the removal of other constraints on the public sector expenditures, among them the fiscal deficit. Deficits in Zambia have been modest by international standards. However, their inflationary impact depends not only on the size of the deficit, but also on its origin. For example, deficits due to current expenditures tend to be more inflationary than those due to capital programmes, because the latter expand productive capacity while the former only expand demand. Unfortunately, in Zambia public investment programmes have been cut drastically, and the fiscal budget is heavily tied up with current expenditures (most capital expenditures are aid-financed). Half of the tax revenues are used to pay the public sector employees; while state administration, DPD service and the constitutional reform consume another thirty percent of the budget. Only twenty percent is available for pro-poor programmes and investment.

It would be misguided to address these difficulties primarily through additional public expenditure cuts (see Annex 6.2). In Zambia, the fiscal budget can play an important role in the generation of demand, the expansion of capacity and the financing of pro-poor programmes. The fiscal deficit is also essential for the profitability of the financial system and the development of the capital markets. The expansion of the fiscal space needed to carry out pro-poor activities requires policies at two levels. On the one hand, it is necessary to expand public expenditures in priority areas, even if the fiscal deficit increases in the short-term. There is no reason to believe that this will crowd out private sector expenditures, because the Zambian economy is operating far from its production possibilities frontier due to the existence of several significant supply constraints. Moreover, there is abundant liquidity available in the financial

system, as is demonstrated by the large balances held in foreign currency accounts and the banks' insatiable demand for government securities (especially as the secondary market develops). What Zambia currently lacks is profitable investment opportunities. Public expenditures can help to create such opportunities, both directly and through the removal of the supply constraints, opening new frontiers for private accumulation and economic growth.

On the other hand, the government needs a strategy to stabilise the DPD and to manage its consolidated debt (after the incorporation of the arrears and pensions liabilities), in order to secure monetary and financial system stability.¹³⁷ This strategy may include four types of policy measures. First, the government should support the development of the securities markets and make more intensive use of repos for monetary policy.¹³⁸ Second, the reduction of the interest rates on the government securities, in order to cut the cost of the DPD service. This will be facilitated by the introduction of controls on capital flows and on foreign currency accounts (see below). In the absence of competition from quality private sector financial assets, there is no reason why the state should pay high rates for its securities. Third, the introduction of long-term (ten to twenty year) bonds to finance pensions, infrastructure and social programmes. Fourth, the automatic transfer to the Treasury account of all Bank of Zambia revenues in government securities.

If these measures are insufficient to stem the growth of the domestic public debt, the government may be forced to choose between expanding its capacity to service the debt (through higher taxation or cuts in social spending and public investment) or reviewing the size and liquidity of the debt to make it compatible with the government's capacity to pay, given its pro-poor policy commitments (see Annex 6A.3). This adjustment could be achieved in different ways. It could include, for example, negotiations to convert short-term T-bills

and bonds into index-linked instruments bearing lower interest rates and longer maturity. This can be made simpler if these securities are included into the compulsory bank reserves or the banks' risk-adjusted capital requirements. In extreme circumstances, the government may suspend temporarily the domestic public debt service (as well as payments on other financial contracts involving the Bank of Zambia and the government of Zambia) until a sensible solution can be found for the DPD overhang and its service costs. In this case, it may be necessary to restrict trading in public sector securities in the Lusaka Stock Exchange to protect traders against further capital losses, and as the prelude for restructuring the domestic public debt and reducing its cost (see Annex 6A.4). Alternatively, the government might impose a substantial one-off tax on financial assets to finance its social programmes, which would help to stabilise the domestic public debt and to direct resources to pro-poor priorities simultaneously. None of these measures cancels property rights, but they make the exercise of these rights compatible with domestic production capacity and macro-economic stability, including the long-term viability of the Zambian financial markets.¹³⁹

It is also necessary to address the long-term sustainability of the balance of payments and the management of the exchange rate. Let us consider each of them in turn. A sustainable balance of payments is essential for any development strategy, but this is especially important for pro-poor strategies because they require high and sustained growth rates and the expansion of the scope for autonomous policy decisions.

Zambia's balance of payments constraint is binding at three levels: trade, capital flows and the foreign debt overhang. Trade policies are reviewed elsewhere in this report. Here, it suffices to say that a more diversified trading pattern is essential to permit the capture of gains from trade and to distribute them more equally across

society. The backward and forward linkages of copper mining in Zambia are feeble, and it is important to internalise the chains of economic activity around copper, and distribute more widely the productivity gains obtained in this industry. This will require investment in related activities, including not only mineral processing and enriching, but also fuel, spare parts, maintenance, housing, transport, communications and consumables.

These investments will support productivity growth in copper mining, and help to transfer some of these gains to the rest of the economy. In the long-run, they will also increase the economy's resilience against fluctuations in the copper prices. These investments can be funded in different ways, including portfolio diversification by the exporters, transfers through the financial system, and state investment funded by foreign aid or in the manner described below. Given the limited fiscal space available to the state, capital investment in export-related sectors and economic diversification may require an extraordinary levy on copper mining. This levy could be imposed in different ways.

One alternative is to impose a substantial one-off tax on extraordinary profits. This has the advantage of being non-distortionary, but it may be inappropriate not only for legal reasons (depending on the interpretation of the contracts with the concessionary companies), but also because the buoyancy of the international copper market may last, in which case the concept of 'extraordinary profits' becomes inapplicable. In this case, it may be more desirable to create a Copper Stabilisation and Development Trust, financed by a permanent export levy and a small contribution from the government of Zambia. In order to distinguish this levy from a regular tax, the Trust could be managed by an independent board appointed by parliament. Its remit would include the long-term stabilisation of the industry, the promotion of regional poor development, and economic diversifi-

cation. This can be interpreted broadly, to include not only the Copperbelt but also the construction of supporting infrastructure in other parts of Zambia. For example, the Trust could take responsibility for the development of transport links in the mining areas, cheapening the copper exports and increasing the profitability of the sector. It could also develop transport links elsewhere, if this would support indirectly the expansion of copper mining.

Moving to the capital account of the balance of payments, its liberalisation has changed the form of the balance of payments constraint in Zambia. Previously, it appeared through the absolute scarcity of foreign exchange; in contrast, it now appears through the potential volatility of the exchange rate and, increasingly, the need to maintain attractive interest rates to entice foreign capital and retain domestic capital in Zambia. It is necessary to stabilise the capital account in order to reduce the country's vulnerability to changes in the circumstances in the financial markets in the developed countries, as well as in South Africa. Zambia's vulnerability is significant because of the denationalisation of the banking system and the extent of dollarisation.

Three measures can help to address these weaknesses. First, capital flows need to be controlled. In order to preserve the incentives for foreign investment in Zambia, the Chilean model of capital controls is probably the most appropriate. This model does not involve restrictions on outflows. However, all foreign capital inflows should be deposited in the Bank of Zambia at zero interest for a fixed period of time (for example, two or three months).¹⁴⁰ This should ensure that committed investors still find it profitable to invest in Zambia, while uncommitted speculators will find their profit margins severely eroded. This type of capital control would also help to reinforce, on a sustainable basis, the reserves of the Bank of Zambia. Alternatively, restrictions may be imposed on capital outflows, for example through a compulsory interest-free

deposit before repatriation, or through a small tax on capital exports or on foreign currency transactions, for example, those taking place in Zambia, involving Zambian nationals, firms based in Zambia or Zambian banks.

Second, a foreign currency transactions register should be created, in order to minimise tax evasion and the scope for exchange rate volatility and capital flight. This register should be accompanied by the introduction of a criminal offence of filing misleading declarations, which should be supervised by the Bank of Zambia. Along the same lines, it would also be important to introduce a small tax on all foreign currency remittances (except debt service), and to require MoFNP or parliamentary authorisation for all foreign currency borrowing and bond sales. The current stability of the kwacha offers an opportunity for the introduction of these stabilising measures, since it would be much harder to impose them when the exchange rate is unstable.

Third, it is essential to reduce Zambia's foreign debt stock further, as is argued elsewhere in this report. This can be achieved partly through international negotiations and greater aid flows and, partly, through a careful audit of the debt by expert consultants hired by the Zambian government. Other countries have been able to achieve significant reductions in their debt in this manner, indicating that this may be one of the most profitable undertakings available to the government of Zambia.

In addition to improving the current account and stabilising the capital account of the balance of payments, it is also important to implement an exchange rate regime compatible with the government's long-term anti-inflation policy and its pro-poor objectives. In terms of the former, the managed floating system has been very successful, as a result of buoyant copper prices and the relative prosperity of the non-traditional exports. However, this system has also led to a significant valorisation of the kwacha, and it may lead to

economic instability in the future. In addition to this, the potential contribution of this policy regime to pro-poor policies and outcomes is intrinsically limited. A policy choice is needed, and the priority attributed to achieving very low rates of inflation may be sub-optimal. Exchange rate stability is essential for inflation control in a small open economy, especially if it is highly dollarised. This implies that inflation targeting may not be adequate for Zambia, because this policy regime requires a floating exchange rate. However, it does not follow that nominal exchange rate targeting would be the appropriate alternative, because of Zambia's diversified trading pattern and heavy import dependence. It is likely that the most appropriate exchange rate regime for Zambia would aim to stabilise the real effective exchange rate at a slightly undervalued level.¹⁴¹ This can be achieved either through the shift to an active crawling peg, or through a policy of 'talking down' the kwacha and, simultaneously, relaxing the fiscal and monetary policy stance in order to restore the incentives to the non-traditional export sector. This is especially important because the latter is likely to be more sensitive than copper mining to the level of the exchange rate.

The foreign exchange market could also benefit from small regulatory changes, in order to assist the stabilisation of the kwacha at the desired level. These changes include, especially, recognition of the fact that the value of the kwacha is heavily influenced by the aid flows, which are anything but driven by economic fundamentals. Hence, although the value of the kwacha is currently determined by market processes, it is in no way determined by market variables. In order to stabilise the exchange rate within the desired range, it might be useful to split the foreign exchange market into three channels: (a) a commercial channel for private current account transactions, (b) a financial channel for capital and financial account flows (subject to the controls indicated above), and (c) a non-

commercial channel for official and non-government organisation currency flows. These channels, possibly operating under different exchange rates, would reflect the specific features of each type of currency flow. Transactions in the first two channels may be undertaken in the commercial banking system and the bureaux de change; but the third, including non-market flows only, that tend to be spasmodic, unpredictable and conditional, should be centralised in the Bank of Zambia. This will help to stabilise the foreign exchange market, reduce the fiscal and monetary policy impact of fluctuations in aid delivery, and facilitate the accumulation of reserves by the Zambian government.

Dollarisation is the last potential source of instability to be considered in this section. The foreign currency account overhang in Zambia is very large (see Figures 6.4 and 6.5), and sudden portfolio shifts by the account-holders could severely destabilise the kwacha. In extreme circumstances, these shifts may lead to hyperinflation. In this sense, the recent attempts by the Zambian authorities to limit the circulation of dollars are commendable, because they have helped to increase the potency of the monetary policy instruments, support exchange rate stability and expand the fiscal space of the public sector. However, the overhang of foreign currency deposits has not been addressed yet.

In order to absorb the foreign currency deposits in a controlled manner, it may be appropriate to increase the risk imputed to bank deposits denominated in foreign currency, and raise the compulsory deposit ratio on foreign exchange deposits from 14.5 percent (the same ratio as the kwacha deposits) to one hundred percent. These administrative measures will create disincentives to the banks holding foreign currency deposits, possibly leading to restrictions in their availability to the public. It may also be useful to tax Zambian citizens holding assets denominated in foreign currency. In contrast, incentives should be offered to

facilitate the conversion of the foreign currency deposits into kwacha, for example, a limited tax amnesty. If these measures are judged to be impractical, or if there is a prospect of capital flight or hyperinflation because of the misuse of the foreign currency accounts, the government should secure their compulsory conversion into long-term (ten to twenty year) domestic bonds. These bonds may be index-linked (in order to protect holders from domestic inflation), or linked to the exchange rate (to protect them from any devaluation of the kwacha). These concessions will increase the cost of conversion, but they may help to build consensus around these policy measures. The foreign currency resources made available to the state can be placed into a trust fund in charge of the bond payments, and tasked to invest these resources in pro-poor projects selected in consultation with the MoFNP.

Alternatively, instead of being converted into bonds the foreign currency account balances could be converted into shares in a holding company with a remit similar to the trust fund outlined above. In this case, the shares would be non-redeemable, rather be traded at the LuSE, and the fund would make regular dividend payments depending on the rate of return on its investments.

6.3 Inflation Policy

The Zambian macroeconomic policy mix has been eclectic, aiming to stabilise inflation, the financial system and the exchange rate, and to facilitate the accumulation of foreign reserves by the Bank of Zambia. Significant successes have been achieved in all areas; however, the reduction of inflation to single-digit levels has been elusive. Low inflation is perceived to be desirable not only because of the supposed costs of inflation, but also because Zambia has become an outlier, with the inflation rates in most neighbouring countries being lower than those in Zambia. Inflation has tended to become rigid, despite the Bank of

Zambia efforts to reduce it further and the recent revaluation of the real exchange rate. This may indicate that the scope for the use of demand control measures is nearly exhausted. They helped to eliminate high inflation, but the moderate inflation rates in Zambia may be due primarily to supply factors.¹⁴² These factors include the climate and infrastructure bottlenecks affecting food supply, changes in imported goods prices, indexation, and adverse expectations leading to speculative behaviour. None of these causes of inflation responds directly to the money supply controls being imposed by the Bank of Zambia. It is increasingly clear that the ambitious inflation targets of the government of Zambia are unachievable except at a very high cost for the economy and for social welfare. It may be more desirable to implement a medium-term anti-inflation strategy, aiming to stabilise the rate of inflation while the supply constraints are relaxed, in order to reduce the economic and social costs of inflation control. It is also likely that the financial programming model of the Bank of Zambia, which is being used to control the monetary aggregates, may be inadequate. The monetarist money supply targeting experiences in West Germany, Switzerland, the UK and the US did not vindicate the claims that money supply targeting was either feasible or conducive to rapid inflation stabilisation (Arestis and Sawyer 1998). In addition to these practical difficulties, the theory underpinning money supply targeting was fatally damaged by the criticisms inflicted by the new classical, Keynesian and radical political economists in the eighties (Levacic and Rebmann 1982 and Sawyer 1989).

Furthermore, it is unclear why the Bank of Zambia should spend so much effort, at such a high cost to the economy, seeking to reduce inflation to single digit levels. The literature shows that moderate inflation, in the ten to forty percent range, generates few if any economic costs, while attempts to impose very low inflation can be costly

(Chowdhury 2004 and Rao 2002). Moderate inflation is not associated with slower growth, lower investment, higher unemployment, less foreign direct investment or the deterioration of any important real variable.¹⁴³ It is even possible that moderate inflation may help to sustain economic growth, especially when there is excess capacity and significant unemployment or underemployment. The literature does seem to indicate that, first, the relationship between inflation and growth is non-linear. Second, the optimal rate of inflation can change in space and over time, and it may even be positively correlated with the rate of economic growth.¹⁴⁴ Third, even though high inflation can harm the poor, excessively low inflation and conventional stabilisation policies can have the same result. Therefore, there seems to be no ground to claim that inflation should always be maintained in the single digit range (McKinley 2003).

The government of Zambia's anti-inflation strategy should be reconsidered for other reasons too. Zambia's inflation targeting 'lite' does not constitute a full-fledged inflation targeting regime (ITR), because ITR involves much more than having a desired inflation rate and assigning one policy tool (in Zambia, the broad money supply) to achieve this goal. ITR also requires a range of supporting institutions and an elaborate institutional framework contributing to the achievement of the central bank's main policy objective.¹⁴⁵ Zambia is far from having the institutional capacity to adopt ITR, even though the country has been moving towards it for several years.¹⁴⁶ At the moment, the Bank of Zambia lacks a model of inflation and a fuller understanding of the monetary policy transmission process in the country. Its inflation and money supply targets are determined through a simple set of identities, explained in Annex 6A.1, and the outcomes of this strategy have been limited (Munacinga 2004, 27, 32-35). In other words, the Bank of Zambia has been largely

following rules of thumb while it attempts to build its reputation (Stone 2003, 14). However, the outcomes of this strategy are bound to be limited, because sustained gains in confidence must be based on policy achievements, rather than merely upon intentions. At the moment it is hoped that these achievements will derive largely from the confidence expected to flow from the good intentions of the monetary authority. This is unlikely to offer the basis for sustainable economic policy.

There are other reasons why ITR may be inappropriate for Zambia.¹⁴⁷ First, the economy is small and volatile and the inflation outturns are, correspondingly, variable, depending on imponderables (such as the climate) to a much greater extent than in larger economies. The variance of the outturns implies that, in order to increase the probability of achieving an inflation target, the Bank of Zambia must adopt tighter monetary policies than would be required otherwise. These policies are costly and they will tend to depress the economy, which may be incompatible with poverty reduction and the alleviation of existing supply constraints.¹⁴⁸

Second, the Bank of Zambia cannot count on the interest rate mechanism to steer the economy towards the inflation target, because the Zambian financial system is too shallow. At this stage, a combination of policy mechanisms is being used, including money supply targets backed up by fiscal austerity and OMOs. This has been inefficient, and it has increased the economic costs of achieving low inflation in Zambia.

Third, ITR is incompatible with fiscal dominance, which is evidently present in Zambia. Moreover, economic volatility destabilises both the state expenditures and monetary policy, because tax revenues fluctuate and unexpected expenditures often cannot be deferred or even financed by recourse to the financial markets. These fluctuations are exacerbated by the volatility of the aid flows.

Fourth, ITR is incompatible with financial or money market instability. It could be extremely costly to assert the priority of the inflation target in the face of an impending financial crisis, and conflicts of this type are more likely to happen where the financial system is relatively shallow and undeveloped than in countries with developed financial systems. Furthermore, it can be difficult to control inflation when money supply and demand are unstable. Fluctuations in the supply of money were examined above, but money demand in Zambia is volatile. This is partly because of the recent financial sector reforms, the introduction of financial market innovations and the changes in portfolio associated with the reform process (Munacinga 2004, pp.85-6). As a result, the Bank of Zambia has been unable to estimate with confidence the demand for money, which makes it difficult to pursue the inflation target.

Fifth, ITR is not suitable for countries with a tight balance of payments constraint, or where the exchange rate is volatile.¹⁴⁹ Although the latter has been relatively stable in Zambia recently, the balance of payments constraint remains binding. Moreover, the exchange rate channel seems to be more important than the monetary channel to explain variations in the rate of inflation.¹⁵⁰

These limitations indicate that an alternative strategy of inflation control may be desirable. This strategy should address primarily the causes of inflation, and it should be compatible with the achievement of pro-poor outcomes. In other words, it should include a medium-term programme to address key supply constraints (roads, bridges, agricultural development, food storage and marketing, exports, and so on), while avoiding a superfluous obsession with single digit rates of inflation. As long as inflation remains stable, its current level is low enough not to make it especially costly to the poor. The current rate of inflation is probably less costly than a harsh and potentially misguided disinflation programme would be, even if it were successful.

A more desirable medium-term anti-inflation strategy should avoid overly restrictive constraints on the supply of money, or the domination of the interest rates by inflation objectives. It should rely extensively on targeted fiscal policies, while suspending the drift towards Bank of Zambia independence, though literature has not demonstrated that central bank independence brings benefits in terms of inflation performance, growth, volatility or the sacrifice ratio (the output cost of reducing inflation). Moreover, the central bank, like all other social institutions, needs to accommodate many different social interests, rather than merely sectoral ambitions to achieve very low inflation and protection of the financial sector. In this context, inflation control should be pursued as part of a medium-term pro-poor development strategy, including other objectives such as price, exchange rate and financial stability, export diversification, and economic growth and distribution.

6.4. Conclusion

The development of pro-poor monetary, financial and exchange rate policies in Zambia requires careful policy co-ordination, and the subordination of these policies to an industrial policy strategy. This strategy should aim to relieve the supply constraints that prevent the achievement of the welfare improvements pursued by government, and rightly expected by the population. A macroeconomic reform strategy focusing on the adjustment of relative prices and the construction of the institutional edifice into which a thriving market economy would be expected to grow is risky, because it may put into place inappropriate structures given the state of development of Zambia, the aspirations of its people, and the policy objectives of the government. The ensuing conflicts and economic underperformance could be wasteful and potentially destabilising. It is impossible to wish into existence an institu-

tionally developed economy, and it is undesirable to attempt to mould economic structures in advance, and from the outside. Economic policies and institutional development must correspond to the peculiarities and the state of development of the country while, at the same time, attempting to steer the economy towards the fulfilment of socially desirable goals.

The reform programme was successful on several counts, explained above, but it has been unable to distribute these gains among the majority of the population. This chapter has addressed some of the shortcomings of this policy strategy, while acknowledging its successes and offering concrete suggestions for the expansion and consolidation of the pro-poor policies and programmes of the government of Zambia.

The proposed measures vary in scope and intensity, depending on the circumstances, and they may be adopted in different combinations depending on the government's priorities. Their main objectives are 1) to increase the degree of co-ordination across different policy areas, including industrial, trade, monetary, financial and exchange rate policy; 2) to restrict the openness of the capital account of the balance of payments in order to expand the policy space of the government of Zambia; 3) to expand the government's fiscal space in order to facilitate the use of public resources for the achievement of socially desirable goals; and 4) to harmonise the use of financial system resources with the pro-poor priorities of the government, raise the productivity of these resources, and limit the ability of financial system to control domestic credit, the financing of the state and the balance of payments. These policies can contribute to the achievement of pro-poor development objectives and, as such, they can claim the attention of the authorities.

101 '[T]he government and the donors have made fiscal austerity an end in itself and a measure of reform commitment' (Rakner, van de Walle and Mulaisho 1999, p.2).

102 'Despite much policy reform in the 1990s, despite the heavy injection of what became palliative external assistance and despite modest external debt relief, the ... Zambian economy contracted in

absolute terms over the past two decades, a period in which the country's population rose by 80 percent to over 10 million people today, while per capita income was halved. Zambia became the only developing country for which the UNDP's Human Development Index showed a negative trend in the 1990s. Whilst at Independence in 1964, Zambia was the second richest country in Africa, today it ranks amongst the continent's poorest nations...Summing up development in Zambia, the WB noted that with a decline in per capita GNP in excess of 30 percent in the 1980s, the country held "one of the worst records of economic decline of any country not engaged in internal or external warfare" (van der Heijden 2001, p.1). Alternatively, 'human development indicators [suggest] that the human condition in Zambia worsened since the mid nineteen seventies up until the advent of the new millennium. The deterioration was especially notable during the period of the structural adjustment programmes' (Seshamani 2005, p.2).

103 'The development of the government bond market in any economy is very important in that it is the sure way the government deficits can be covered in a less inflationary way. It is therefore imperative that the Zambian government is encouraged to finance its budget deficits through borrowing from the market' (FSDP 2004, paragraph 294). For a critical assessment of Zambian financial liberalisation, see Adam (1995).

104 Currently, blue-chip corporations can borrow at two to five percent above the T-bill rates, but smaller firms and personal loans are charged significantly higher rates. See Figures 7.1-7.3, IMF (2004a, p.93), Munacinga (2004, pp.18, 80) and FSDP (2004, paragraphs 271-2, 282-3).

105 See FSDP (2004, paragraphs 65, 101 and section 7.2.4.i), IMF (2004a, p.96) and www.luse.co.zm.

106 The reform of the Bank of Zambia is described by Hesselmark (1998).

107 See FSDP (2004, paragraphs 92-8, 219, 221-2, 224) and IMF (2004a, p.94).

108 See Maimbo and Mavrotas (2003, p.7).

109 See FSDP (2004, paragraphs 20, 153 and section 7.2.5), Maimbo and Mavrotas (2003, pp.6, 11-12) and Munacinga (2004, pp.8, 19-20).

110 See FSDP (2004, paragraphs 8-9, 47-8, 93, 272-3 and section 7.2.5) and Munacinga (2004, pp.17, 64-66).

111 'Without income on foreign currency operations, most banks would have been unprofitable over the last four years' (FSDP 2004, paragraph 230). See also paragraphs 2, 4, 18-19, 28, 49, 65, 89, 93, 228-9, 231, 234, 237 and section 5.3, IMF (2004a, p.94).

112 See FSDP (2004, paragraphs 7, 18, 20, 56-7, 65, 101, 140, 284).

113 See FSDP (2004, paragraphs 16, 21, 65, 105-7, 140-3, 154-61, 232 and section 3.8.2-3).

114 See FSDP (2004, paragraphs 50, 65, 101 and section 7.2.4 iii) and IMF (2004a, p.95).

115 See FSDP (2004, paragraphs 6, 49, 55, 84, 87-8) and Munacinga (2004, p.18).

116 'The importance of a well functioning capital market cannot be overemphasized as it improves financial market efficiency and is the missing link in Zambia's long quest and search for economic development, sustainable economic growth and poverty reduction' (FSDP 2004, paragraph 284). See also FSDP (2004, paragraphs 16 and 309 vi).

117 See also FSDP (2004, paragraphs 103, 299) and Munacinga (2004, p.21). The prospects for the Lusaka Stock Exchange have improved lately: 'market capitalisation [has] increased ... to US\$1.650 million. This positive development was helped not only by the stable exchange rate but equally by investor confidence in the market. With the listing of the Zambia Metal Fabricators Plc (ZAMEFA), the number of companies listed on the Lusaka Stock

Exchange increased to 12 [in 2004]' (MoFNP 2005, p.6).

118 FSDP (2004, paragraphs 58-9 and section 7.3.8 xix).

119 The Bank of Zambia is currently subordinated to the executive. For example, section 5, part II of the Bank of Zambia Act (1996) states that 'The Minister [of Finance and National Planning] may convey to the Governor [of the Bank of Zambia] such general or particular government policies as may affect the conduct of the affairs of the Bank and the Bank shall implement or give effect to such policies'. See also parts III and VII of the Bank of Zambia Act, FSDP (2004, paragraphs 165, 208 and sections 3.8.2.i and 4.4.1) and Munacinga (2004, p.20).

120 See FSDP (2004, paragraph 270).

121 See FSDP (2004, paragraphs 102, 310-11, 313-15), MoFNP (2005, p.5) and Munacinga (2004, pp.12-17, 53, 132-4).

122 See FSDP (2004, paragraph 316).

123 See FSDP (2004, paragraph 102) and Munacinga (2004, p.135).

124 See FSDP (2004, paragraphs 54, 317) and Munacinga (2004, p.113).

125 See Munacinga (2004, pp.13, 47-9, 81).

126 'Inflation has remained stubborn at around 17 percent over the past two years. This is the single most important factor in determining the level of interest rates. High inflation rates have contributed to the high interest rates in the country, making the cost of doing business prohibitive. In our quest to see the economy grow, inflation must be brought to single digit over the next two years. In this regard, monetary policy in 2005 will be geared towards reaching the end-year annual inflation of not more than 15 percent by restricting the growth of money supply to 16 percent' MoFNP (2005, p.9). The perceptive reader will have noticed that this quote fails to distinguish between real and nominal interest rates (see section 8.3).

127 See Munacinga (2004, pp.21, 81-2). The weight of food prices in the CPI is currently fifty-seven percent, of which maize prices correspond to eighty-five percent. Obviously, any variation in maize prices, for example, because of crop failures or speculation, will have severe implications for inflation.

128 This is not a problem that can be resolved easily or simply through efficiency gains. A financial system can be highly competitive (and, in this narrow sense, efficient) and, at the same time, dysfunctional if it does not contribute to the country's development objectives.

129 There is evidence that lending in Zambia is largely demand-driven. The influence of monetary policy is marginal, as price seems to explain only seven percent of the movements in total loans even after two years (Munacinga 2004, p.64).

130 'Thought should be put on new and creative institutional mechanisms to support credit to the poor and to job-generating activities. Both public and private mechanisms (such as public guarantees) should be considered for that purpose. Unfortunately, among the PRSPs under analysis, the evidence is that few identify how new financing mechanisms in support of the poor can be provided' (Gottschalk 2004, pp.36).

131 Previous experiences in Zambia indicate that the banks do not always find it profitable to lend to priority sectors, even if they are offered discounts on their compulsory reserve requirements. This is because their additional interest income from the loans is insufficient to compensate the additional risk of the loans. These disappointing outcomes do not imply that directed credit is unfeasible, only that it needs to be supported by an appropriate incentive structure.

132 See Gottschalk (2004, p.31).

133 'The creation of such [small] exchanges may be a premature project as they might lack an actual economic rationale ... [F]or instance, ... the Lusaka Stock Exchange (LuSE) has little effect on the larger Zambian economy ... [The] LuSE consists of "forced

trading" (a SEC-licensed dealer must necessarily direct all trading in public companies through the LuSE) associated with corporate restructurings. For instance, the remarkable increase in the number of shares traded, number of trades, and turnover ratio in 2001 was mostly the result of changes in ownership and mandatory offers in Zambia Sugar and in Chilanga Cement. Of the number of total shares traded in the LuSE in 2001, 97.9 percent were shares of Zambia Sugar; another 1.4 percent were shares of Chilanga Cement ... The LuSE appears to be making little if any contribution to the Zambian economy ... [T]he LuSE's failure to foster economic development in Zambia is mainly a function of the overall weak economic environment and less a function of the legal and technical constraints on the exchange ... There are little or no savings to be allocated to the few existing firms. Savings are low because earnings are low and because Zambians can expect to live for only 38 years. Those who can afford to save will search for better returns and a safer portfolio of investments. Excess returns of holding stocks (over a 12-month period) have been negative during the 1998-2001 period' (Marone 2003, pp.1, 11, 25).

134 See FSDP (2004, paragraph 65 xviii).

135 'Domestic arrears are defined as: (i) any bill that has been received by a spending Ministry from a supplier for goods and services delivered (and verified) and for which payment has not been made within 30 days after the due date of payments; (ii) Wage, salary and any payment to government employees, including any direct or indirect scheme of housing assistance, that were due to be paid in a given month but remained unpaid on the fifteenth of the following month; and (iii) interest or principal obligations which remain unpaid thirty days after the due date of payment. This definition of domestic arrears excludes changes in the stock on account of interest, penalties and valuation changes' (IMF 2004d, p.57).

136 For heavily critical assessments of Zambia's cash budget, see Dinh, Adugna and Myers (2002) and Stasavage and Moyo (2002); see also Fagernas and Roberts (2004, pp.viii, 24), Seshamani (2005, p.16) and WB (2003b, p.xv).

137 There is 'urgent need for fiscal adjustment to break the unsustainable cycle of rising domestic debt and interest payments in recent years. To illustrate the risks, the staff team presented alternative scenarios. Under an adjustment scenario consistent with higher external support and the move in 2004 to a PRGF arrangement with the HIPC completion point reached soon after, it would be possible to achieve a gradual phasing out of domestic financing, which would be eliminated in 2008. This should result in a gradual decline in the domestic debt from 21.9 percent of GDP in 2003 to below fourteen percent of GDP in 2008 ... In a scenario without fiscal adjustment, domestic financing would double from 4.9 percent of GDP in 2004 to ten percent of GDP in 2008, entailing an unsustainable rise of domestic debt and interest payments and a sharp reduction in all components of primary spending (IMF 2004d, pp.13-14). Alternatively, 'fiscal consolidation is envisaged to prevent a further escalation of domestic debt and interest payments that would jeopardise macroeconomic stability and sharply constrain spending on poverty reduction' (Bank of Zambia 2004, p.21).

138 See FSDP (2004, paragraph 7.2.6.ii).

139 'There is a respectable and influential body of opinion which ... fulminates alike against devaluations and [capital] levies, on the ground that they infringe the untouchable sacredness of contract ... Yet such persons, by overlooking one of the greatest of all social principles, namely the fundamental distinction between the right of the individual to repudiate contract and the right of the State to control vested interest, are the worst enemies of what they seek to preserve. For nothing can preserve the integrity of contract between individuals, except a discretionary authority in the State to revise what has become intolerable. The powers of uninterrupted usury are too great. If the accretions of vested interest were to grow without mitigation for many

generations, half the population would be no better than slaves to the other half' (Keynes, Tract on Monetary Reform, CW 4, pp.56-7, cited in Skidelsky 1992, p.160).

140 See Epstein, Grabel and Jomo (2003).

141 There is a compelling argument in the industrial policy literature that exchange rate stability and a slight undervaluation of the domestic currency offer the most conducive environment for long-term economic growth. See, for example, Agosin and Tussie (1993), Chang (1993) and Gereffi and Wyman (1990). See also Guillaume and Stasavage (1999, p.33).

142 It is clearly misguided to address cost inflation through demand measures; for example: 'the expected increase in the price of petroleum products was likely to add to production and transport costs, and hence adversely affect inflation outcome. Therefore, monetary policy actions were directed at containing the growth of reserve money within the projected path. To achieve this, the Bank of Zambia was to employ indirect instruments, such as the sale of Government securities' (Bank of Zambia 2004, p.3, emphasis added).

143 See, for example, Bruno (1995), Bruno and Easterly (1996), Chang and Grabel (2004, ch.11), Dornbusch and Fischer (1991), Epstein and Yeldan (2004) and Rao (2002).

144 'While some will interpret this as a licence for big spending, huge deficits and hyperinflation, we simply point out that there is no strong evidence in support of the argument that very low inflation is either pro-growth or pro-poor. Actually, too low an inflation rate can be as harmful to the poor as too high a rate of inflation' (Vandemoortele 2004, p.13).

145 Inflation targeting 'lite' (ITL) is a widely practiced monetary regime in weak economies, see Stone (2003).

146 See Stone (2003, pp.20-21). For the case study of Nigeria, see Batini (2004); see also Ball and Reyes (n.d.), Carare and Stone (2003) and Stone and Bhundia (2004).

147 For a detailed study of the preconditions for ITR, see Carare et al (2002).

148 'The reason why emerging market economies explicitly concerned with price stability usually perform less well than developed economies in terms of price and/or inflation stabilisation can be attributed to the fact that stabilizing prices is harder for emerging market economies. This is because emerging market economies face a more volatile macroeconomic environment and, typically, have weaker institutions that enjoy less credibility than their developed economies' counterparties. Importantly, the volatility of macrovariables and the authorities' credibility are related, in the sense that emerging market economies find it more difficult to acquire credibility in an unstable environment. In turn, this leads to unstable outcomes, which undermine the credentials of the monetary authorities' (Batini 2004, p.9). Similarly, 'it seems important that inflation targeting, if adopted, does not have an excessively low target, nor too a narrow band, for inflation. Also, too a low inflation target may not be appropriate for these countries as they may be subject to higher price variability when compared to developed countries, given the price shocks they are subject to, and their relatively weaker production and distribution systems' (Gottschalk 2004, pp.33).

149 'It is not possible for a country open to international capital flows ... to have both a stable exchange rate and monetary policy directed at domestic goals like price stability the so called "impossible trinity" ... Sooner or later conflicts between the two goals arise, jeopardizing the attainment of one or even both objectives. One particular aspect of the debate is that trying too hard to keep exchange rates stable when the economy is open and subject to short-term capital flows can be risky. International evidence confirms this notion' (Batini 2004, p.7).

150 See Munacinga (2004, pp.67, 79). For IMF (2004a, p.94), '[q]uite often ... the central bank [of Zambia] 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'. See also Gottschalk (2004).

Table 6.1: Zambian banks: assets, capitalisation and profitability, 2003 (K million and %)

	Total Assets (TA)	Share of TA	Total Capital	Pre-tax profit	Capitalisation (%)	Return on assets (%)	Branches
BBZ	1,017,991	21.8	107,308	80,655	10.5	7.9	27
ZNCB	931,475	19.9	59,372	15,230	60.4	1.8	43
SCB	787,330	16.8	92,222	61,765	11.7	9.0	15
STAN	544,837	11.7	53,784	43,504	9.9	8.7	8
CITI	487,878	10.4	109,728	43,080	22.5	10.0	2
INDO	272,082	5.8	47,678	16,008	17.5	7.1	7
FBZ	284,162	6.1	31,013	18,011	10.9	6.4	32
BOC	62,992	1.3	5,801	109	9.2	0.2	1
FAB	65,621	1.4	21,543	10,520	32.8	17.3	3
ABC	101,386	2.2	12,188	4,987	12.0	59.7	1
INVEST	45,865	1.0	7,292	1,253	15.9	3.2	2
CAV	26,830	0.6	5,055	2,784	18.8	12.9	1
IDH	26,645	0.6	7,927	3,553	29.8	13.2	1
N/CAP	21,217	0.5	4,959	1,151	23.4	6.0	8
TOTAL	4,676,311			565,870	302,610		140

Table 6.2: Distribution of banking sector assets, loans and deposits (K billion and %)

	Dec 01						Dec 02						Jun 03					
	Assets	%	Loans	%	Deposits	%	Assets	%	Loans	%	Deposits	%	Assets	%	Loans	%	Deposits	%
Foreign banks	2,284	66	783	73	1,546	64	3,029	64	798	82	2,142	66	3,274	65	925	85	2,274	64
Government banks	857	25	251	23	673	28	1,251	26	94	10	913	28	1,321	26	75	7	1,005	28
Local banks	319	9	45	4	187	8	444	9	83	8	202	6	449	9	86	8	254	8
Total	3,460	100	1,079	100	2,406	100	4,724	99	975	100	3,257	100	5,044	100	1,086	100	3,533	100

Sources: Source: FSDP (2004, p.61).

Table 6.3: Banking sector's earnings by type of ownership (K million and %)

	Dec 01		Dec 02		Jun 03	
	Pre-tax profit	%	Pre-tax profit	%	Pre-tax profit	%
Foreign banks	184,516	125	237,653	68	99,158	73
Government banks	-54,963	-37	78,926	22	16,550	12
Local banks	18,963	12	337,719	10	19,725	15
Total	147,907	100	350,298	100	135,433	100

Sources: Source: FSDP (2004, p.61).

Table 6.4: Domestic public debt and interest payments (% GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Central government expenditure	3.2	40.2	37.2	35.8	38.1	32.8	27.5	26.1	30.6	29.3	31.0	32.1	31.9	32.6	26.8
T-bills and bonds outstanding	na	na	na	na	na	7.9	6.5	5.9	4.0	4.4	5.4	8.3	19.0	21.1	na
Interest (% expenditure)	4.3	4.2	7.4	13.5	12.0	7.8	11.2	8.6	4.3	4.8	4.5	4.9	8.7	8.9	10.8
Interest (% GDP)	1.4	1.7	2.7	4.8	4.6	2.6	3.1	2.2	1.3	1.4	1.4	1.6	2.8	2.9	2.9

Sources: IMF and Bank of Zambia.

Figure 6.1: Bank of Zambia Interest Rate and Inflation, 1998-2005 (percentages)

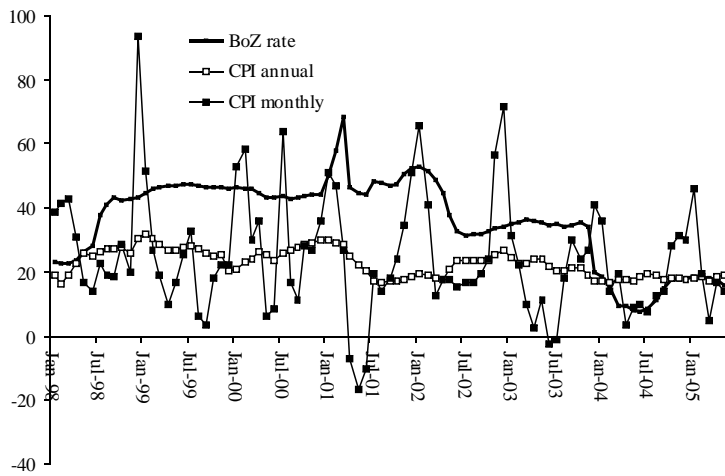
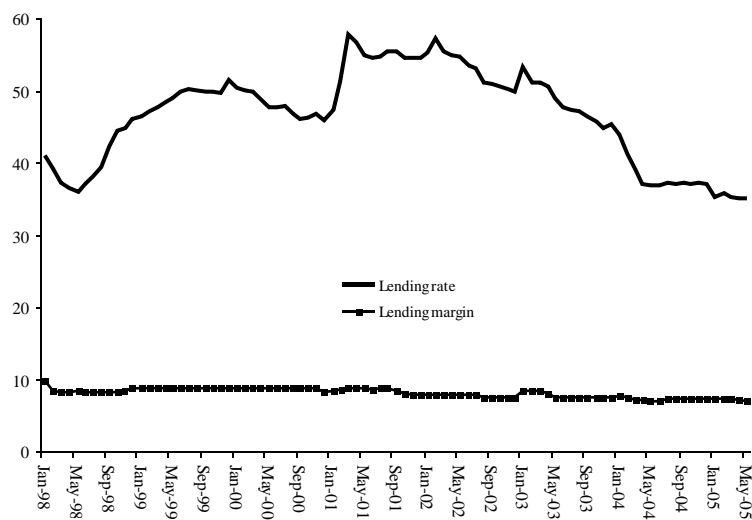
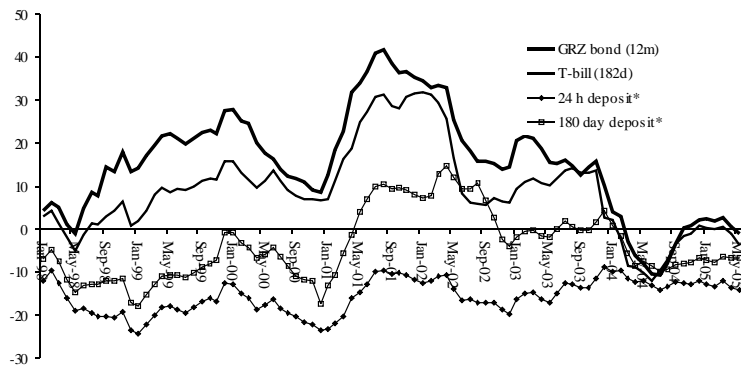


Figure 6.2: Lending Rate and Lending Margins, 1998-2005 (percentages)



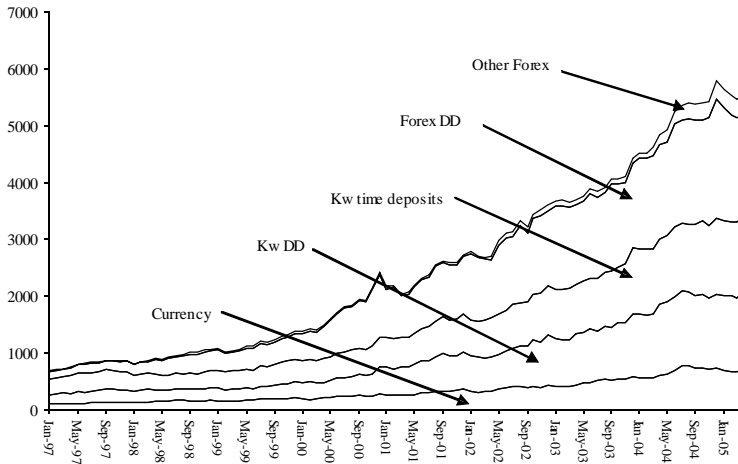
Sources: Bank of Zambia.

Figure 6.3: Real annual rates of return to saving instruments, 1998-2005



*Deposits over K20million
Sources: Bank of Zambia.

Figure 6.4: Composition of the money supply, 1997-2005 (M3, billions of Kwacha)



DD- demand deposits
Sources: Bank of Zambia.

Figure 6.5: Composition of the money supply, 1997-2005 (M3, percentages)

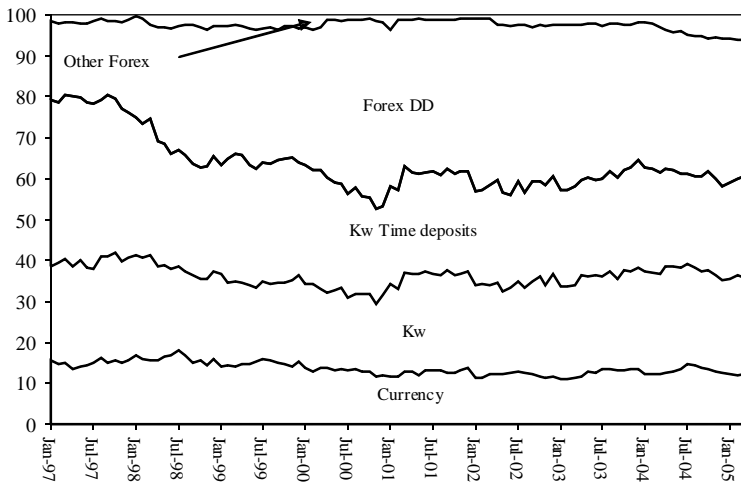
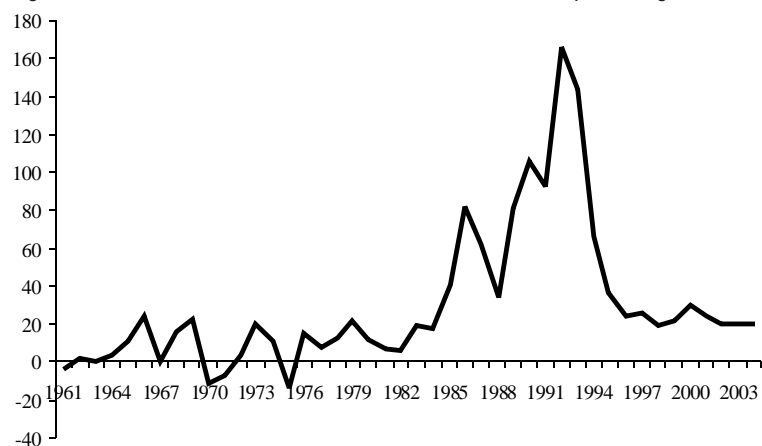
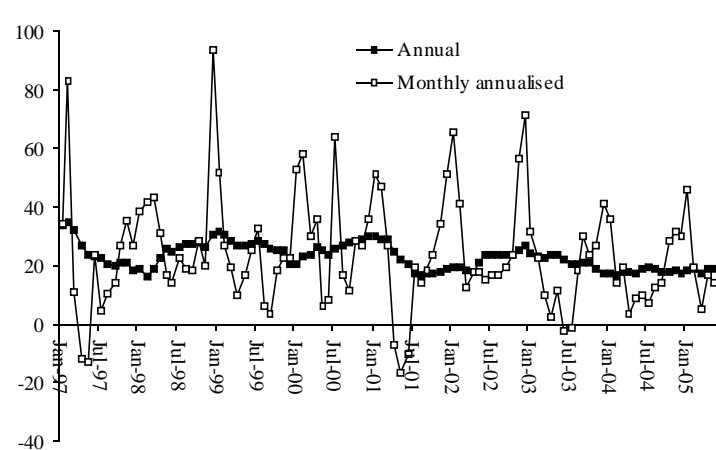


Figure 6.6: Annual inflation rate, 1961-2004 (GDP deflator, percentages)



Sources: IMF(2005) and Bank of Zambia(2003).

Figure 6.7: Inflation rate, 1997-2005 (CPI, percentages)



Annex

6A.1: Money Supply Targeting in Zambia

Monetary policy implementation in Zambia is based on the IMF financial programming framework. There is no model of inflation or of the monetary policy transmission mechanism in Zambia, and monetary policy departs from three identities (Munacinga (2004, pp.21, 36-9, 79-81, 128). First, the equation of exchange:

$$MV = Py \quad (1)$$

where M is the supply of broad money (M2), V is the velocity of circulation, P is the price level and y is the real output.

Second, the consolidated balance sheet of the central bank:

$$Mh = NDA + NFA \quad (2)$$

where Mh is base (reserve) money, NDA is net domestic assets and NFA is net foreign assets. NDA can be decomposed into credit to the government (Dcg), credit to non-government (Dcp) and other net items (ONI):

$$Mh = Dcg + Dcp + ONI + NFA \quad (3)$$

Therefore,

$$dMh = dDcg + dDcp + dONI + dNFA \quad (4)$$

Alternatively, base money includes currency in circulation and bank reserves:

$$Mh = C + RR + ER + VC \quad (5)$$

where C is currency in circulation, RR and ER are required and excess reserves, and VC is vault cash in the banking system. The Bank of Zambia can reduce (increase) the reserve ratio through regulation, OMOs or the discount window. The outcome of the

adjustment process is captured by the money multiplier, m:

$$M = mMh \quad (6)$$

where $m = (cd+1)/(cd+rr)$, cd is the currency-deposit ratio and rr is the required reserve ratio.

The third identity refers to the balance of payments:

$$CA = dMh - KA \quad (7)$$

where CA is the current account and KA is the capital account .

In consultation with the government, the Bank of Zambia and IMF and World Bank representatives set the annual targets for GDP growth and inflation, assuming a constant velocity of circulation. Then the growth rate for broad money is set, which allows the calculation of the desired growth rate of reserve money. Subsequently, the individual components of reserve money are determined.

Finally, the operational target (the growth rate of reserve money) is set. Discretionary monetary policy is estimated by subtracting NDA from the estimated operating target levels for reserve money. The projected paths for these variables are the benchmark for monetary policy operations. Policy implementation takes the form of minimising deviations of their actual paths from the target levels, using open market operations, changes in the statutory ratios, foreign exchange market intervention, commercial bank loan restrictions and moral suasion, in addition to fiscal austerity.

6A.2 Definitions of the Public Sector Deficit

Public sector deficits can be measured in different ways depending on the revenues

and expenditures included in the calculation (i.e., the concept of 'public sector'), and the form of calculation of each flow. This annex focuses on three common measures of the public sector deficit, the nominal deficit (or public sector borrowing requirement, PSBR), and the primary and operational deficits.

Nominal Deficit (PSBR)

The PSBR was formalised by the IMF in the eighties (IMF 1986). It measures the difference between the expenditures of the central government and its revenues in a given period (in what follows, one year) or, alternatively, the change of the net debt of the non-financial public sector. The central government comprises all public sector agencies; among them national and local state units and semi-autonomous agencies, including social security and state-owned enterprises (SOEs).

Their budget constraint can be represented by:

$$G = T + \Delta M_h + \Delta B + E \Delta R^* + \Delta C$$

where G is expenditures, T is tax revenues, ΔM_h and ΔB are the changes of the monetary base (seigniorage) and the domestic debt with the non-government sector (i.e., excluding government securities held by the central bank), E is the average nominal exchange rate, R^* is the international reserves, and C is the debt of the SOEs.¹⁵¹ For simplicity, arrears and other non-conventional forms of public expenditure financing are excluded. The nominal deficit of the central government (PSBR) is:

$$N = \text{PSBR} = G - T = \Delta M_h + \Delta B + E \Delta R^* + \Delta C$$

The PSBR can also be measured through the variation of the net debt of the public sector (NDPS), where

$$\text{NDPS} = \Delta M_h + \Delta B + E \Delta R^* + \Delta C.$$

Primary Deficit

The primary deficit (P) excludes interest payments on the public sector debt:

$$P = N - iB$$

where i is the nominal interest rate, $i = (1+p)(1+r) - 1$, p is the rate of inflation, and r is the real interest rate.

The primary deficit is an indicator of the sustainability of the domestic debt and, for this reason, it is often used as a proxy for the risk of default of the public sector. If the primary deficit is positive the government's debt has increased for non-financial reasons and, in this sense, it may be unsustainable. Conversely, a primary surplus (even if it is insufficient to eliminate the nominal deficit) indicates that the public sector is paying at least part of the interest on its debt. In principle, this implies that the public sector debt is sustainable.

Operational Deficit

The operational deficit (O) is the nominal deficit minus that part of the interest paid by the government that corresponds to inflation:

$$O = N - pB$$

The rationale for the operational deficit is the following. If there is inflation, part of the nominal variation of the DPD is merely due to the increase in the general price index, compensating the holders of securities for the devaluation of their capital. This does not correspond to any fiscal imbalance. For illustration, see the example in Table 6A.1.

Suppose that the country's GDP is 100, that economic growth is nil, The rate of inflation is zero, and that the nominal and real interest rates are ten percent. The government's debt on 1 January is 9.1. Suppose also that the tax revenues cover the government's non-financial expenditures.¹⁵²

On 31 December, when interest is due on the public sector bonds, 0.91 monetary

units must be financed. Since there are no tax revenues available (and monetisation is ruled out by assumption), the government must sell additional bonds to pay interest. Therefore, the primary deficit is nil, the nominal deficit is 0.91, and the DPD rises to 10.01:

In the following year there is one hundred percent inflation. Therefore, GDP rises to two hundred and, if the real interest rate is to remain at ten percent, the nominal interest rate must rise to 120 percent ($i = (1+p)(1+r) - 1 = (1+1)(1+0.1) - 1 = 1.2$). If the government's tax revenues remain equal to its non-financial expenditures ($P = 0$), the DPD will grow by the amount of the interest due. In this case, this interest will be:

$$iB = [(1 + p) (1 + r) - 1] B = [(1 + 1) (1 + 0.1) - 1] (9.1) = 10.92$$

which is also the nominal deficit. The DPD therefore increases to $9.1 + 10.92 = 20.02$ during this year.

If we exclude the impact of inflation on the DPD, we can determine the Operational deficit:

$$O = N - pB = 10.92 - (0.2) 9.1 = 0.91$$

which is equal to the nominal deficit, purged of the impact of inflation (this is the same as the nominal deficit for the zero inflation case, illustrated in Table 6A.2): The significance of the operational deficit becomes clear in the following scenario. Suppose that, in the case as in Table 6A.3, the government decides to eliminate its nominal deficit, perhaps in order to reduce inflation. This would imply a fiscal effort of eleven percent of GDP, which is bound to generate severe political tensions.

Yet, the nominal deficit is almost entirely due to inflation. What the economy needs, in this case, is not a lower nominal deficit (i.e., the public sector finances are not 'out of control') what it needs is lower inflation. Once this has been achieved, the deficit will

vanish almost entirely without any fiscal effort. In this sense, excessive focus on

The reduction of the PSBR, allegedly in order to reduce inflationary pressures, can be profoundly misguided. It can generate unemployment, poverty and other social costs for no economic reason. What the reduction of the deficit will be doing, in reality, is to accelerate the repayment of the DPD (its real value declines), which may or may not be warranted this objective should be considered on its merits, rather than in the guise of inflation control.

For an example closer to Zambia, suppose that, initially, GDP is one hundred, its growth rate is five percent, inflation is twenty percent, and the initial public debt is twenty (or twenty percent of GDP). If the real interest rate is ten percent and the nominal interest rate is thirty-two percent (ten percent plus inflation), the nominal deficit will be 6.4 percent of GDP, (when the primary deficit is zero). If the real interest rate is zero, the nominal deficit will be four. In contrast, the operational deficit in both cases is only 2.4 (percent of GDP).

6A.3 Sustainability of the Domestic Public Debt

Domestic debt sustainability can be defined in different ways and, consequently, different values can be found for the fiscal deficit compatible with a 'sustainable' DPD. The simplest way to approach this problem is to aim for the stabilisation of the DPD at whatever level it is, and calculate the primary fiscal deficit that is compatible with this outcome (the debt stabilising primary deficit). Other scenarios can be derived easily from this baseline. The debt stabilising primary deficit can be calculated as follows. Let Y be the GDP, M the money supply, B the domestic public debt stock, N the nominal fiscal deficit, P the primary deficit, i the nominal interest rate, r the real interest rate, y the real GDP growth rate and π the rate of inflation. The nominal deficit at the end of period t includes the

primary deficit and the interest on the accumulated debt. This deficit can be financed either by monetisation (seigniorage) or bond sales (for simplicity, we ignore arrears and other non-conventional financing strategies, SOEs and the foreign sector):

$$N_t = P_t + iB_{t-1} = (M_t - M_{t-1}) + (B_t - B_{t-1})$$

Since $i = (1 + \pi)(1 + r) - 1$,
 $P_t + [(1 + \pi)(1 + r) - 1]B_{t-1} = (M_t - M_{t-1}) + (B_t - B_{t-1})$

Simplifying and rearranging:

$$B_t = P_t + (1 + \pi)(1 + r)B_{t-1} - (M_t - M_{t-1})$$

If we define $b_t = B_t/Y_t$, $b_{t-1} = B_{t-1}/Y_{t-1}$, $p_t = P_t/Y_t$, $m_t = M_t/Y_t$ and $m_{t-1} = M_{t-1}/Y_{t-1}$, note that $Y_t = (1 + \pi)(1 + y)Y_{t-1}$, and subtract b_{t-1} from both sides, we have:

$$b_t - b_{t-1} = p_t + \frac{(1 + r)}{(1 + y)} - 1 b_{t-1} - m_t + \frac{1}{(1 + \pi)(1 + y)} m_{t-1}$$

This equation implies that the growth of the domestic debt as a proportion of GDP depends on the size of the debt, the primary deficit, the GDP growth rate, the real interest rate, the rate of inflation and the degree of monetisation (which determines the scope for seigniorage).

Suppose, for example, that we are interested in the debt stabilising primary deficit (the value of p_t needed to ensure that $b_t - b_{t-1} = 0$), assuming that the real interest rate is ten percent per annum, the growth rate of real GDP is five percent, the initial debt stock is 20 percent of GDP, the ratio of money to GDP rises from seven to eight percent during the year, and that inflation is twenty percent (these were approximately the parameters for Zambia in 2004). In this case,

$$p_t = 0.08 - \frac{1}{(1 + 0.2)(1 + 0.05)} \times 0.07 - \frac{(1 + 0.1)}{(1 + 0.05)} - 1 \times 0.2$$

and $p_t = 1.5$ percent of GDP.

If the economic growth rate is only two percent, the maximum primary deficit compatible with the stabilisation of the

domestic public debt declines to 0.7 percent of GDP (in other words, if the primary deficit exceeds 0.7 percent of GDP, the DPD will increase). Alternatively, if the GDP growth rate is five percent but the real interest rate is zero, the maximum primary deficit is as high as 3.4 percent of GDP.

The policy implication is that low interest rates and rapid GDP growth can make a substantial difference for debt sustainability. It should also be noted that, as the DPD rises as a share of GDP, stabilisation becomes a more demanding exercise, requiring lower fiscal deficits. Reciprocally, the difference between the current primary deficit and its debt stabilising level indicates the size of the required adjustment to stabilise the DPD, which may take the form of expenditure cuts, tax increases, or reductions in the interest rates. Faster growth or the reduction of the debt stock through a debt adjustment programme (see Annex 6A.4) could also lead to the same result.

6A.4 Restructuring the Domestic Debt

The state can restructure its liabilities mainly through changes in the supply of money or in the stock of government securities. In what follows, these alternatives will be briefly considered in turn.

The state can reduce the value of the money supply if it deliberately creates inflation, but this is trivial. Monetary reforms offer more interesting examples of the reduction of the real value of the monetary base. They cannot be reviewed here in detail. These experiences generally involve the announcement by the government that the existing notes and coins (or that some notes, for example, the high value ones) will cease to be legal tender after a certain date. The population is invited to deposit those assets in the banking system, where they may be discounted or frozen temporarily, or exchange their holdings for a new currency, possibly at a discount. Those failing to exchange their holdings after a

given deadline lose everything. Examples include the monetary reforms in Tunisia and Corsica (1943), Belgium (1944), Finland (1945), Japan (1946), West Germany and China (1948), and Czechoslovakia (1953). Other monetary reforms followed the collapse of the Austro-Hungarian Empire at the end of World War 1, and the dissolution of the Soviet bloc in the early nineties.

Monetary reforms can have several objectives, among them the elimination of hyperinflation, the demonetisation of currency held abroad, or the capitalisation of the public sector. For example, in 1922 the Greek government imposed a monetary reform in order to control inflation, in which the notes were literally cut in half. One part was returned to their owners (worth fifty percent of their previous value), while the other part became a compulsory loan to the government. In 1926 the government imposed another reform on similar lines, but the currency-holders were allowed to retain three-quarters of the value of their monetary holdings (bank deposits were left untouched in both episodes).

The restructuring of the government securities is different. The process basically involves the restriction of the liquidity of the securities held by the public, normally in order to stabilise inflation or public sector finances. IMF (2003, p.140) reviews twenty-six episodes of debt reduction in the emerging market economies. This study concludes that, in most cases, the restructuring contributed to the reduction of the debt-GDP ratio and the reduction of the public sector deficit (because of the reduction of the debt servicing costs). It is instructive to briefly review two such experiences, taking place in Argentina (1989-90) and Brazil (1990).

The Argentine economy was under severe stress in 1989 (Carvalho 1999). Inflation had reached two hundred percent in the month of July, M1 had declined to 2.2 percent of GDP, and there was very little demand for government securities. The public sector finances had essentially

collapsed. In late December the government imposed the 'Bonex plan'. The plan included the conversion of all fixed-term bank deposits, government securities and bank reserves into bonos externos (Bonex), ten-year dollar-linked government bonds, with returns determined by the *libor*. The currency in circulation, current accounts and savings accounts were left untouched, and the asset-holders were allowed to withdraw only 1m australes (approximately US\$600) from their frozen funds. There was a severe reduction in liquidity in the economy (M3 declined by sixty percent in real terms) in the wake of the plan. This contraction of liquidity had severe economic implications, and the government gradually released additional funds during the next few months in order to stimulate the level of activity. The Bonex plan was unsuccessful in eliminating hyperinflation, but it helped to improve the public sector finances significantly; for example, interest payments on the domestic public debt (DPD) declined by 4.8 percent of GDP. In order to tackle inflation, the government introduced in the following months a succession of stabilisation measures, culminating in the well known 'convertibility plan'.

The Brazilian economy was also under severe stress in early 1990, with inflation peaking at eighty percent in one month. The incoming Collor de Mello administration imposed a stabilisation programme in March known as the 'Collor plan' (Carvalho 2000 and Faro 1990). The lynchpin of the plan was the temporary freeze of most financial assets held in the banking system, including current and savings accounts, financial investments and government security holdings. For example, all balances in current and savings accounts in excess of fifty thousand cruzados novos (approximately US\$1,000) were frozen, and so were eighty percent of the balances on term deposits, seventy-five percent of DPD holdings, and so on. The frozen funds were held by the central bank, and they were returned in eighteen monthly instalments, at

six percent interest plus inflation indexation. During the first two months of the plan, some of the frozen funds could also be transferred between accounts in order to pay outstanding bills.

The Collor plan had three main objectives: reducing demand and inflation, limiting DPD growth (which was rising exponentially at that time, mainly through the sale of highly liquid securities that were used as reserve value), and controlling the speed of remonetisation (in the wake of a sudden elimination of hyperinflation the demand for money tends to rise rapidly, and temporary mismatches between money supply and demand can disrupt the real sector). Although the Collor plan stopped the drift towards hyperinflation, it did not eliminate high inflation. Its limited success was partly due to the need to expand liquidity more rapidly than the government had anticipated, in order to stem the contraction of the economy (real GDP declined by 4.5 percent in 1990). In spite of this, the plan reduced the DPD held by the public from fifteen to five percent of GDP in 1990 and, further, to two percent in 1992. This was achieved largely because the six percent real return on the frozen securities was less than the interest rates paid previously, and because the plan was supplemented by a temporary tax on financial transactions, which was used to repurchase the outstanding securities.

Table 6A.1

Variable	1 Jan (t)
GDP	100
GDP growth	0
Inflation($\dot{\theta}$)	0
Nominal interest rate (i,%)	10
Real interest rate (r,%)	10
Domestic public debt (B)	9.1

Table 6A.2

Variable	31 Dec (t)
GDP	100
GDP growth	0
Inflation($\dot{\theta}$)	0
Nominal interest rate (i,%)	10
Real interest rate (r,%)	10
Domestic public debt (B)	10.01
Primary deficit (P)	0
Nominal deficit (N)	0.91

Table 6A.3

Variable	1 Jan t + 1	31 Dec t + 1
GDP	100	200
GDP growth	0	0
Inflation($\dot{\theta}$,%)	0	100
Nominal interest rate (i,%)	10	120
Real interest rate (r,%)	10	10
Domestic public debt (B)	9.1	20.02
Primary deficit (P)		0
Nominal deficit (N)		10.92
Operational deficit (O)		0.91

151 The foreign public debt does not need to be considered separately because it is included the other terms in this identity.

152 This example draws on Bresser-Pereira (1983).