

**The Debt Office
And
The Effective Debt Management
Functions:
An Institutional and Operational
Framework**

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List of Abbreviations and Acronyms

ALM:	Asset Liability Management
BD:	Budget Department
BIS:	Bank for International Settlements
CAC:	Collective Action Clauses
CB:	Central Bank
CBDMS:	Computer Based Debt Management System
CEMLA:	Latin American Monetary Studies Centre (Centro de Estudios Monetarios Latinoamericanos)
Comsec:	Commonwealth Secretariat
CS-DRMS:	Comsec Debt Reporting and Management System
DMFAS:	UNCTAD Debt Management and Financial Analysis System
DOD:	Debt Outstanding and Disbursed: Nominal Stock of Debt
DRS:	World Bank Debtor Reporting System
EDM:	Effective Debt Management
EBDM:	Executive Board on Debt Management
EU:	European Union
DMO:	Debt Management Office
FY:	Fiscal year
IADB:	Inter-American Development Bank
GCO:	General Comptroller's Office
GDDS:	IMF General Data Dissemination System
IFMS:	Integrated Financial Management System
IMF:	International Monetary Fund
IFI:	International Financial Institutions
IT:	Information Technologies
MEFMI:	Macroeconomic & Financial Management Institute of Eastern and Southern Africa
MOF:	Ministry of Finance
NT:	National Treasury
OECD:	Organisation for Economic Co-operation and Development
SAO:	DMO's Support Administrative Office
SDDS:	IMF Special Data Dissemination Standard
SDMO:	Separate DMO
UNCTAD:	United Nations Conference on Trade and Development

Abstract

This paper differentiates from other papers published on the subject at least in two aspects. The first one is the political relevance that is given to the decision making process as far as responsibility for fixing a global macroeconomic public debt management strategy is concerned. The second is that the approach is a functional analysis, i.e. there is no need to have a specific structure for the debt office in order to analyse who and where the functions are carried out. The paper gives a clear and well-defined list of tasks for each one of the functions, and this leads to clear and structured functional responsibilities for the implementation of the back, middle and front office working organisation structure.

The first difference pointed out above is probably the main one, i.e. the political relevance given to the decision making process, as far as responsibility for fixing the global macroeconomic debt management strategy is concerned. This is the reason why this paper starts with the description of the Executive Debt Management Functions, i.e. the functions that have to be clearly established and implemented at the most senior level of the government and that are not the responsibility of the Debt Management Office (DMO). These functions have to deal with three major aspects: first the establishment of the debt strategy that supports the global macroeconomic strategy and here this macroeconomic level should not be confused with the financial-microeconomic debt management strategy that the DMO applies in order to minimise cost and risk; second, implementing the legal and regulatory framework that would lead to the achievement of the macroeconomic policy, and last, but not least, the clear policy as far as staff and computerised systems are concerned in order to provide the DMO with personnel that have the required skills; as well as the firm allocation of means and resources for implementing a performing Computer Based Debt Management System (CBDMS) is essential. This last point is important, because the public debt managers, skills wise, are very much alike to private banks staffs, thus they need incentives to stay in place, on one hand, and on the other hand, a CBDMS is a complicated system and an expensive investment, not only to implement it but also for maintenance. A modern DMO cannot function without a flexible and performing CBDMS.

The second important difference, pointed out in the above paragraph, is that the approach is a functional analysis. This is extremely important, because the DMO in developing countries has to be organised and shaped in function of the financial markets that the country is tapping¹, e.g. the Brazilian DMO or the Mexican DMO have completely different organisational needs compared to those of the DMO in Burkina Faso, Nepal or Haiti, for instance. However, the functional approach allows applying the methodology to any country, whatever its development level and its financial markets sophistication².

The paper aims to be a useful analytical and managerial support tool for the debt practitioners and for the academia. It provides an appropriate approach for developing countries, and offers a detailed and systematic blueprint in how to establishing an efficient DMO.

¹ Borresen and Cosío-Pascal (2002).

² I have applied this framework of analysis successfully to countries as different as Bolivia, Cambodia, Cameroon, Congo, Côte d'Ivoire, Dominican Republic, El Salvador, Nepal, Nicaragua, Panama, Senegal and Zambia among others. The methodology allows finding out what functions are performed or not performed and how to implement them.

Foreword

I started my work on public debt in the late 1970s with the Secretaría de Hacienda y Crédito Público (Ministry of Finance) in Mexico. In particular I was the Mexican Delegate to the *Ad Hoc* Group of Experts on the Developing Countries Debt Problem; a negotiation forum that took place in Geneva, under the auspices of UNCTAD, and that was a follow up of the negotiations that started in the early 1970s at the North-South Conference in Paris. Later on, I came to work for UNCTAD in 1979, where I founded one of the more successful technical assistance programmes on external debt, which is still in business and continues to provide technical assistance to around 70 countries after I retired from it in 2001. My participation as representative of the Secretary-General of UNCTAD to the Paris Club in the early 1980s was an interesting experience, in which the first difficulty I found was the debtor countries' lack of information on their external debt: how much the country owed? To what creditors? In what currencies? When the payments were falling due and in what currencies? Who were the national debtors besides the Central Government? And so on. The idea of creating a Computer Based Debt Management System (CBDMS) for debtor countries came out very naturally from this experience.

The above reasons lead to the centralised development of a CBDMS at UNCTAD by the DMFAS Programme. CBDMS that, after many updates and enhancements, continues to provide services to many user countries. However it came out very quickly that the lack of CBDMS was not the only reason why debtor countries had a lousy debt management. There were the institutional framework and the legal environment that were inappropriate for an Effective Debt Management (EDM). The DMFAS Programme addressed this as early as 1988 and 1993. However, things have evolved since and revisiting the subject was necessary.

A preliminary version of this paper was written for the UNCTAD-DMFAS Programme in the first half of 2004. Unfortunately, the premature death of Mr. Phillippe Straatman, Chief of the DMFAS Programme, delayed *sine die* the publication of the paper. So that I decided to publish it elsewhere because I think it is important and deserves dissemination among debt managers. Phillippe Straatman and I wrote the first version of Effective Debt Management in 1989 and its revision in 1993, and I wish to dedicate this work to the memory of the friend and colleague that he was.

This paper is composed of five sections. The first one is an introduction to the concept of Effective Debt Management Functions. The second and the third are the description of the functions: the second for the Executive Functions, which are not necessarily a Debt Management Office (DMO) responsibility, and the third to the Operational Functions, which are the direct DMO responsibilities. The fourth section is devoted to the responsibilities that a DMO can be accountable for, that may vary from country to country. The last section addresses major issues on debt management, stressing the pragmatic analysis that the functional approach provides. There are two Annexes with open-ended lists of tasks for each one of the Effective Debt Management Functions.

The Inter-American Development Bank, through the Latin-American and Caribbean Debt Group Initiative, kindly allowed me to publish the paper. I thank the IADB, in particular Mr. Pietro Masci, for this opportunity given to me. Notwithstanding, the usual disclaimer applies: the views expressed in this paper are solely the author's responsibility.

1. Introduction

Chart 1

EFFECTIVE DEBT MANAGEMENT FUNCTIONS AND OUTPUTS

<u>Executive Debt Management</u>	➤	<u>Direction and Organisation</u>
Policy Function	➤	Strategy
Regulatory Function	➤	Structure
Resourcing Function	➤	Staffing and Systems
<u>Operational Debt Management</u>	➤	<u>Debt dynamics and Practice</u>
Controlling/ Coordinating/ Monitoring	➤	Control, coordination and monitor
<u>BACK OFFICE</u>		
Recording Function	➤	Debt data and statistics
Operating/ Monitoring Functions	➤	Debt operations settlement and monitoring
<u>MIDDLE OFFICE</u>		
Analytical Function	➤	Analysis and financial strategy
Risk Analysis Function	➤	Minimise cost and risk
<u>FRONT OFFICE</u>		
Issuing/Negotiating Function	➤	Securities, loans and restructuring agreements
Market Making Function	➤	Government securities trading

The DMFAS Programme first introduced the debt management functions within the Effective Debt Management (EDM) context in 1989 and reviewed in 1993³. Since then, many developments arrived and it was necessary to review the EDM Functions in the light of the historical evolution of debt management. However, the distinction between Executive Debt Management and Operational Debt Management functions remains valid in present times. The new developments are mostly at the level of the operational debt management functions, for which the front, middle and back office approach is taken⁴. This is shown in Chart 1.

It is important to note that the Executive Debt Management Functions are not the direct responsibility of the Debt Management Office (DMO). They are performed at a higher hierarchical level: Minister of Finances, Governor of the Central Bank, Head of the Treasury,

³ See DMFAS/UNCTAD (1989) and (1993). See Chapter 11, Box 11.1, of IMF, BIS, Comsec, Eurostat, OECD, the Paris Club Secretariat, UNCTAD, and the World Bank, (2003). Mehran (1985) first introduced the concept of debt management functions, but without a general framework for Effective Debt Management.

⁴ The front, middle and back office approach does not preclude any location for the DMO, but refers to functions to be performed. This functional classification takes more or less relevance in function the financial markets that a country is tapping: the DMO organisation is function of the financial markets which it has access to. See Borresen and Cosío-Pascal (2002).

Head of the Budget and indeed the Head of the DMO. The group of high rank officials that takes part to the Executive Debt Management Functions could be called “Executive Board on Debt Management” (EBDM)⁵, and the secretariat activity to this group should be performed by the DMO itself. The decisions taken at the EBDM level are to be implemented by the DMO; this means that DMO has initiative and margin of manoeuvre within the guidelines and responsibilities provided by EBDM. Now, the DMO provides feedback to the decision-making process of these functions through its representation to the EBDM, the official who is Head of DMO. The Operational Debt Management Functions are the direct responsibility of DMO, within the guidelines provided by the EBDM.

2. Description of the Executive Debt Management Functions

2.1. Policy Function

This function will define the objectives of government debt management and the corresponding debt strategy that a country will apply⁶. The objectives and the debt strategy are not designed in a vacuum; they are embodied into the overall macroeconomic strategy of a country, depending on the country’s economic development strategy, and will provide elements for the decision on what cost and risk, maturity concentration, currency composition, interest rate structure etc.; and also will design a strategy for rising foreign or domestic resources depending on the budget deficit and on the allocation of funds. It might also address decisions on other issues, like the sectors that have access to external financing and in what terms, as well as fixing borrowing ceilings by debtor and/or creditor category, and on what would be the general policy for guarantees coverage by the government, the size of the fiscal deficit, etc⁷. These decisions will depend on the overall macroeconomic strategy, the debt sustainability and portfolio analysis provided by the DMO to the EBDM, as well as on the macroeconomic projections of the domestic and external sectors, presented to the EBDM by other bodies of the government. The strategy for the development and good functioning of a domestic financial market for government securities is part of this function too.

2.2. Regulatory Function

This function involves the establishment of a well-defined legal environment in order to achieve the debt strategy providing for a well co-ordinated recording, analytical, controlling and operating levels, supported by efficient information flows. This includes the legal framework with a complete and consistent set of laws reflected on a comprehensive Public Financial Administration Act, or at least on a Public Debt Act, as well as an Institutional Framework with rules and regulations for each of the institutions involved in the public debt management operations, and last but not least, an Organisational Framework with the functions manuals, procedures manuals and job descriptions for all the institutions involved.

⁵ The EBDM is a subset of the Council of Ministers, in some cases the Council itself, including other senior officials like the Governor of the Central Bank, the Director of Budget, the Director of Treasury, the Head of DMO, etc. It is important to note that the Executive Management Functions are not bound to “Debt Management”, but in fact they are applicable to many aspects of the senior management on strategy and decision making process. For instance, the same scheme may be applied to fiscal policy, and indeed the EBDM constituency might overlap with the fiscal policy executive body decision-making.

⁶ See Currie; Dethier and Togo (2003) p. 32 and Wheeler (2004) pp. 14-15 for objectives of government debt management objectives for selected countries. See Currie; Dethier and Togo (2003) p. 34 and Wheeler (2004) pp. 114-115 for strategic debt management benchmarks of selected countries.

⁷ See the list of tasks for each of the functions in Annex 1 and 2. The lists are open-ended, and may have additional tasks in function of specific country situations.

The regulatory function establishes the legal framework that defines, first, the establishment, functioning and composition of the EBDM; second, the rules and regulations coordinating all the actors involved with public debt and DMO's responsibilities as the only authorised body to contract or issue debt on behalf of the government⁸; and third, the function manuals, the procedures manuals and job descriptions for each one of the participating bodies and officers.

This function also fixes, through the annual Budget Law⁹ for each fiscal year, the sectors that will be able to tap foreign resources and in what terms, the ceilings of indebtedness for foreign and domestic debt, in net flows for the fiscal year¹⁰. Eventually, also limits could be fixed on the variation of certain indebtedness indicators¹¹, this in function of the objectives and strategy chosen.

The regulatory function should be dynamic, i.e. it implies revision of the legal, institutional and organisational frameworks in function of variations in the overall macroeconomic strategy, as well as on the global political and social changes in time. The dynamic revision of the legal framework would allow adapting it to the new situations and issues that the government and the country would be facing and addressing.

2.3. Resourcing Function

A policy decision has to be taken at a very high level, at the EBDM, for hiring and retaining skilful personnel¹². This may involve salary policies, but also career perspectives and facilities in kind. Important policies for retaining personnel are training programmes and recycling of knowledge sessions for the DMO officials.

Regarding systems, a modern DMO cannot work without a performing Computer Based Debt Management System (CBDMS), which brings flexibility and rapidity to the debt data processing and thereby allow debt managers to review the information in ways that are not practicable

⁸ In some countries, the legal framework might give this prerogative to the Parliament or the Minister of Finance, however this responsibility has to be delegated to the DMO through the rules and regulations in order to keep control on public indebtedness.

⁹ A Fiscal Responsibility Act also complements the budget law in some countries, and plays a very important roll for EDM. Normally, this legislation relates to the establishment of clear rules for fiscal discipline and accountability.

¹⁰ It is recommended to approve indebtedness in net flow basis, because the net flow determines exactly the variation of the stock of debt at the end of the period.

¹¹ However, when debt indicators involve economic variables that are not under control of DMO, these indicators might be misleading as far as the DMO capacity for managing debt is concerned and their interpretation should be done in consequence. The classical example should be the debt service to exports ratio, the debt stock to GDP ratio or the fiscal deficit to the debt stock. The exports behaviour, prices and quantities, as well as the GDP rate of growth are not affected by the DMO performance, if the exports sector is not doing well or if GDP is not growing as expected, it has to be kept in mind that exports and GDP growth are not under the DMO's control. In the same line, neither is the fiscal deficit, so that the DMO should not be given automatically as responsible for negative outcomes of these types of indicators. Besides, fixing objectives like a given ratio of government debt to GDP imposes a constraint on the volatility of the debtor country domestic currency value of the total debt, as limiting the public deficit as a percentage of GDP imposes constraints on the average duration of the debt portfolio, on the ratio of fixed- and floating-rate debt and on the amount of annual refunding. See Coessens, Hiliana and de Montpellier, *Louis Debt Portfolio Management in the Kingdom of Belgium* in Nars *ed.* (1998)

¹² The rotation of staff is a real problem for the good functioning of the DMO. This problem was mentioned as early as 1989 by Kalderen *et al.* (1989) and continues to represent a major problem for DMO's, not only in developing countries but in developed countries as well.

otherwise. Also here, a policy decision has to be taken at a very high level, at the EBDM, for supporting firmly the implementation and maintenance of a performing CBDMS at the DMO¹³.

3 Description of the Operational Debt Management Functions

These functions, as far as public sector is concerned, are particular responsibility of the DMO. These functions are performed by the DMO within a centralised system, within a decentralised system different bodies may perform them, but the information is always gathered and centralised by the DMO. The functions illustrated in Chart 1 represent a kind of ideal situation, which may vary from country to country depending on the specificity of each one of them, in particular at the operational functions level. The functions are distributed among the three levels of back, middle, and front office, which is the modern organisation of a financial institution.

- **The front office** is responsible for funding transactions, relations with investors, underwriters and banks¹⁴, through loans and security issues including external loans negotiations and domestic government debt auctions, and in this process seeks the most efficient funding cost, taking into account the guidelines established by EBDM. The front office implements the strategy and manages the portfolio against benchmark. In some countries the cash management is the DMO's responsibility, and the front office has an active role in this with the middle office feedback¹⁵.
- **The middle office** is responsible for analysis and advice on the debt management strategy, which will enable the senior management to choose the suitable strategy, and also monitors the front office performance designing limits on deviations from benchmarks, as well as implementation of risk controls. The middle office also performs sustainability analysis on regular basis, and within this context, undertakes consistency analysis of the debt variables with the real economy variables. The middle office fixes the primes that have to be paid for guarantees as well as the margins to be charged for on-lending operations, and monitors other implicit contingent liabilities. Monitoring contingent liabilities may also be a middle office responsibility. In some countries the cash management is the DMO's responsibility, and the middle office takes care of this in coordination with the front office¹⁶.
- **The back office** is responsible for debt registration, and handles transactions confirmations, settlements, payments, as well as for maintaining records of all debt contracts, disbursements, payments, debt restructuring, on-lending, issued guarantees, settlement of transactions, etc. The back office has to implement security for payments instructions and settlements. The back office is also responsible for budgetary

¹³ CBDMS are long, difficult and expensive to develop and to maintain. This is a major policy issue as far as the good functioning of the DMO is concerned. Spreadsheets are not an alternative to a real CBDMS. Spreadsheets do not have the flexibility that a CBDMS has. In addition to this, IT security measures might be very weak when using spreadsheets. See Section 5.5 on these matters.

¹⁴ In some cases, this group, or a subset of this group, can be referred to as "market makers" as long as local market is concerned. The "market makers" are market leaders as traders in the domestic primary and secondary markets.

¹⁵ This is often the case when the DMO is within the Treasury, like in Ireland, France, New Zealand and the U.K.

¹⁶ Cash management is a critical component of liquidity management within the Treasury. Accurate forecasting timing and amount of cash flows are essential for this function, and the DMO middle office has a comparative advantage for undertaking this. See Horcher (2006) on Treasury and Cash Management and Williams (2004) on Cash Management and the DMO. See Section 5.7.

projections for debt service, as well as for disbursements projections, both projections to be taken into account for the budget projections. The back office is in charge of the implementation and maintenance of the CBDMS.

3.1. Controlling/Coordinating/Monitoring Function

These functions are performed by the senior staff of the DMO, and might be seen as those of the EBDM's Secretariat, i.e. to control that the law, the rules and regulations, and the guidelines issued by the EBDM are applied and followed, as well as on giving a feedback on the micro-administrative situation to the senior macroeconomic decision-makers. This set of functions are basically the follow up and enforcement of the decisions taken at the EBDM level, and are essential for the efficient implementation of the decided debt management strategy. These functions are performed at the more senior level of DMO and are vertically implemented, i.e., there is control, coordination and monitoring at all levels within DMO. This set of functions will also supply substantive feedback to the EBDM, through the Head of the DMO and its senior staffs, for the evaluation and revision of the debt strategy by the EBDM. These functions will also coordinate all the different functions of the DMO, within it and with other bodies of the government as well as with official and private institutions.

The DMO Head's office should coordinate with the front, middle and back offices and ensure that all the actors involved enforce the debt strategies properly. Separation of functions in this context helps promote the independence of those designing strategies and monitoring them (middle office), with those registering debt and performing operations (back office) and the ones executing negotiations and security issues (front office). Proper interaction and coordination among these offices, which is a senior management and middle office responsibility, is of paramount importance for the successful implementation of debt management policies.

3.2. The Back Office

The back office performs the basic functions, which will permit that all the others operational functions could be carried out. The objective of the back office is to create and maintain a high quality and updated database of the debt portfolio that will allow timely registration, disbursements, servicing and to produce accurate statistical information. Therefore, the functions comprise the administration of the full cycle of the life of a contract, from the signature to its full repayment.

3.2.1. Recording Function

The recording function is essential and is at the base of all the other functions. It is composed of **Collecting, Storing, Processing, Validating and Disseminating** debt data. The recording function is not necessarily an "accounting" function, however it provides the data for public accounting¹⁷. Also, the aggregation and manipulation of data will supply relevant statistical information with a very wide range of utilisation. The Government has to apply a solid personnel retention policy for the institution performing the recording function. This is important, because performing the recording function is the base for all other functions, i.e. the institution performing this function has to put at the disposal of all other users the debt data for them to perform their own functions. The recording function also implies reconciliation of debt data periodically with creditors, as well as data validation and internal and external auditing of debt data. The debt data processing and its dissemination is the end of the cycle for this function.

¹⁷ The accounting of public debt is not a direct responsibility of DMO but of the General Comptroller's Office (GCO). DMO provides the necessary elements to GCO for the integration of public debt into the consolidated financial accounting statements of the government.

3.2.2. Operating Function

The operating function is the basic dynamics of debt: to trigger the disbursements in due time, to pay without falling in arrears, to verify that the creditors are claiming the correct amounts, to notify disbursements to the Budget Department and to the Treasury through the Integrated Financial Management System (IFMS), and to order debt service through the IFMS channels, to verify that the currencies needed for the debt service will be available for payments at the Central Bank or with agent banks abroad. While debt servicing may not be this function's direct responsibility¹⁸, the operating function is expected that information on timely payments of debt will be performed efficiently. Part of the operating function is also the production of debt service and disbursements projections for the Budget Department to include them into the incoming fiscal year (FY) budget.

3.3. The Middle Office

The middle office is responsible for analysis and advice on the debt management strategy, as well as for implementing risk controls. The middle office monitors the front office's compliance to the EDBM proposed strategies, and with established risks limits, such as permissible degree of deviation from specific benchmarks.

3.3.1. Analytical Function

The Analytical Function will perform debt servicing cash-flow projections, on existing loans and new financing, activity that is intimately linked to cash management; portfolio analysis as well as debt sustainability analysis, to be performed on regular basis. Other kinds of analysis are performed by this function depending on the debtor country needs and strategy. This function will provide a substantial feedback to the EDBM through the Head of the DMO in order to evaluate the global macroeconomic debt strategy and, eventually, amend it. This function would also allow DMO to take and implement debt management strategies, within the mandate given by EDBM, and to propose changes to EDBM's. The middle office performs an analysis of the total stock of domestic and external public debt and the debt flows in specific regular periods. This analysis should provide debt information corresponding to the indebtedness with each of the creditors and debtors, in particular, evaluating the debt composition on currencies and interest rates. These statistics should also be presented in terms of economic indicators that will help to evaluate the level of indebtedness for example in terms of the ratios of the total stock of debt in relation to the GDP, or the debt service ratio and other debt indicators. This analysis together with statistical tables would be presented in reports with a periodic publication.

This function also coordinates with the macroeconomic policy departments of the Ministry of Finance and the Central Bank, in order that the financial risk modelling of the debt portfolio feeds into, and is responsive to, the macroeconomic global development strategy reflected in the macroeconomic forecasting models.

As pointed out before, Treasury cash-flow projections might be responsibility of the middle office too.

3.3.2. Risk Analysis Function

This function is a key activity of the DMO, which once it receives the instructions from the EDBM on the amounts to borrow; it is the DMO's responsibility to borrow performing a prudential cost-risk policy. Here communication with other bodies of the government, i.e. the

¹⁸ The payment of government budget expenditures, including debt service, is normally responsibility of the Treasury, the DMO requesting in due time the Treasury to order the payment.

Central Bank, is necessary in order to adopt the recommended Asset and Liability Management (ALM) strategy¹⁹. This function will permit, *inter alia*, to examine the portfolio behaviour against a given prudential trade off benchmark between cost and risk, e.g., determining the proper mix between external-domestic debt; the maturity profile; the desired currency, interest rate composition, etc.

The risk analysis function would also include a Guarantees, On-lending and Direct Lending Risk Analysis Task Force, which will also be in charge of evaluating the risk on providing guarantees, on-lending and of direct lending to domestic enterprises and of providing the basis for charging a guarantee prime or a spread over the domestic base rate to the beneficiary in order to cover the evaluation costs and the risk incurred²⁰.

Providing guarantees, on-lending and direct lending would imply, in some cases, setting up a contingency reserve fund that will have the role of a financial buffer in order to absorb future unforeseen payments, and thus avoiding sudden increase in the budget expenses or increasing the Central Government's borrowing. Depositing the guarantee primes and/or the margin that have been paid by the beneficiaries would be the resources to create the contingent reserve; this reserve should be deposited in a bank account that will generate interest earnings and will be managed by the middle office.

Contingent liabilities might also be part of the risk analysis function²¹. Indeed, there are a large number of contingent liabilities that risk to end up as public indebtedness²². One example of these kinds of liabilities had been Pension Funds. Some countries are including in this analysis events like natural disasters or suits to the government²³. The role of DMO in this field would be to foresee the ways and means to minimise the risk that contingent liabilities represent to fiscal stability.

3.4. The Front Office

The front office applies the EBDM's and middle office guidelines when negotiating new loans or issuing new bonds, and its main objective is to raise funds at the minimum cost, subject to an acceptable level of risk. One responsibility of the front office would be the development of the domestic financial market, very often in cooperation with the Central Bank.

3.4.1. Issuing/Negotiating Function

The Negotiating Function is an essential responsibility of the front office, and bears the responsibility of following closely all the guidelines that the EBDM has laid down for this purpose. This function would allow evaluating funding prospects, together with their impact on the debt portfolio in terms of compliance with the approved strategy. These evaluations would be made on the technical, financial and legal terms and conditionalities of the funding proposals. The front office has closest knowledge of financial markets that feeds to the middle office, also

¹⁹ The "natural hedging" for the DMO is to make the external debt structure match with the structure of the Central Bank's foreign reserves. For a presentation of ALM see Cassard and Folkerts-Landau (1997) and World Bank and the IMF (2001) and (2002).

²⁰ It has to be noted that if the Government undertakes providing guarantees, on-lending and domestic lending, the later with its own resources. The risk analysis, the calculation of guarantee primes and the spread to be applied to lending and on-lending should be undertaken by the middle office, and the monitoring of such loans by the back office.

²¹ See Currie (2002) and Currie and Velandia (2002).

²² See Polackova (1998) and Polackova-Brix and Schick (2002).

²³ See Holguín-Torres (2005).

feeds risk-management plans to banks and underwrites in order to help designing a funding plan within benchmark parameters.

In some countries there are, *de facto*, two front offices: one for external financing and one for domestic financing. In those cases, the middle office would have the responsibility for coordinating the activities of these two offices. However it is advisable to have the management for all types of financing, external and domestic, within a single front office, so that the decision for raising either external or domestic finance would be made by a single team, so that consistency for the decision making process would be assured.

This function should enable to negotiate with all external creditors and to issue or borrow the desired amount and type of borrowing or hedging instruments in the international financial markets. This function plays an important role of liaising with the country's creditors, donors and development partners.

For domestic debt issuance, the funding is executed according to the government's objectives, and interacts with the domestic financial market through auctions of government securities. One of the objectives would be to finance the fiscal gap, and within this objective, the dynamics of budget execution would link this function to cash management.

3.4.2. Market Making Function

This would include, *inter alia*, implementing a securities market regulation, to creating a market infrastructure, strengthening the demand for government securities and to developing the supply of government securities²⁴. This function intends to give greater transparency and predictability to the domestic market, on one hand, and on the other hand, this function would also provide financial instruments that may become benchmarks for the private sector domestic issuers and investors.

Developing countries have historically favoured external indebtedness in order to finance economic development. This fact was due to two important factors: first, to the low share of domestic savings compared to developed countries, and second, to the relative weaknesses of domestic financial markets, often linked to major macroeconomic imbalances that implied that domestic debt would be an expensive operation compared to external financing. However, governments of developing countries have made an effort to control macroeconomic balances and to develop domestic financial markets, this has been possible because domestic saving have increased in these countries, and because the development of domestic financial markets helps domestic enterprises to find financing domestically.

Besides, domestic indebtedness is appealing for governments because it presents a series of advantages compared to the external debt: the exchange rate risk is an element eliminated from the market risk; the complexity of taking loans under foreign laws and regulations is also eliminated; the amortisation algorithm is fixed by the debtor and not by the creditor; the debt issued by the Central Government provides financial instruments in the local market that are used by the Central Bank for the implementation of monetary policy; and last but not least, the yield curve of public domestic issues may be used as benchmark for domestic private issuers.

²⁴ See World Bank and the IMF (2001), pp. 31-33, and World Bank and the IMF (2001a).

The Market Making Function should be oriented to establish a domestic institutional market framework, create a market infrastructure, implement policies in order to increase the public securities demand and create an efficient primary market.

4. Responsibilities that the DMO can be Accountable for

The natural responsibilities of the DMO are the operational debt management functions. However, the nature of the responsibilities that the DMO will be in charge of may vary from country to country. This section will explore the responsibilities that the DMO may be accountable for. The responsibilities of the DMO are defined in the Public Debt Law or the Public Finance Administration Act, and they have as common denominator which is their approval by the Congress.

The DMO is the only authorised body to contract or issue debt on behalf of the central government; it is though the institution that negotiates the borrowing on behalf of the government. The DMO minimises the risk involved in borrowing from different financial sources, and carries out debt analysis to alert the higher authorities on risks involving a possibly future situation of unsustainable debt, so that the necessary strategic steps could be taken in due time. These responsibilities are related to the following points²⁵:

- The DMO seeks to establish the strategy, structure, staffing and systems framework, as well as the guidelines, established by the senior authorities of the country.
- The DMO seeks to minimise costs and risks associated with public borrowing, lending, on-lendig and publicly issued guarantees.
- The DMO takes responsibility for ordering the debt service to the financial agent of the central government through the Treasury and/or the Budget Department, for the loans borrowed and the bonds issued directly by the central government, short-, medium- and long-term. The DMO provides information to the CGO for public accounting purposes and to produce consolidated financial reports of the public sector.
- Cash flow management is a basic function of the government, which DMO may take the responsibility.
- The DMO might provide guarantees coverage (for public sector and eventually for private sector enterprises) through a risk analysis evaluation that may imply charging risk guarantee primes to the beneficiaries for the guarantee coverage. The guarantee coverage is authorised by the Congress on annual basis through the budget law. The DMO monitors all guaranteed debt.
- The DMO monitors the loans borrowed and bonds issued by entities and enterprises belonging to the central government.
- The DMO monitors the loans borrowed and bonds issued by the local governments as well as the loans and bonds borrowed or issued by entities and enterprises belonging to the local governments.

²⁵ An interesting approach to these responsibilities can be found in Deredza, Cornilious (2004).

- If a guarantee materialises, the DMO pays the liability on behalf of the original debtor and manages the triggered guarantee as a subrogated loan, ordering the payment as a direct loan to Treasury and/or the Budget, and uses legal means in order to recuperate the guaranteed payments from the original debtor.
- The DMO on-lends proceeds of foreign loans and/or monitors on-lending by other financial institutions of the public sector. If the debtor, beneficiary of an on-lent loan, fails in honouring its debt, the DMO continues to pay the foreign mother loan, or monitors that the on-lending financial institution continues to honour it, and uses legal means in order to recuperate the payments from the domestic debtor. On-lent loans are not a liability for DMO or for the on-lending institution, they are on the other side of the balance sheet: they are assets, and are part of Government revenue. This fact implies that their treatment, from the risk management point of view, is different from the regular loans owed to foreign creditors²⁶.
- Fiscal contingent liabilities, other than guaranteed loans, are not the direct responsibility of the DMO. The exceptions are those contingent liabilities that have explicitly been authorised by the Congress to be assumed as public debt, i.e. the Debt Office is authorised to issue specific financial instruments in order to pay, or to raise resources to pay, a specific contingent liability. However, these contingent liabilities, other than guaranteed loans, might be monitored by the DMO if required by the high authorities²⁷.
- Another relevant aspect for the DMO is to ensure that the provisions of international agreements subscribed with creditors (Paris Club, London Club, other bilateral creditors, multilateral, etc.) are complied with by the DMO itself and other governmental entities. One example of these provisions is the comparability of treatment clause included in the Paris Club agreements.
- Domestic market development has been an important part of DMO's responsibilities recently. The increase of domestic saving in emerging economies and some other developing countries have lead to the alternative of financing the fiscal deficit domestically. This has some advantages, as to reduce the exchange risk for the debtor government.
- For some countries, grants are an important component of foreign capital inflows and in consequence the DMO might be involved in monitoring these flows. However, the monitoring of grants has specific requirements that do not necessarily overlap with the DMO requirements for monitoring repayable resources, and in these cases an *ad hoc* solution should be taken by DMO to tackle this specific monitoring activities.

²⁶ If some of these on-lent loans were non-performing, this would lead to build up contingent reserves, which are assets too.

²⁷ The General Government Debt definition (SNA 1993) would include Social Security, Retirement Schemes and Unemployment Insurance when those activities are provided by the public sector. However, these liabilities cannot be under the "management" of the DMO, the DMO might monitor them, but not manage them. In some countries, Social Security, Retirement Funds and Unemployment Insurance are considered as public debt, the EU countries that have subscribed to the Maastricht Treaty, in particular, apply this approach. See footnotes 30 and 31. The new Template proposed by the IMF for reporting public debt also includes social security and pension fund liabilities.

- The DMO might eventually monitor private non-guaranteed debt; this is more and more common as the private non-guaranteed debt is, potentially, a source of debt distress for many countries facing foreign exchange constraints.

5. Major Issues in Debt Management

This section will point out the major issues in debt management, in particular those issues that might seriously harm the implementation of the EDM Functions if not efficiently managed, controlled and monitored.

5.1. Debt Strategy within a Macroeconomic Framework

This is the output of the Executive Strategy Function described in section 2.1. Public Debt Management should, on the one hand, enable the government to meet the objectives of macroeconomic development, of which EDM is a tool for the national development policy, while on the other hand, considering that debt management is part of the government's management in public finance, it should play a role in the collection and management of budgetary resources needed for public investment and for regular servicing of existing debt. Thus, Public Debt Management is a mechanism, which helps the government to achieve a number of basic objectives defined in function of the national macroeconomic strategies.

The EBDM decides the objectives and strategies of public debt in function of macroeconomic priorities and the DMO implements them and provides regular feedbacks on their implementation and their results to EBDM. The EBDM fixes the global goals and strategies at a macroeconomic level: what sectors may tap foreign resources and in what financial terms, the policy to provide guarantees coverage, as well as what would be the share of the budget deficit financed through the issuance of public debt, etc. This last point is linked to the allowed deficit and its sources of financing by the Congress in the annual budget law. The DMO would implement these objectives and strategies at a microeconomic and micro-administrative level. For instance, once EBDM has proposed, and the congress approved, the share of the deficit to be financed through issuance of debt, it is the responsibility of DMO to find how to finance it and with what instruments, minimising the cost and risk of the operation.

The DMO addresses the various elements of a debt strategy formulation and its planning cycle. It has to produce projections of debt service under different hypotheses in order to assess the indebtedness effect on the balance of payments and the budget for short- and medium-term strategies. The planning cycle should analyse the opportunity of issuing new debt, the utilisation of loans proceeds and the eventual opportunity for refinancing and/or rescheduling the debt in the near future. However, DMO does not take the macroeconomic decisions, nevertheless the analyses made by DMO are a feedback to EBDM, including possible choices of macroeconomic strategies, for consideration and decision-making.

Coordination among the DMO, the fiscal policy makers and the Central Bank, within its role of monetary policy maker, should be achieved, given the interdependency of the policy instruments in these activities. Adequate coordination is needed at the operational level in order to avoid cross-purpose operations in financial markets between DMO and monetary policy makers. DMO, once the amount of the fiscal deficit has been decided, will analyse the implications of its financing through new debt, and will report to EBDM and the fiscal policy makers on the costs

and risks associated with the size and structure implied by the new debt issue, which eventually would make the fiscal policy makers reviewing their strategy²⁸.

The DMO should assess debt sustainability by means of portfolio analysis and macro-economic forecast, as well as government fiscal revenue forecasts²⁹. DMO evaluates and analyses what are the costs and risks associated with debt: exchange rate variations and interest rate fluctuations and takes a prudential strategy minimising risk and cost.

The DMO, in cooperation with other government agencies, prepares debt sustainability analysis, covering debt data as well as balance of payments and budget information. Eventually, if the country is a HIPC, DMO evaluates sustainability of present value of debt using the thresholds defined by the HIPC Initiative.

The DMO provides the background and the framework for a debt strategy formulation and implementation at the micro-economic and micro-administrative level, and provides the substantive information for the formulation of a macroeconomic debt strategy to EBDM.

Debt management is a dynamic matter, and a strategy that was appropriate at one moment in time, might be not at another one. This is why the three Executive EDM Functions should be reviewed and evaluated by EBDM on regular basis in order to modify the strategy, the legal framework and the staffing and systems environments, following the evolution of international and national financial and economic developments.

5.2. Legal and Regulatory Structure

The legal and regulatory structure is of paramount importance, and it is the key for a successful EDM. All governments have to address this issue with attention and in depth analysis. As it was said in section 1.2, the Legal and Regulatory Structure is the output of the Executive Debt Management Regulatory Function.

The law defining the framework for public debt management is, in some countries, a law that stands alone as a “Public Credit Law” or “Public Debt Law”, and in some other countries, it is part of the general “Public Financial Administration Act”.

In any case, the law has to start with the definition of the higher public decision making body in the country as far as public debt is concerned: the EBDM. The law should define the composition and the responsibilities of EBDM. The law should give to EBDM the powers to perform the Executive Debt Management Functions.

²⁸ An interesting survey on coordinating public debt management and monetary policy can be found in Sundararajan, V.; Dattels, Peter and Blommestein, Hans (ed.) (1997) and Wheeler (2004).

²⁹ There are also a set of thresholds for low income countries proposed by the World Bank and the IMF, which may be applied in these debt sustainability analyses. See the World Bank and the IMF (2004), Box 3, p. 25. See also IMF (2003) and (2005).

The legal framework defines the notion of “Public Debt” in each country³⁰. The public debt has to be approved by the Parliament as a regular requisite, and the DMO is authorised to utilise a financial instrument to finance the debt. It is important to distinguish in the law the difference between public debt, publicly guaranteed debt, the latest being a contingent liability for the central government’s budget, and fiscal contingent liabilities that are not debt, but that under certain circumstances might become debt. The DMO is accountable for public debt and publicly guaranteed debt, but not necessarily for fiscal contingent liabilities³¹. Floating debt, which is the accrued unpaid payments that are rolled over from one fiscal year’s budget to the next one, is not public debt, unless it remains unpaid and the Parliament authorises its consolidation or its payment through specific financial instrument to be issued by the DMO³².

The public debt law should stipulate that no public sector institutions would be able to initiate public credit operations without previous authorisation from the Ministry of Finance (DMO). Furthermore, the institutions of the central administration would not be able to formalise public debt operations that are not contemplated in the fiscal year’s budget law. The only exceptions in some cases would be contracts subscribed with foreign Governments and their agencies, and international organisations, in which the country is a member. In these cases, the law may authorise the Executive Branch to formalise credit operations. The public debt law would also stipulate that the use of resources contracted by public credit is reserved exclusively for productive investments or the refinancing of liabilities. The law should warn the use them for financing recurrent expenditures systematically.

The law defines the notions of “External Debt” and “Domestic Debt”, which in order to be consistent with the international definitions it ought follow the creditor’s residence criteria, i.e. if the creditor’s residence is abroad, the loan is external, and if the creditor is a national resident the loan is domestic, regardless of the currency of the loan or the reference law of the loan or securities issue contract³³.

The law describes the rules and regulations for the allocation of guarantee coverage by the public sector, which should be a DMO responsibility. The allocation of guarantees should be authorised on fiscal year basis by the Parliament because is a direct fiscal contingency for the budget. The

³⁰ The definition of the General Government debt that is agreed by the SNA 1993 and which includes the central government, state and local, social security funds operated at each level of the government, and all non-market non-profit institutions that are controlled and mainly financed by government units. The General Government debt is the total gross liabilities of the units composing the General Government. This definition is for accounting purposes, but not for applying debt management techniques to all the elements of this set of liabilities. See IMF, BIS, Comsec, Eurostat, OECD, the Paris Club Secretariat, UNCTAD, and the World Bank (2003), paragraph 3.6, pp. 25-26. This definition is applied by the EU country members of the Maastrich Treaty. See <http://www.francetresor.gouv.fr/oat/fr/dette26.html>.

³¹ For instance, Social Security or Pension Funds are, in general, not considered as Public Debt to be managed by DMO. This is in line with Chapter 9 of IMF, BIS, Comsec, Eurostat, OECD, the Paris Club Secretariat, UNCTAD, and the World Bank (2003). However, these fiscal contingent liabilities may be recognised as public debt when the cost of not assuming them could be unacceptably high. The cost might be financial, political or social.

³² In many developing countries, over a number of years the Government has indirectly contracted debt through the creation of arrears by line Ministries circumventing regular budgetary procedures, i.e. creating involuntarily a public unpaid liability that in many countries has become an important portion of the public debt. The issue of avoiding accumulation of arrears through budgetary arrears is outside the scope of debt management; the system to be put in place to address this problem is a stringent control of the budgetary execution.

³³ See IMF, BIS, Comsec, Eurostat, OECD, the Paris Club Secretariat, UNCTAD, and the World Bank (2003), p. 7, for the definition of external debt.

allocation of guarantees is a service supplied by the DMO that bears a cost, because it implies skills and staff necessities to evaluate the risk, besides the fact of bearing the risk itself. This cost for DMO, and the acceptance of the risk that implies the creation of reserves against it, justify the charge of a guarantee prime to the beneficiary of the guarantee. Actually, providing a guarantee, without charging for it, is equivalent to subsidise the guarantee's beneficiary.

Another important point as far as allocation of guarantees is concerned, is the definition of what the national government considers as a guarantee. It is important to minimise the implicit guarantees that could take the Central Government through the indebtedness of public enterprises or local governments. It has to be clearly spelt out in the National Law in what case and how the Central Government Provides a guarantee, and how it has to be acknowledged by the creditor in the loan contract or in the Collective Action Clauses (CACs) in case of bond issues³⁴.

The law will also clearly spelt out the responsibilities the DMO is accountable for. This can be part of the rules and regulations, which are based on the law, and reflected in the Functions and Procedures Manuals of DMO. At this level too, rules and regulations will address the responsibilities and tasks of each of the institutions involved in public debt management.

The legal framework does not end at the approval of the law: in many countries, once the law is approved, the authorities omit drafting the rules and regulations. If the corresponding rules and regulations are not drafted and implemented, the law has the risk of remaining inapplicable: functions and procedures manuals as well as job descriptions have to be drafted for all the institutions, their departments and the individual staffs. This is of particular importance for the DMO.

5.3. Location, Organisation and Role of DMO

The issue of the location of the DMO comes here as an important decision. The DMO's physical location in the national organisational set-up is of course closely linked to the role, responsibilities and mandate the office has been given. The unit responsible for monitoring central government debt should logically be located at the Ministry of Finance, with close links to the Treasury the Comptroller and the Budget. This is because the process of monitoring central government direct and guaranteed debt is linked to the treasury operations and the budgetary process (in budget preparation and in budget execution) as well as with the Comptroller's Office³⁵. It may be, however, that some countries have these responsibilities distributed between several different institutions, depending on the organisation of Government services and historical precedent. Some other countries have opted for implementing a Separate DMO (SDMO)³⁶.

³⁴ Collective Action Clauses (CACs) are clauses that can be incorporated into an international bond's legal documentation to facilitate the restructuring of that bond if needed. See Donald J. Mathieson and Garry J. Schinasi (2000). In the case of a public enterprise or a local government that is not covered by the Central Government's guarantee, this should be recognised in a CAC by all the bondholders. In the case of a loan, it should be a clause in the loan contract in which the creditor explicitly recognises that the loan is not guaranteed by the Central Government. These conditions for public sector non-guaranteed borrowing should be explicitly spelled out in the national law.

³⁵ It is at the level of the Comptroller's Office where the formal accounting operations of public debt are performed and where the Government consolidated financial statements are produced.

³⁶ The advantages and draw backs of the location of the DMO at the Ministry of Finance in front of the establishment of a SDMO can be found in Borresen and Cosio-Pascal (2002), and Currie; Dethier, and Togo, (2003), as well as in Magnusson, Tomas (2003), *The Institutional and Legal Base for Effective Debt Management* in UNCTAD (2003). The three papers conclude that there are more advantages for developing countries and economies in transition to locate the DMO at the Ministry of Finance than setting up a SDMO. For a summary of the Functions of the Government Debt Office see IMF, BIS, Comsec,

The Ministry of Finance or the Central Bank have, historically, been the institutions in which the operational debt management functions have been centralised. However, the location of the DMO at the Central Bank has been more a recognition of the secular weaknesses of the Ministry of Finance, as far as retention of qualified personnel is concerned, than a natural responsibility for the Central Bank. Presently, with the evolution of the role of the Central Bank, which is becoming an autonomous body in charge of monetary policy, and the Ministry of Finance taking more responsibility in integrating the public financial management, the DMO location has been naturally shifted from the Central Bank to the Ministry of Finance in many countries.

In some countries, however, the Recording Function, as far as external debt is concerned, has remained with the Central Bank. This is because two reasons: first, the Central Bank has trained staffs with the required skills over many years and has the working environment to retain this personnel, and second, the Central Bank performing as the financial agent of the Government do need the database updated and lined up accurately in order to programme the debt service payments in advance. In these cases, the Ministry of Finance is a privileged user of the database and have access to it without restriction, even more; the payments are order by the Ministry to the Central Bank through the Treasury and Budget Departments. No major problems have been detected in the countries working under this scheme³⁷.

The Minister of Finance is ultimately responsible for the public borrowing and for implementing a public debt strategy, but the day-to-day implementation of those are delegated to the DMO. The role of the DMO is clearly defined through the legal and regulatory framework along the allocation of responsibilities among the different agencies involved. The organisational model that will be applied to the DMO will depend on several factors. These factors are the historical background, the legal division of responsibility among different government bodies, and the importance of public debt in the overall public finances, as well as the volume of data and its complexity. However, the organisational structure of the debt office should be oriented towards a global and efficient debt management operational functions approach, capable of responding to all needs and responsibilities. Irrespectively of the level of development a country is on, it must, in one way or another, organise its debt management debt office according to the type of sources of financing it has access to³⁸.

In addition to this structure, any DMO needs a strong Support Administrative Office (SAO) performing basic functions such as human resources, training, incentives and penalties, code of conduct, etc. This SAO is needed in all administrations, private or public, and within EDM, it might have some specificity for a DMO, which development will be also in function of the historical background and legal division between the different national institutions involved in EDM³⁹.

DMO has to coordinate with the other bodies of the government on the needs for financing and their implications for fiscal and monetary policies⁴⁰. But coordination goes beyond the fiscal and

Eurostat, OECD, the Paris Club Secretariat, UNCTAD and the World Bank (2003), Table 11.3 and Figure 11.1, pp. 104-106.

³⁷ Bolivia and Nicaragua, for instance. However, these two countries are HIPCs, which external debt composition is mainly concessional.

³⁸ A comprehensive analysis of these facts can be found in Borresen and Cosío-Pascal (2002).

³⁹ There is also need to have a strong and performing IT Department, but this will be dealt with in Section 5.5.

⁴⁰ On this subject see World Bank and the IMF (2001) p.11.

monetary policies and debt management. DMO might coordinate and control many other activities too, like the debt service in due time by beneficiaries of guarantees and on-lent loans, etc.

DMO also has to report on regular basis to the Minister of Finance and to the EBDM, and on annual basis to the Parliament or Congress, directly or through the Minister of Finance. DMO is subject to Parliament's scrutiny, to internal and external controls (e.g. audits) and puts at the disposal of the civil society regular reports and statistical bulletins on the public debt status of the country.

In all cases, the organisational structure of the DMO should be based on a Functions and Procedures Manuals that will determine its role, responsibilities and functions, with supervision at intermediate level and the necessary staff in permanent positions to execute all the tasks of the work program.

The Functions Manual is complemented by a Procedures Manual that norms the flow of information in the operative cycle. This involves: the reception of documentation and information of domestic and external financing; the registration of this information in the database; and, the steps to follow for the accounting and statistical registry of disbursements and public debt service. Therefore, this Manual should link the operative activities with the structure and functions established by the Functions Manual. Both manuals should establish the organisational framework that is required for an efficient executive and operational debt management.

These two manuals have to be complemented with specific Job Descriptions for all officers in DMO, which should incorporate the terms of reference related with the centralisation of responsibilities in terms of all the operational functions for each one of the officers.

5.4. Hiring, Training and Retaining Staff

A universal problem for governments is how to attract and retain skilful personnel for debt management, i.e. with a background combining a good financial, macroeconomic and public policy skills. Given the public sector's salary scales and hiring practices, to achieve this might be hazardous. The task of hiring and retaining skilful staff is even further complicated by the complexity of developing countries debt and the rapid evolution of financial techniques. In many developing countries and economies in transition, no permanent solution has been found; DMO teams are very often not only understaffed but consists in part of staff on temporary secondment or with provisional salary arrangements. The rate of turnover is often alarmingly high, without a corresponding capacity for in-service training in order to upgrade the knowledge of the remaining staff to quickly render new employees fully operational⁴¹.

Such an important problem has to be addressed at a very high decisional level, this belongs to one of the executive functions: the Resourcing Function, which is responsibility of EBDM. Building a public debt management team is a difficult endeavour given the complexity of the work involved. It requires staff with a quite large spectrum of skills: finance, economics, ability to understand a complex text (loan contracts, often in a foreign language), mathematics of finance and last but not least, a good literacy as computer's user. It is obvious that a profile like this is highly demanded in the private financial sector; thus if the staff is not reasonable paid and does not have motivations like training programmes and career perspectives, the personnel turnover at DMO will seriously hamper its functioning.

⁴¹ This problem was pointed out as early as 1989 by Kalderen *et al.* (1989), and it seems that it has changed very little since, at least in a large number of countries.

Problems of retaining qualified staff are not bound to developing countries and economies in transition. As it was said in Section 2, some OECD countries created their SDMOs in order to have a more flexible salary and working environments for retaining qualified staff⁴². The problem with a SDMO is that it appears not to work in countries where poor organisational structures exist within the government, a situation that often arises due to lack of resources, besides the fact that the implementation of a SDMO requires a very high investment to start with. The solution for this problem has been, in some countries, to create a “core of excellence” within the government, where access is difficult because the skills required are of high standards and, in consequence, the recruitment is very selective implying that salaries are above the public sector’s average. But salary does not seem to be the only factor to retain personnel; there are also the career perspectives and the assurances of obtaining regular training for the staffs on board. There are also financial facilities that eventually the government could provide to these cores of excellence, like loans and mortgages at concessional terms for the staffs, relatively to what could be obtained through the domestic commercial banks’ loans and mortgages. The important point here is that there is no need to “separate” the core of excellence from the regular government body. In some countries this core of excellence has been implemented within the Ministry of Finance.

These innovative mechanisms have to be addressed and decided at a very high level, at the EBDM or at the Council of Ministers, but these decisions are essential to be taken in order to have a sustainable performing and efficient DMO. There is often the argument that this problem is not bound to the DMO, but to many other sectors within the Government, which is true. However, it has to be kept in mind that public debt is very often the major expenditure share within the national budget, and that as such it deserves a special attention in respect to other staffing policies within the public sector⁴³.

Regarding training for DMO’s staffs, presently there are specific organisations that can provide this training making less heavy the in-service training expenditures and infrastructure for the DMOs. One example is the UNCTAD/DMFAS Programme and of other institutions like the World Bank, the International Monetary Fund and the Commonwealth Secretariat, as well as regional organisations like MEFMI⁴⁴ also provide training services on different debt management and debt statistics areas.

The DMO should have regular training programmes that cover all the different aspects of public debt monitoring and management. This training programmes should include, *inter alia*, advanced courses in new financial instruments in capital markets, and risk and contingent liabilities management. These programmes will contribute to the establishment of a solid technical structure of the staff, capable of performing functions of management and control of public debt.

⁴² See World Bank and IMF (2002), p. 31.

⁴³ It has to be recalled that major crisis of the world economy have been triggered through lousy debt management in the early 1980s and in the middle 1990s.

⁴⁴ CEMLA, in Latin America, has also started some training programmes on debt sustainability. However, this training has been bound to HIPC’s economies in the region (Bolivia, Guyana, Honduras and Nicaragua). External donors provide the financing of such training, i.e. CEMLA does not assign proper resources to this activity. IADB has launched an initiative called Latin American Debt Group, which organises regular meetings of Latin-American debt managers. This is not a training programme as such, but it allows for exchange of information and experiences among the debt managers of the countries in the region.

5.5. Computerised Systems and Debt Management

Computers bring flexibility and rapidity to the debt data processing and thereby allow debt managers to review the information in ways that are not practicable otherwise. Within minutes, computer systems can compute the current balances of hundreds of loans, sum them and print reports organised by lender, borrower, currency and so forth. Even more important, computers allow the debt manager to answer “what-if” questions about the profile of future payments if interest rates and or exchange rates rise or fall and thus analysing quickly the changes in the country’s debt burden resulting from hypothetical changes in financial markets. In the same way, a computerised system can allow the debt managers to cross the debt data with the real economy macroeconomic variables so that projections of financing needs to close the balance of payments and/or the national budget deficit are obtained. Because these reasons it is today impossible to effectively manage the public debt without a computerised system. In addition to that, if the system is decentralised, modern technology is required for the different actors to communicate quickly and efficiently. This is why the involvement of the Information Technologies (IT) Department is so vital for debt managers⁴⁵, and the DMO, at all levels, needs the support of the IT Department for performing the operational EDM functions, and the maintenance of the local area network, as well as the interface between the CBDMS and the Integrated Financial Management System (IFMS)⁴⁶.

A CBDMS has three components, the hardware, the software and the database. The hardware is the physical equipment in which the system operates; the software is a programme of instructions that are communicated to the computer to direct its operation. There are two types of software: one giving commands to the computer, the operating system, and one directing the computer to perform specific functions, which is the application software, which includes the embodied consistency checking functionalities. The database includes the figures and basic information regarding debt entered by the user of the system, the data that are calculated by the system and the definitions needed to organise the data.

Physical hard copy filings systems should be avoided, with the exception of legal loan contracts, all information should be in electronic format. This approach gives high relevance to IT security backup measures, its regularity and the locations of the backups. For instance, a daily backup should be done and be kept at the DMO, and a weekly backup should be kept in a building different of that of DMO.

Documentation is an integral part of any CBDMS. There must be a full description of how the system is structured and how it operates. There must be standard entry forms/screens, training manuals, operating procedures and help functionalities. Without a complete and up-to-date documentation, staff can only operate the system on the basis of oral instructions. This leads to inefficiency, errors and difficulties in training new staff.

An important ingredient for a successful implementation of a CBDMS is the requirement of a smooth flow of data, defined in a uniform manner, into the computerised storage system at the DMO. This implies that all the institutions involved in public debt operations are known as well as their individual responsibilities and functions. At what level of detail and with what periodicity the information should be communicated to the DMO must be defined for each institution. The information flows streaming out of DMO should be defined equally, i.e. to what institutions, with what level of detail and with what periodicity. The support of the information is

⁴⁵ See IMF, BIS, Comsec, Eurostat, OECD, the Paris Club Secretariat, UNCTAD and the World Bank (2003), Table 11.2, p. 103, for a summary of tasks and requirements of a CBDMS.

⁴⁶ See Section 5.9 on this subject.

also important, in the case of a CBDMS; the inflow might be the most often on electronic support, for the outflow, it would be in function of the recipient needs⁴⁷.

The choice a performing CBDMS is a crucial decision for the DMO. As such an extent that this decision should be taken at the Executive Functions level, it is part of the Resourcing Function that will be addressed by EBDM. The CBDMS has serious cost implications policies that EBDM has to support with a consistent strategy. The hardware needed by the DMO is in general expensive, because the appropriate software for an EDM, both the operating system and the application software, are complex and heavy, which implies the need for a highly performing hardware⁴⁸. The need of expenditure in this field is linked to the “Core of Excellence” that was referred to in the previous section. These cores of excellence should have access to computer equipment that might be, on the average, superior to the public service standards, because their needs and responsibilities.

The application software is a delicate decision to take too. There are, theoretically, three possibilities: a standard system developed by one of the international suppliers⁴⁹, a domestic in-house development, or outsourcing the development of the system to an external software developer.

The experiences with outsourcing have been quite unfortunates. This is because if the DMO’s IT team is not directly involved in the development of the software, and the software very often becomes a kind of “black box”, in spite of the documentation that is supplied with the system. Besides, very often the end user documentation is available, but the technical one is not or is incomplete. An other shortcoming of this solution is that the contract with the supplier is bound in time, and the debt management daily work is very dynamic, so that at one moment or another, the system will be obsolete, in this case, if the contract cannot be renewed with the supplier, the DMO’s IT will have to “fix” the deficiencies of the system, producing at the end an inflexible computer patchwork. For all these reasons, DMO and EBDM should be very cautious before taking the decision for outsourcing the development of the CBDMS.

The domestic in-house development appears to be the best strategy for tailoring the CBDMS one hundred percent the DMO needs, but this solution might become an extremely expensive one⁵⁰. In order to produce a performing and efficient CBDMS, the DMO has to host a highly qualified team of IT staffs, which are expensive, and all the problems pointed out in section 5.4 will come out here too. In addition to this, a group of debt managers have to be dedicated to the drafting

⁴⁷ All these points have to be clearly defined in the Functions and Procedures Manuals for each of the institutions, including DMO, that were referred to in section 5.2.

⁴⁸ There is the false idea that LDCs or HIPCs, and in general developing countries, should not afford working with the latest technologies. This is very often a “Donor Country’s” opinion, unfortunately, this is not true for three main reasons: first, the IT market does not offer “second hand” performing computers, second, one essential part of the software, the operating system, is embodied in the new computers leaving the previous ones obsoletes, and third, the databases of HIPCs or LDCs, because the concessionality of the loans, the creation of arrears and multiple rescheduling exercises are extremely complex and do need the latest technologies to be dealt with.

⁴⁹ The most widely used systems of this kind are the DMFAS of the UNCTAD DMFAS Programme and the CS-DRMS of the Commonwealth Secretariat. The users of these two systems are around 140 countries in the World, each system covering about half of the countries. A comprehensive report on the development of DMFAS 5.0, that was developed in cooperation with the World Bank and financed by UNDP, can be found in UNDP (1997).

⁵⁰ Here we refer to full-fledged CBDMS, the observations do not concern spreadsheet systems that some countries utilise as a “worst-is-nothing” tool, and that in no case can be considered as a CBDMS.

and reviewing of the specifications for the IT team. This is of essential importance, because the extension and linkages of the whole system have to be designed and agreed upon since the very beginning, in order to avoid ending with a patchwork system. The allocation of resources represented by the debt managers to interact with the IT team implies high costs too. Another serious drawback of a domestic development is the complexity of the task and the time length required. The average development time span for a CBDMS varies from 3 to 6 years, which converts this task in a major endeavour, and the final cost would certainly be measured in USD million.

The standard software packages available now are less expensive than developing a wholly new system for reasons of cost and workability. Compared to designing, programming and maintaining an entirely new system, the package can be relatively inexpensive. Their designers and users have debugged the available systems to the point where they are likely to have fewer operating problems than custom-made systems. They can be implemented quickly and the maintenance is centralised, creating high economies of scale⁵¹. The maintenance of a system is of vital importance: it has been proven that the personnel turnover in the IT Department makes domestically developed systems very vulnerable. Choosing a standard software package also decreases the need to maintain a full group of developers within the DMO's IT Department, there are only needs for maintenance and service for daily work, database management and security procedures like regular backups. All these direct and indirect cost factors should be analysed carefully in selecting a strategy to implement a CBDMS.

The development of IT applications is increasing in all the public sector, for example the IFMS latest implementations, and this makes more and more necessary to have performing, flexible and versatile CBDMS. The IFMS allow the CBDMS to be electronically interfaced with the Treasury, the Budget and the Comptroller, increasing efficiency in public debt management and public financing management in general, as it will be developed in section 5.9. One of the difficulties encountered with IFMS implementation are the multiplicity of users, some of them in very isolated areas, like some municipalities in the far countryside. This is a shortcoming for these geographically isolated local governments in order to properly report their financial obligations and budget execution to the central government, including their debt, which is an important liability for the budget.

Very often this kind of problem would be found in developing countries that lack of local technical support. In these cases the new technologies will certainly help. One of those is to pass from intranet to internet communications. This step forward will certainly improve communications in one hand, and on the other hand, to cut dawn maintenance costs.

This solution would permit to communicate with isolated local governments, without the need of installing heavy software in each one of them, and also to cut dawn costs in the installation and maintenance for a standard CBDMS package. For the DMO in a country, which have local limited resources to maintain a sophisticated CBDMS, the implementation of this technology would be a major step forward. The CBDMS software can be installed at the system's supplier headquarters the user having unlimited access through internet.

5.6. Performance Criteria on Debt Data, Statistics and Analysis

Without a well-performed Recording Function, no other function will be effective. A set of debt data, accurate, complete and up-to-date is unavoidable for a good performing of EDM. The

⁵¹ The implementation of DMFAS, for instance, varies from 6 months to 3 years, in order to cover the full database depending on its complexity; this is fast in front of an in-house development.

implementation of checklists in order to evaluate the performance of data accuracy, completeness and up-to-date is of high help. These checklists would lead to performing indicators following the methodology proposed by MEFMI⁵².

The indicators for the Recording Function are designed to enable the user to objectively evaluate and track performance in debt data management, by checking the regularity of data up-dates, the source and the registered changes. They are intended to be an integral part of the management process, to be used as a basis for systematically identifying priority areas for improving debt data capacity and developing or modifying a data collection plan, and for tracking progress over time.

Accurate up-to-date and complete database on the data that the DMO has been mandated for should be assured⁵³. This implies regular reconciliation of figures with creditors, at least once a year, and solid data validation routines implemented by the back office⁵⁴.

The input of loan's information to the database should be monitored and controlled periodically by each head of unit of the DMO. The technicians of the units should have the responsibility to run lists of loans to verify the consistency of the information and to correct them if necessary. A designated officer at DMO should perform the validation of the consolidated debt information periodically⁵⁵. Errors and inconsistencies in the information could be detected through consolidated reports, and notified to the head of each group for correction. The status of the database and its consistency should be analysed in periodic meetings with the heads of units who have the responsibility of executing the agreed work programme. The database established would facilitate an adequate monitoring and control of disbursements and payments made during the fiscal year. It would also support the preparation of debt service projections and the evaluation of its impact in the debt profile.

Regular audits are also helpful for achieving an accurate up-to-date and complete database. It is useful to have periodically an internal audit, as internal control mechanisms that can be performed by auditors of the Comptrollers Office and an external audit performed by the Superior Audit Institution in the country, as an external control⁵⁶.

The ultimate objective to have an accurate database is to publish information that is transparent, up-to-date and reliable, in order to produce relevant information and statistics for domestic and international needs.

Domestically, the production of information covers a large range of needs, that can go from internal analytical reports and analysis for decision making, reports for daily operations, and reports to cover internal official statistics to the publication of a Statistical Bulletin in order to keep informed the whole civil society on public debt evolution and facts.

⁵² See Baball, Balliram (1995).

⁵³ Databases on public and publicly guaranteed debt and other types of debt or contingent liabilities as required by the responsibilities that DMO has been accounted for. See section 3.

⁵⁴ Validation procedures are part of the training packages that the standard CBDMS providers include into the technical assistance projects.

⁵⁵ Eventually this officer can be the database administrator.

⁵⁶ The control is internal when carried out by the Comptroller Office, because this Office is part of the Executive Power, as the Ministry of Finance where DMO is located; whereas the Superior Audit Institution reports to the Congress or the Parliament, which is the Legislative Power, and then is considered as external control.

A Statistical Bulletin is not bound to tables, but a short, clear and simple explanation of the figures should accompany each table, as well as a short, clear and simple executive summary of the conclusions should be provided in the Bulletin.

The international needs for information cover the International Financial Institutions (IFIs) needs: the World Bank Debtor Reporting System (DRS), the IMF Special Data Dissemination Standard (SDDS) and the General Data Dissemination System (GDDS) information requirements⁵⁷; and information for international risk qualifiers firms, like Fitch, Moody's and Standard and Poor's⁵⁸. The Statistical Bulletin referred to in the previous paragraph can, of course, be of relevant utility for external purposes if there is an English translation of it. The external debt position is part of the International Investment Position (IIP), that all country member of the IMF should report, and could be part of the SDDS or GDDS if the reporting country has voluntarily adhered to one of these options.

The data should also allow performing on regular basis portfolio analysis reviews in order to assess risk and to take with opportunity decisions that will minimise the risk and cost for the government's budget⁵⁹. A good information and transparency of the DMO will certainly improve the image of the debt managers in the country, and will facilitate the implementation of the Monetary and Financial Practices Transparency Code⁶⁰.

5.7. Cash Management

Government cash management has been given less attention than debt management. However, cash management and debt management are two close related activities, and bad cash flow management not only wastes resources but also can inhibit the development of local financial markets and undermine monetary policy.

There are three major steps in cash management: Expenditure and revenue forecasting, cash monitoring and borrowing strategy. The expenditures and revenue forecasts of line ministries,

⁵⁷ The DRS is the base for the World Bank annual publication Global Development Finance, which publishes and analyses capital flows to developing countries and their debt stocks, see <http://www.worldbank.org/>. The principal goal of the GDDS is to assist countries in the development of their overall statistical systems. The emphasis is on the quality of the data and the dissemination practices for economic, financial, and socio-demographic statistics. The GDDS focuses on assisting countries to formulate comprehensive, but prioritised, plans for improvement in compilation and dissemination practices. In this respect, the country information developed by national statistical agencies describes: (a) improvements that have been implemented in the recent past, such as adoption of practices set out in the "[System of National Accounts 1993](#)" or in the fifth edition of the "[Balance of Payments Manual](#)", or the introduction of an enterprise survey; and (b) plans for improvement that address remaining shortcomings in the short and medium term. See: <http://dsbb.imf.org/Applications/web/gdds/gddsfaq/>. The Special Data Dissemination Standard (SDDS) was established by the International Monetary Fund (IMF/Fund) to guide members that have, or that might seek, access to international capital markets in the provision of their economic and financial data to the public. Both the General Data Dissemination System (GDDS) and the SDDS are expected to enhance the availability of timely and comprehensive statistics and therefore contribute to the pursuit of sound macroeconomic policies; the SDDS is also expected to contribute to the improved functioning of financial markets. See <http://dsbb.imf.org/Applications/web/sdds/home/>.

⁵⁸ There are other rating agencies like Dominion Bond Rating and A. M. Best, but these agencies do not rate developing countries, emerging market countries or economies in transition countries. All the ratings agencies quoted here are recognised by the U.S.A. Securities and Exchange Commission as National Recognised Statistical Rating Organisations (NRSRO).

⁵⁹ This is an important matter. See World Bank and IMF (2001), p. 10.

⁶⁰ See World Bank and IMF (2001), pp. 13-16.

together with the revenue forecasts provided by collecting agencies, and debt service and disbursements in cash forecasts by DMO compose the first step. This information is checked against the accounting data booked in the NT General Ledger, the debt service and disbursements projections in the debt database and the cash balances in the NT single bank account and its sub-accounts. This enables to determine the liquidity position of the Central Government and eventual shortfalls or surpluses. This information forms the basis for DMO to determine the borrowing requirements and for the MOF, through NT, the spending limits and warrants for line ministries and spending units.

Government cash management may be defined as:

“The forecasting, control and stewardship of an organisation’s financial assets and liabilities, flows and balances, protecting them from fraud, error or loss⁶¹. In the case of a sovereign government, this would be leading to the strategy and the associated process for managing cost-effectively the government’s short-term cash flows and cash balances, both within the government and between government and other sectors.”⁶²

In general, government cash management has two objectives: The first is to ensure that the general government manages its cash balances efficiently so that the government does not have “surplus” cash on hand, which would mean that debt managers had borrowed excessively and thereby incurring in unnecessary debt-servicing costs and additional risk for the government; and, the second objective is to neutralise the impact on the domestic banking sector of the government’s cash flows variations. This neutralisation is necessary to avoid that government transactions may create large unpredictable changes in liquidity in the domestic banking system and hamper monetary policy⁶³.

5.8. Domestic Financial Markets Development

There has been a tendency to substitute external debt with domestic debt in emerging markets and other developing economies⁶⁴. This fact is due to several advantages that domestic debt could present over foreign debt:

- The exchange rate risk is eliminated from the market risk framework.
- Complex legal contracts under foreign laws are eliminated.
- The amortisation algorithm is fixed by the debtor, and not by the creditor.
- Government’s medium- and long-term issues provide financial instruments to the Central Bank for monetary policy.

⁶¹ See Horcher (2006).

⁶² See Williams (2004).

⁶³ See Wheeler (2004) and Williams (2004).

⁶⁴ World Bank and IMF, (2001a). However, the increase in domestic indebtedness is due also to the external debt recurrent crises, which had lead to reduction of domestic demand in order to generate surpluses in the current account of the balance of payments for servicing external debt. This situation has lead to lower or stagnant wages and profits implying lower tax revenues. There has been also a heavily indebted public sector owned enterprises that have put additional pressure on the government’s debt. Finally, there have been the recurrent arrears to suppliers through lousy budgetary execution that has contributed to the increase of domestic debt, when the Central Government is unable to cope with these arrears within the following FY, the arrears being consolidated into public debt. All these factors stress the need for the enhancement and development of domestic financial markets. Some of these aspects of increase in domestic debt can be found in Comsec (1999).

- The government yield curve of government issues is a useful benchmark for domestic private sector issuers and investors.

In order to develop domestic financial markets, there are four important aspects to address⁶⁵:

- Market institutional framework.
- Market infrastructure.
- Increase the demand for public bonds and notes.
- Implementation of an efficient primary market.

5.9. CBDMS and Integrated Financial Management Systems

The recent economic reforms that followed the establishment of democratic regimes, mainly in Latin America, have implied substantial change in the role of the Central Government and various public and social agents. This evolution has been supported by the IFIs through a whole range of Modernisation of State Projects. The idea behind this policy is that there is a direct relationship between the quality of government and economic development, i.e. economic reform and poverty reduction strategies will not be successful without strong public institutions. One of the main ingredients in these Modernisation of State projects and in the strengthening of public institutions is the improvement of public financial management.

The primary objective of public financial management is to influence those that make decisions in such a way that the decisions taken are more sensible and prudent, and that they lead to a more effective, transparent, and accountable overall management. In the public sector many key financial decisions might be taken without any meaningful information or careful analysis of future impacts. It is the inevitable combination of political, legal, and social demands which make financial management of the government much more difficult and complex than financial management of a private business. This is further complicated by the traditional fragmentation of the functions of public sector financial management. However, the basic and essential responsibilities of public sector financial management include the functions of planning, financing, safeguarding, utilisation, analysis and reporting.

Translating these functions into subsystems, a financial management system can be defined as composed of the budget, treasury, cash flow and debt management, accounting and auditing subsystems. The most economic and efficient way to apply these characteristics is through the integration of the basic financial functions and responsibilities within a single and coordinated system. The broad technical requirements of public sector financial management are similar for all countries or systems of government, and a core system can be tailored to differing country circumstances: this is the Integrated Financial Management System (IFMS) approach.

Obviously the CBDMS is one of the core subsystems within the IFMS and has great utility at different levels and stages of the public financial management process. The first one is at the budget elaboration process, in which the DMO will provide as input for this process the forecast of debt service and loan proceeds for the incoming fiscal year, and if required, the resulting debt service and loan proceeds implied by new indebtedness in case of a deficit financed through additional borrowing.

The CBDMS is extremely useful too in the budget execution process. The DMO should alert the Treasury and the Budget on both sides of the budget execution: expenditures and resources.

⁶⁵ See World Bank and IMF, (2001) and (2002).

Regarding expenditures, the DMO should trigger the debt service operations to the Treasury and Budget to be paid by the government's financial agent. Regarding the resources, DMO should alert the Treasury and the Budget on the cash disbursements from loan proceeds deposited at the Treasury accounts. An important role of the DMO within the budget elaboration and budget execution process is the provisions for guaranteed debt, which is a contingent liability for the central government's budget.

References

1. Borresen, Pål and Cosío-Pascal, Enrique, (2002), *Role and Organization of a Debt Office*, DMFAS Programme Technical Paper N° 1, United Nations, New York and Geneva, UNCTAD/GDS/DMFAS/2.
2. Coessens, Hiliana and de Montpellier, Louis (1998), *Debt Portfolio Management in the Kingdom of Belgium* in Nars ed.(1998)
3. Comsec, (1999), *Effective Domestic Debt Management in Developing Countries*, Debt Management Series-1, Commonwealth Secretariat, London.
4. Currie, Elizabeth, (2002), *The Potential Role of Government Debt Management Offices in Monitoring and Managing Contingent Liabilities*, Mimeo, the World Bank, January, Washington.
5. Currie, Elizabeth and Velandia, Antonio, (2002), *Risk Management of Contingent Liabilities within a Sovereign Asset-Liability Management Framework*, Mimeo, the World Bank, January, Washington.
6. Currie, Elizabeth; Dethier, Jean-Jacques and Togo, Eriko, (2003), *Institutional Arrangements for Public Debt Management*, Washington, World Bank Research Paper 3021.
7. Baball, Balliram (1995), *Performance Standards and Performance Indicators in Debt Management*, MEFMI, Harare.
8. Deredza, Cornilious, (2004), *Conceptualising a Sovereign Foreign Borrowing Policy Framework*, in *Forum*, MEFMI, Harare, March.
9. DMFAS/UNCTAD (1989) *Effective Debt Management*, UNCTAD/RDP/DFP/ DMS/2, Geneva.
10. DMFAS/UNCTAD (1993) *Effective Debt Management*, UNCTAD/GID/DMS/15, Geneva.
11. Cassard, Marcel and Folkerts-Landau, David, (1997), *Risk Management of Sovereign Assets and Liabilities*, Mimeo, Working Paper of the International Monetary Fund WP/97/166, Washington
12. Hoercher, Karen A., (2006), *Essentials of Managing Treasury*, John Wiley & Sons, Hoboken, New Jersey.
13. Holguín-Torres, Jaime, (2005), *Pasivos Contingentes-Colombia*, Dirección General de Crédito Público y del Tesoro Nacional, LAC Debt Group: Debt Strategy Workshop, 26 September, Inter-American Development Bank, Washington.
14. IMF, BIS, Comsec, Eurostat, OECD, the Paris Club Secretariat, UNCTAD and the World Bank, (2003), *External Debt Statistics: Guide for Compilers and Users*, Washington.
15. IMF, (2003), *Sustainability Assessments--Review of Application and Methodological Refinements*, Washington, June.
16. IMF, (2005), *Information Note on Modifications to the Fund's Debt Sustainability Assessment Framework for Market Access Countries*, Washington, July.
17. Kalderen, Lars et al. (1989) *Debt Management and the Developing Countries: a Report to the UNDP by an Independent Group of Experts*, New York, July.
18. Magnusson, Tomas (2003), *The Institutional and Legal Base for Effective Debt Management* in UNCTAD (2003).
19. Mathieson, Donald J. and Schinasi, Garry J., (2000), *International Capital Markets: Developments, Prospects, and Key Policy Issues*, IMF, Washington, September.
20. Mehran, H. (ed.) (1985), *External Debt Management*, International Monetary Fund, Washington.

21. Nars, Kari. (ed.) (1998), *Excellence in Debt Management*, Euromoney Publications, London.
22. Polackova, Hana, (1998), *Government Contingent Liabilities: A Hidden Risk to Fiscal Stability*, The World Bank, Working Paper 1989, Washington.
23. Polackova-Brixi, Hana and Schick, Allen (eds.) (2002), *Government at Risk: Contingent Liabilities and Fiscal Risk*, World Bank and Oxford University Press, Washington and New York.
24. Sundararajan, V.; Dattels, Peter and Blommestein, Hans J. (1997), *Coordinating Public Debt and Monetary Management*, International Monetary Fund, Washington.
25. UNCTAD, (2003), *Proceedings of the Third Inter-Regional Debt Management Conference, Geneva 3-6 December 2001*, United Nations, Geneva and New York.
26. UNDP, (1997), *A Report on the Joint UNCTAD-World Bank Programme of Debt Management*, Management Development and Governance Division, Discussion Paper 4, UNDP, New York.
27. Wheeler, Graeme, (2004), *Sound Practice in Government Debt Management*, The World Bank, Washington.
28. Williams, Mike, (2004), *Government Cash Management: Good- and Bad-Practices*, Mimeo.
29. World Bank and IMF, (2001), *Guidelines for Public Debt Management*, Washington, March.
30. World Bank and IMF, (2001a), *Developing Government Bond Markets: A Handbook*, Washington.
31. World Bank and the IMF, (2002), *Guidelines for Public Debt Management: Accompanying Document*, Washington, November.
32. World Bank and the IMF, (2004), *Debt Sustainability in Low-Income Countries-Proposal for and Operational Framework and Policy Implications*, Washington, February.

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Annex 1: Executive Debt Management Functions: The List of Tasks

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Policy Function: Macroeconomic Public Debt Strategy						
Access to External Financing	Guarantees and On-lending	Providing Guarantees	On-lending policy	Fixing Borrowing Ceilings	Strategy for Raising Funds	Domestic Financial Market
Decide on what economic sectors will have access to external financing in function of the macroeconomic priorities of the country: What sectors and corporations will have priority for grants and soft loans, which ones will have access to commercial financing and which ones will not have any access to foreign resources.	Decide on what economic sectors will benefit from guarantees or on-lending in function of the macroeconomic priorities of the country: What sectors and corporations will be eligible for obtaining guaranteed loans and what sectors and corporations will be eligible for obtaining on-lent loans.	Fix the general policy on costs for the sectors and corporations eligible for obtaining guaranteed loans: which ones will be paying the full guarantee prime and which ones will be subsidised through reduction or write-off of primes.	Fix the general policy on costs for the sectors and corporations eligible for obtaining on-lent loans: which ones will be paying the full margin over the base rate and which ones will be subsidised through reduction or write-off of the margin.	In function of the global indebtedness targets for the FY, borrowing ceilings have to be fixed, globally, and, if necessary by sector, local governments, and/or by corporations. The ceilings should be fixed in function of global indebtedness indicators in net flow basis. The ceilings determination is closely related to the intended size of the fiscal deficit.	The preference for financing should be towards grants and concessional loans, and when these sources are exhausted then domestic indebtedness may be authorised. The guidelines on this matter have to be fixed clearly and firmly for each FY.	Lay down the strategy for implementing a security market regulation and infrastructure. Strengthening the demand for the Government's securities to build the potential investor base, and developing the supply of Government securities in order to develop an efficient primary market.

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Regulatory Function: Structure for the Legal and Regulatory Framework				
Legal Environment	Legal Framework	Institutional Framework	Organisational Framework	Efficient Information Flows
Define the steps and the actions for implementing a well-defined Legal Environment in function of the selected Public Debt Strategy.	The Legal Framework should clarify the authority to borrow, to issue new debt, to invest and undertake financial transactions on behalf of the Government. These powers and responsibilities should be given to a single agency, i.e. the MOF, however, other agencies would have operational roles in debt management and should also be clearly identified as well as the nature of their roles.	The Institutional Framework should be well specified for each one of the institutions participating to public debt management. Precise and detailed description of responsibilities should be clearly specified and legal arrangements should be supported by delegation to the debt managers. Rules and regulations have to be elaborated, consistently with the Legal Framework, for each of the participating institutions in debt management, leaving no ambiguity in the mandates of each one of the participant institutions.	The key requirement is to ensure that the Organisational Framework surrounding debt management is clearly defined. For each of the participating departments in each institution, Functions and Procedures Manuals have to be drafted, as well as detailed Job Descriptions for each one of the department's officials.	The frequency, nature and level of aggregation of information flows are defined in the functions and procedures manuals, however a monitoring and evaluation mechanism should be implemented in order to assure that the information flows are streaming properly from one institution to the other and within each institution.

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Resourcing Function: Staff and Systems	
Stable Working Environment	Maintenance and Updates of the CBDMS
Incentives and career perspectives should be assured in order to avoid rotation of personnel for the debt management functions. This is of particular importance for the DMO. Without a clear and firm decision on this issue the success of the implementation of the DMO in the country would be seriously compromised.	Adopt measures and allocate a budgetary line for maintenance of the CBDMS and for the supporting hardware and software, as well as for ensuring the stability of the technical personnel working for the debt management functions.

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Annex 2: Operational Debt Management Functions: The List of Tasks.

Secretarial Support by DMO to EBDM.

Controlling/Coordinating/Monitoring Function: Control, Coordination and Monitor			
Control	Enforce and Follow up	Substantive Feedback to EBDM	Coordinate
The law, the rules and regulations, as well as the guidelines issued by EBDM, are applied and followed; in order to do this, an Objective and a Financial Debt Strategy is fixed for the Operational Debt Management Functions.	All the decisions taken by EBDM essential for the efficient implementation of the decided debt management strategy.	In order for EBDM to evaluate and revise of the debt strategy, the legal and regulatory framework and the staff and systems policies.	Among DMO, Investment Department, the National Treasury, the Budget Department, the Central Bank, and other bodies of the government, as well as with official and private institutions, and within the DMO: among the front, middle and back offices to ensure that all the actors involved enforce the debt strategies properly.

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Back Office				
Recording Function: Debt Data and Statistics				
Collecting	Storing	Processing	Validating	Disseminating
All information concerning debt contracts and debt transactions, including Central Government direct debt, public sector debt, guaranteed debt, and on-lent loans. The information to be collected for all these categories of debt are: copy of debt contracts, all information concerning disbursements, all information concerning repayments of principal, payment of interests and fees, repurchases, consolidations and restructurings.	All the collected information, properly classified, into the CBDMS. Qualified personnel in the use of the CBDMS should enter the information. The loan contracts of all categories of loans collected must be properly stored and classified. The IT team would provide security measures to backup the data on regular basis, with at least a weekly backup transferred to another building.	Once the data are stored into the CBDMS, the amortisation schedules have to be calculated for each loan, and for each tranche within the loans automatically by the CBDMS. Standard agreed reports for debt payments projections, DOD, commitments, maturity profile, interest rate profile, duration and other statistical and financial reports must be produced on periodical basis.	The operators will apply well-defined validation procedures in the process of storing data. Loading the data following the CBDMS procedures will enable the embodied validation of the system procedures. From time to time, but at least once a year, a conciliation of figures has to be undertaken with the external and domestic creditors as well as with the national beneficiaries of guarantees and on-lent loans.	Disseminate the data for, national and foreign, public and private users, in particular by granting access to the database, with well-established rights and privileges, to the other authorised users of the national public sector. Provide Data to the international financial institutions following the agreed international statistical requirements (DRS, SDDS and GDDS).
Operating Function: Debt Operations Settlement and Monitoring				
Debt Service	Verification of Claims	Disbursements	Foreign Currency Needs	Budget and Treasury
· To Monitor and Order Debt Service falling due, with a well pre-established timing, to the National Treasury, the Budget Department, and to the Central Bank in order for them to pay in due time.	Verification that the creditors are claiming the correct amounts for every payment request.	Notifying Disbursements in cash credited at the Central Government's accounts, as well as information on payments by creditors to suppliers abroad to DMO, and the accounting function of the Comptroller General.	Verifying that the Foreign Currencies Needs for the debt service will be available for payments at the Central Bank or with agents' banks domestically or abroad.	DMO (the back office) will Grant Access to the Database to the Central Bank, the Budget Department, Department of Investment and the National Treasury, assigning right and privileges, in order for them to carry out budget and treasury functions.

Middle Office				
Analytical Function: Analysis and Financial Strategy				
Debt Service Projections	Analysis	Substantive Feedback	Indebtedness Structure	Statistics and Statistical Bulletin
Perform Debt Service Projections on existing loans and new financing in order to evaluate the budgetary burden of public indebtedness, including guaranteed and on-lent loans. These projections should be shared with BD, NT, DMO and CB.	<ul style="list-style-type: none"> · Perform Portfolio Analysis on existing loans and new financing; · Perform Debt Sustainability Analysis on regular basis; · Performs an Analysis of the Total Stock of Domestic and External Public Debt and its debt flows in specific regular periods; · Perform Other Kinds of Analysis depending on Government's needs and strategy; 	Provides elements to the Senior management of MOF for a Substantive Feedback to EBDM in order to evaluate the global macroeconomic debt strategy and, eventually, allow EBDM to amend it.	Provides debt information corresponding to Structure of the Indebtedness with each of the creditors and debtors, in particular, evaluating the debt composition on currencies and interest rates. The currency structure of foreign debt is useful for application of ALM strategies in coordination with CB strategies for managing foreign reserves.	Provides Statistics in Terms of Economic Indicators that will help to evaluate the level of indebtedness, for example in terms of the ratios of the total stock of debt in relation to the GDP, or the debt service ratio and other debt indicators; and makes available by publishing, or through Website, the global and sectoral analysis of the Public Indebtedness, together with statistical tables that would be presented in Statistical Bulletins or Reports with a periodic publication on the Government's Public Debt situation. The Bulletins and the Reports would follow international agreed standards.
Risk Analysis Function: Minimise Cost and Risk				
Domestic Debt	External Debt	Guarantees	On-lending	Government Lending
Implement Risk Analysis and Risk Benchmarks between cost and risk for Domestic Public Debt by DMO and NT supported by CB.	DMO in coordination with CB will implement Risk Analysis and Risk Benchmarks between cost and risk for the External Public Debt. DMO will undertake debt sustainability analysis at least twice a year.	DMO will strengthen its Guarantees Risk and Risk Analysis in order to evaluate the risk of guaranteeing domestic enterprises borrowing and in order to provide the basis for charging a Guarantee Prime to the beneficiary in order to cover the evaluation costs and the risk incurred. MOF-DMO is the sole institution authorised to provide guarantees.	The Guarantees Risk Analysis function will also be in charge of evaluating the risk of on-lending to domestic enterprises and of providing the basis for charging a Spread Over the Base Rate to the beneficiary in order to cover the evaluation costs and the risk incurred. MOF-DMO is the sole institution authorised to on-lent resources.	<ul style="list-style-type: none"> · The Guarantees Risk Analysis function will also be in charge of evaluating the risk of lending to domestic enterprises and of providing the basis for charging a Spread Over the Base Rate to the beneficiary in order to cover the evaluation costs and the risk incurred. MOF-DMO is the sole institution authorised to lend Government's resources.

Front Office			
Issuing/Negotiation Function: Securities, Loans and Restructuring Agreements			
Borrowing on Behalf of the Government	Funding Prospects	Liasing	Domestic Debt Issuance
MOF, trough DMO, is the sole authorised ministry or agency of the Government for Signing Foreign Loans and/or Grants on behalf of the country.	Evaluates Funding Prospects, together with their impact on the debt portfolio in terms of compliance with the approved strategy, taking into consideration the technical, financial and legal terms and conditionalities of the funding proposals.	Liaising with the country's creditors, donors and development partners, as well as with domestic investors and domestic market makers.	DMO, in coordination with the CB, is the sole authorised body to issue domestic debt on behalf of the Central Government.
Market Making Function: Government Securities Trading and Market Development			
Securities Market Regulation	Market Infrastructure	Strengthening the Demand	Developing the Supply
Implementing the Securities Market Regulation framework decided by EBDM, i.e. implementing the legal framework for securities issuance; developing the regulatory environment to foster market development and enable sound supervisory practices to be enforced; introducing appropriate accounting, auditing and financial disclosure for the financial sector reporting.	Creating a Market Infrastructure introducing trading arrangements suitable for the size of the market, including efficient and safe custody, clearing and settlement procedures; encouraging the development of a system of market-makers to enable buyers and sellers to transact efficiently at prices reflecting a fair value; removing any tax or other regulatory impediment that would hamper trading in government securities; fostering, at a later stage, the scope for other money market and risk management instruments, such as repos and interest rates futures and swaps.	·Strengthening the Demand for government securities removing regulatory and fiscal distortions; eliminating below-market-rate funding through captive investor sources; implementing appropriate rules and regulatory regime affecting participation of foreign investors in the domestic market.	Developing the Supply of government securities establishing clear objectives for securities issuance and debt management; developing basic projections of the government liquidity needs; creating safe and efficient channels for the distribution of securities lowering transaction costs; progressively extending the maturity of government securities; consolidating the number of debt issues and creating standardised securities with conventional maturities; implementing a predictable debt operations, i.e. with pre-announced issuance calendars and disclosure of funding needs and auctions outcomes.