

2. Key Issues for Developing Countries

The experience of developing countries in managing domestic debt shows that there are some pervasive problems which left untackled, or tackled badly, have extremely undesirable consequences.

Domestic debt management – part of overall economic strategy

1. Domestic debt management is often treated in isolation from the rest of macro-economic management. Debt management influences and is influenced by fiscal and monetary policies and the balance of payments. An expansionary fiscal policy, for instance, could raise interest rates and inflation, and thus the cost of public debt. Therefore, at the policy level, debt management should be integrated into an overall strategy which is appropriate for the country.

Revenue reform – part of domestic borrowing strategy

2. Governments face rising fiscal deficits and increasingly rely on domestic borrowing to finance them. Attempts to reduce the deficit run into limitations in the tax base and the demands of spending on development. Tax reform, therefore, has to be implemented at the same time as fiscal adjustment. In the meantime, reliance on bank borrowing boosts money supply and inflation. Attempts to control this produces high real interest rates. Eventually, the public loses confidence in the government's ability to honour its debt obligations.

Need for appropriate borrowing strategy

3. Debt managers often fail to formulate an appropriate borrowing strategy. Borrowing is carried out in a haphazard fashion, without prior deliberation over the alternative methods of funding and a careful consideration of the consequences. As a result, debt managers run into a number of problems which typically include an excessive monetisation of debt, a maturity profile which is very short-term, and a bunching of payments which cause cash flow difficulties.

Need to develop debt securities market

4. Markets for domestic debt instruments are undeveloped. In many countries there is a paucity of debt instruments, the markets for selling them are primitive, mechanisms for trading them inefficient and unreliable, their prices regulated by the government, and the institutions that invest in debt weak. These weaknesses enormously hamper not only debt management, but also monetary management. Debt managers should therefore have an interest in developing markets for debt securities.

**Better co-ordination
between debt and
monetary management**

5. There is a lack of co-ordination between debt management and monetary management. There should be close co-ordination between the two because they are intimately linked. One reason lies in the fact that monetary financing of the fiscal deficit is an alternative to debt financing. Another arises from the use by monetary policy of indirect methods of control such as sales and purchases of Treasury bills, which are debt instruments, for its open market operations. Yet in many countries debt managers operate in disharmony with monetary managers.

Better debt monitoring

6. There is a lack of data and a proper mechanism for monitoring debt. This is a serious problem in many countries. Its importance is obvious. Without accurate information available in an appropriate form, effective debt management is not possible.

These problems manifest themselves in a number of ways. Often the stock of debt becomes unsustainable or so large that servicing it entails huge costs to the economy, such as the crowding-out of the private sector, high inflation and a lack of resources for social spending. How to deal with these problems is discussed in detail below.

Six areas for action

1. Integrate debt management into a macro-economic strategy

The debt management policies the government of a country should adopt depend on the situation of the country: on its fiscal and monetary position; its existing stock of debt, both external and domestic; the stage of development of its debt securities markets. What is appropriate for one country will not necessarily be appropriate for another. So the first thing policy makers need to do is to take a good look at their debt in the context of an overall macro-economic framework.

**A framework for
alternative means of
financing fiscal deficit**

The framework that is usually adopted is that of the national accounting system where excess savings over investments must finance the excess of public spending (including public investment) over its revenue. Excess spending by the whole economy is possible only when it is financed by the rest of the world. On this basis policy makers can establish an overall projection of fiscal deficits. From this they can derive a borrowing programme, after taking into account estimate of the supply of financial resources in the system, the private sector's demand for credit and the amount of resources available for the public sector that is consistent with the achievement of macro-economic targets. An appropriate assessment of alternative means of financing the deficit must be analysed in detail.

A borrowing strategy which emerges from such a process involves close co-ordination at the policy level between the main institutions involved in economic policy, particularly the ministry of finance and the central bank. They need not only to define objectives of fiscal, monetary and debt management but to prioritise them according to the situation of the country. They should aim to end up with a plan all of whose aspects are consistent with each other.

2. Assess debt sustainability and need for fiscal adjustment

One of the key assessments policy makers have to make concerns the sustainability of their country's existing stock of debt. There are several theoretical models dealing with this subject. One approach analyses the public sector's balance sheet, listing its assets and liabilities, calculating the present values of future government revenues and expenditures and, on the basis of this, estimating the government's net worth. If it is negative, the debt is unsustainable, and fiscal adjustment necessary. This approach is presented in Appendix I.

Another approach raises the issue: would a given fiscal policy result in a stock of domestic debt that is stable? Or would it grow to a level that is insupportable? The key concepts it uses are (a) the stock of debt in proportion to the size of the economy (debt/GDP); (b) the primary deficit, that is fiscal deficit minus that part of expenditure that goes to paying interest on the existing stock of debt; (c) that part of the deficit that can be safely financed by money creation; (d) the inflation-adjusted or real rate of interest on government debt; and (e) the rate of growth of the inflation-adjusted or 'real' GDP.

The theory says that the sustainability of debt is a function of the primary deficit, the real rate of interest, and the growth rate of the economy. Generally speaking, a low growth rate, a high rate of interest and a large primary deficit tend to increase the debt-to-GDP ratio.

Specifically, it says that the debt-to-GDP ratio will be on a rising trend if the real rate of interest exceeds the growth rate unless this is offset by a primary surplus. If the debt-to-GDP ratio is on a rising trend from an initial position that is sustainable, fiscal policy must be adjusted or there will be a crisis. This approach is used to assess the sustainability of fictitious country X's domestic debt in the box on page 18, and a mathematical exposition of the theory is presented in Appendix II.

What this approach makes clear is that debt is never too high in itself, but depends critically on other factors, particularly the growth rate. A debt-to-GDP ratio of, say, 80 per cent, may be unsustainable in a country that is growing relatively slowly, but manageable in a

Debt sustainability linked to budget deficit, interest rates and growth rates

Box 1: Measuring sustainability: simulation for Country X

Background

In the 1970s, fiscal deficits and public debt did not create much of a problem in Country X, as real interest rates were low and the government could finance the deficit by money creation without much inflation. However, in the 1980s the level of domestic debt in Country X grew rapidly. By 1991–92 interest payments were claiming about half of the central government revenues and inflation was running at 14 per cent. At the same time, Country X's economy got into a balance of payment crisis and it had to embark on an IMF structural adjustment programme. How large a fiscal correction was needed?

Basic formula

The basic formula in the method mentioned above is:

$$db = z - s + b(r - y)$$

Where

b = ratio of debt to GDP

z = ratio of the primary deficit to GDP

s = that part of the deficit that can safely be financed by money creation

r = the real rate of interest on government debt

y = the rate of growth of real GDP

d = symbolises change over a period which in this case is one year.

The formula says the change in the debt ratio is equal to the primary deficit to GDP minus the safe level of seignorage and inflation tax plus the debt ratio multiplied by the real rate of interest on debt minus the real rate of growth.

Applying the formula to Country X's circumstances

In 1991–92, domestic debt of the non-financial public sector was 54 per cent of GDP, so $b = 0.54$

- The primary deficit was 4.4 per cent of GDP, so $z = 0.044$.
- s is an estimate of seignorage and acceptable inflation; a credible estimate is 0.012.
- A credible growth rate of GDP is 5 per cent a year, hence $y = 0.05$.
- Finally, the real rate of interest on debt could be put at 4 per cent, so $r = 0.04$.

Thus:

$$db = 0.044 - 0.012 + 0.54(0.04 - 0.05)$$

$$\text{or } db = 0.0266$$

This means that on these assumptions, the domestic debt ratio will be growing at over 2.5 per cent a year. The terminal value of b can be calculated by setting $db = 0$, and solving for b:

$$b = (z - s) / (y - r)$$

$$\text{or } b = (0.044 - 0.012) / (0.05 - 0.04) = 3.2$$

This means that the domestic debt ratio will end up at 3.2 times GDP. This is clearly unsustainable. Interest charges alone at a 10 per cent nominal interest rate would eat up 32 per cent of GDP!

Adjustment required to achieve sustainability

One can also derive from this method the degree of adjustment needed to make debt sustainable. By making $db = 0$, and $b = 0.54$, we can solve for X to calculate the required reduction in the primary deficit:

$$z = s - b(r - y), \text{ which works out at } 0.017.$$

This means that the primary deficit should be reduced to 1.7 of GDP from 4.4 per cent to keep domestic debt stable.

country that is growing rapidly. That said, it is worth bearing in mind that the future growth rate of an economy is not necessarily independent of the amount of debt its government accumulates. If a country with a relatively large debt but a rapidly growing economy continues to borrow a large proportion of the country's savings, it may affect the growth rate by crowding out private sector investment, and thus make a debt that might have been sustainable, unsustainable.

Prudential rules of thumb and credit risk

Value judgements in ascertaining debt sustainability

The example in the box opposite illustrates an important point: an assessment of debt sustainability cannot carry the certainty of mathematics. One needs to project future tax and expenditure patterns, future inflation and interest rates, and the future economic growth. This necessarily involves a great deal of judgement, and judgement can be fallible.

Nor should one conclude from the proposition that debt that is sustainable is optimal. The best level of debt depends on a number of specific characteristics of the country, such as its people's propensity to save, their tolerance of inflation, how efficiently they employ its capital, its taxable capacity, and, most importantly, the ability of its debt and capital markets to absorb government borrowing. Many developing countries save little; the tolerance of inflation varies considerably; and hardly any have capital markets capable of accommodating large government borrowing.

Rules of thumb to define debt sustainability

Partly because of the inevitable uncertainty in this area, it is prudent to adopt rules of thumb rather than rely on precise calculations. They may seem somewhat arbitrary, but can be of more practical value. This is the approach embodied in the Maastricht Treaty of the European Union. Countries that have signed up to it are required, before they can adopt the common currency, the Euro, to meet certain criteria. Two of them concern debt and deficits: (a) their fiscal deficits should not exceed 3 per cent of GDP, and (b) the gross debt of the government should not exceed 60 per cent of GDP.

Developing countries too should consider adopting similar rules, not just for prudential reasons, but because they are becoming widely used in calculating the credit risk of debt instruments of countries. Here are some rules worth considering:

- Aim to have fiscal deficits below 3 per cent of GDP.
- Public debt service should not exceed 15 per cent of government revenue.

- Public domestic debt should not consistently be higher than 200 per cent of domestically generated government revenue.

Crises, emergency measures and fiscal adjustment

The case for fiscal prudence, therefore, is strong. However, many countries, for a variety of reasons, have found themselves with a level of debt that is unsustainable and have had to endure a crisis. The route to it is well-marked. The problem begins with persistently large deficits. To bridge the gap between spending and revenue, the government resorts to a combination of borrowing abroad (if it can), borrowing from the central bank (printing money), and borrowing from domestic institutions. Since in many developing countries these are government controlled, they borrow from them at below market rates. But as large fiscal deficits persist, this source is not sufficient to plug the gap. So they borrow from others at higher cost, or (more typically) rely more on the central bank. This money creation fuels inflation, which eventually increases the cost of credit. The government may then impose higher statutory ratios on its banks, forcing them to hold a higher and higher amount of its debt. This reduces their profitability and their ability to lend to productive enterprises. The banking system is thus weakened and becomes prone to crisis. If the government can resort to external borrowing, it probably will, but this will eventually result in balance of payments crises and an inability to service its external debt. Finally, there will be a loss of confidence, a flight of capital, and a general crisis in the economy.

Dangers of financing persistent fiscal deficits

Once a crisis is upon a country, it will have to embark on a long term programme to reform its tax and spending policies to reduce its fiscal deficits and bring its debt to a sustainable level. But in the short term it could consider measures to reduce the immediate pressure:

How to deal with a debt overhang

- A combination of external debt reduction and rescheduling to ease budgetary pressure arising out of a persistently high debt service.
- Obtaining quick disbursing grants and concessional borrowing to support the budget.
- Selling public sector assets to the private sector.
- Restructuring debt by issuing securities with longer maturities and change in the terms of domestic debt service.

But such measures are no substitute for reform of government finances. The nature of these reforms falls outside the scope of this compendium, but they are spelt out in detail in several reports of the World Bank and the IMF. Some points are worth noting:

- The sequence of the reforms is important because some of the measures – less reliance on captive borrowing at controlled interest rates, for example – will actually increase the fiscal deficit in the short run.
- The quality of fiscal adjustment is important. The deficit should be cut by increasing public savings rather than by reducing public investment. In particular, the deficit should be reduced without cutting public spending on infrastructure, and on primary education and health, as these are vital for both growth and the alleviation of poverty.

3. Evolve an appropriate borrowing strategy

When policy makers have assessed the sustainability of the government's fiscal stance and decided on the degree of fiscal adjustment required, debt managers need to formulate a credible borrowing strategy. As a first step, they need good forecasts of the borrowing requirement of the government. Then they need to make an assessment of the likely take-up of government securities by the public, the banks and other financial institutions. They should be careful to limit borrowing from the central bank – financing the deficit through money creation. In many countries legal limits and institutional barriers to excessive monetisation have proved useful.

Avoid excessive reliance on short-term debt

In drawing up a schedule of borrowing, debt managers should be careful to avoid an excessive reliance on short-term debt. The schedule should chime in with the redemption dates of maturing loans, the cash needs of the banks and financial institutions and the overall state of liquidity of the economy. It is obvious that this requires close co-ordination with the operation of monetary policy – an issue discussed in more detail below.

Once a schedule of borrowing has been decided, debt managers should be conscious of the benefits of transparency and predictability. Capricious changes to the schedule or unpredictable behaviour by debt managers increases the risk of holding government securities, which in turn ultimately raises their cost of debt to the government.

4. Develop markets for government securities

Properly functioning markets for government securities are necessary both for effective debt management and monetary policy management. For this reason it is important that the authorities – particularly the central bank – take the initiative in developing them. Initially, they will concentrate on developing primary markets for debt securities, and at this stage they are likely to use the same instruments for debt management and monetary control.

Goal is to separate debt management and monetary policy operations

Later the authorities should seek to develop secondary markets in government securities. When this has developed, the operations of debt management and monetary policy can be more easily separated.

At its most undeveloped or primitive stage, there is virtually no market of government debt. The government's deficit is almost entirely financed by the central bank, except that part of it which the government can borrow abroad. There is therefore hardly any domestic debt held outside the central bank. If the government incurs a deficit, it is monetised. This is an inherently inflationary situation.

Some of the debt then tends to be sold by the central banks to commercial banks. They are obliged to hold a proportion of their assets in the form of government securities. The interest they earn on it is set by fiat of the central bank – it bears little relation to the market and is usually low. These banks are in effect captive lenders to the government. They tend to hold the securities to maturity and there is little trading. Other financial institutions, usually state-owned pension funds or insurance companies, are sometimes also obliged to hold government debt. As one would expect, at this stage, money markets are weak and the interbank markets thin.

Creating a market for government securities

The first step in moving from this situation involves the creation of a market for short-term government securities, usually Treasury bills, the idea being that a market for longer term securities can be created later. The creation of a Treasury bill market can be a powerful spur to the development of money markets by encouraging banks to manage their liquidity more actively. At the outset, the authorities should decide whether the primary market for Treasury bills should be used strictly to finance the fiscal deficit or also be a tool for monetary management.

Before the development of secondary markets in Treasury bills, some countries have used primary issues of Treasury bills at auctions to regulate bank reserves. This is a step towards fully-fledged indirect monetary management through open-market operations (OMOs) and is called open-market-type operations. As explained in the box on page 24, indirect monetary management involves targeting bank reserves to control their lending capacity, and short-term interest rates to determine the broad structure of interest rates.

It is possible to do this before secondary trading in Treasury bills has developed, but it is difficult. These auctions need to be held frequently and at market-clearing interest rates, so that the volume of these sales can determine bank reserves and the interest rates set the general interest rates structure in the economy. In practice, it is not likely that these auctions will be sufficiently flexible to enable

the authorities to control sudden feasts and famines of liquidity. Therefore, there is a need for refinance/rediscount or repurchase agreements (Repos) which the authorities can use to increase or decrease liquidity for short periods. In addition, the central bank, purely for monetary management purposes, may employ other tools to supplement Treasury bills, in particular:

- **Central bank securities:** These are bills issued at the discretion of the central bank. They pose the danger of overlapping with Treasury bills. One way out is to issue central bank bills at shorter maturities – say, up to three months – and Treasury bills for longer. Although this might minimise competition between the two instruments, such a segmentation might retard the development of the secondary markets.
- **Central bank credit auctions:** These can be another way in which the central bank can regulate bank reserves. In undeveloped markets commercial banks tend to be heavily dependent on the central bank, and by varying the amount of credit it auctions and letting the interest rate be determined freely, the central bank can use these auctions as a powerful monetary tool. In such circumstances, Treasury bills could be used largely as a means of funding rather than for monetary policy.
- **Government deposits:** Some countries transfer government deposit balances between the central bank and commercial banks as another means of influencing the banks' reserves and conditions in the money markets.

**Treasury bill auctions –
need for competitive
bidding and transparent
mechanisms**

It is important to ensure that the Treasury bill auctions as far as possible conform to the criteria of free markets, in particular, that prices are determined by competitive bidding, that the auction mechanism is transparent and that there is a regular and well-publicised calendar to which the central bank adheres. There are two other questions which should be addressed:

- **Should participation in the auctions be restricted?** In many countries only certain types of institutions are allowed to bid, and in some there are further restrictions arising from the requirement that some bidders can enter the auction only through the agency of banks. There may be good practical reasons for this, but it is important to ensure that the risk of collusion between bidders is minimised. In some countries participation is restricted to a group of authorised institutions called primary dealers. But this arrangement is justified only in so far that this exclusive privilege is matched by obligations on primary dealers to act as secondary market makers. This is discussed later.

- **Should the central bank itself participate in auctions?** In general, this is undesirable, but if it is necessary because the market cannot absorb the issues, the central bank should be careful to participate in a way that does not put itself into competition with other bidders.

Box 2: The operation of monetary policy

Monetary policy involves the use by the central bank of certain instruments to determine short-term interest rates and bank reserves in order to control inflation and maintain a stable and adequate level of liquidity in the economy. Until recently, central banks of developing countries used direct instruments: credit controls, interest rate ceilings, statutory liquidity ratios (whereby banks have to place a certain proportion of their deposits in government assets), and directed credit programmes.

In the past few years it has become generally accepted that the economy works better if central banks exercise monetary control through financial markets. This involves indirect methods of control: open market operations (OMOs), reserve requirements and discount operations. Open market operations are the sale or purchase of financial instruments such as Treasury bills. The central bank can also use repurchase agreements (Repos) – purchase securities under contract to resell them at a specified price on a given date – or reverse repurchase agreements. These are used to increase or decrease bank reserves. Rediscounting facilities are a way for the central bank to lend money through rediscounting government securities. Reserve requirements oblige banks to hold a specified part of their deposits in the central bank, usually at nil interest.

Many Commonwealth developing countries are in transition in monetary management from direct controls to indirect controls. The move to indirect controls necessitates the development of markets for government securities. The task for many is complicated by the legacy of having to cope with a monetary overhang – excess liquidity that has resulted from financing large and persistent fiscal deficits by borrowing from the central bank, in other words, by printing money. To reduce the inflationary potential of this, the central bank needs to mop it up. But this is far from a costless process. If it does so through issuing Treasury securities, it will increase the debt of the government and hence the cost of servicing it. If it mops up the excess by issuing its own securities, its own profits would be reduced, and the cost of this will eventually be borne by the government, by way of fewer profits to this consolidated fund.

This tension between putting monetary policy on to a sound footing and keeping down the cost of debt runs right through many of the measures involved in moving to a market-based system of monetary control. These include:

- stopping ad hoc government borrowing from the central bank and reducing the share of central bank financing of government deficits in favour of non-inflationary sources;
- developing an active money market;
- developing a Treasury bill market where the central bank can conduct its OMOs;
- removing direct controls on interest rates and credit allocation;
- promoting a competitive and strong financial sector;
- setting up markets for secondary trading in government securities.

Deregulating interest rates and strengthening banks

Well-functioning financial markets require a sound and independent banking sector in which managers are actively engaged in managing their assets to increase the strength and profitability of their portfolios. Most Commonwealth developing countries which have embarked on the process of reform begin with a legacy of a crippled banking sector in which:

- banks are owned or controlled by the state – their management has a civil service not a commercial culture;
- banks are forced to lend a large part of their loanable resources to the government and a significant part to sectors deemed socially worthy or to other government-owned enterprises that are failing;
- lending rates are set by the government.

Unsurprisingly, many banks are entering a market-oriented environment crippled by a portfolio of non-performing loans.

Banking reform as part of overall financial sector reform

It is vital to reform the banking sector as part of an overall strategy to reform the financial sector. This involves moves to strengthen the banks' portfolio and capital base and to reduce and ultimately eliminate government direction of credit allocation and interest rates. But these moves must be underpinned by a prudential framework for bank regulation and supervision. Preparation of new banking legislation, conferring greater supervisory powers to central banks and ensuring that banks comply with the regulations, is essential for success.

Developing secondary markets

Secondary markets necessary for debt management and monetary control

As remarked earlier, secondary markets for government securities are necessary to achieve the aims of debt management and for indirect monetary control. In particular, secondary markets:

- help fix the terms of new issues;
- reduce the risk for investors by providing them with a mechanism for selling the securities for which they are bidding;
- are an essential prop for the creation of market interest rate structures, thus allowing genuine open market operations for monetary policy;
- encourage the development of new products such as options and futures based on government securities; and
- provide benchmark interest rates for corporate bonds.

Experience has shown that well-functioning secondary markets – that is, those in which a broad spectrum of investors participate and

in which they can trade easily when they choose – for government securities do not develop without the help of the authorities, particularly the central bank. Therefore they should take a number of initiatives:

Need for reliable payments, clearing and settlement system

- They need to create a framework of regulation and supervision. To accomplish this, some have created a securities commission, a central body which looks after all aspects in this area. Governments also need to remove from existing laws any burdens on issuing and trading government securities. New legislation may be needed to introduce scripless securities if paperless transactions are thought desirable.

Market makers can facilitate trading in securities

- The business of buying and selling stock can be hugely facilitated by market makers, principals who provide two-way prices whenever the market is open and are prepared to deal at them. This can be a risky business, and market makers may need certain privileges that compensate them for the risk. The central bank can help by authorising a group of market makers as primary dealers, giving them specified privileges in return for specified obligations. The privileges could include an exclusive access to the auctions of government securities or some other advantages, for example, no prepayment requirements, telephone or electronic bidding, options on additional purchases of stock at non-competitive prices. In some countries market makers have access to privileged information, in others they receive favourable tax treatment, or rights to borrow securities or take short positions. In return for these privileges, primary dealers are obliged to make continuous two-way prices in government securities.

Essential role of primary dealers in secondary markets

Primary dealers can play a vital role in the development of secondary markets. By holding inventories of securities, they help keep prices stable. Because they stand in the centre of the market, they can incorporate all the available information into the prices they quote, thus making markets efficient. By taking positions, they offer immediacy of execution to market participants. Finally, they help educate investors in the characteristics of securities and the advantages of holding or trading them.

Primary dealers can also provide valuable assistance to the central bank by keeping it informed of the latest market developments and the state of demand, and assisting it in designing new instruments. In considering the privileges to offer in return for the services primary dealers render, central banks should consider both the present stage of market development and the future. Some privileges may assist growth in the present but inhibit it in the future. Thus some privileges should be granted on a temporary basis. Central banks also need to be able to trust dealers and to supervise them.

Box 3: The role of the Central Bank in the development of debt securities markets in Sri Lanka

The limited maturity structure of market instruments, the absence of market making systems and regulatory constraints deterred the development of an active secondary market in Treasury bills in Sri Lanka and this, in turn, hindered the development of the market for long-term securities. The Central Bank initiated a number of improvements which transformed the situation. In 1992, it appointed a group of approved primary dealers (APDs) consisting of 14 bank and 4 non-bank primary dealers. The number has now been increased to 21, comprising 15 banks and 6 non-banks, which were expected to develop secondary markets for Treasury bills and government securities. As part of the on-going financial sector reform, the Central Bank also strengthened its involvement by amending a series of legislation and streamlining activities to support the development of the debt securities market. The changes it initiated include:

- (i) Amendments to the Monetary Law Act; the Credit Information Bureau Act; the National Savings Bank Act; the National Development Bank Act; the Development Finance Corporation of Ceylon Act; the State Mortgage and Investment Bank Act; the Registered Stocks and Securities Ordinance (RSSO); the Local Treasury Bills Ordinance; and the introduction of a new section to the RSSO to deal with Scripless Securities. These amendments enabled the Central Bank to auction and trade in Treasury bills and government securities and to further strengthen the financial sector.
- (ii) Varying the maturity structure of debt instruments and removal of administrative and regulatory constraints relating to the issue of debt securities.
- (iii) Issue of guidelines to Approved Primary Dealers setting out their privileges and responsibilities in market making and streamlining of their operations.
- (iv) Closure of the Central Bank's secondary Treasury bills window, which provided short-term funds exclusively to commercial banks and selected non-bank institutions, and the opening of the Repo Window to all market dealers.
- (v) Publication of the maturity structure of Treasury bills on a weekly basis and the issue of long-dated Treasury bonds with different maturities.
- (vi) Issue of investment guidelines to the largest long-term fund holding agency, the Employees Provident Fund, enabling it to diversify portfolio investments by permitting it to invest 5–10% of its inflow of funds in securities other than government securities.
- (vii) Selection of a core group of potential fund managers from contractual savings organisations (EPF, ETF and Insurance Companies) and providing practical training to them on fund management.
- (viii) Introduction of the Reverse Repo Facility in November 1995 to stabilise call money market interest rates and to intensify open market operations.
- (ix) Provision of extensive testing facilities and training for computerised trading programmes coupled with visits to other central banks which have sophisticated trading facilities.
- (x) Withdrawal, with effect from June 1994, of the withholding tax placed on interest on domestic debt instruments to encourage market players to develop secondary trading in government debt.
- (xi) Permission for commercial banks to obtain foreign loans up to 5% of their capital and reserves.
- (xii) Amendments to the National Savings Bank Act providing a capital base and making its operations more market oriented.
- (xiii) Permission for non-Board of Investment exporters to obtain foreign currency loans through domestic units and offshore units of commercial banks.
- (xiv) Commencement of Treasury Bond Auctions.

Source: Central Bank of Sri Lanka

- A reliable payments, clearing and settlements system is an essential feature of a good secondary market. Central banks should encourage banks or other institutions to develop these industries in their countries or provide the services themselves. There are four elements involved when a security is traded: (a) the trade has to be cleared, (b) ownership has to be transferred, usually by a depository, (c) the money has to be transferred, and (d) the security has to be kept safely by a custodian. What is important is that the transfer of the security by the depository and opposite movement of funds should be done simultaneously in a way that ensures 'delivery versus payment'.

The central bank may also need to take the initiative in training. When secondary markets in government securities get going, it will often be the case that there is a shortage of the skills necessary to run such a market. So the central bank may need to establish training programmes in securities trading for potential market participants, and for its own personnel and those from the Treasury, in monetary and debt management.

When secondary market trading in short-term government securities becomes established, the central bank should encourage such trading in instruments with longer maturities. This will involve the participation of pension and insurance funds who typically need such long-term securities because their liabilities are long term. In many countries such institutions suffer from the same institutional atrophy as do the banks, and reforms aimed at making them more efficient will be necessary.

5. Improve co-ordination between debt and monetary management

Effective debt management requires close co-ordination between the ministry of finance and the central bank, particularly in the early stages of market development, when debt management is closely tied to monetary management. In most developing countries co-ordination is weak. There is often no clear allocation of responsibilities, no sharing of vital information, procedures for implementing policies are undefined and meetings of key committees are irregular. Strengthening institutional co-ordination should be given high priority.

There should be clear and transparent procedures for taking decisions and implementing them. As a general rule, the ministry of finance is responsible for the size of the fiscal deficit and the broad parameters of the government's borrowing programme, and the public debt office for raising funds, managing the issue structure, retiring or renewing existing debt that falls due. Because of the close links with monetary policy, the public debt office is often located in

Clear allocation of responsibilities between ministries of finance and central banks

Box 4: Tanzania's key steps relating to government domestic debt operations

The Economic Recovery Programme (ERP), begun in 1986, aims to improve macro-economic management, address the underlying structural weaknesses and encourage more active private sector participation. The programme involves policies to increase output, reduce inflation and improve the balance of payments. Integral to this process are the liberalisation of domestic markets and improving debt management, both domestic and external. Presented below are events that have relevance to monetary policy, fiscal policy and debt management:

1993

- Jan Issuance of Bank of Tanzania (BOT) certificates of deposit as part of a contractionary monetary policy.
- July The BOT removed the maximum lending rate of 31% for commercial banks as a step liberalisation of interest rates.
- Aug The BOT commenced Treasury Bill Auctions with 91-day Bills as a tool for financing short-term government debt, an instrument of liquidity management and as a reference point for the determining of market interest rates.
- Sep 35-day Treasury Bill introduced for Treasury Bill auctions.

1994

- Jan The Capital and Securities Act enacted.
- Jan The Discount Rate, the rate at which BOT accommodates commercial banks on short-term basis, was increased from 27% to 50% per annum. Thereafter the rate was to be adjusted bi-weekly, on the basis of marginal yields in the auction of the 91-day Treasury Bill.
- Feb The 182-day Treasury Bill was introduced in the Treasury Bill Market.
- Aug The minimum interest rate on 12-month fixed deposits was abolished. Before, the rate was positive in real terms.
- Sep Vault cash was included in determining the Minimum Reserve Requirements in addition to all deposit liabilities, excluding foreign currency deposits.
- Oct The calculation of the Discount Rate was determined on the basis of the weighted average of T-Bill Auction yields for all maturities.
- Dec The 35-day Treasury Bills were discontinued from the auctions.

1995

- Mar The Capital Market and Securities Exchange was inaugurated by the Finance Minister.
- July The Bank of Tanzania Act (1995) became effective, empowering the BOT with a single policy objective of price stability.
- Aug All banks and financial institutions were required to publish quarterly financial statements and audited financial statements in newspapers that circulate widely in Tanzania. Liquid assets ratio was abolished.

1996

- Jan The government adopted cash budget system to control inflationary spending and reduce the budget deficit.
- Apr The entitlement of commercial banks to hold up to 50% of their Statutory Minimum Reserve in Treasury Bills was abolished.
- July The Tanzania Revenue Authority (TRA) was established in a bid to improve tax administration. Credit ceiling on commercial bank lending was abolished.

1997

- Apr New Banking and Financial Institutions Regulations were gazetted.

Source: Bank of Tanzania

the central bank, but sometimes certain aspects of even short-term debt management remain in the ministry of finance. In countries where markets are advanced and monetary management can be completely separated from debt management, the public debt office can be made independent of both the central bank and the ministry of finance. But this is not possible in developing countries. For them, the merits or otherwise of an independent debt office are a theoretical matter, albeit one which may become important in the future.

Need for debt and monetary policy co-ordination

Given the close relationship between public debt management and monetary policy, there is a strong argument for establishing a joint monetary and debt management co-ordination committee consisting of senior officials from central bank and the ministry of finance. This would set targets for the sale of government securities in the light of the government's borrowing requirement and targets for inflation, and see that appropriate policies are implemented. It could also guide the development of the markets for government securities and co-ordinate policy links between external and domestic debt management. A stylised representation of the institutional arrangement for monetary and debt management is shown in the diagram opposite.

Need for central bank autonomy

Close co-ordination between the central bank and the ministry of finance is essential, but it is equally important that central banks do not become arms of the government. As a long-term goal they should become independent of the ministry, but even in the short term they should acquire a fair degree of autonomy. As a step in this direction, the government could put a limit on the automatic financing of the government's cash needs from the central bank.

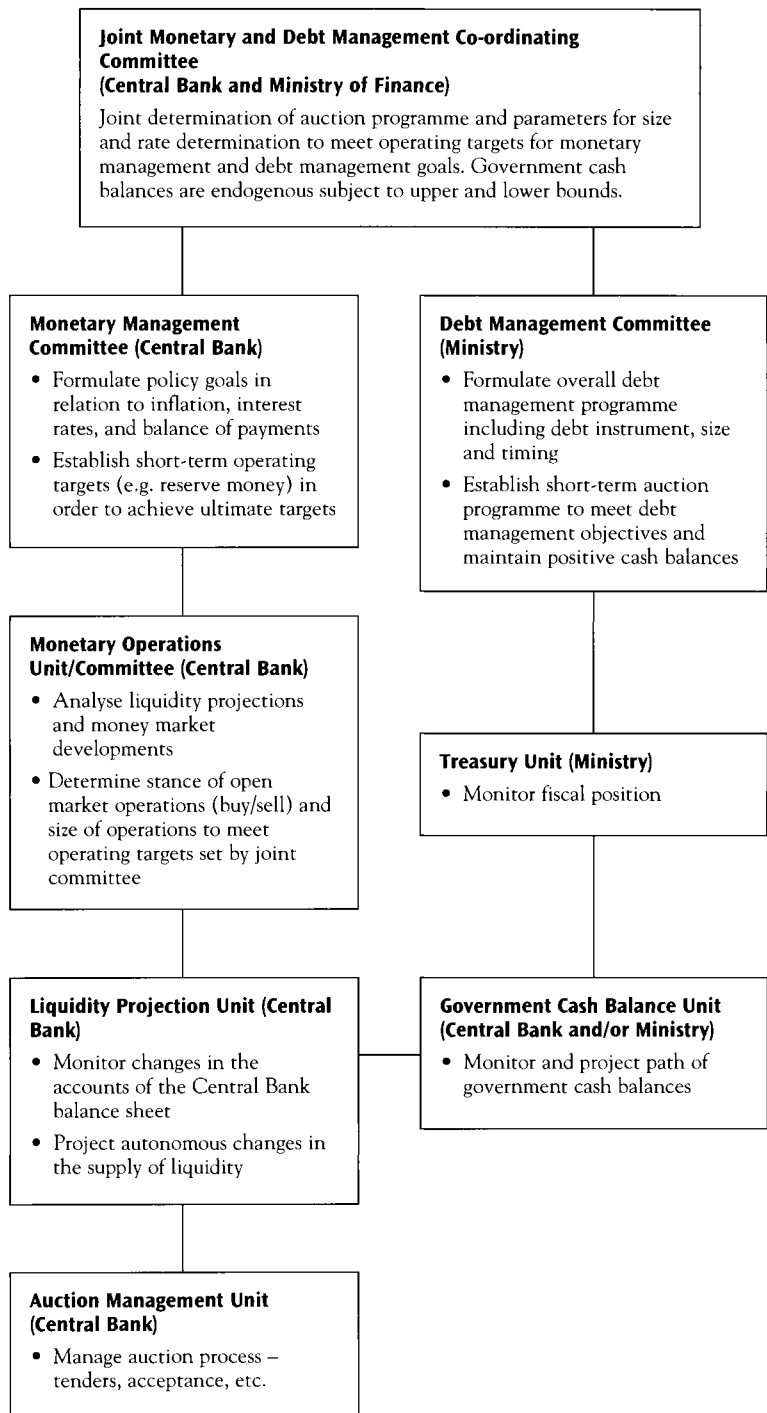
6. Improve debt data management

Effective debt management requires comprehensive and up-to-date databases. Public debt needs to be categorised into borrowers (central government, state governments, public sector enterprises and other decentralised agencies); by debt instruments (marketable and non-marketable); by maturities (short and long-term) and interest structure (fixed and floating). The information system should have the capacity to generate borrowing trends, redemption schedules, interest payments, and to make projections based on planned transactions.

Computerisation of debt data essential for efficient debt operations and analysis

Since the database is large, computers can be useful for debt accounting and statistical reporting. They are also helpful in preparing reports and supporting managerial functions. A computer-based debt management information system can be used for storing information related to debt management, retrieving and organising information reports, carrying out debt analyses and relating debt

Structure of institutional arrangements for monetary and debt management



Source: IMF

information to other data systems. The system should be able to produce standard reports as well as querying and ad hoc reporting. The system should be able to provide analytical support tools to facilitate policy and strategy formulation.

Commonwealth Secretariat programme of assistance in debt and development resource management

The Commonwealth Secretariat has an integrated programme of assistance in various areas of debt management for its 54 member countries. The programme which was formally launched in 1985, is handled by the Secretariat's Economic and Legal Advisory Services Division. The advisory services cover the following areas:

- Strengthening legal and institutional arrangements for contracting and managing debt.
- Provision of the in-house developed computer software – Commonwealth Secretariat Debt Recording and Management System (CS-DRMS).
- Assisting in the data compilation and recording as well as reviewing the quality of debt databases.
- Capacity-building through training courses and workshops on various issues of debt management as well as on the use of CS-DRMS.
- Providing direct advice to member countries in areas such as debt restructuring, debt strategy and evaluating various loan offers, including negotiating with creditors.
- Providing debt experts on long-term assignment in member countries.

CS-DRMS is more than a computer software – it is a model of best practice in debt management. CS-DRMS enables countries to capture both external and domestic borrowing, and can also handle grants and government lending. It has the potential to analyse borrowing and lending operations in an integrated manner. It assists ministers of finance and central banks in forecasting and budgeting debt service payments, monitoring disbursements, evaluating new borrowing and planning reserves. The system has electronic links with the World Bank's debtor reporting system as well as with the Debt Sustainability Model-Plus (DSM+) of the World Bank. There is a facility to export information into spreadsheets such as Excel for further manipulation.

The software is regularly updated to take account of changes in creditor practices, market instruments, user requirements and computer technology. CS-DRMS runs both in English and French,

and has facilities to accommodate other languages. The CS-DRMS software is currently undergoing a three-year modernisation programme, with many new features, including expanded facilities for debt analysis, new modules focusing on government on-lending, the increasingly important area of domestic debt, and improved access for a larger number of users with differing needs. Phase One of the modernisation was completed in 1997 with the release of Version 7.1, which features a new, more user-friendly display, including Windows interface. The new version, CS-DRMS 2000+ is scheduled for release in late 2000.

The *CS-DRMS Newsletter*, produced twice a year, describes the activities of the Commonwealth Secretariat in debt management.

Some 2,000 staff from member countries have been trained in various areas of debt management and CS-DRMS. Training has covered topics such as the interpretation of loan agreements, debt data capture and analysis, debt strategies and techniques, debt sustainability analysis and effective domestic debt management.

Box 5: Domestic debt module in CS-DRMS

Over the years, the Economic and Legal Advisory Services Division (ELASD) of the Commonwealth Secretariat has made considerable efforts to improve debt management capacity in member countries. The programme of assistance comprises policy advice for debt management and technical assistance through the provision of the in-house developed Commonwealth Secretariat Debt Recording and Management System (CS-DRMS) software, which includes both external and domestic debt modules. The software has become a model of good practices in debt management and is in use in over 70 sites in 49 countries, including 7 outside the Commonwealth.

The domestic debt module in the system allows users/countries to record various instruments of domestic borrowing: Standard Loans, Treasury Bills, Treasury Bonds, Government Stocks and Savings and Deposit Certificates. The system is able to generate forecasts of debt service, monitor arrears and assist in guiding debt policies including borrowing strategies. The software provides useful domestic debt reports to guide economic managers in decision making. Over the years, however, there have been major developments in domestic debt markets encompassing: a new range of debt instruments, including those specifically to target different types of investors – retailers and wholesale, instruments to diversify the maturity structure of domestic debt and facilities to promote secondary trading of debt instruments. As markets become sophisticated, new systems need to be introduced that can assist in formulating dynamic benchmark debt portfolios, transforming them through numerous debt management techniques. Towards this end, the CS-DRMS is being modernised. CS-DRMS 2000+ which is scheduled for release in late 2000, will greatly enhance functionality in the area of domestic debt management.