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Managing Public Debt: Formulating Strategies and Strengthening Institutional Capacity

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ACRONYMS

ADB	Asian Development Bank
AfDB	African Development Bank
AFR	African Department (Fund), African Region (Bank)
AFRITAC	African Technical Assistance Center
AMF	Arab Monetary Fund
AT	MTDS Analytical Tool
BEAC	Bank of Central African States
BDM	Banking and Debt Management Department (Bank)
CB	Central Bank
COMSEC	Commonwealth Secretariat
CEMAC	Economic and Monetary Community of Central Africa
CEMLA	Regional Association of Latin American and Caribbean Central Banks
CMAC	Central American Monetary Council
DECDG	Development Economics Data Group (Bank)
DeMPA	Debt Management Performance Assessment
DMF	Debt Management Facility
DMFAS	Debt Management Financial and Analysis System (UNCTAD)
DRI	Debt Relief International
DSA	Debt Sustainability Analysis
DSF	Debt Sustainability Framework
EAP	East Asia and Pacific Region (Bank)
ECA	Europe and Central Asia Region (Bank)
FAD	Fiscal Affairs Department (Fund)
FRM	Financial Resources Mobilization Department (Bank)
FSAP	Financial Sector Assessment Program
GCMSM	Global Capital Markets Securities Markets Department (Bank)
Gemloc	Global Emerging Markets Local Currency Bond
GFSR	Global Financial Stability Report
GN	MTDS Guidance Note
HIPC	Heavily Indebted Poor Countries
LAC	Latin America and Caribbean Region (Bank)
LIC	Low-Income Country
MCM	Monetary and Capital Markets Department (Fund)
MDRI	Multilateral Debt Relief Initiative
MEFMI	Macroeconomic Institute for Financial Management
MIC	Middle-Income Country
MoF	Ministry of Finance
MNA	Middle East and North Africa Region (Bank)
MTDS	Medium-term Debt Management Strategy
MTFF	Medium-term Fiscal Framework

PDM	Public Debt Management
PEFA	Public Expenditure and Financial Accountability
PRMED	Economic Policy and Debt Deptartment (Bank)
RTAC	Regional Technical Assistance Center
SAR	South Asia Region (SAR)
SPR	Strategy, Policy and Review Department (Fund)
TA	Technical Assistance
TAG	DMF Technical Advisory Group
TTF	Topical Trust Fund
UFR	Use of Fund Resources
UNCTAD	United Nations Conference on Trade and Development
WAIFEM	West African Institute for Financial and Economic Management

I. INTRODUCTION

1. **In May 2007, the World Bank and IMF Boards discussed the paper "Strengthening Debt Management Practices: Lessons from Country Experiences and Issues Going Forward" (IDA/SecM2007-0197, SecM2007-0141, SM/07/111).** In those discussions, the Boards of both institutions endorsed a public debt management (PDM) work program that was particularly focused on strengthening frameworks and capacity in low-income countries (LICs). This comprised three main elements: (i) develop a toolkit to help LICs formulate an effective Medium-Term Debt Management Strategy (MTDS) and apply it in 4–6 countries a year; (ii) undertake debt management performance assessments; and (iii) continue the provision of debt management and domestic market development technical assistance (TA) and advisory services to middle-income countries (MICs). This paper is a response to the Boards' request for an update on the development and implementation of that work program.

2. **The earlier paper noted the importance of improving debt management capacity in LICs, particularly where debt relief had created significant borrowing space.** This was presented in a context where countries needed access to significant additional funding if growth was to accelerate and the Millenium Development Goals were to be met.[1] Directors recognized that in many instances PDM capacity was still weak, especially in the area of formulating an effective MTDS that adequately evaluates the costs and risks of new borrowing. This situation raised the concern that poor borrowing choices would contribute to the re-accumulation of unsustainable debt, particularly in light of the new borrowing opportunities that were emerging. Since then, rapid changes in the macroeconomic and market environment have led to new financing and debt related pressure points that further underscore the need for well-functioning PDM frameworks and robust debt management strategies.

3. **This paper reports on progress in supporting efforts to strengthen the PDM framework in developing economies, with a special focus on the needs of LICs.[2]** It highlights lessons learned in the development and implementation of the toolkits designed for this purpose, and proposes a way forward for the Bank and the Fund to extend and deepen the program. The paper will also report on ongoing PDM work in MICs.

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[1] While the funding needs are large, many LICs indicate that the availability of concessional financing has not grown in line with demands. For example, as discussed at the World Bank-IMF Annual Meetings 2008 African Governors Roundtable on Emerging Financing and Debt Related Challenges.

[2] Within the Bank, the paper has been prepared by staff of the Economic Policy and Debt Department, Poverty Reduction and Economic Management, and the Banking and Debt Management Department, Treasury. Within the Fund, the paper has been prepared by staff of the Sovereign Asset and Liability Management Division, Monetary and Capital Markets Department.

II. THE FINANCIAL CRISIS: IMPLICATIONS FOR DEBT MANAGERS

4. **The current conjuncture is particularly challenging for debt managers.** The volatile and changing outlook for debt markets, creditors, and donors highlights the importance of developing and maintaining a diverse range of financing sources. In particular, the external nature of the shock highlights the importance of a resilient source of domestic savings to absorb shortfalls in external financing. Further, the higher volatility of interest rates, exchange rates, and debt flows exert additional pressure on debt managers to properly assess—and to the extent possible mitigate—the risks.

5. **Fiscal pressures have increased across the board, leading to increased financing needs at a time when conditions in financial markets are severely constrained**. Economic activity is slowing and widespread credit contraction is exacerbating the slowdown. In countries where fiscal space exists, compensating for this economic slowdown through expansionary fiscal policies, and/or providing support for the domestic financial system, will require additional government borrowing.

6. **Some MICs are better placed to meet these challenges as a result of past efforts to reduce vulnerabilities in their debt portfolio.** Indeed, several established borrowers have been able to successfully tap international capital markets this year (including Brazil, Colombia, Poland, and Slovenia), relieving some pressures on domestic markets, and helping secure the benefits of past gains in domestic market development. Similarly, the cash buffers that some have built up (e.g., Brazil) enabled debt managers to modify their issuance plans in 2008, in some instances even temporarily suspending issuance, and provide some scope to cover their 2009 financing needs. This illustrates the potential benefits that can accrue to countries through a sustained program to strengthen PDM and formulate robust debt management strategies closely coordinated with prudent macroeconomic policies.[3]

7. **Among the LICs, too, the financial crisis and global recession will also increase financing needs.**[4] The crisis is being transmitted to LICs primarily through real sector channels. Real export volumes of primary commodities will be hit hard as the global recession continues, adversely affecting government revenues in many LICs. Moreover, the massive decline in commodity prices over the last six months and their weak prospects in 2009 are likely to further contribute to additional pressure in their export sectors and deterioration of fiscal revenues. Remittances, a major source of external revenue in many

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[3] Indeed, improvements in PDM frameworks, strengthening of debt management strategies and resultant reduction in portfolio vulnerabilities have contributed to rating upgrades in several cases, including the recent upgrades of Brazil and Uruguay.

[4] See "Weathering the Storm: Economic Policy Responses to the Financial Crises", World Bank, November 2008 and "The Implications of the Global Financial Crisis for Low-Income Countries," International Monetary Fund, forthcoming.

LICs, are also expected to contract in 2009, while FDI flows are expected to fall. Other financial inflows, including bilateral aid, are also subject to downside risks. Domestic banks may be hit by second-round effects as the economic downturn increases the number of borrowers unable to service their loans. On the fiscal front, less buoyant tax revenues, combined with pressing expenditure needs, are likely to open up higher financing gaps in many LICs.

8. **LICs' options to fill these emerging financing gaps are constrained.** Some LICs, which have created fiscal space in recent years through prudent fiscal policies, or built up financial cushions by saving part of their booming revenues from commodity exports, may have scope for fiscal stimulus. In others, this scope is limited by debt sustainability and financing constraints, unless donors come forward with provision of additional support at concessional terms.

9. **This major challenge will require a re-evaluation of the existing debt management strategies in all countries, especially LICs.** The financing options that a number of LICs had available to them last year may now have very different cost and risk characteristics. Moreover, the scope to substitute external sources with domestic savings is also limited, particularly where domestic debt markets are underdeveloped and liquidity is constrained. This context highlights the urgent need to develop or put in place a robust PDM framework in LICs that helps promote long-term debt sustainability, and can adapt to a changing market environment.[5]

III. WORK PROGRAM LINKAGES

10. **Staffs have completed the development of a suite of tools that can be used to help strengthen PDM frameworks in LICs.** It is an integrated architecture, yet flexible enough so that each individual component can be used in isolation to respond to unique country demands. The architecture builds on the *Guidelines for Public Debt Management* (World Bank and IMF and, 2001, revised 2003) and the significant experience of Bank and Fund staff on debt issues, and in providing PDM capacity building and TA in client and member countries.

11. **The three main components of the work program architecture are:**

- *The MTDS toolkit.* This aims to provide technical and operational guidance on the process for developing a *plan* that the government intends to implement over the medium-term[6] in

[5] For example, in the current context, applying the MTDS framework will help identify, and quantify, the key risks involved in using whatever financing options are available, allowing them to be managed more effectively.

[6] The medium-term is typically defined as 3–5 years. This mitigates the risk that short-term expediency will dominate the choice of strategy.

order to achieve a *desired composition of the government debt portfolio.* It also captures the government's preferences with regard to the *cost-risk trade-off*, and is consistent with long-term debt sustainability.

- *The Debt Management Performance Assessment (DeMPA) toolkit*, which assesses the strengths and weaknesses in the institutional arrangements supporting PDM operations in a country.
- *Targeted capacity building and TA*, that can be applied when a country requests support in a specific area of PDM (e.g., drafting a legal framework to underpin borrowings and guarantees).

12. **This program has been developed to address the need for PDM reforms along both policy and institutional lines.** Institutional reforms should establish a consolidated and coordinated operational approach, while policy reforms should seek to determine objectives, instruments and targets that support the separation of PDM from fiscal and monetary policies.[7] Central to these reforms is the critical role of risk management in the formulation of a debt management strategy consistent with fiscal and debt sustainability. The toolkits complement each other, as well as the analysis provided by the debt sustainability framework (DSF) for LICs, in supporting overall PDM reform (see Box 1). Overall the work program complements other related capacity building and TA efforts, including financial sector TA related to the Financial Sector Assesment Program (FSAP) or other domestic debt market development initiatives (e.g., through the Gemloc Advisory Service Program). The specifics of both the MTDS and DeMPA toolkits are discussed in more detail below.

IV. Medium-Term Debt Management Strategy

A. Developing the Framework

13. **A joint Bank-Fund working group undertook the task of developing a framework to guide the formulation of an effective MTDS.[8]** A key element of this work was the development of operational guidance so that countries could meet their financing needs at low cost, subject to a prudent degree of risk, and consistent with maintaining debt sustainability. The framework was also intended to take due account of the specific macro challenges facing LICs and countries' specific degree of market development and access. In line with Directors' suggestion ("Strengthening Debt Management Practices: Lessons from Country Experiences and Issues Going Forward", IDA/SecM2007-0197, SecM2007-0141, SM/07/111), the framework has a strong focus on identifying and managing the risk exposure

[7] See for example discussion in the World Bank and IMF, 2001, "Guidelines for Public Debt Management", or Wheeler, Graeme, 2004, "Sound Practice in Government Debt Management", World Bank.

[8] The working group comprised Bank representatives from PRMED, BDM, and FRM, and Fund representatives from MCM, AFR, FAD, and SPR.

embedded in the debt portfolio, and enabling effective risk monitoring. It also helps to underscore the

Box 1. DeMPA, MTDS and the DSF: The Linkages

DeMPA, MTDS and DSF are all frameworks that address debt issues. DeMPA and MTDS are targeted debt management frameworks focused on how the composition of debt is managed, while the DSF focuses on the long-term sustainability of debt, which is influenced by both its level and composition. While each has its own particular focus, the approaches complement each other. In particular, the level and composition of debt are intrinsically inter-linked—changes in the composition will impact the servicing of the debt, potentially adding to the level, while the level of debt will influence the terms and availability of new borrowing, and consequently the feasible composition of the debt. These interdependencies imply that a PDM framework must be consistent with a fiscal framework that ensures public debt sustainability.

One way to concretely consider the specific linkages between the three approaches is to define sovereign debt management as the ***process of establishing and executing a strategy for managing the government's debt*** in order to raise the required amount of funding, achieve its risk and cost objectives, and to meet any other sovereign debt management goals the government may have set, such as developing and maintaining an efficient market for government securities.[1/]

In this context, the **DeMPA** assesses the effectiveness of the ***processes*** involved in sovereign debt management, highlighting their strengths and weaknesses. That is, it assesses all functions of debt management that will ultimately have an impact on the government's ability to effectively formulate and implement a credible MTDS. In this regard, DeMPA assessments can help support debt sustainability over the long term by highlighting areas in need of improvement so that a country achieves sound debt management practices.

The **MTDS** provides a framework for formulating and implementing a debt management strategy that raises the required amount of funding while achieving the government's risk and cost objectives, consistent with maintaining debt sustainability. It is primarily focused on ***determining the appropriate composition*** of the debt portfolio, taking into account the macroeconomic and market environment, and related vulnerabilities. It determines the government's plans to achieve its desired portfolio composition over the medium term (e.g., 3–5 years).

Finally, the **DSF** helps determine the ***level and terms of borrowing that can be sustained***. Long-term debt sustainability in a country depends on multiple factors such as real GDP growth, sound fiscal policy, and a consistent macroeconomic policy mix, including prudent debt management. Overall, its primary objective is to gauge if the ***level*** and terms of current and expected future borrowing, associated with a well-defined medium-term macroeconomic framework, may lead to future debt servicing difficulties over the long term.

1/ From the "*Guidelines for Public Debt Management*".

importance of domestic debt market development[9] by highlighting the potential benefits of developing a diverse range of financing sources. The process of designing and implementing an effective MTDS is described in a guidance note (GN).[10] In addition to the GN, a spreadsheet-based analytical tool (AT) has also been developed to help support the process of decision-making when formulating a strategy.[11]

14. **The framework has been shared with, and feedback obtained from, both TA partners and other debt management experts in the field.[12]** Staffs have also used the opportunities provided by various international debt management fora to outline the framework for a wide range of debt managers, and donors. That feedback, in addition to comments from country authorities where the framework has been applied, has been incorporated in the development of the toolkit.[13]

15. **Overall the framework is flexible in its application.** For example, even where borrowing choices remain limited, embedding such a systematic approach to decision-making can help strengthen the debt management function, enhance analytical capacity and help reduce operational risk. It also emphasizes the need for debt managers to assess, and take into account, the potential impact of their actions, and other developments, on the potential availability of different sources of financing.[14] The following two sections set out the key features of the GN and the AT.

B. The Guidance Note

16. **The GN provides practical guidance on the process of developing an effective MTDS, describing each step involved in detail (see Box 2).** A series of detailed appendices complements the description of the process. The GN also touches on related issues such as

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[9] The delivery of this work, and its contribution to domestic debt market development, has been recognized in the G–8 Action Plan for Developing Local Bond Markets in Emerging Market Economies and Developing Countries.

[10] The GN is attached in an accompanying volume.

[11] A user manual for the AT is being prepared; a preliminary version is available on request. This will be completed and posted on the Bank and Fund websites, along with the AT and the GN, by May 2009.

[12] Such as COMSEC, CEMLA, Debt Relief International, MEFMI, Pole Dette, WAIFEM and UNCTAD. See IDA/SecM2007-0197, SecM2007-0141, and SM/07/111, Annex IV for a description of the main debt management TA agencies.

[13] As with the DSF, it is anticipated that the toolkit will be kept under review. The toolkit will be further refined as implementation of the framework becomes more widespread.

[14] For example, the impact of issuing a sovereign bond on the international capital markets on future access to concessional borrowing (e.g., taking into account IDA's non-concessional borrowing policy).

dissemination, monitoring and implementation of the MTDS, providing for example, a template for public documentation of the strategy. While the GN is intended for the authorities responsible for debt management operations, it is also useful for a broader audience of monetary and fiscal policy makers.

Box 2. Steps in Determining an Effective MTDS

The key steps involved in determining an effective MTDS are:

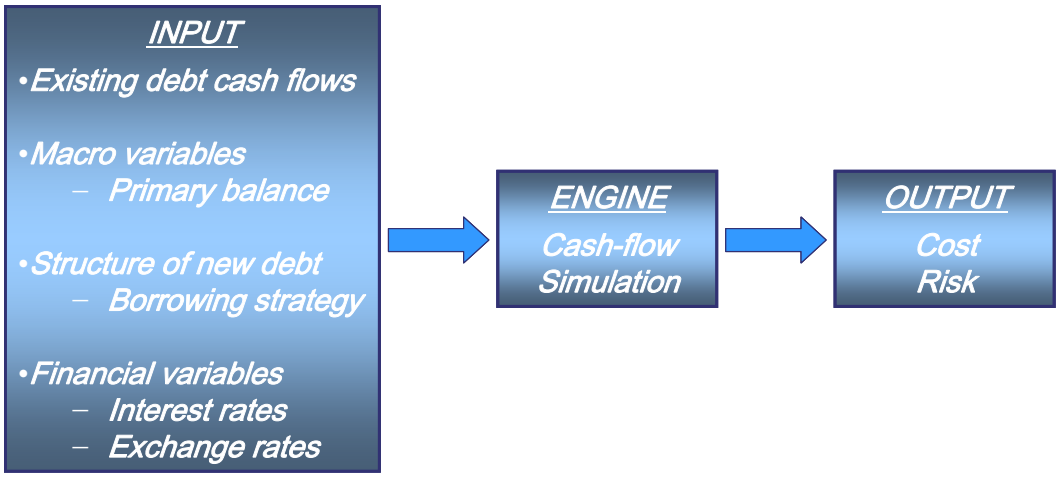
1. Identify the objectives for public debt management and scope of the MTDS.
2. Identify the current debt management strategy and analyze the cost and risk of the existing debt.
3. Identify and analyze potential funding sources, including cost and risk characteristics.
4. Identify baseline projections and risks in key policy areas—fiscal, monetary, external and market.
5. Review key longer-term structural factors.
6. Identify the cost-risk trade-offs, and assess and rank alternative strategies.
7. Review implications of candidate debt management strategies with fiscal and monetary policy authorities, and for market conditions.
8. Submit and secure agreement on the MTDS.

17. **By going through the process set out in the GN, the cost-risk trade-off of different borrowing strategies is evaluated within a medium-term context.** Setting clear medium-term strategic goals will help debt managers make informed choices and avoid poor decisions made solely on the basis of cost, or for the sake of short-term expediency. The process helps identify, monitor and manage key financial risks. It also explicitly requires coordination with fiscal and monetary management, helping identify the constraints that limit the debt manager's choices, as well as the steps to ease those constraints. Finally, by encouraging transparency, this approach can help facilitate the relationship with external investors, rating agencies and others in the financial markets, and consequently support domestic debt market development.

C. The Cost-Risk Analytic Tool

18. **The purpose of the Analytical Tool (AT) is to provide quantitative analysis to guide the MTDS decision-making process.** It has a spreadsheet-based structure developed on the basis of scenario-analysis models typically used by debt management offices, projecting cash flows as a function of: (i) existing debt; (ii) macroeconomic assumptions, e.g., primary balances; (iii) new borrowing strategies; and (iv) financial variables, including interest rates and exchange rates (see Figure 1).

Figure 1. The AT Tool



19. **The AT facilitates the quantification of costs and risks for each strategy under consideration.** By illustrating the consequences of following a particular strategy under various scenarios for macroeconomic and market variables, it gives insight into the key vulnerabilities embedded in the specific strategy under consideration. The standard output, generated by the AT, focuses on two specific cost measures: annual interest payment-to-GDP and the nominal stock of debt-to-GDP. The risk is measured in terms of the maximum increase in cost, given a particular macro or market scenario, relative to the baseline.[15] However, the AT also caculates a number of other cost and risk indicators, allowing countries to focus on those measures most relevant for their needs, and outputs can be tailored as desired.[16]

20. **Furthermore, the AT enables the comparison of alternative strategies, by allowing their different cost-risk combinations to be mapped.** For example, see the illustration in Appendix II. This mapping will highlight the point on the cost-risk trade-off where costs cannot be reduced further without incurring higher risks, and similarly where risk cannot be reduced without increasing costs. The ultimate choice of strategy will therefore depend on the authorities' tolerance for risk—a decision typically taken at the highest level. Additional factors, including macroeconomic constraints and domestic debt

[15] The AT employs a deterministic rather than a stochastic framework for measuring risk. This need for a deterministic approach is largely driven by the severe data limitations in LICs. Consequently, it was decided that risk would be more reasonably captured by looking at the change in baseline costs resulting from the application of various stress tests.

[16] Such as interest costs/revenues, debt service/exports, amortization profiles, average time to maturity, and share of variable rate debt. These indicators could be compared to the equivalent output from the LIC DSF to gauge the debt sustainability implications. The practical links between the MTDS framework and the DSF are discussed more fully in the GN.

market development objectives, may also affect the preferred strategy choice. It is worth noting that often the trade-off is not always straightforward. For example, using one indicator, one strategy may clearly dominate the rest; however, once the other indicator is assessed, the preferred strategy may be less clear. This clearly shows why determining the appropriate strategy requires significant judgment, and is not a purely formulaic exercise.

D. Preliminary Results from Early Application of the Framework

21. **The MTDS toolkit was developed partly on the basis of experience gained in its application in five countries, namely Bangladesh, Ghana, Cameroon, Nicaragua, and Moldova.** The countries were chosen on the basis of expressed demand, their regional diversity, diversity with respect to financing choices and degree of domestic debt market development. Moreover, they belong to a group of countries where the Bank or Fund had already been engaged in the provision of debt management TA.

22. **The principal objective was to help countries build the capacity to systematically identify the trade-offs involved in determing a new, or modify an existing, MTDS.** Mission teams [17] discussed the key elements of the toolkit with the authorities, demonstrating how a specific set of strategies might be assessed in practice, given macroeconomic and pricing assumptions. They also sensitized the authorities to the process of formulating an MTDS, so that, going forward, the authorities would be better able to integrate debt management and macroeconomic issues. This would facilitate a stronger and more active dialogue with Bank and Fund country teams, and the public in general. However, the work undertaken did not entail identifying a prescriptive or single strategy (see Appendix II).

23. **This early country experience confirmed the benefits from the development of such a framework at the country level**. As anticipated in "Strengthening Debt Management Practices: Lessons from Country Experiences and Issues Going Forward" (IDA/SecM2007-0197, SecM2007-0141 and SM/07/111), key vulnerabilities in the macro-economic environment present significant challenges. Most countries were exposed to external shocks, a vulnerability that was aggravated by a dependency on aid flows. In addition, lack of financing flexibility, largely as a consequence of limitations in domestic financing sources, reduced countries capacity to absorb shocks, including volatility in aid flows, adding volatility to expenditures and growth. This exposure to external shocks, including the current crisis, implies a risk of exchange rate adjustment, a key source of risk to the debt portfolio.

24. **Countries typically had an informal debt management strategy in place.** While generally based on concepts of debt sustainability, overall, these strategies lacked a firm

[17] Teams typical included a combination of Bank and Fund staff and a member from other debt management TA providers. UNCTAD joined the Bangladesh team, while COMSEC joined in Ghana. A debt management expert at the Central AFRITAC participated in Cameroon.

analytical underpinning. In addition, the treatment of the debt portfolio was not comprehensive, with external and domestic debt dealt with separately. Finally, in several cases, the authorities had a conflict between an objective of reducing the stock of domestic debt, while also developing the domestic debt market.

25. **The typical strategy was to maximize concessional debt.**[18] Maintaining a strategy of maximizing concessional financing would continue to minimize debt servicing costs, fostering greater debt sustainability. However, it does result in significant exchange rate risk. Following that strategy also meant that domestic debt market development was neglected, and, in general, domestic debt had played the role of a fiscal anchor with respect to satisfying the conditions attached to various donor programs.

26. **While reducing the exchange rate exposure of the total debt portfolio was desirable in most cases,** the scope for a significant substitution of domestic for external debt was limited by the general shallowness of domestic markets. In addition, where capital accounts were open, and the authorities were committed to an exchange rate anchor, the short maturity of domestic debt implied an additional source of rollover risk. However, this risk was relatively small in those countries where domestic debt was low, and/or fiscal surpluses had been generated. In some instances, where the presence of nonresident investors had supported an extension of maturity in the domestic market, the associated rollover risk was mitigated by restricting their investments to longer tenors. Going forward, to contain risks to debt sustainability, such a strategy would need to be accompanied by appropriate macroeconomic policies to contain domestic interest rates.

27. **This strategy of maximizing concessional debt has also constrained the scope for a medium-term expenditure framework to drive expenditure choices.** This determination of borrowing choices, primarily on the basis of the availability of specific concessional loans, limited the analysis of the full range of available financing, both external and domestic. The adoption of the MTDS framework would allow country authorities to consider the scope for financing expenditures using a wider range of instruments, rather than solely constraining the choice to a specific source of concessional loan. That would facilitate an untying of aid, and would support efforts to develop more robust medium-term fiscal and budget frameworks from which expenditure priorities can be determined independent of the financing.[19]

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[18] This is in line with Boards' discussion of "Applying the Debt Sustainability Framework for Low-Income Countries Post Debt Relief," November 2006, where Directors reiterated that concessional flows remain the most appropriate source of external finance for LICs. While such a strategy might not appear consistent with plans to develop the domestic debt market, it might be possible to pursue both objectives. In some cases, however, this could lead to reserves accumulation and/or overfinanced budgets.

[19] This would not preclude countries with limited capacity to obtain assistance in specifying, assessing, and implementing projects.

28. **Taking a more strategic approach to determining financing choices will also necessitate more integration of debt management strategy formulation and broader macroeconomic management.** In many of the countries, vulnerabilities to exchange rate and potential budget volatility suggested the need to take account of fiscal and foreign exchange reserves buffers in formulating an MTDS. For example, while tapping non-resident investors in local markets was a potential avenue for mobilizing foreign currency and possibly extending the maturity of domestic debt, some allowance for that should be taken into account when determining reserves adequacy.

29. **The lack of a formal debt management strategy that takes a total portfolio perspective also appears to have had adverse institutional consequences**, with borrowing decisions often made outside the debt management unit without explicit vetting. In addition, in most cases, effective implementation of an MTDS would require improvements in government cash management, and monetary operations and liquidity management.

30. **Addressing the various institutional weaknesses identified in the application of the framework will need continued TA.** For example, some countries lacked adequate debt databases and information systems, impeding their ability to formulate an MTDS. Where a DeMPA was applied alongside the MTDS framework, this provided the authorities with a thorough diagnostic to identify institutional weaknesses and priorities for reform.

V. Debt Management Performance Assessment (DeMPA)

A. The DeMPA Framework

31. **Directors supported the proposal to complement the MTDS capacity building work with the application of the DeMPA framework.** DeMPA provides a standard to measure performance by assessing the strengths and weaknesses in country PDM operations. This assessment can form the basis for the design of an actionable reform program, thereby helping harmonize donor support in this area. It also permits country authorities, international donors and creditors to monitor progress in strengthening PDM operations in a country over time.

32. **Development of the framework is complete.** The framework was developed under the auspices of the Bank's Debt Management Technical Working Group,[20] and through a broad collaborative effort with country officials, TA providers, international standard setting agencies and related stakeholders.[21] As with the MTDS framework, development also

[20] The members are from the Bank departments (PRMED, BDM, DECDG, and GCMSM), the regions (AFR, EAP, ECA, LAC, MNA, and SAR) and the IMF (MCM, FAD, and SPR).

[21] Inputs provided by the IMF; Debt Relief International (DRI); the DMFAS Programme of the United Nations Conference on Trade and Development (UNCTAD); the Debt Management Division of the Commonwealth Secretariat; the United States Department of Treasury - Office of Technical Assistance; and international

(continued)

benefited from experiences and feedback gained through field testing in Albania, Guyana, The Gambia, Malawi, and Nicaragua. Valuable comments received at seminars and outreach events were also incorporated.[22]

33. **DeMPA is a comprehensive methodology for assessing PDM performance.** It covers all six core functions of PDM (see Box 3): (1) governance and strategy development; (2) coordination with macroeconomic policies; (3) borrowing and related financing activities; (4) cash flow forecasting and cash balance management; (5) operational risk management; and (6) debt records and reporting.[23] Its scope is central government PDM and closely related functions such as issuance of loan guarantees, on-lending and cash flow forecasting and cash balance management. However, in line with international standards on debt reporting, the debt reporting indicator requires that the central government report both central government and total nonfinancial public sector debt and loan guarantees. It is modeled after the Public Expenditure and Financial Accountability (PEFA) indicators.

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standard setting bodies (e.g., OECD, PEFA and the Task Force on Finance Statistics) enhanced the applicability of the tool.

[22] These included participants at the First Annual Organisation for Economic Co-operation and Development (OECD) Forum on African Public Debt Management, Amsterdam, December 2006; the Fifth Inter-Regional Debt Managers Seminar, London, September 2007; UNCTAD's Sixth Debt Management Conference, Geneva, November 2007; the Inter-Agency Task Force on Finance Statistics, March 2007; and the IMF, October 2007. Based on the past year's operational application and suggestions received at training/outreach events from inter alia, Crown Agents, MEFMI, WAIFEM, Pole Dette, CEMLA, ADB, and AfDB, were considered in the latest amendment the DeMPA indicators in November 2008 in line with the DeMPA Amendments Policy (http://go.worldbank.org/5AHEF2KF70).

[23] The tool is attached in an accompanying volume and is complemented by a Guide that provides supplemental rationale and information on each indicator to assist users (http://go.worldbank.org/5AHEF2KF70).

Box 3. Debt Management Performance Assessment Indicators (DPIs)

	Governance and Strategy Development
DPI-1	Legal Framework
DPI-2	Managerial Structure
DPI-3	Debt Management Strategy
DPI-4	Evaluation of Debt Management Operations
DPI-5	Audit
	Coordination with Macroeconomic Policies
DPI-6	Coordination with Fiscal Policy
DPI-7	Coordination with Monetary Policy
	Borrowing and Related Financing Activities
DPI-8	Domestic Borrowing
DPI-9	External Borrowing
DPI-10	Loan Guarantees, On-lending and Derivatives
	Cash Flow Forecasting and Cash Balance Management
DPI-11	Cash Flow Forecasting and Cash Balance Management
	Operational Risk Management
DPI-12	Debt Administration and Data Security
DPI-13	Segregation of Duties, Staff Capacity and Business Continuity
	Debt Records and Reporting
DPI-14	Debt Records
DPI-15	Debt Reporting

34. **DeMPA provides a detailed assessment across these 15 indicators.** PDM operations are scored across a number of different dimensions under each indicator, adopting a scoring methodology similar to PEFA. This will allow country authorities to monitor improvements over time and benchmark their performance relative to other countries. An important difference relative to PEFA is the emphasis placed on meeting a minimum requirement that is considered a necessary condition for effective performance, i.e., achieving a C score for a specific dimension. Failure to meet that minimum requirement signals a serious deficiency in performance, indicating a priority area for reform. The dimensions of each indicator provide a level of detail that can form the basis for the design of an actionable reform plan.

35. **A key value of the assessment is the qualitative description that justifies each score.** This is captured in the assessment report. By highlighting, in detail, the specific strengths and weaknesses, the report enables the development of a prioritized PDM reform

plan. However, the report stops short of making recommendations for reforms or setting out an action plan as these activities require careful follow-up.

36. **The assessment is discussed with the country authorities, but is not a negotiated document.** Where the authorities' views differ from that of the assessment, the divergence of views is reflected in the report. It is a document owned by the authorities, to be used to help improve PDM operations as they determine. In this connection, it is at the country's discretion whether or not to disclose the assessment report.

B. Preliminary Results from Early Application

37. **After piloting the DeMPA indicators in 5 countries, 18 country assessments have been undertaken to date.** As the product is demand driven, there is no pre-defined target list of countries. However, assessments have been completed in a diverse set of countries, including those at differing stages of the HIPC process (Table 1). It has also been undertaken in MICs. This experience shows that, while the DeMPA indicators were designed for LICs, they are an equally useful diagnostic for the MIC context. In several instances, the assessments were carried out in partnership with regional TA providers. This collaboration is likely to increase significantly going forward.

Table 1. DeMPA Assessments and Country Characteristics

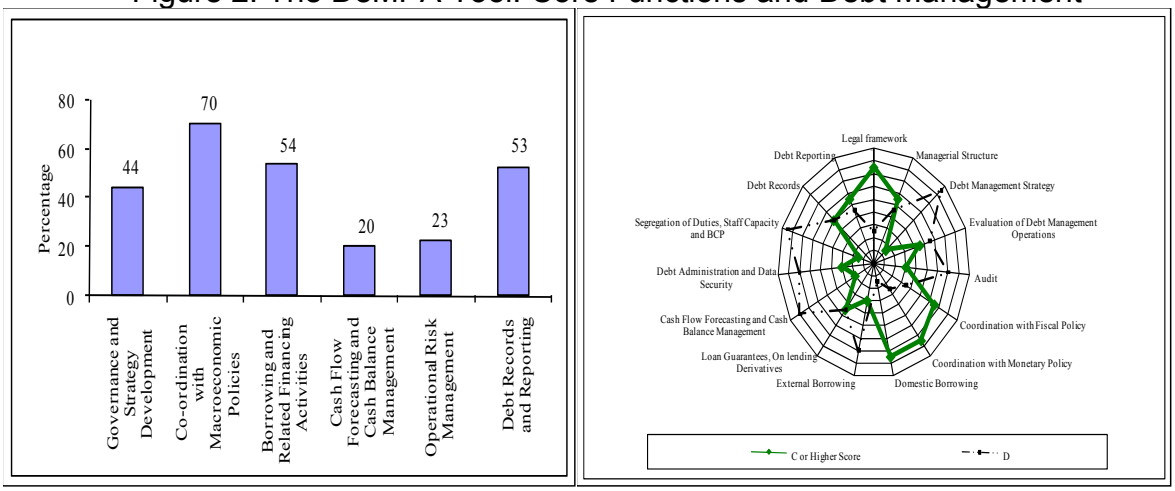
Country	2007 GNI Per Capita (Atlas Method, current US$)	HIPC Status	Country	2007 GNI Per Capita (Atlas Method, current US$)	HIPC Status
Africa (16)			*East Asia & Pacific (1)*		
Burkina Faso**	$430	Post-CP	Mongolia	$1,290	NA
Cameroon**	$1,050	Post-CP			
CAR	$380	Interim Period	*Europe and Central Asia (2)*		
Gambia*	$320	Post-CP			
Ghana	$590	Post-CP	Albania*	$3,290	NA
Guinea**	$400	Interim Period	Moldova	$1,260	NA
Malawi*	$250	Post-CP			
Mali**	$500	Post-CP	*Latin America & Caribbean (3)*		
Mozambique	$320	Post-CP			
Nigeria**	$930	NA	Guyana*	$1,300	Post-CP
Republic of Congo**	$1,540	Interim Period	Honduras**	$1,600	Post-CP
Rwanda**	$320	Post-CP	Nicaragua*	$980	Post-CP
Sao Tome and Principe	$870	Post-CP			
Swaziland**	$2,580	NA	*South Asia (1)*		
Togo	$360	Interim Period			
Zambia	$800	Post-CP	Bangladesh	$470	NA

Source: World Bank WDI Database and DeMPA assesment reports.
Notes: * Pilot countries. ** Joint missions with other debt management technical assistance providers. NA = Not Applicable.

38. **Early results from DeMPA assessment reports are helping to identify common priority areas for debt management reform across countries.** Across the six core functions, operational risk management, and cash flow forecasting and management, appeared as key weak spots (Figure 2, panel 1). Less than half of the sample complied with minimum requirements for sound governance and strategy development. Countries appeared to do better in the areas of coordination with macroeconomic policies and the recording and

reporting of public debt data, while roughly half scored a C or higher with respect to borrowing and related financing activities.[24]

Figure 2. The DeMPA Tool: Core Functions and Debt Management



Note: Data in the charts relates to twenty countries for which the reports have been finalized.

39. **A closer look at the 15 individual indicators and their associated dimensions provides a better understanding of the broad characteristics (Figure 3, panel 2).** For example, underlying the weak operational risk management results is the absence in the majority of countries of (i) business continuity planning; (ii) strong operational controls; and (iii) well-articulated responsibilities for staff. The poor performance under the sound governance and debt management strategy development function can be explained by the fact that very few LICs in the sample have debt management strategies that could be implemented, coupled with ineffective accountability frameworks, evidenced by the lack of regular performance audits. These weaknesses outweigh the positive fact that the majority of countries have effective legal frameworks that underpin borrowing. In the area of cash flow forecasting and cash balance management, performance is impeded by weak forecasting of the aggregate cash balances in government bank accounts (see Appendix III).

40. **Of particular concern is the weakness observed in the area of external borrowing.** Less than one-third of the countries in the sample met minimum requirements in

[24] The dimensions under the indicator "coordination with macroeconomic policies" reveal a sample bias that is likely to unwind with future assessments. A number of the countries in the current sample are part of either the Economic and Monetary Community of Central Africa or the West African Economic and Monetary Union; as such the governments are bound by strict legislation that limits the availability of direct resources from the regional central banks. Going forward we expect fewer countries in the sample to be part of currency unions with such legislation. Similarly, we expect that the ratings for the "coordination with fiscal policy" will fall due to an amendment to this indicator. Staff has strengthened the minimum requirement from simply having access to key fiscal variables to having undertaken a DSA within the last three years.

this area. Scores on the three dimensions of this indicator show that there is: (i) a low degree of assessment of the most beneficial/cost-effective borrowing terms and conditions; and (ii) a general absence of documented procedures for borrowing in foreign markets. These findings are particularly worrying because a number of the countries in the sample have expressed their interest in issuing in international capital markets once the financial turbulence settles.

41. **The results also show that very few LICs have sound debt management strategies.** In line with the experience in the MTDS pilots, while every country in the sample had a strategy, it was generally unpublished, did not have approval of the highest policy makers and was not supported by a decision making process that would ensure its regular production and updating. Moreover, most strategies were not underpinned by sound cost-risk analytics.

VI. Overall Lessons

42. **Country authorities and TA partners have expressed support for the Bank and Fund's emphasis on supporting PDM reform efforts.** They considered each toolkit valuable on its own merits, although they did consistently request additional explanation on how the various toolkits in this area, namely, DSF, MTDS, and DeMPA, are interrelated. In this connection, they encouraged staff to provide more training on the toolkits going forward. In addition, they strongly supported the public good nature of the toolkits, but noted that other providers of TA would need to be trained so that they could also support this reform effort.

43. **As the AT has been developed, efforts have been made to make it more user friendly.** This has been done in part by providing a user manual and reducing some complexity. Still, while welcoming the usefulness of the tool, many users have continued to comment on its complexity. Going forward, staff intend to make improvements in this area.[25]

44. **Support for the usefulness of the toolkits was echoed by other providers of debt management TA.** TA partners have indicated their willingness to adopt both the DeMPA and the MTDS frameworks in their own work programs. Regional partners, such as MEFMI, have already made provision for training on the frameworks to be incorporated in their work programs for the coming year. Both UNCTAD and COMSEC have indicated their intention to develop standard reports that will generate some of the required data input for the MTDS analysis.

45. **The MTDS toolkit has proved useful in providing a coherent framework and the required analytical underpinnings for debt management strategy formulation.** It has proved to be flexible in its application, being able to deal with the unique debt structures, and

[25] As with the DSF templates, the AT, and its accompanying user manual, will be revised further in light of ongoing country experience.

to partially adjust for various indirect costs or constraints.[26] The toolkit has been effective in underscoring the importance of a coordinated process for formulating a strategy, and helping to clearly and explicitly document the debt strategy trade-offs, which could enhance the accountability and transparency of country authorities' actions.

46. **Staffs were able to demonstrate how the MTDS toolkit would enable countries take a total portfolio approach to determining their financing choices.** Such an approach would allow country authorities to identify whether more elaborate debt strategies, which go beyond the sole consideration of concessional financing, would generate a profile of interest costs that would continue to be consistent with debt sustainability, given improved macroeconomic conditions, greater macroeconomic and PDM capacity, and a more diverse range of financing options.[27] For example, different combinations of concessional, quasi-concessional and market debt could be tested to determine a possible ceiling on, say, where average interest costs would still be consistent with debt sustainability. This approach would also eliminate a need to calculate the net present values of specific loans and their implied grant elements, so that an analysis of debt sustainability would be similar to that undertaken in more advanced countries. Facilitating the development and implementation of such strategies would also help enhance the effectiveness of medium-term expenditure and fiscal frameworks, enabling the authorities to set expenditure priorities independent of financing sources.

47. **The MTDS toolkit also proved useful in estimating the costs of following an explicit domestic market development strategy.** Although the broader benefits of a deeper domestic market could not be quantified, the AT could help quantify the costs of following a specific issuance plan, designed to promote the development of the debt market. This would allow authorities to more fully assess the potential risks to debt sustainability of developing the market by increasing domestic debt.

48. **The DeMPA application was successful in sensitizing policy makers to the comprehensiveness of sound debt management practice.** Often, there is an impression that debt management is primarily about debt data recording and reporting, and it is not considered a separate policy with its own objectives and targets. This, in part, explains why

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[26] For example, where borrowing choices are constrained by existing, pre-committed loans. Another example is explicitly modeling the implications of an LIC issuing sovereign debt on international capital markets.

[27] Such strategies are envisaged under the proposed amendments to Fund policies discussed in "Changing Patterns of Low-Income Country Financing and Implications for Fund Policies on External Financing and Debt", March 2009. It could also help demonstrate that a specific proposal to use non-concessional loans would be consistent with IDA's Non-Concessional Borrowing Policy. See IDA (2006b). "IDA Countries and Non-Concessional Debt: Dealing with the 'Free Rider' Problem in IDA14 Grant Recipient and Post-MDRI Countries." IDA/R2006-0137, July.

some of the key analytical aspects of PDM operations[28] have been found to be weak or non-existent. The application of both toolkits also had the effect of emphasizing the risk that inconsistencies could emerge in the government's overall policy mix when PDM is not given a separate policy mandate underpinned by an effective MTDS.

49. **Country demand for MTDS and DeMPA follow-up is strong.** Although constrained so far by limited resources, staffs have undertaken follow-up activities in a variety of ways with those countries that have requested it. For instance, reform programs have been prepared in Albania, Ghana, and a preliminary sequencing done for Bangladesh. Specific follow-up MTDS missions are planned in Moldova and Ghana, while the resident debt management advisor at the Central AFRITAC is following up bilaterally some related issues in Cameroon. In Togo, DeMPA has been followed by a debt data recording and reporting systems upgrade, and related TA has been provided. Malawi's DeMPA assessment report was used in Bank country work for structuring lending operations, while Mozambique's was used to inform financial sector TA projects.

50. **These activities will need to be complemented by efforts to strengthen capacity in other areas,** such as public financial management, government cash management, and monetary operations. In addition, strengthening PDM is an integral part of a domestic debt market development program,[29] which in turn will allow governments to reduce costs and better manage risks in the public debt portfolio over time. To be most effective, these activities will need appropriate sequencing and to be coordinated with the PDM reform plan.

VII. Further Steps Towards Improving PDM Frameworks

51. **The lessons learned from the development and application of the MTDS and DeMPA highlight a continuing need to strengthen PDM frameworks**. This need becomes more acute in light of the fact that more advanced LICs may increase their reliance on non-concessional financing, given the scale of their investment needs and the potential reduction in access to concessional financing with increased income levels.[30] Addressing that need will require a sustained capacity building and TA effort, including in collaboration with external partners and Regional Technical Assistance Centers (RTACs). This section highlights the steps planned by staffs to undertake this effort.

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[28] Areas like cost-benefit analysis of new borrowing, the design and implementation of an MTDS, cash flow forecasting and cash balance management, and the publication of a debt statistical bulletin.

[29] That work requires close coordination of a wide range of stakeholders and covers a broad range of aspects from money, primary and secondary markets, the investor base, market infrastructure and regulation. See, for example, World Bank (2007) "Developing the Domestic Government Debt Market: From Diagnostics to Reform Implementation".

[30] See the August 1, 2008 Nouakchott Declaration on Financing for Development in Africa.

A. Continuing the Program of Assessments and Capacity Building in LICs

52. **The development phase of the MTDS toolkit is complete and country application underway, DeMPA implementation is in an advanced stage, and targeted capacity building and TA activities are set to continue.** Staffs propose to scale up all three activities going forward in partnership with external partners and RTACs**.**

53. **Staffs aim to apply the MTDS framework in 4–6 new countries and undertake up to 20 DeMPA assessments per year.** In addition, country work to develop reform programs and targeted TA on specific related topics will be undertaken. Efforts will be made to align these with the debt related work programs developed by the RTACs in order to avoid overlaps, ensure consistency, and availability of immediate technical support in PDM.[31] However, in FY10, Fund delivery may be constrained by other work demands arising from the current crisis.

54. **Delivery of this work will remain driven by country demand; thereby ensuring ownership and securing a clear commitment to follow-up**. Staffs will work with country and regional teams as the key channels for identifying potential candidates for DeMPA and MTDS, and to help determine the priority of delivery. It is envisaged that the ideal sequence of activities would be DeMPA, followed by MTDS, followed by development of a reform program, followed by other tailored TA to implement the reform program. However, staffs recognize that country requests may not neatly fit into this mould. Thus, flexibility and coordination of delivery, including through the Bank-Fund Coordination Meeting on Debt Management and Debt Markets[32] and through consultation with external partners and the RTACs, will be important. Staffs are in the process of putting in place a formal and rigorous review process to ensure that, as the program expands, the quality and consistency of work is maintained. This will be supported by embedding a formal feedback process with country authorities so that activities remain relevant. This country experience and feedback will enable staffs to keep these frameworks under review, and to update them as necessary.

55. **Ensuring that this work program improves debt management outcomes will require ongoing monitoring, and coordination with other Bank-Fund work.** PDM plays an important role in supporting and helping maintain macroeconomic stability, and supporting the development of domestic debt markets. Consequently, evaluating the effectiveness of PDM operations and monitoring implementation of reform plans could play a role in country work. For example, country teams should include a more specific discussion of the authorities' debt management strategy and whether it meets the standard set out in

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[31] These work programs are coordinated with HQ activities.

[32] This regular meeting, established early 2007, is an important mechanism to improve collaboration in the provision of TA and capacity building and advisory services, helping to address some of the concerns identified in the report of the external review committee on Bank–Fund collaboration, February 2007.

DeMPA and is in line with the approach set out in the MTDS framework. This could help identify candidates and priorities for capacity building activities, helping resource allocation decisions. Additionally, the regular (e.g., in intervals of approximately 3 years) application of the DeMPA tool in the same country can help monitor and evaluate debt management reform outcomes over time. This also helps to monitor the effective use of the resources that the Bank, the Fund and donors intend to use to support the work program (see sub-section below).

56. **Training activities will play an increasingly important role in the work program.** The delivery of capacity building and TA activities will need to be supported by training of country officials, including in collaboration with external partners, and a number of training activities are already in the calendar.[33] For example, the Bank has planned three events in collaboration with the Joint Vienna Institute, while the Fund is planning a workshop in collaboration with East AFRITAC, and more generally to integrate MTDS modules in its regular training and workshops with the IMF Institute. In addition, two DeMPA training events, one in collaboration with the East Caribbean Central Bank, are planned.[34]

57. **These activities will be complemented by various outreach activities.** For example, staffs are planning to arrange a roundtable to discuss with policy makers debt strategy related challenges facing LICs. Countries will continue to be invited to participate in regular fora, such as the Sovereign Debt Management Forum (see paragraph 69 below). These complement ongoing efforts by the Bank and Fund to disseminate and train country officials in debt sustainability analysis and debt statistics.

58. **Developing a "training of trainers" program will be important to ensure that the DeMPA and MTDS frameworks become established public goods.** Staffs are planning to develop such a program for the MTDS framework. Experience with such a program for the DeMPA indicates that it is an effective way to help establish the toolkits as recognized standards for PDM capacity building and TA. Importantly, it has also facilitated the inclusion of partners in DeMPA missions, reducing the resource burden, and enhancing partners' engagement with the delivery of follow-up activities. Several partners have already indicated their appetite for participating and organizing such programs.[35]

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[33] The Bank has also created a database of providers of training in PDM, centralizing training information that can be useful for public debt managers, available at http://treasury.worldbank.org/Services/Public+Debt+Management/Resources/DatabaseofProvidersofTrainingonPDM.html.

[34] This follows three other trainings on the DeMPA: one training for trainers in collaboration with UNCTAD at Geneva, and two Regional trainings for client countries in collaboration with WAIFEM at Abuja and MEFMI at Nairobi.

[35] For example, Commonwealth Secretariat has requested training for its staff on the framework, while MEFMI has scheduled a specific course for its fellows.

59. **More generally, coordination with external partners and other multilateral development banks will be necessary to effectively scale up these capacity building activities.** Their support will be needed to provide follow-up in their respective areas of expertise, including for example, support for country authorities in the area of debt recording so as to generate the necessary inputs into the MTDS AT. In addition, given the scale of follow-up activities needed, their participation will be needed to relieve the resource constraint. A detailed reform program, developed and adopted by country authorities, will help coordinate and maximize the synergies across all TA and capacity building providers.[36]

B. Resources for Implementation

60. **To support these activities, the Bank has recently launched a multi-donor trust fund—Debt Management Facility (DMF) for Low-Income Countries (LICs).** The Fund is represented on the DMF Technical Advisory Group (TAG). The DMF is a multi-donor trust fund—to date commitments are $12 million over 4 years—established to support the scaling up and accelerated implementation of the Bank's debt management work program in LICs. The objective of the facility is to strengthen debt management capacity and institutions in developing countries through:

- Systematic application of the DeMPA tool;
- Application of the MTDS framework;
- Design of debt management reform programs; and
- Promotion of learning and knowledge generation via an extensive program of training and outreach, including a Debt Management Practitioners' Program.

61. **The funding of the DMF will leverage the Bank budget that has already been programmed for these capacity building activities.** Additional Bank budget was provided for the debt management work program for three fiscal years beginning in FY08. The development and implementation of the DeMPA and the MTDS achieved to date has benefited from these funds. For the program of activities scheduled going forward, an extension for an additional three fiscal years would help ensure that these activities are mainstreamed into Bank country team operations.

62. **DMF funding allows Bank staff to engage in complementary activities to DeMPA and MTDS.** A key follow-up activity to the DeMPA assessments will be working with countries to develop a debt management reform plan to help strengthen the weaknesses identified. Knowledge management, training and research will also figure prominently in the DMF work program activities. Most DMF activities will be delivered in cooperation with a

[36] See, IDA/SecM2007-0197, SecM2007-0141 and SM/07/111, Annex IV for a description of the main debt management TA agencies.

number of "implementing partners" that will receive DMF grants.[37] However, DMF is an open platform that allows for other partners to participate in the future. Effective coordination among the Bank, the Fund and the implementing partners will be supported by the TAG. The TAG will comprise non-Bank experts from each of the implementing partners.

63. **In order to complete the PDM architecture, the Fund is working to put in place a Topical Trust Fund (TTF) that will be complementary to the World Bank's DMF.[38]** The Fund's TTF will provide assistance to help LICs formulate and implement sustainable debt strategies. The Fund's TTF will have two pillars: (i) an analytical pillar, anchored around the DSF and MTDS, which will help countries determine the level, terms and composition of borrowing that can be sustained over time; (ii) an infrastructural pillar, which will then provide technical assistance that will support the implementation of a country's preferred MTDS, i.e. put in place the necessary institutions and infrastructure to deepen domestic debt markets or facilitate access to international capital markets.

64. **To ensure flexibility and comprehensiveness, TA delivery under the Fund TTF will take place through a set of modules designed to cover the entire spectrum of debt strategy issues, from formulation to implementation.** The envisaged modules are expected to train country officials in DSF, provide assistance in formulating MTDS, strengthen fiscal and cash management linkages relating to debt management, provide analytical tools to better assess risks in public debt portfolios, develop and deepen domestic public debt markets, and advise on accessing international capital markets. While a frontier LIC, with reasonably effective debt management capacity and a debt strategy in place, may just need help to issue sovereign bonds in the international capital markets, a post-MDRI low-capacity country might need to focus on more basic modules to entrench the concept of debt sustainability. The proposed TTF will give priority to LICs that have benefited or are benefiting from the HIPC and MDRI initiatives to ensure a durable exit from their past debt distress. TA delivery will use a combination of country missions, regional workshops and dissemination events.[39]

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[37] The initial list of implementing partners is: the Commonwealth Secretariat, UNCTAD's DMFAS Programme, Debt Relief International, CEMLA, MEFMI, Pole-Dette and WAIFEM.

[38] This is one of the nine TTFs the Fund is seeking to establish in order to enhance capacity building in developing countries in the following areas: public finance management, revenue administration, management of natural resource wealth, compilation and dissemination of basic macroeconomic and financial statistics, monitoring of macroeconomic and financial vulnerabilities, financial sector stability, debt sustainability, anti-money laundering and combating financing of terrorism, and enabling macroeconomic environment in fragile states.

[39] MTDS missions require two steps: an initial two-week mission consisting of two Bank and two Fund staff, and a one-week follow-up mission by one Bank and one Fund staff. In addition, some training and dissemination events, (e.g. 2-3 regional events plus one HQ-based event per year) will also take place in order to sensitize policymakers and disseminate best practice. As LICs' awareness of debt sustainability and related

(continued)

C. TA and Capacity Building Activities in MICs

65. **Staffs intend to continue with their existing activities in MICs (see Box 4).**[40] This reflects the fact that these countries also require a re-evaluation of existing debt management strategies given the fundamental changes in the macroeconomic and market environment. These activities will continue to be demand driven, in line with country priorities;[41] it is also likely that these activities will be scaled up, particularly in more vulnerable countries as a consequence of the current financial crisis. Coordination with debt market development work programs will also be strengthened, in order to meet immediate TA needs in the wake of the crisis, but which would also contribute to long-term development goals. Bank and Fund staff will continue to collaborate with advanced countries and EMs so that they can share their experiences with other developing countries through the direct provision of TA and through participation in Bank or Fund missions.

66. **In addition, capacity building at the sub-national level is likely to increase in importance** as the process of public expenditure and investment decentralization deepens, increasing the need for sound risk management.[42] This will need to be complemented by continued work at the central government level to strengthen the management and oversight of contingent liabilities.

67. **Given that the DeMPA and MTDS frameworks build on the approaches taken by more developed economies, it is likely that MICs woud also find them useful.** Indeed the general characteristics of the MTDS framework have provided the basis for much of the ongoing PDM advisory and TA activities in MICs. More recently the MTDS framework has been used more explicitly as the basis for such work. In this context, the GN will prove useful to a broad range of client and member countries.

68. **These TA and capacity building activities will continue to be complemented by various training events.** Two flagship training courses "Designing Government Debt Management Strategies" and "Implementing Government Debt Management Strategies" are likely to continue to be offered by the Bank on an annual basis in Washington, Paris and Tokyo (in collaboration with the Government of Japan).[43] These are often supplemented by technical *ad hoc* workshops, arranged by both the Bank and the Fund, such as the Bank-

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issues improves over time, the frequency of these events is expected to decline. Country delivery of the planned DeMPA work program would involve one two-week mission with 3 Bank staff or experts.

[40] Lessons learned on TA and capacity building activities in MICs, discussed extensively in SM/07/111, IDA/SecM2007-0197 and SecM2007-0141 continue to hold.

[41] Consequently, the pace and focus of delivery of Fund activities may be affected by the new policy on TA charging.

[42] The Bank has recently begun providing capacity building in this specific area.

[43] For the first time, the Fund will also be providing resource persons for this program in 2009.

organized workshop on risk modeling for debt managers from OECD and emerging and developing countries, or the Fund-organized workshop on contingent liabilities and debt management strategy formulation.

Box 4. Debt Management Related Country Work

Since the last Board discussion in May 2007, the Bank and Fund have been active in providing TA and advisory services across a wide range of countries.

World Bank Country Work

The Bank's advisory services provide support for countries across all stages of reform, from diagnostics to implementation. Since May 2007, diagnostics have been carried out in ten countries including Armenia, Belarus, Egypt, Honduras, Jamaica, Jordan, Nigeria, Panama, Peru and Swaziland. The Bank assisted five countries including Albania, Armenia, Egypt, El Salvador, and Panama in designing reform plans. Implementation of reforms has been supported in Armenia, Chile, Colombia, Costa Rica, Dominican Republic, Egypt, El Salvador, Guatemala, Kenya, Indonesia (in partnership with the Fund), Jordan (also in partnership with the Fund), Macedonia, Mongolia, Pakistan, Panama, Peru, Serbia, and United Arab Emirates. One of the new activities has been to provide support to sub-national government, where a needs assessment was carried out in Andhra Pradesh (India) and a diagnostic of risk management practices in Rio Grande do Sul (Brazil). Debt management reform is usually integrated in Bank operational work, including that related to the financial sector, public financial management, and governance.

IMF Country Work

Since May 2007, the Fund has delivered about 40 TA missions in debt management or debt market development from headquarters, including the joint Bank-Fund missions to Indonesia and Jordan, and four missions applying the CCA framework to evaluate sovereign risk. In addition, resident debt management advisers based at Central and West AFRITAC and in the Central Asian region have delivered around an additional 45 missions. Some of these have been delivered within the context of a regional project, generally undertaken in partnership with regional authorities, to strengthen debt management systems and develop debt markets. These include projects underway in Central America (supported by the CMAC) and the CEMAC region (in collaboration with the BEAC), plus a project just initiated in the MCD region, in partnership with the AMF. Debt management issues have also been central to a number of UFR-related surveillance missions, such as Seychelles and Ukraine. Debt management and debt market development issues have also been covered in detail in the context of Article IV surveillance in 9 countries, including for example Brazil.

Joint Country Work

In the particular context of the joint FSAP program, debt management and debt market development issues have been dealt with in detail in 17 FSAPs and FSAP updates completed since May 2007, including Syria and Thailand.

69. **Other regular outreach events will continue.** For example, the IMF's Public Debt Management Forum and the World Bank Sovereign Debt Management Forum will continue

to provide valuable opportunities for debt managers to share experiences and network.[44] These events also contribute to, and enhance the quality of, Fund multilateral surveillance. In the area of debt market development, both the Bank and Fund partner with the OECD in the annual OECD-World Bank-IMF Global Bond Forum. Similarly, the Bank will continue to support events such as the International Retail Debt Management Symposium, in collaboration with a group of OECD country retail debt managers, to benefit emerging and developing country debt managers interested in developing a retail debt market.

70. **Finally, both the Bank and Fund will continue to produce applied research and analysis**. For example, Bank staff is currently working on a publication that synthesizes the Bank training program mentioned above, and on a Policy Research Paper on "On-Lending of Borrowed Funds: Issues, Country Practices, and Lessons for Emerging Market Governments",[45] while Fund staff is currently working on a number of policy papers related to the impact of the crisis and associated public interventions, on debt, its management, and debt markets, along with a working paper on "The Cost of Aggressive Sovereign Debt Policies: How Much is the Private Sector Affected?".[46] In addition, the Fund's Global and Financial Stability Report regularly addresses developments in PDM and debt markets in the context of its overall risk analysis.[47]

VIII. ISSUES FOR DISCUSSION

- Do Boards agree that the ongoing crisis further confirms the urgency for the provision of debt management TA and capacity building in developing countries, especially LICs?

- Do Boards endorse the proposed work program of activities? Specifically;

    - Do Boards endorse the MTDS toolkit, comprising the GN and AT, and its application in more countries, including MICs?

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[44] These will be complemented by the initiation of a Forum for Asian debt managers, which will be supported by the Asian Development Bank and Fund.

[45] Complementing the three research papers published since May 2007 on "A cross-country analysis of public debt management strategies"; "Choosing the currency structure for sovereign debt: a review of current approaches"; "Coordinating Public Debt Management with Fiscal and Monetary Policies: An Analytical Framework".

[46] The Fund has also recently published a number of debt related working papers, including "Strategic Considerations for First Time Sovereign Bond Issuers", "A Risk-Based Debt Sustainability Framework: Incorporating Balance Sheets and Uncertainty", "A Framework for Developing Secondary Markets for Government Securities", "Measuring Sovereign Risk in Turkey: An Application of the Contingent Claims Approach".

[47] For example an assessment of the impact of the transfer of banking sector risk to the sovereign will be presented in the forthcoming GFSR.

  - Do Boards support the ongoing use of the DeMPA framework for assessing strengths and weaknesses in PDM operations?

  - Do Boards agree that countries should continue with, and prioritize, efforts to strengthen their PDM frameworks, including by formulating robust debt strategies based on the MTDS framework, and developing and implementing reform plans based on a DeMPA?

  - Are there any areas where additional or supplementary guidance should be developed for country authorities?

- Do Boards agree that the suggested partnership with external partners and the RTACs provides an effective mechanism to deliver the work program?

- Should greater efforts be made in Bank and Fund country work to support the design and implementation of countries' MTDS, a diagnostic of PDM operations using DeMPA and/or follow-up of PDM reform programs, where relevant?

Appendix I. The MTDS Analytical Tool: An Overview

71. **The purpose of the MTDS Analytical Tool (MTDS AT) is to support the process of decision-making by illustrating the consequences of following a particular financing strategy under various scenarios or stress tests.** As with any tool, the outputs are driven by the assumptions made, so careful judgment must be applied when interpreting the results and taking the final decision on the appropriate choice of debt management strategy.

72. **The AT allows the debt manager (DM) to simulate the impact of meeting their financing requirement using a variety a strategies.** Strategies can be specified by either specifying a financing plan to be followed over the course of the simulation horizon or by specifying a desired debt portfolio composition to be achieved. The evolution of key cost and risk indicators for each strategy are assessed.

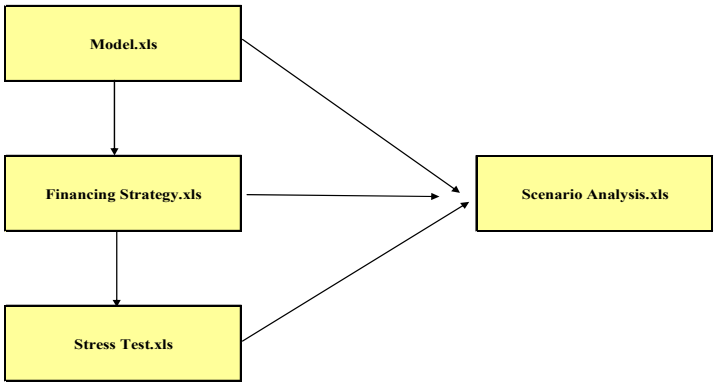
73. **The AT has an excel-based structure (Figure 3) developed on the basis of scenario-analysis models typically used by debt management offices.** It projects cash flows as a function of three main variables: (i) market scenarios (financial variables); (ii) borrowing strategies (e.g., combination of instruments); and (iii) macroeconomic assumptions (e.g., primary balances). Summary statistics are then computed based on complete cash flows and multi-currency instruments.

74. **It is comprised of four separate spreadsheets (see Figure 3 below), three of which are used to (i) specify the model; (ii) various financing strategies; and (iii) shock scenarios.** The fourth spreadsheet combines the information detailed in the other three spreadsheets, and runs the various financing strategies defined under alternative shock scenarios.

75. **The key inputs for the AT consist of (i) the macro-economic framework, including the assumed path of the exchange rate—this is taken from the DSF; and (ii) details of the existing debt portfolio**. Key assumptions include the (i) specification of the yield curves that will apply in both domestic and international markets for each period of the simulation; (ii) the pricing of other nonmarket instruments; and (iii) the strategies to be tested.

76. **The model produces as output a number of cost and risk indicators for each strategy considered.** These include the evolution of debt and debt service, indicators of repayment capacity, refinancing and interest rate risk, the debt composition (by instrument type and currency), and debt sustainability. Detailed amortization profiles are also produced for each point in time. The key output sheet is the Cost-Risk worksheet which compares key indicators across all the strategies to enable the trade-off to be evaluated.

Figure 3. Schematic of the MTDS Analytical Tool



Appendix II. Developing a Medium-Term Debt Management Strategy in Practice: An Illustration

77. **The objective of an MTDS mission is to provide TA to authorities to support their efforts to either develop or improve upon an existing debt management strategy.** The GN provides a framework to focus the TA, and the AT can help add quantitative rigor to support the analysis of various strategy options. The elements of the toolkit are demonstrated to the authorities by assessing how a set of specific strategies might perform under a given set of pricing and macroeconomic assumptions—typically those used in the last DSA. However, the missions are not intended to produce an actual strategy. Indeed, even the various strategy options that are considered are not to be taken as staff suggestions or as a prescriptive list. The intention is that the authorities use the knowledge transfer to subsequently formulate a new, or modify an existing, MTDS, which could then be discussed with Bank and Fund country teams in the context of the overall discussion of the macroeconomic framework.

78. **The aim of this Appendix is to provide an illustrative example of how the MTDS toolkit can work in practice**. The country example below is based an actual country case where the toolkit has already been applied.

Country background

79. **Prior to the HIPC/MDRI debt relief, this country's implicit debt management strategy was cost reduction.** Recently a national public debt management strategy document was published that charted a new course for developing the domestic debt market, and sought to institutionalize a closer consideration of the cost and risk trade-offs of new borrowing options going forward, while maintaining long-term debt sustainability. The MTDS exercise was to help provide a framework to quantitatively evaluate these options, by providing the cost and risk trade-offs involved in alternative debt management strategies.

Costs and risks of the existing debt portfolio

80. **The existing debt portfolio is broadly composed of 60 percent external and 40 percent domestic debt.** Overall the portfolio is relatively low cost. Almost all external debt is contracted at concessional rates, while the presence of captive investors, and practice of forced placements, has kept the cost of domestic debt below a true market rate. With regard to key vulnerabilities, foreign exchange risk is the dominant risk as there is no domestic currency debt—all debt is denominated in or linked to foreign currencies. Refinancing and interest rate risk are moderate as only 6 percent of the total debt matures in the next 5 years, and over 80 percent of the total portfolio is fixed rate.

Structural features and macroeconomic risks

81. **Despite substantial debt relief and recent fiscal consolidation, the country remains at a modest risk of debt distress, underlining the importance of continuing to contain debt interest costs.** A key factor affecting the risk of debt distress is the country's vulnerability to exchange rate movements, particularly given its dependence on commodity exports and high oil imports. Given persistently high current account deficits, and the limited availability of concessional loans and volatility of aid, the authorities have sometimes felt the need to rely on domestic issuance or external borrowing from nontraditional sources to meet expenditure needs. Weather related events regularly impact the fiscal and balance of payments position, again potentially resulting in unanticipated financing needs. However, the domestic financial market is highly dollarized and shallow with limited institutional investors, limiting its ability to smooth the impact of these temporary budgetary shocks. In addition, the impact of rising food and fuel prices poses an additional challenge with respect to containing domestic financing costs, and pressure on the real exchange rate.

Assessing the alternative debt management strategies

82. **Taking these factors into account, the relative performance of four alternative debt management strategies was considered (see Figure 4).** The strategies tested were based on discussion with the authorities with respect to their goal of developing the domestic debt market and their perspective on their options for securing concessional financing going forward:

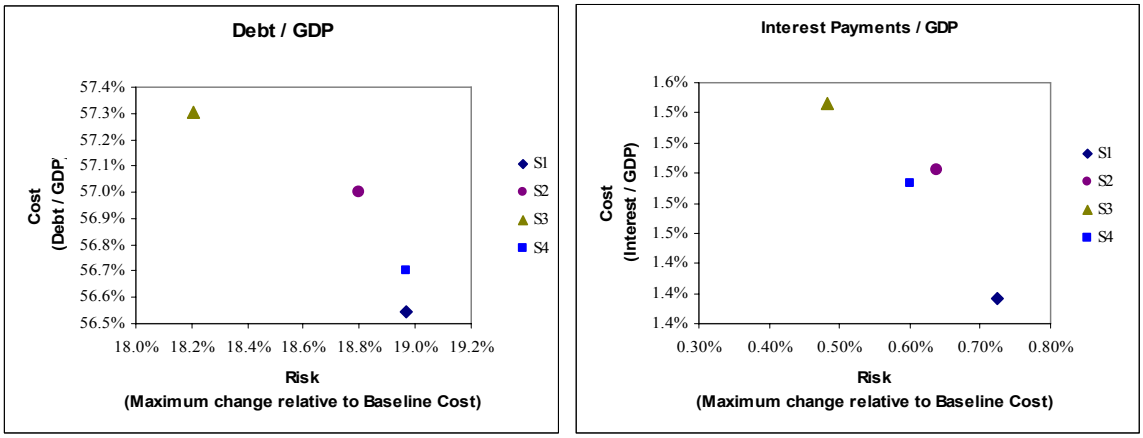
- (S1) The existing strategy where financing needs are mostly covered with external concessional debt, implying a continued reduction in the domestic debt stock;

- (S2) Strategy aimed at developing the domestic debt market, by rolling over some maturing domestic debt into new, more standardized, domestic debt instruments and implying lower external debt relative to S1;

- (S3) Strategy that addresses the exchange rate risk by introducing domestic currency denominated debt at the same pace as domestic debt is issued under S2; and

- (S4) Strategy to change the composition of external debt by reducing the degree of concessionality of external financing, reflecting the authorities' concern that the availability of concessional financing may decline going forward.

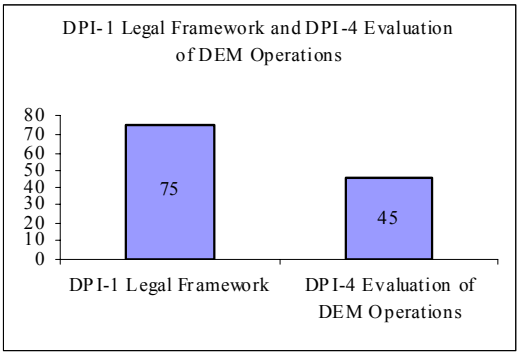
Figure 4. Illustrating the Cost-Risk Trade-off

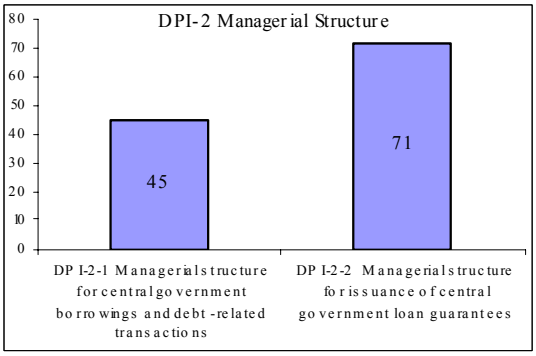


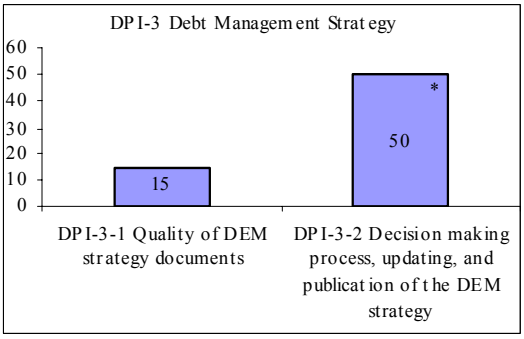
For a similar level of risk, strategy 1 is the least costly compared to strategies 2 and 4. This strategy implicitly maximizes concessional borrowing to help maintain debt sustainability. Strategies 2 and 3 are illustrative scenarios that highlight the potential increase in costs associated with the authorities' stated objective of building the domestic debt market. Similarly, these strategies capture the impact of using domestic sources of financing in the event that the total amount of concessional funding is not forthcoming and external non-concessional sources are limited. In addition, Strategy 3 highlights the potential cost of reducing exchange rate exposure in the portfolio. The primary benefit of presenting the cost and risk of each strategy in this context is to highlight the estimated cost to the government budget of pursuing a domestic debt market development strategy. In order to contain these costs, and to ensure that risks of debt distress are not excessively aggravated, this market development strategy would need to be supported by prudent macro policies that would help reduce the cost—by reducing credit and inflation risk premia, while creating sufficient budget space to accommodate these costs.

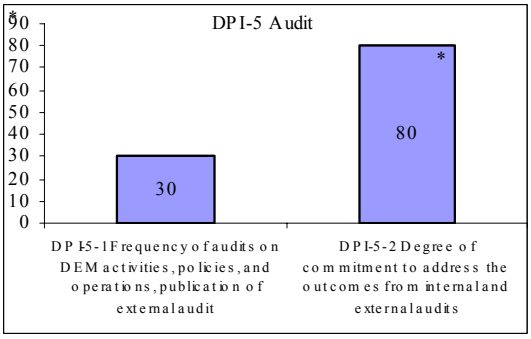
Appendix III. The DeMPA Tool: Preliminary Results

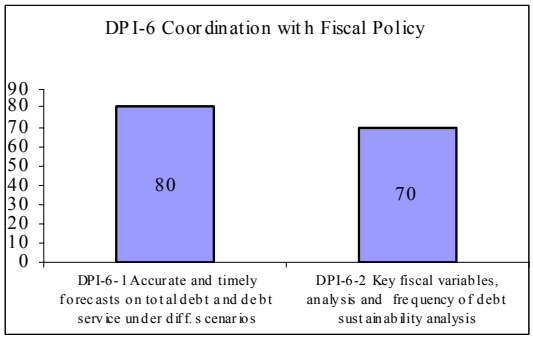
DeMPA Results by 35 Dimensions
Percentage of Countries Meeting the Minimum Effectiveness Requirements

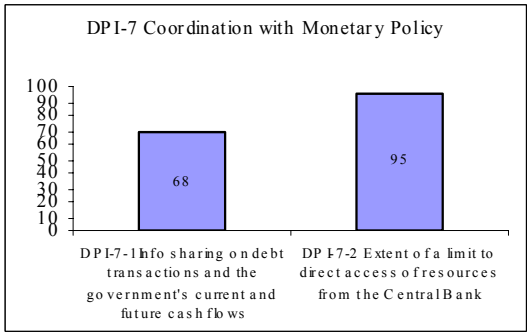


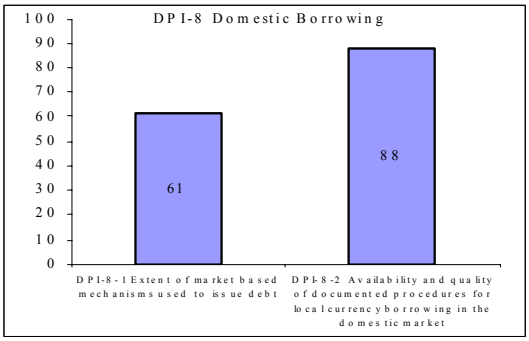


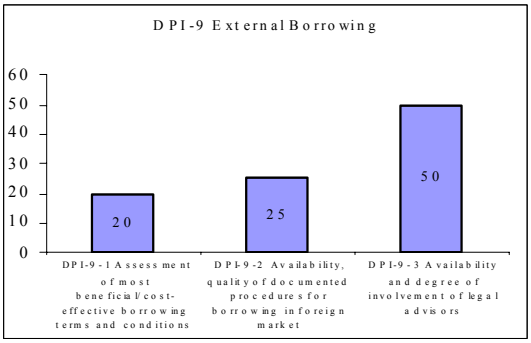




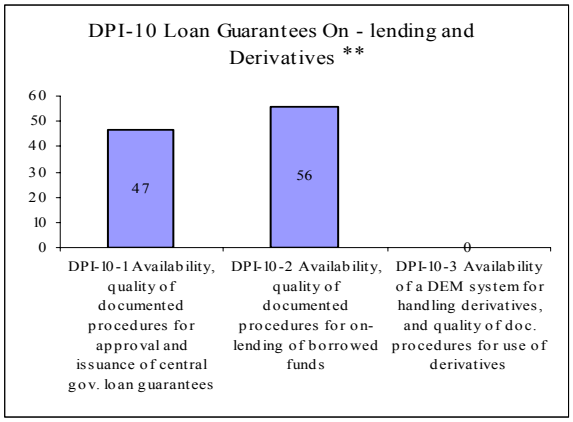


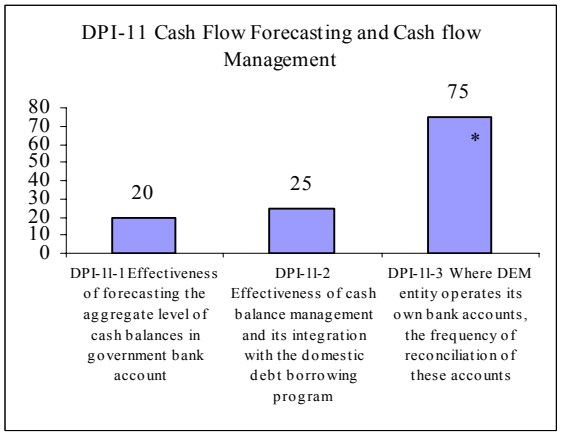


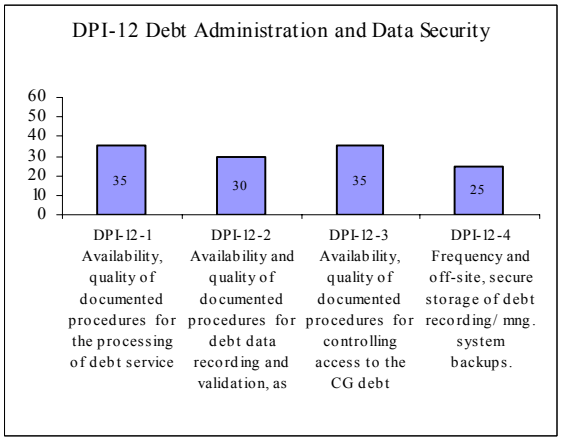


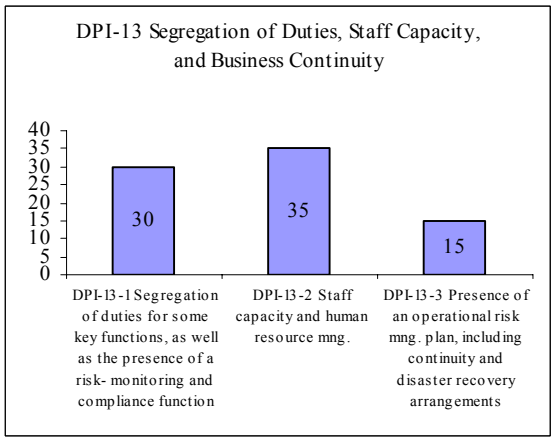


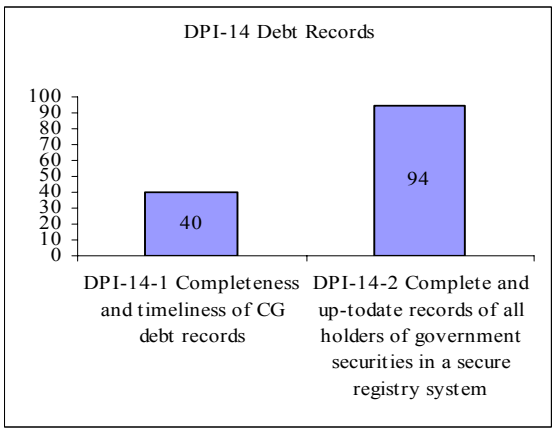
DeMPA Results by 35 Dimensions (Continued)
Percentage of Countries Meeting the Minimum Effectiveness Requirements

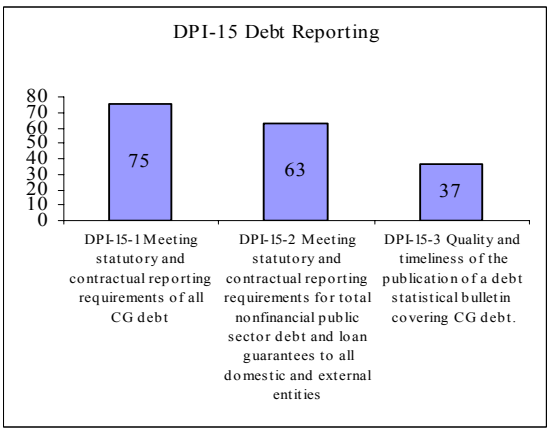












* When calculating the percentage of those sampled countries which met with the minimum effectiveness requirements for a particular dimension, those countries, which received N/R (Not Rated) are excluded from the sample. In some cases, this inflates the result for a certain dimension, e.g. for the second dimension of the DPI-5 Audit, only ten countries out of twenty sampled countries were assigned a score; 80% or eight out of ten countries met with the minimum effectiveness requirements for this dimension. Other similar cases are marked with asterisk.

** Assessment result indicates that none of the sampled countries had derivatives, see DPI-10-3.

THE WORLD BANK
INTERNATIONAL MONETARY FUND

Developing a Medium-Term Debt Management Strategy (MTDS)
Guidance Note for Country Authorities

Prepared by the Staff of the World Bank
and International Monetary Fund

February 24, 2009

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Developing a Medium-Term Debt Management Strategy (MTDS)— Guidance Note for Country Authorities

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Contents Page

I. INTRODUCTION

1. Drawing on experience, the World Bank and International Monetary Fund have developed a systematic and comprehensive framework to help countries develop an effective medium-term debt management strategy (MTDS). The development of this framework has benefited from consultation with a number of regional and international bodies engaged in capacity building in public debt management, and collaboration and input from debt management officials in a number of developing countries. This note describes a framework for developing a comprehensive MTDS, and provides a template for a public debt management strategy document.[1] The Guidance Note is accompanied by an analytical tool that can be used to undertake basic cost and risk analysis, providing a key input into the debt management strategy decision-making process.

2. The financial crises of the 1990s illustrated very clearly why the composition of the public debt portfolio is an important factor in the degree of resilience to external shocks. Figure 1a highlights how, in some countries (e.g., Argentina, Brazil, Indonesia and Russia) the currency exposure was a key determinant of the increase in debt levels. In other cases, the realization of an implicit contingent liability related to the banking sector (e.g., Turkey, Korea or Thailand), or the cost of assuming other private sector liabilities, aggravated existing vulnerabilities in the debt portfolio with a similarly negative impact on the overall debt level and the government's budget. In the specific case of low-income countries (LICs), developments in real effective exchange rates, often driven by unfavorable commodity price trends, contributed significantly to debt sustainability problems, also underscoring the importance of following a sound debt management strategy (see Figure 1b). Such experience highlights the importance of developing effective debt management strategies to help mitigate risk.

3. The recent financial crisis has also helped highlight the benefits of developing and implementing a sound debt management strategy, with some middle-income countries better placed to meet the related financing and fiscal challenges as a consequence of sustained efforts to reduce vulnerabilities in their debt portfolios.[2]

4. The Multilateral Debt Relief Initiative (MDRI) has significantly reduced the debt burden in many LICs, freeing resources to help finance governments' growth programs. It has also opened new opportunities to access non-concessional sources of financing, including access to the international capital markets. While the recent financial crisis may have temporarily closed some of those financing avenues, nevertheless these new sources are

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[1] Consequently, it complements and augments the discussion on debt management strategy development in the World Bank-IMF (2003) *Guidelines for Public Debt Management* (the *Guidelines*). The note has been prepared under the auspices of a joint World Bank-IMF working group comprising from within the World Bank, Karina Garcia-Casalderrey, Lars Jessen, Shyamalendu Pal, Angelique de Plaa, Abha Prasad, Francis Rowe, Tihomir Stucka, Mark Thomas, Eriko Togo, and Antonio Velandia-Rubiano, and from within the IMF, Bernardin Akitoby, Myrvin Anthony, Allison Holland, Peter Kunzel, Christian Mumssen, Christian Mulder, Perry Perone, and Abdourahmane Sarr.

[2] See discussion in *Managing Public Debt: Formulating Strategies and Strengthening Institutional Capacity* (forthcoming), a joint World Bank-IMF board paper.

likely to become a more general feature of LICs' financing options going forward. These opportunities, while welcome, raise new risks and challenges. Countries are frequently faced with new and conflicting proposals from the market on possible financing options, while in many cases lacking a coherent framework to fully assess the related costs and risks. For example, how should the appropriate mix of concessional and quasi-concessional debt be determined? Should a country tap the international capital markets? What are the cost-risk implications of extending the maturity of domestic borrowing? As many emerging market countries have experienced, poor financial choices, including on the terms and structure of new debt, can contribute to the re-emergence of significant debt vulnerabilities, putting debt sustainability at risk, and jeopardizing the achievement of macroeconomic policy targets.

5. The framework seeks to help countries develop an MTDS that explicitly recognizes the relative costs and risks involved, takes account of the linkages with other key macroeconomic policies, is consistent with maintaining debt sustainability, and can facilitate domestic debt market development.[3] In that way, risks to the sovereign balance sheet can be contained, while minimizing the potential debt-related burden on tax payers and maximizing the resources available for other expenditures.

Figure 1a. Examples of the Impact of Exchange Rate Depreciation on the Ratio of Public Debt to GDP (percentage points of GDP)

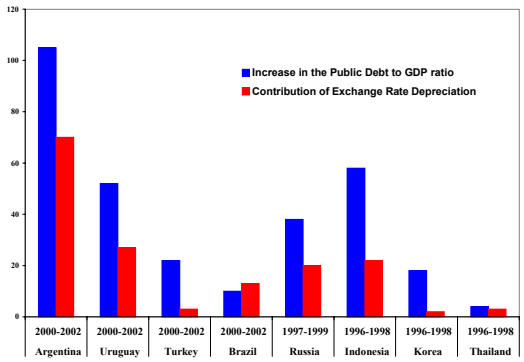
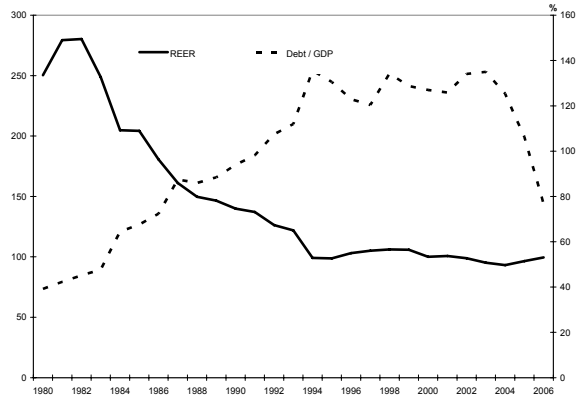


Figure 1b: REER and Debt in Sub-Saharan African LICs



[3] While this framework was specifically developed taking into account the LIC context, it is more general in its application and could be equally useful in other developing and emerging market economies.

What is an MTDS?

6. When determining how best to meet the government's financing requirement, the debt manager (DM)[4] is faced with many potentially difficult trade-offs between alternative instruments. For instance, if foreign interest rates are lower than domestic interest rates, foreign currency debt may seem attractive. However, the tradeoff becomes less clear once the exchange rate risk, which will determine the *ex-post* cost of foreign currency debt, and / or other considerations regarding government objectives with respect to domestic government debt market development, are taken into account. The debt management strategy should identify and explain these trade-offs.

7. An MTDS is a *plan* that the government intends to implement over the medium-term[5] in order to achieve a *desired composition of the government debt portfolio*, which captures the government's preferences with regard to the *cost-risk tradeoff*. It operationalizes country authorities' debt management objectives—e.g., ensuring the government's financing needs and payment obligations are met at the lowest possible cost consistent with a prudent degree of risk. An MTDS has a strong focus on managing the *risk exposure* embedded in the debt portfolio—specifically, potential variations in the cost of debt servicing and its impact on the budget. In particular, an MTDS identifies how cost and risk vary with the composition of the debt. While a sound MTDS can be developed without the use of a quantitative tool, especially where countries are severely constrained in their choices, the use of scenario analysis provides useful information, enabling the DM to quantify the potential risks to the budget of alternative debt management strategies.

8. In principle, the MTDS covers total non-financial public sector debt. This comprises the debt of the central government (budgetary, extra-budgetary and social security funds), the state and local governments, and the debt of non-financial public corporations. In practice, however, it is often useful to initially focus on central government debt, where generally data are more readily available and the authority exists to implement the strategy. The scope of the MTDS can be extended as information becomes available and where the institutional arrangements allow for a broader and more comprehensive strategy to be implemented. For example, to effectively extend the MTDS to cover the totality of non-financial public sector debt would require some element of central government control on borrowing decisions of state and local governments, and non-financial public corporations.

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[4] The term "debt manager" is used here to generically describe those authorities responsible for developing the MTDS. While primary responsibility will lie, along with the decision-making authority, with the Minister of Finance, this term encompasses the debt management unit or office, who would typically take the lead in preparing the strategy proposal; however, it could also cover a macroeconomic unit in the Ministry of Finance if involved in determining policies affecting the choice of debt composition.

[5] The medium-term is typically defined as 3–5 years. If the time horizon is too short, e.g., the budget cycle, there is a risk that short-term expediency will dominate, turning the focus on short-term costs and away from risks that could materialize later. The evaluation of the cost and risks underlying the strategy should aim to capture the full economic cycle, allowing potentially higher short-term interest rates and substantive movements in the exchange rate to emerge, both of which may significantly increase the cost of debt.

9. The focus of the MTDS is typically on actual direct liabilities of the government, rather than contingent liabilities.[6] Nevertheless, contingent liabilities may have an important bearing on the sustainability of debt and robustness of the MTDS. Consequently, it would be prudent to consider the potential risk that contingent liabilities could materialize under specific scenarios. It should be noted that this requires the DM to have good information on the nature of these liabilities.[7]

Benefits

10. An MTDS provides a framework within which the authorities can make informed choices on how the government's financing requirement should be met, while taking due account of constraints and potential risks. Such a systematic approach to decision-making can help strengthen the debt management function, enhance analytical capacity and help reduce operational risk even where capacity is constrained.

11. Adopting an explicit and formal MTDS enables the authorities to:

- **Evaluate the cost-risk trade-offs**: The MTDS allows informed decisions to be made, ensuring the costs and risks associated with alternative strategies are clearly recognized and identified. Setting clear medium-term strategic goals will help DMs avoid poor decisions made solely on the basis of cost, or for the sake of short-term expediency.
- **Identify and manage risk**: Even where financing choices are limited, the MTDS helps identify and monitor key financial risks, and establish strategies that ensure countries are well placed to take advantage of new borrowing opportunities, in a considered and risk conscious way. The MTDS also facilitates risk management by enabling the consideration of options for risk mitigation. This could include supporting the development of the domestic debt market, maintaining cash or reserves buffers, or establishing committed lines of credit.

12. In addition, an MTDS provides benefits with respect to:

- **Coordination**: The MTDS will facilitate coordination with fiscal and monetary management, helping to reconcile various objectives and constraints, including on domestic debt market development and balance of payments issues. Along with enhancing coordination, it enables each agent to focus more clearly on its core objectives, helping to achieve greater clarity and accountability for debt management separate from fiscal and monetary policies.
- **Identification of constraints**: It helps identify the constraints that affect the DM's choices, allowing where possible, steps to be identified to ease those constraints.

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[6] Although some countries may include all the direct explicit exposures of the central government, including guarantees, in their definition of debt.

[7] In some instances, the lack of adequate monitoring and information on government guarantees has significantly aggravated debt vulnerabilities.

- **Cost**: An MTDS can potentially lower the cost of debt servicing, as an effective and transparent MTDS will support domestic debt market development, and facilitate the relationship with investors, creditors and rating agencies.
- **Transparency**: A formal and explicit MTDS can help build broad-based support for responsible financial stewardship, enhancing governance and accountability.

How does the MTDS fit in the macroeconomic framework?

13. In order to ensure consistency between the MTDS and the overall macroeconomic framework, it is important that the interlinkages and feedback effects are well understood and that coordination mechanisms are in place (see Box 1). Indeed, for LICs, these interlinkages are likely to be more significant, partly due to underdeveloped domestic debt markets, and partly due to capacity constraints and relatively weak institutional setting.[8] In this context, close coordination is vital to ensure that the overall policy mix is sustainable.

14. In practice, the DM determines the MTDS taking into account constraints stemming mainly from the macroeconomic framework and the level of development of the domestic financial market. In turn, the analysis of the MTDS can provide input to the macroeconomic policy analysis. Similarly, given its medium-term perspective, the MTDS can support efforts to develop the domestic debt market by facilitating a transparent and predictable strategy for domestic borrowing, which will support the systematic introduction of new instruments, and by highlighting where impediments might exist, particularly in market infrastructure and institutions, that the DM and other authorities could work to remove.[9]

[8] Developing and implementing an effective MTDS may require a significant strengthening of capacity in many developing countries, see Appendix I for a discussion of the enabling institutional framework. In addition, capacity may need to be strengthened in other complementary areas—such as government cash management and forecasting, medium-term fiscal and expenditure frameworks, monetary policy implementation—to maximize the benefits of an MTDS.

[9] For example, the DM can introduce a new point on the yield curve confident that it can be sustained with continued issuance in the medium-term; this commitment to continued issuance of this new instrument can then be communicated to market participants. See the World Bank and International Monetary Fund (2003a, revised), *Guidelines for Public Debt Management,* and the World Bank and International Monetary Fund (2001), *Developing Government Bond Markets: A Handbook* for a broader discussion of the benefits of regularity and predictability in issuance.

Box 1. Key Interlinkages

Figure 2 outlines the key interlinkages between the MTDS and other key policy areas, also indicating how cost-risk analysis is used to pull this information together and inform the choice of MTDS:

- *MTDS, Fiscal Planning and Debt Sustainability*
  Ex ante the level of debt is mainly determined by fiscal policy, although *ex-post* the debt composition can play an important role (see Figure 1a). Given the medium-term perspective of the MTDS, to be most effective it should be formulated within a fully operational medium-term fiscal framework (MTFF). Debt sustainability analysis (DSA) will assess whether the fiscal policy implied by the MTFF, and the associated debt level, is sustainable over the long-term. The Bank-Fund Debt Sustainability Framework (DSF), a key tool to undertake that analysis, includes alternative scenarios to assess the realism of the outlook. This is undertaken by showing the development of debt ratios if (a) the primary balance does not change (improve) and (b) projections of GDP growth are closer to the historic outcome than the assumed outlook; and through bound tests to examine the impact on debt of shocks to key macro variables. The MTDS will add to this by allowing a detailed analysis of the cost and risk characteristics of different debt management strategies. The MTDS could also help country authorities move towards setting expenditure priorities independent of financing sources, by identifying strategies that generate a profile of interest costs consistent with debt sustainability, but which do not rely on the availability of specific project financing. More generally, the MTDS can strengthen fiscal planning by contributing an analysis of the likely, and possible, budget implications of implementing the MTDS.

- *MTDS and Monetary Policy*
  The monetary policy regime, the instruments used for monetary policy operations, the institutional setting, as well as the credibility of monetary policy, all have important implications for the MTDS. For example lack of a credible monetary policy may result in a high inflation risk premium and make longer-term domestic debt excessively costly. Another example arises where sterilization operations to mop up liquidity arising from capital inflows have led to large scale central bank issuance of securities in its own name.[10] The consequent increase in quasi-fiscal deficits, and potential replacement of central bank debt with central government debt, are also considerations that need to be taken into account when developing an MTDS.

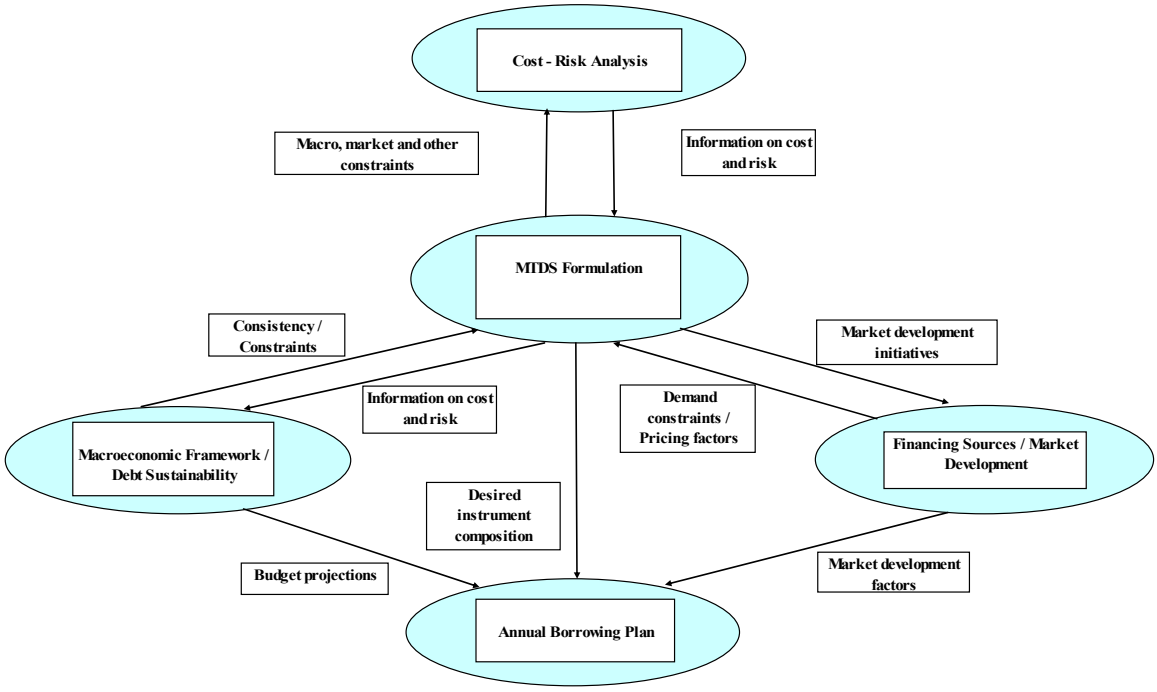
- *MTDS, Exchange Rate Policy and Balance of Payments*
  The exchange rate policy, and expected evolution of the balance of payments and consequent developments in the real exchange rate may have consequences for the MTDS. For example, if the exchange rate is expected to be on a downward trend, that would increase the cost of external borrowing. Similarly, debt servicing may spike if the exchange rate is volatile. In general, borrowing in foreign currencies requires a good understanding of balance of payments trends and coordination with exchange rate policies. In addition, the exchange rate and capital control regime is pertinent for the MTDS. For example, under a fixed exchange rate regime, and in the absence of capital controls, capital flight can lead to problems rolling over domestic debt, and erode international reserves. In such cases, it may be appropriate to consider whether additional foreign currency reserve buffers are required to cover short-term domestic debt, or maturities need to be lengthened.

- *MTDS and the Development of Domestic Debt Markets*
  Often the trade-offs between borrowing domestically or externally will be capped by the level of development of the domestic debt market, and/or private sector crowding out considerations. The MTDS can help identify key challenges in this area, and in some instances the chosen strategy can help address those challenges.

[10] See Appendix IV for a broader discussion of issues relating to the interaction with monetary policy.

- *MTDS and Annual Borrowing Plan*
  An annual borrowing plan should be developed, consistent with the MTDS and taking account of the underlying volatility in government cash flows. The borrowing plan helps operationalize the MTDS. The specifics on size and timing of new borrowing are determined in conjunction with the forecast of cash needs given the expected implementation of the budget, and taking account of any specific market characteristics or creditor behavior, and objectives of regular and stable issuance in the domestic market. An important factor in determining the effectiveness of the borrowing plan will be the quality and robustness of government cash management and forecasting. The plan also has important consequences for the central bank's assessment of liquidity conditions and should be shared with it.

Figure 2: Key Interlinkages



Developing an MTDS

15. The MTDS is most effectively developed where an appropriate enabling framework already exists, including a well-developed medium-term macroeconomic framework, with clear and consistent objectives for fiscal and monetary policies.[11] Key elements of such a framework include (see Appendix I): (i) an adequate legal framework; (ii) effective institutional arrangements; and (iii) comprehensive and efficient debt recording. While

[11] The Guidance Note recognizes that many of these elements may not be fully in place in many developing countries; nevertheless, an effective MTDS could help identify needed reforms.

countries take different approaches to each of these, some key underlying principles generally hold true.[12]

- **The legal framework.** This should clarify the authority to borrow and to issue new debt, invest, and undertake transactions on the government's behalf. Often, the legal framework also sets out the overall objectives for debt management, clarifies the accountability, and outlines the desired reporting and audit requirements.

- **Institutional arrangements.** The supporting governance structure should clearly outline and describe the roles and responsibilities of all relevant institutions involved in debt management activities. In particular, it should be clear which agent is responsible for debt management decisions.

- **Debt recording**. The DM needs to have sufficient information available on the debt portfolio on which to base the analysis. Often, establishing an effective database which covers all types of debt presents a significant challenge. A precondition for high-quality and comprehensive debt data is efficient debt recording.

16. In addition, given that the purpose of the MTDS is to inform future financing choices, it is imperative that there is political commitment to, and strong ownership of, the process.

17. The steps involved in designing an MTDS are set out below. Note that although these steps are presented in a specific sequence, this is only indicative. In practice, the distinction between each step will not be so clear, several steps may be undertaken simultaneously, and / or in a different order:

1. *Identify the objectives for public debt management and scope of the MTDS.*
2. *Identify the current debt management strategy and analyze the cost and risk of the existing debt.*
3. *Identify and analyze potential funding sources, including their cost and risk characteristics.*
4. *Identify baseline projections and risks in key policy areas—fiscal, monetary, external, and market.*
5. *Review key longer-term structural factors.*
6. *Assess and rank alternative strategies on the basis of the cost-risk trade-off.*
7. *Review implications of candidate debt management strategies with fiscal and monetary policy authorities, and for market conditions.*
8. *Submit and secure agreement on the MTDS.*

[12] See the *Guidelines* for a fuller discussion.

18. Once the MTDS has been agreed, it should be disseminated through a published strategy document. The DM should then develop an annual borrowing plan that is consistent with the MTDS.

19. As the borrowing plans are implemented, their impact on progress towards achieving the MTDS should be regularly monitored and evaluated. In addition, the MTDS should be reviewed on a regular basis (e.g., annual), or more often if macro or market conditions change significantly. This monitoring and review process is an important element of effective risk management.

II. Developing a Medium-Term Debt Management Strategy

Step 1. Identify the objectives for public debt management and scope of the MTDS

Objective: Identify the main objectives for public debt management and define the scope of the MTDS.

20. To enhance accountability, the objectives and scope for public debt management, which effectively determine the DM's tasks and responsibilities, as well as the coverage of the MTDS, should be identified. In countries where debt management objectives are not clearly stated, e.g., in a legal document, the DM should agree on the primary objectives with the highest authority (preferably the Minister of Finance) and ensure that these are clearly documented.

21. The relevant objectives for debt management are often framed in terms of ensuring that the government's financing needs and payment obligations are met on a timely basis, and at the lowest possible cost, consistent with a prudent degree of risk. Often a secondary objective is supporting domestic debt market development. Furthermore, the DM should identify other policy objectives that may have implications for the formulation of the MTDS, such as supporting the implementation of monetary or exchange rate policy.

22. A precondition for developing and implementing a sound MTDS is a clear definition of the scope for the strategy.[13] At a minimum, the scope should include the total (domestic and external) direct central government debt. The exact definition of the scope will depend on the degree to which the DM can influence the risk exposure of specific portfolios.[14] The coverage of the MTDS could be gradually expanded as information becomes available and

[13] Usually the MTDS excludes central bank debt. This is because the anticipated profit remittances from the central bank are already embedded in the fiscal projections (see Appendix IV), although it would be important to check that these projections are indeed consistent with the assumed cost of monetary policy implementation. However, the implications of the currency composition of government's foreign debt and central bank's foreign assets can be separately reviewed for the scope to match the exposure and reduce risk in the overall public sector balance sheet, i.e., an asset-liability management (ALM) approach.

[14] For example, if the scope includes the portfolio of government guarantees, the DM should be involved in the decision-making process with respect to the issuance of guarantees.

where the institutional arrangements allow for a broader and more comprehensive strategy to be implemented.

23. Even with a relatively narrowly defined scope, the DM should attempt to gather information on the overall balance sheet of the government, i.e., the main financial assets and liabilities of the government, and main contingent liabilities. This information can inform the assessment of overall vulnerability of the debt position, and strengthen the analysis of the appropriate strategy by taking into account the net financial exposures of the government.[15]

Output:
- Description of the overall objectives for debt management.
- Description of the scope for the MTDS.

Step 2: Identify the current debt management strategy and the cost and risk of the existing debt

Objective: Identify the current debt management strategy, the outstanding debt and its composition; calculate basic cost and market risk indicators.

24. Identifying the current debt management strategy helps provide a basis against which alternative strategies can be tested. Often a formal debt management strategy does not exist, or only covers part of the debt portfolio. In such cases, the current strategy would be a description of existing borrowing practices.

25. A solid understanding of the structure of, and risks to, the outstanding stock of debt is fundamental in developing an MTDS. The DM should gather the data on the debt portfolio as defined under Step 1. The data should comprise the total size of debt, a breakdown by currency, creditor type, instrument-type, i.e., fixed, floating, or indexed, bullet or amortizing (see also Box 7). The DM should organize the data so that the debt servicing and debt maturity profile can be readily determined and the impact of changing assumptions assessed.[16] Ideally, this information will be easily available from the debt recording system(s).

26. The DM should analyze the debt stock on the basis of key cost and risk indicators. This requires the DM to identify a clear definition of cost and risk. While this may seem trivial, in practice, it is an issue that debt managers struggle with. It is important that the DM is clear about the objectives of debt management, and the relevant time horizon to which they apply. Typical cost and risk indicators used by DMs are discussed in Appendix III. Based on an assessment of these indicators, the DM should identify sources of vulnerability to the

[15] This can lead to a more comprehensive ALM approach.

[16] For variable rate debt and debt denominated in foreign currencies, the current interest and exchange rates are typically applied for the initial calculation of the debt servicing and maturity profile of the outstanding debt stock. However, these would be recalculated using the projections underlying any forward-looking quantitative analysis (see Step 6).

existing debt.[17] The extent of the risk will depend on the *risk factors*, such as the variability and trends in interest rates, and exchange rates,[18] as well as the *risk exposure*, such as the share of domestic debt, short-term, and variable rate debt.

Output:
- Detailed information on outstanding debt.
- Debt servicing profile of outstanding debt.
- Description of main portfolio risks.

Step 3: Identify and analyze potential funding sources, including their cost and risk characteristics.

Objective: Identify potential sources of finance, their financial characteristics, amounts available, and desirability of use.

27. The DM should identify the characteristics of all existing financing instruments, and assess the relative cost and risk of these.[19]

28. In addition to the standard characteristics of the outstanding debt that affect the cost and risk analyzed in step 2, other characteristics also affect the desirability of specific types of debt instruments. These include:

- whether its use is restricted to certain purposes, e.g., project financing or budget support;
- whether there are other conditions attached to it, e.g., is co-financing required; and
- whether there are any uncertainties associated with disbursement.

29. The DM also needs to consider whether the use of certain instruments (such as international capital market financing) would entail other indirect costs such as the legal or financial advisory services necessary to achieve a successful issue. In addition, the DM should determine whether any instruments come with added benefits, such as advisory services or project management support, which could offset some of the cost factors. Clear

[17] This assessment of vulnerabilities could also include creditor concentration, which captures an element of rollover risk.

[18] It is important that variability is assessed over an appropriate time horizon. For example, using an annual measure of volatility might mask a trend in a key variable, often apparent when data are graphed; in those cases, volatilities should be evaluated over longer periods. Moreover, it is important to evaluate real changes in these variables. For example, the long-term debt to GDP ratio— and other ratios indicative of the cost of debt— depends on developments in the real interest and exchange rate. In one country to which the MTDS was applied, the annual standard deviation in the real exchange rate was 2 percent, masking that the real exchange rate had depreciated 20 percent over the past 10 years, adding 2 percent to the real cost of foreign debt annually.

[19] Appendix III discusses possible sources and their cost and risk characteristics. Note that the MTDS is focused on debt creating financing options; this means that grants are not covered by the MTDS. However, the projected availability of grants is an important factor in determining the net debt creating financing need, and should be incorporated into any quantitative analysis, as they will effectively reduce the funding need.

identification of such factors will help inform the appropriate balance, for example, between bilateral and multilateral sources. The DM should assess, given information about the potential sources of funding, if there are any limitations on the quantity that could be borrowed from these sources going forward, or the conditions under which its availability might change.[20]

30. The DM should consider what potential new financing instruments might become available within the horizon of the MTDS (e.g., access to international capital markets, retail debt, and longer tenors). Issues of timing can also be critical in determining the feasibility of specific instruments.[21] The DM should also consider whether financial derivatives might be accessible and clarify how these might affect the implementation of the MTDS. However, while using swaps to alter the currency composition of the debt might be appropriate for LICs, this requires that the necessary capacity, systems and institutional set-up are in place. Where actions are outside his scope, the DM should consider raising this with the relevant policy maker, and more generally working with other officials to enhance the country's access to financing.[22]

Output:
- An assessment of the characteristics, including the cost and risk, of all available and potential financing instruments, and how they might mitigate the portfolio risks previously identified.
- An identification of constraints, particularly on issue size, relevant to the determination of the MTDS.
- An identification of steps necessary to improve access to, or terms of, these instruments.

Step 4: Identify baseline projections and risks in key policy areas—fiscal, monetary, external, and market

Objective: Identify the baseline projections for key fiscal, monetary and external policy variables, as well as market rates, the main risks to these projections, and the relevant constraints and implications for MTDS formulation.

[20] For example, if a country decides to access the international capital markets, its access to concessional financing might change. See "IDA Countries and Non-Concessional Debt: Dealing with the 'Free Rider' Problem in IDA14 Grant Recipient and Post-MDRI Countries", IDA/R2006-0137, July 2006. Or, currently, it may only be feasible to access the domestic market at variable rates or at relatively short tenors, but if the domestic market were more developed, it would be feasible to issue longer-term fixed rate debt. In this case, the DM should actively consider what policy actions are within his purview, that would be effective in developing the domestic market further.

[21] For example, if monetary policy is not yet fully credible, then the DM may want to postpone issuance of longer-term fixed rate instruments on the grounds of cost.

[22] This could involve, for instance, supporting the implementation of a program of investor education by the securities regulator, or encouraging the tax authorities to review the tax treatment on investments in government securities, to facilitate domestic market development.

31. The DM should have a clear understanding of the macroeconomic framework within which the MTDS is to be developed, and how it interacts with decisions on debt management. In particular, this step will require interaction with the fiscal and monetary policy authorities. The baseline projections for the macro variables will in general be the same as those used in the authorities' debt sustainability analysis (DSA) (see Box 2).

Box 2. MTDS, DSA and the DSF: The linkages

MTDS and DSF are both frameworks that address debt issues, but, given their different focus, they are complements rather than substitutes.

The DSF provides the analytical tool to undertake debt sustainability analysis (DSA). It focuses on the long-term sustainability of debt, which is influenced by both its level and composition. To assess debt sustainability, the DSF considers a baseline macroeconomic framework that outlines a country's fiscal and balance of payments stance under certain assumptions and conditions, and then considers the robustness of key debt burden indicators—usually the ratio of the NPV of debt to GDP, exports or tax revenue—to various macroeconomic shocks, such as to GDP, the exchange rate, revenues, etc. Overall, its primary objective is to gauge if the level and terms of current and expected future borrowing may lead to future debt servicing difficulties over the long-term. However, certain simplifying assumptions are generally made, e.g., the term structure for market debt is not explicitly modeled, which limits its ability to provide some of the detailed analysis that would be of interest to the debt manager.

The MTDS is a more targeted debt management framework, focusing on the specifics of how the composition of debt should be managed over the medium-term. Determining an effective MTDS requires the performance of various financing strategies to be evaluated under a given path for key macroeconomic variables, which should be consistent with that used in the DSF. Similarly, it requires the robustness of each alternative strategy to be evaluated under various shocks. Again, the DSF should inform the stress tests to be applied. Here, variables that capture market risk, such as the interest rate sensitivity of cash flows, other determinants of the term structure, and the exchange rate, may be explicitly modeled. This means that more detailed information on the specifics of the debt portfolio can be assessed more readily.

The DM needs to recognize that MTDS may have important consequences for the DSA conducted within the DSF. Where testing of the alternative debt strategies under the various stress tests suggests that key debt sustainability indicators may be at risk, this should be discussed with the fiscal authorities. At this point, the preferred strategy, and its associated cost and risk implications, could be fed into an updated DSA.

32. As regards the *fiscal policy setting*, the DM should be clear about the expected path of the primary balance, and the key drivers underlying this projection, including anticipated government revenues and expenditures, and economic growth. An issue that may be particularly pertinent for LICs is the appropriate treatment of project loans and associated spending. The planned spending, as reflected in the fiscal framework, is typically dependent on the receipt of specific project loans. Thus the DM may want to take the path of expected disbursements as a given, as they will be offset by changes in spending.[23]

[23] Nevertheless, it will be important to assess from time to time strategic choices in a more unconstrained manner, which will enable the authorities to determine the relative costs and benefits of project-based versus general budget financing.

33. With respect to *monetary policy and external factors*, the DM should seek the views of the monetary authorities on their assessment of the future stance of monetary policy, the exchange rate, the anticipated balance of payments developments and the implicit debt strategy incorporated in the external DSA. Given their assessment of the outlook, the monetary authorities may require a specific target for reserves accumulation to be financed; this could be particularly pertinent in the case where countries are part of a monetary union, or where the country operates a fixed exchange rate regime. In addition, the credibility of monetary policy should be considered as it may affect the relative cost considerations of short- and long-term domestic debt and influence the choice of the preferred strategy. In this case, the MTDS could contribute to coordinated efforts to enhance credibility and reduce the inflation risk premium.[24] More generally, the role of debt management policies in reinforcing or hindering these policies needs to be clearly understood and may require coordination (see also Box 1 and Appendix V).[25]

34. In addition, the DM needs to determine a baseline projection for relevant yield curves, and any other relevant *market factors*, that will prevail through the planning horizon, thereby enabling the assumed cost of contracting new debt or rolling over existing debt to be determined. Judgment is required when identifying the most suitable methodology for undertaking these projections, and estimating any required risk premia. The DM should draw on market contacts and market analysis to help inform these projections.[26] As domestic debt markets develop, the quality of these estimates can be improved and more sophisticated techniques may become feasible.

35. The DM can also draw on officials involved in other areas, particularly banking supervision, to understand the scale of potential weaknesses in banks which may affect demand for public debt, and those involved in capital controls to understand the potential scale of rollover risk in domestic debt. More generally, a broad understanding of financial sector, regulatory or taxation policies will be useful to assess possible developments that could impact the market environment for issuing debt. Finally, the DM should review the financial advice and analysis available from other sources, e.g., investment banks, which could provide some useful insight into how market conditions might evolve.

36. Once a baseline has been determined, the DM should identify, in consultation with other officials, relevant risk scenarios, which could potentially impact the quantity, and cost, of financing required. For example, where countries have increasingly accessed external funding sources, including the international capital markets, the DM should consider the risk

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[24] For example, the introduction of inflation-linked instruments could signal a wider commitment by the authorities to maintaining price stability.

[25] For example, in relatively underdeveloped markets, any implied volatility in the supply of domestic debt securities, and the tenor of those instruments, could affect the transmission of monetary policy, and the effectiveness of any monetary policy signals.

[26] Standard options for deriving a yield curve would include inferring the forward curve from the current observed curve, or assuming a domestic yield curve based on a benchmark external curve (e.g., in US dollar or Euro) and adjusting for expected inflation differentials, inflation risk premium and credit risk premium. This option is included in the accompanying spreadsheet tool.

of a "sudden stop," which could lead to rollover problems. That assessment could influence the preferred strategy towards lengthening the average maturity of external debt or building a cushion of reserves.[27] At a minimum, these risk scenarios should reflect those highlighted by the debt sustainability framework (DSF).[28]

37. Note that, even in the absence of a substantive change in the macroeconomic framework, the MTDS may have important consequences for the DSA. Where testing of the alternative debt management strategies being considered (see Step 6 and Box 2) suggests that key debt sustainability indicators may be at risk, the DM should interact closely with those involved in the DSA to identify strategies that reduce the risk of debt default, or if there are no such strategies, highlight this, so that other measures can be taken.

Output
- Baseline projections for key fiscal, monetary policy, external, and market variables. - A clear and comprehensive set of country specific risk scenarios to be tested.

Step 5: Review longer-term structural factors

Objective: Review structural factors that will potentially influence the desired direction of the debt composition over the longer-term.

38. The DM should identify, in consultation with economic policy-makers, long-term structural features of the economy that may influence the desired debt composition. These factors should also be reflected and discussed in the authorities' DSA. These could include the following:

- the economy's dependence on commodities, and the associated vulnerability to developments in commodity prices;
- the longer-term prospects of continued access to concessional finance;
- possible long-term trends in the real effective exchange rate; and
- long-term inflationary trends.

39. Such factors could have a significant influence on the desired debt composition over the long term. For example, the desirable currency composition should take account of the long-term outlook for the real effective exchange rate and consequent implications for an evaluation of domestic versus foreign real interest rates. Similarly, the maturity composition

[27] Where this external vulnerability is high and reinforced by the operation of a fixed or semi-fixed exchange rate regime, coordinating that risk mitigation response with the monetary authorities is critical.

[28] For example, experience suggests that the authorities should be cautious in their assessment of the expected return on public investment or aid; consequently a more pessimistic growth scenario should be considered. The DSA should highlight the key stress tests.

of the portfolio should take account of the broad macroeconomic policy regime, and whether that might change over the long term.[29]

40. An assessment of how economic policy makers expect these factors to develop over time, will guide which strategies the DM should focus on (see Box 3). In addition, a longer-term perspective on the extent, and speed, to which the quality of institutions can be strengthened and credibility of macroeconomic policies established, would be relevant to consider, as those developments will affect the terms on which new borrowing will become available.

Box 3. Linkage Between MTDS and Country Specific Structural Economic Factors

Depending on the country specific factors that are being analyzed, the MTDS should be targeted at mitigating or offsetting, as much as possible, undesirable outcomes. For example:

- Terms of trade developments: Where countries revenues are significantly exposed to terms of trade developments, e.g., as a consequence of a dependence on commodity exports or imports, this is likely to have implications for their real effective exchange rate. This aggravates the potential cost and risk of foreign currency debt. Alternatively, potential cost and risk is significantly reduced if a country's real effective exchange rate is systematically appreciating. So, while many LICs have suffered from the consequences of the prolonged downward trend in commodity prices in the 1980's and 1990's, for the Asian tigers, foreign currency debt might have proved relatively cheap. As commodity prices and terms of trade can follow very long cycles a long-term view on the risk is necessary.

- Access to concessional financing: As countries' income levels grow, access to concessional financing may become limited. In this case, the MTDS will be biased to enhancing the access to other types of financing. For example, introducing a broad range of domestic marketable securities, or establishing access to international capital markets.

Output
- Articulation of long-run structural factors that the MTDS should take into account.

Step 6: Assess and rank alternative debt management strategies on the basis of the cost-risk trade-off.

Objective: Identify and analyze possible debt management strategies, assess their performance, and choose a small number of candidate debt management strategies.

41. To determine the preferred MTDS, the DM should assess the performance—either qualitatively or quantitatively—of a range of alternative strategies, from a cost and risk

[29] For example, if it is envisaged that, over time, the exchange rate regime may become more flexible, then that might have implications for the longer-term currency and maturity composition of the portfolio. As noted earlier, rollover risk is more pronounced in countries that follow a fixed exchange rate regime, but a more flexible exchange rate regime could support a greater proportion of short-term debt.

perspective. This requires the DM to identify a set of relevant strategies, and assess these under the constraints and future scenarios for the primary balance and market rates previously determined. Furthermore, the strategies should then be evaluated under the relevant risk/stress scenarios that have been identified.

42. In practice, the DM only needs to analyze in detail a small set of strategies. To begin, the DM could consider the existing—implicit or explicit—debt management strategy (see Step 2). The DM might then identify alternative debt compositions and strategies that could help mitigate the key vulnerabilities already identified. Strategies that support the development of domestic markets might also be considered.

43. In the absence of any specific quantitative tools to analyze alternative strategies, the DM should consider what characteristics of debt or debt composition would mitigate key sources of volatility to the budget or provide some buffer to the impact of identified risks (see Step 4), and consider the potential costs of achieving that debt composition. For example, if the country is exposed to external shocks and the real exchange rate is volatile or at risk of a downward trend, the DM may want to avoid aggravating that by reducing external financing. This would allow the DM to specify the preferred direction of specific risk indicators, such as increasing the share of domestic currency debt or lengthening debt maturity.

44. If the DM has developed, or has access to, relevant tools (such as the accompanying MTDS spreadsheet tool, see Box 4 and illustration in Appendix VI), a quantitative assessment of the cost and risk of the alternative strategies can be undertaken. Typically, such tools compare the cost of debt to the risk (as defined by the change in the cost) over a specific time horizon under different scenarios. Such tools allow the DM to simulate the impact of various financing options, tracking the evolution of the key cost and risk indicators for each strategy tested.

45. Scenario analysis allows the impact of specific shocks or risk scenarios to be evaluated. These should include the alternative scenarios or stress tests identified in Step 4, including any compound shocks considered in the DSA. Similarly, where the DSA analysis suggests that the baseline macro scenario is optimistic, it is important to assess the implications of using a more conservative set of macro assumptions.[30] This risk assessment becomes critical where debt levels are already high, relative to the government's ability to pay.

46. The choice of time horizon over which the cost and risk are evaluated should take account of the stability of the economy. For example, if the economy is quite stable, evaluating the cost and risk over a shorter time horizon may be fully representative; however, if the economy is not stable, it may be necessary to consider a longer time horizon.[31]

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[30] This might bias the MTDS towards lower risk, but possibly more costly, strategy.

[31] For example, if commodity export prices are in a downward trend, a longer time period may need to be chosen so that the upward trend is also captured.

Similarly, the shocks considered also need to correspond to the period evaluated.[32] More generally, when comparing the relative impact of specific stress tests, the subjective probability assigned to the realization of each specific shock should be taken into account.

Box 4. The MTDS Analytical Tool

An analytical tool (MTDS AT) complements the analysis described in this Guidance Note. The purpose of the tool is to support quantitatively the process of decision-making. The outputs are intended to inform and illustrate the consequences of following a particular debt management strategy under various scenarios or stress tests. The tool can be used to test the consequences of either following a specific financing plan or achieving and maintaining a specific debt composition, with the associated series of financing plans determined by the tool. In this connection, the tool can be used to highlight the relation between, on the one hand, the cost of various financing plans or debt compositions, and, on the other hand, the associated risk. The tool is flexible, users can, within certain limits, specify the time horizon for the projections, the number of currencies, and the range of instruments.

The tool is Excel-based and comprises four separate spreadsheets. A variety of cost and risk indicators are produced allowing the DM to consider cost-risk trade-offs of each alternative strategy.

While the resulting cost-risk trade-offs help in the decision-making process by providing quantitative information, the tool is not meant to be the sole focus when making decisions. With outputs driven by the input assumptions, careful judgment must be applied to any interpretation of the results.

47. The strategies under consideration should be reviewed against the assessment in Step 3, to ensure that they would be feasible to implement. This review might identify broader policy issues that effectively constrain the set of feasible strategies. Even where the range of feasible debt management strategies is limited, as is the case in many LICs, this explicit evaluation of the costs and risks is an important element of risk management.

48. Once the DM has assessed the performance of the key relevant strategies, core results should be summarized (e.g., tabular or graph form) and a small number of candidate strategies should be identified, presented, and discussed with other policy officials.

Output:
- A ranking of a small number of candidate strategies in terms of cost and risk.

Step 7: Review implications of candidate debt management strategies with fiscal and monetary policy authorities, and for market conditions

Objective: Ensure that relevant feedback from the strategies identified is provided to the fiscal and monetary policy authorities. Review the potential debt market implications of the strategies.

[32] For example, is a typical shock best represented by the annual standard deviation or are shocks correlated over time and is the shock best represented by the standard deviation over a 5-year period, measured on a rolling basis, e.g., over a 20-year horizon. Ideally the standard deviation would be calculated over a period that is equal to or longer than the cycle. See also the discussion under Step 2.

49. The candidate strategies, and their associated cost and risk implications, should be reviewed with the fiscal policy authorities, and their implications for debt sustainability assessed. If the review of the strategies identified under Step 6 with the fiscal authorities suggests potential risks to the budget, or that debt sustainability or external viability appears to be at risk, the potential strategies may have to be adjusted. Alternatively, a review of the baseline fiscal projections may be required so that more fiscal space can be created.

50. Similarly, the potential implications of the candidate strategies for monetary conditions should be discussed with the central bank, including their potential to support monetary policy objectives. The anticipated amount of foreign currency, and other non-resident financing, and the likely tenor, may have implications for intervention, the exchange rate and crowding out of the private sector. Also, the implications for the balance of payments and the level of rollover risk relative to the anticipated level of international reserves should be discussed. In case external debt sustainability appears at risk, or financing strategies create or contribute to excessive liquidity risk, the implications for the exchange rate regime should be discussed. The outcome of such discussions may also affect the choice of strategy, or might require the DM to identify an alternative strategy.

51. The implications of the DM's preferred MTDS, including the implied financing from domestic and international markets, should be reviewed with the monetary and financial market authorities to assess the impact of the implied investment assumed from key investor groups. The potential implications for capital market development and financial stability should also be assessed.[33] These implications might be positive—for example, a strategy under consideration that would help provide an effective benchmark for the private sector—or negative—for example, the quantity of proposed financing through one instrument would effectively absorb all available capacity and may crowd out the private sector. Similarly, regulatory concerns about, for example, the exposure of the banking system, could be brought to bear, helping determine whether the proposed MTDS is appropriate.

52. In general, if the debt management strategy has significant implications for the underlying macroeconomic assumptions, an interactive approach may be needed where debt and macroeconomic strategies are jointly discussed, and revised using a process of iterations. A significant revision to the baseline projections (Step 4) will require the DM to repeat the strategy analysis exercise (Step 6), etc.

Output:
- A clear assessment that the candidate strategies are consistent with fiscal and monetary policies, maintaining debt sustainability, and are in line with plans for market development.

[33] This could arise as a consequence of a concentration of the investor base, e.g., an increase in the vulnerability of the banking system, might lead to an increased debt burden in the event that the banking system collapses.

Step 8: Submit and secure agreement on the MTDS

Objective: Identify the preferred MTDS, and send proposal, along with ranked alternative candidate strategies, to the highest authority responsible for debt management for approval.

53. Based on Steps 1 through 7, the DM should present the preferred MTDS to the highest authority responsible for debt management for approval. The presentation should include alternatives to the preferred MTDS.

54. The MTDS should be approved by the highest authority of the Ministry of Finance as it should embody the government's preferred risk tolerance, which involves a political judgment on the cost and risk tradeoff. Once approved, the debt management strategy should be formalized and an explicit mandate given to the DM to implement the strategy.

Output: - An approved MTDS.

III. DISSEMINATION

55. Once the MTDS has been agreed and formalized, it is recommended that the MTDS be disseminated through the release of a public debt management strategy document.[34] Dissemination of the MTDS will help the DM strengthen the relationship with creditors, investors and other key stakeholders (e.g., credit rating agencies), and facilitate an open dialogue on key factors influencing the choice and implementation of the MTDS. This could help secure support for the chosen MTDS and reduce investor uncertainty.

56. A typical published document describing the MTDS would highlight the following: the objective and scope of the MTDS; a description of the current and expected macroeconomic environment; an evaluation of the existing stock of debt; and an outline of the agreed MTDS, with a discussion of factors that influenced the choice of strategy, including the key risk factors that the MTDS is focused on managing.[35]

57. The MTDS could be expressed through targets for a specific instrument composition or specific indicators of cost or risk. At the initial stages, the indicators could be more descriptive, e.g., the desired MTDS is to increase the share of domestic currency debt or gradually extend maturities. Over time, the targets could become more specific and precise, e.g., setting a portfolio target of 60 percent domestic currency debt.

58. Where an MTDS is developed for the first time, it might be particularly useful to reach out to a broad audience including parliamentarians, domestic and foreign investors, intermediaries, rating agencies, by organizing workshops, seminars or roadshows. More

[34] The DM should use all readily available avenues for publication, including websites.

[35] See Appendix VII on "Template for a debt management strategy document". It is generally not necessary to disclose the full extent of the analysis undertaken; in particular, some of the stress scenarios considered may be sensitive.

generally, the MTDS can provide a strong basis for building an effective investor relations program,[36] which can facilitate domestic debt market development and impact the cost of future market-based debt.

IV. Implementation and Follow-up

59. Once the MTDS has been decided, the DM should develop an internal *annual financing* plan outlining how the strategy will be implemented over the *coming budgetary period*. The annual funding need will be determined through the budget process, while distribution of the funding need intra-year will depend on the government's cash flows. In general, the cost-effectiveness with which a financing plan can be implemented will reflect the authorities' capacity to develop meaningful government cash forecasts.[37] At the aggregate level the total amounts to be raised through each of the available instruments can be determined based on the strategy. This then needs to be broken down into more specific targets based on the DM's knowledge of the sources of financing.

60. When the aggregate targets are identified, the likely timing of flows should be planned and checked to ensure that it delivers sufficient financing to meet the anticipated intra-year flows. Typically, separate plans will be formulated for domestic and external market borrowing.

61. Determining the annual financing plan generally begins with an analysis of the anticipated budget (cash) flows, including expected debt servicing flows. Taking account of the starting balance on the Treasury Single Account (TSA), or the net balances across government accounts (and the planned profile of reserves financing for the central bank) will enable the DM to map out the profile of financing requirements through the year. Supplementing this with the anticipated disbursements of official loans would identify where the anticipated balance on the TSA will be relative to its target balance, and, consequently, the preferred size and timing of financing operations.[38] On the domestic side, this analysis allows the DM to develop an issuance schedule consistent with any strategic goals, such as following a regular issuance pattern to support market development (see Appendix VIII for an illustration). On the external side, while the DM may have less discretion to choose the precise timing of operations, the analysis would highlight the latest point at which borrowing

[36] See IMF (2004) for a discussion of issues relating to the design of an effective investors relations program.

[37] Efficient and effective government cash management will support the development of a more committed and transparent financing plan, and overall contribute to reducing the cost of debt. Where there are significant weaknesses in cash management, the timing of financing operations may be more *ad hoc*, and consequently less conducive to market development, and, so, more costly.

[38] It may be an agreed policy objective to maintain a positive TSA balance to absorb volatility in key in-flows. In general, to reduce potential carry cost, the debt manager will try to time financing operations to keep account balances as close as possible to their target levels, although that needs to be balanced against the desirability of following a regular issuance pattern to support market development.

will need to have been secured, for example, from tapping international markets or sourcing other external private sector loans.[39]

62. Often the annual financing plan, or at least the domestic component, is communicated to the market.[40] As the year progresses, and the budget is implemented, the financing plans will need to be updated depending on the realized flows.

63. In addition, it is important to periodically review the MTDS, ideally on an annual basis, and confirm its continued validity. Also, if there are fundamental shifts in macroeconomic or market conditions, the MTDS should be updated. A new analysis should be undertaken, and a new proposal should be submitted along with a clear explanation of why a revision and update of the strategy is recommended.

64. Progress on the implementation of the MTDS should also be regularly communicated to the minister of finance, or any other relevant committee, e.g., through regular management reporting. This reporting should provide information on the evolution of the portfolio, and the key cost and risk factors. Such regular reporting plays a key role in an effective risk management framework.

[39] Where countries have not already established a presence in the international capital markets or relationship with specific creditors, then these plans should take account of the potentially significant lead times involved.

[40] Such communication can facilitate the deepening of the government bond market and contribute to both cost and risk reduction by enabling greater volumes, and a broader range of instruments, to be issued, and reducing the risk premium arising from market uncertainty. In addition, the more regularity and commitment that can be factored into the auction schedule, the more likely that operations will be successfully received by the market, helping mitigate the risk of under-subscription.

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Appendix I. The Enabling Institutional Framework

65. A clear institutional framework facilitates effective debt management. Key elements of such a framework include: (i) an adequate legal framework; (ii) effective institutional arrangements including the organizational set-up of the DM function; and (iii) comprehensive and efficient debt recording. While countries take different approaches to each of these, some key underlying principles generally hold true.[41] Specifically, the legal framework should clarify the authority to borrow and to issue new debt, invest, and undertake transactions on the government's behalf (see Box 5). Often, the legal framework sets out the overall objectives for debt management, clarifies the accountability and outlines the desired reporting and audit requirements. It can also address the specific modalities of coordination among the agents involved in debt management, e.g., a fiscal agency role of the central bank.

66. The supporting governance structure should clearly outline and describe the roles and responsibilities of all relevant institutions involved in debt management activities. In particular, it should be clear which agent is responsible for debt management decisions. Typically this would be the minister of finance, possibly supported by an advisory committee. Regardless of the specific set-up, the arrangements needs to be structured, and lines of responsibility and accountability should be clear and consistent.

67. The agent responsible for debt management policies and implementation should make sure that there is sufficient information to discharge this responsibility effectively. Typically this is done through periodic reporting by the DM on progress on the implementation of the debt management strategy and associated borrowing plan. This reporting should provide information on the evolution of the portfolio and the key cost and risk indicators, so that those accountable for decisions are able to adequately monitor developments *vis-à-vis* the expected evolution of these indicators.

[41] See World Bank and IMF, 2003, *Guidelines for Public Debt Management* for a fuller discussion.

Box 5. Elements of a Sound Legal Framework for Public Debt Management

The legal framework for public debt management ideally contains the following key elements:

- Clear authorization by Parliament/Congress to the executive branch of government to approve borrowings and loan guarantees on behalf of the government.
- Clear authorization by the executive branch of government to the debt management entities to undertake borrowing and debt-related transactions and to issue loan guarantees.
- Clear debt management objectives. Common debt management objectives found in modern legislation are that central government's funding needs are always met, the cost of the debt is minimized from a medium/long-term perspective, the risks in the debt portfolio are kept at acceptable levels, and that development of the domestic debt market is promoted.
- A requirement to develop a debt management strategy. Once the debt management objectives are set, these objectives must be translated into an operational strategy that will provide a framework for how the government will achieve its debt management objectives.
- Mandatory reporting on an annual basis covering an evaluation of outcomes against stated objectives and the determined strategy. Such accountability is the counterpart to the delegation by Parliament/Congress of borrowing power to the executive.
- A requirement for an external audit. Such a requirement for external audit is normally found in the general Public Audit Act, rather than in specific debt management legislation.

68. Where different entities are involved in contracting direct liabilities of the central government, there needs to be effective institutional arrangements to ensure coordination and effective implementation of the MTDS. In particular, there needs to be mechanisms in place to share information on developments in these sub-portfolios and coordinate actions. Countries take different approaches to addressing this coordination challenge, ranging from centralizing all debt management functions in one unit, to creating a central unit responsible for developing and monitoring the MTDS, with other entities retaining responsibility for implementation. In addition, given the important linkages between the effective implementation of the MTDS and government cash management and monetary policy implementation, institutional arrangements need to recognize the need to establish effective coordination mechanisms between these functions.

Box 6. Organizational Arrangements

Sound public debt management requires an institutional structure that clearly delineates roles, responsibilities, and reporting channels for the relevant institutions. Consolidating debt management functions into one department or directorate can avoid duplication of functions, strengthen accountability, and reduces the requirements for coordination and information sharing. It also facilitates the analysis and development of a strategy for the aggregate debt portfolio, because one entity is clearly mandated to perform this role and maintains the full set of information required to undertake it.

Experience in the developing country context suggests that that institutional arrangements surrounding debt management operations remain fragmented across a number of government agencies, especially since project management tend to require a heavy involvement of the planning or economy ministries. Strong coordination among the various agencies is then called for to be effective at carrying out DM functions. In this regard, it is generally recognized that a consolidated debt management function is not a precondition for sound public debt management.

When consolidating debt management responsibilities into one entity, clear internal divisions of responsibilities are needed to reduce operational risk. In particular, separation between front- and back-office activities is critical for reducing the risk of fraud in any organization undertaking financial transactions. In turn, in more advanced operations, the separation of front- and middle-office activities ensures the independence of those setting and monitoring the risk management framework from those responsible for executing market transactions. In addition, it is important that staff are subject to a clear code of conduct and conflict of interest rules to ensure the integrity of the debt management operations.

Based on World Bank (2007a) chapter 5.

69. Often, establishing an effective database which covers all types of debt, and that can provide necessary input for the development of the MTDS presents a significant challenge. A precondition for high-quality and comprehensive debt data is efficient debt recording. While a good IT system contributes to establishing sound debt recording, experience show that the establishment of clear processes and procedures around the debt recording system(s) is critical. With respect to IT systems, countries take a variety of approaches including developing systems in-house, use of a third-party system, or some combination of both. To ensure the integrity of any data entered into a system, adequate operational procedures should be in place to ensure accuracy.[42]

70. Country experience in establishing an effective enabling framework are discussed more expansively in World Bank and IMF (2007) and World Bank (2007a).

[42] In general, countries should strive to achieve the "four eyes" principal, with data entered and verified by separate people.

Box 7. Desirable Elements of a Debt Recording System

A robust debt recording system should provide for an accurate, consistent and comprehensive database of domestic, external and government-guaranteed debt. A good debt recording system would readily provide the following:

- An accurate breakdown of the outstanding debt by various characteristics, including currency composition, creditor composition, concessionality, and instrument composition (including by interest rate type).
- Aggregate debt servicing schedules across various categories of debt.
- Some basic portfolio indicators, such as average maturity, proportion of foreign currency debt, etc.
- Payment schedules for interest and amortization of individual loans and securities, along with the associated payment notices. This can be decentralized if management is spread across different contracting entities.

Ideally, the system would also interface with other key systems including (i) the payments system used to make debt servicing payments; (ii) the transaction management system (where relevant);[43] (iii) the auction system (if separate from the transaction management system), and (iv) the government's financial management information and accounting system(s).

In addition, it should be possible to ensure the integrity of the system by imposing appropriate security controls.

[43] For example, if the debt management unit engages directly in financial market transactions.

Appendix II. Designing an MTDS: Checklist for Debt Managers

The key elements of the steps involved in formulating an MTDS are summarized below:

Step 1. Identify the objectives for public debt management and the scope of the MTDS

Purpose is to help clarify what objectives the MTDS should seek to achieve. This will also help clarify the tasks and responsibilities for which the DM is accountable.

- Identify the main objectives for public debt management
    - For example
        - Meet the financing need
        - Minimize cost
        - Maintain risk at a prudent level
        - Develop the domestic debt market
        - Establish a reference or benchmark for private sector issuance
- Ensure objectives (where they are not set down in law) are properly documented
- Define scope of MTDS
    - Central government; general government; or wider public sector
    - Contingent liabilities
    - Interaction with private sector external debt

Step 2. Identify the current debt management strategy and cost and risk of existing debt

Purpose is to clearly determine the starting position for the analysis; this will help identify whether the MTDS should seek to change the characteristics of the existing debt portfolio in any specific way, e.g., reduce a specific risk.

- Explicitly identify the current strategy
    - Provides a benchmark against which alternatives can be evaluated
- Identify outstanding debt and its composition
    - Determine debt servicing profile of outstanding debt
- Calculate basic cost and risk indicators for the portfolio
    - Identify sources of vulnerability to the existing debt stock

Step 3. Identify and analyze potential funding sources, including cost and risk characteristics

Purpose is to determine the range of possible strategies that might be feasible and desirable to implement. This will also help identify any potential constraints that might impede the implementation of a chosen strategy. This may require interaction with financial market supervisors, or other agencies (e.g., ministry of planning).

- Identify potential sources of finance, their financial characteristics, including cost and risk parameters, and potential amounts available

- List existing and potential instruments, domestic and external, and describe their financial characteristics
- Evaluate the potential quantum of borrowing available through each instrument
- Identify any constraints that might impede the availability of funding
- Discuss/rank the instruments based on their cost/risk characteristics (and within the context of the vulnerabilities in the debt portfolio previously identified)

Step 4. Identify baseline projections and risk in key policy areas—fiscal, monetary, external and market

Purpose is to determine the baseline scenario for the analysis of the performance of alternative strategies and identify specific risk scenarios to be evaluated. Requires interaction with fiscal, monetary policy and financial market authorities, and (where relevant) market participants.

- Identify the baseline medium-term projections for key fiscal and monetary policy variables
  - Use projections from the DSF
- Identify whether there are any external constraints relevant for MTDS formulation
  - Discuss any anticipated change in exchange rate or capital account regime
  - Discuss any required financing of international reserves
- Identify the baseline medium-term projections for market rates
- Clarify assumptions about likely pricing of non-market instruments
  - Based on creditor information and other sources
- Determine specific risk scenarios
  - Those identified in DSF
  - Other specific changes to market conditions and demand (e.g., shock to global liquidity conditions)

Step 5. Review longer-term structural factors

Purpose is to take a longer-term perspective and identify any factors that could influence how the debt composition should ideally change over the longer-term. Requires interaction with fiscal and monetary policy authorities.

- Set out long-run structural features of the economy that the MTDS should try to take into account, e.g.,
  - Commodity price vulnerability
  - Access to concessional financing
  - Trends in real effective exchange rate
  - Inflation trends

Step 6. Assess and rank alternative debt management strategies on the basis of the cost-risk trade-off

Purpose is to analyze a number of alternative debt management strategies, assess their performance, and identify a small number of candidate strategies, including a preferred strategy.

- For a range of alternative strategies
    - Assess how costs could change under the various risk scenarios
    - Assess how well each strategy helps mitigate the identified portfolio vulnerabilities
    - Assess how well each strategy meets the debt management objectives, both primary and secondary
    - Assess whether each strategy would be feasible to implement given assumptions about potential sources of financing

Step 7. Review implications of candidate strategies with fiscal and monetary policy authorities, and for market development

Purpose is to clearly determine that the preferred, and other candidate, strategies are consistent with fiscal and monetary policies, maintaining debt sustainability, and in line with plans for market development.

- Outline the preferred, and other candidate, strategies to the fiscal and monetary policy authorities
    - Discuss any points of interaction
    - Confirm that debt sustainability indicators are in line with DSA
- Review the potential debt market implications of the candidate strategies, including where relevant with financial market authorities

Step 8. Propose and Approve the MTDS

Purpose is to propose the preferred strategy to the decision maker, and secure his / her agreement.

- Document the preferred and a small number (e.g., one or two) alternative strategies
    - Outline why the preferred strategy is superior to the others
    - Clearly describe the key associated costs and risks, and relationship with the broad objectives
- Present the proposal to the highest responsible authority
- Agree the MTDS

Once determined, the agreed MTDS should be disseminated.

Appendix III. Cost and Risk, and Debt Indicators

This appendix discusses a variety of measures of cost and risk, and other useful debt indicators that the debt manager may need in the course of effectively managing the debt portfolio. Appendix VI outlines how some of these could be used in specific country application of the framework.

71. A precondition for developing a sound debt management strategy is a clear definition of cost and risk. While this may seem trivial, in practice, this is an issue that debt managers have been and are struggling with. It is important that debt managers are clear about what exactly is captured by specific cost and risk measures so that the most appropriate measures are selected for a given objective.

72. For immediate budget purposes the focus is typically on absolute nominal measures, i.e., nominal interest payments at current exchange rates. While nominal measures are useful for budgeting purposes they fail to inform the decision makers of the true cost of debt as they ignore the implications of inflation on the real value of debt or the gains or losses on indexed debt or debt denominated in foreign currency. They also do not reflect how the repayment capacity is influenced by growth in GDP or tax revenues. Consequently, it may be useful to consider the ratio of interest payments to nominal GDP or nominal tax revenues—both effectively real measures that better capture the true burden of debt. Other important real cost measures discussed below are the ratio of the NPV of debt to GDP and the ratio of interest payments adjusted for capital gains/losses to GDP. The NPV measure is useful because it captures the concessionality of debt. The adjusted interest cost measure captures concessional interest rates directly, but it also adjusts the typically lower foreign currency interest payments for the expected depreciation of the exchange rate, which adds to the principal and consequently to the true burden of that debt.

73. In the context of what follows, and in the MTDS analytical tool accompanying this guidance note, risk is defined as a change in one of these cost measures after a shock is applied. However, this appendix also discusses some other useful portfolio statistics that capture directly the inherent exposure of the debt portfolio to such risks as interest and exchange rate changes. In using these portfolio statistics, it is important to understand how they relate to the more fundamental risk measures.

Cost measures

74. Examples of commonly used cost indicators for a debt portfolio include:

Interest cost

- Nominal interest cost captures the direct nominal impact of interest payments, or coupon payments in the case of bonded debt, but ignores any realized capital gains/losses on indexed debt, such as foreign currency denominated or inflation-linked debt. Algebraically, this measure can be expressed as:[44]

$$I_t^* = \sum_{j=1}^{m} e_{jt} I_{jt}^{FX} + I_t^{DX} \qquad (1)$$

where I_t^* = total interest payments expressed in local currency at time *t*, $e_{jt} = j^{th}$ exchange rate between the domestic currency and foreign currency *j*, I_{jt}^{FX} = interest payments denominated in foreign currency *j*, and I_t^{DX} = local currency interest payments. The absolute nominal interest cost does not give a good indication of the true cost or burden of the debt. Thus, it is better to normalize nominal interest cost in real terms, or in terms of units of nominal GDP or government revenues. The latter two normalizations reflect the capacity of the government to meet the interest payments. Such normalizations would imply that we could define: (a) real interest cost; (b) nominal interest cost as a proportion of nominal GDP; and (c) nominal interest cost as a proportion of revenues.

- The real interest cost may capture better the economic cost of debt associated only with interest payments. It measures the nominal interest cost of debt adjusted for prices, and can be expressed as:

$$I_t^P = \frac{I_t^*}{P_t} \qquad (2)$$

where I_t^P = real total interest payments, P_t = domestic prices and I_t^* is as defined previously.

- The nominal interest cost-to-nominal GDP ratio is a widely used measure of cost and is calculated as:

$$I_t^Y = \frac{I_t^*}{Y_t} \qquad (3)$$

where I_t^Y = nominal interest cost-to-nominal GDP ratio, Y_t = nominal GDP and I_t^* is as defined previously.

[44] For simplicity, we assume that there are only domestic currency nominal debt and foreign currency denominated nominal debt. The equation (and all subsequent ones) could be easily expanded to accommodate debt with different characteristics, such as inflation-linked debt. We also ignore other costs, such as commissions, legal fees and other administrative outlays, that are typically associated with incurring debt.

- The nominal interest cost-to-nominal government revenues ratio is calculated as:

$$I_t^{\mathrm{T}} = \frac{I_t^*}{\mathrm{T}_t} \qquad (4)$$

where i_t^{T} = nominal interest cost-to-nominal government revenues ratio, T_t = nominal government revenues and I_t^* is as defined previously.

- It may be also useful to measure the interest payments per unit of debt, i.e., the average interest rate. The (unweighted) average interest rate is the nominal interest payment relative to the outstanding stock of debt and is computed as:

$$\bar{i}_t = \frac{I_t^*}{D_t} = \frac{\sum_{j=1}^{m} e_{j,t} I_{j,t}^{FX} + I_t^{DX}}{D_t^{DX} + D_t^{FX}} = \frac{\sum_{j=1}^{m} e_{j,t} I_{j,t}^{FX} + I_t^{DX}}{D_t^{DX} + \sum_{j=1}^{m} e_{t,j} D_{t,j}^{FX}} \qquad (5)$$

where $\bar{i}_t$ = the unweighted average interest rate, $D_t = D_t^{DX} + D_t^{FX}$ $= D_t^{DX} + \sum_{j=1}^{m} e_{t,j} D_{t,j}^{FX}$ = the outstanding total debt stock in period t, and D_t^{DX} and $D_t^{FX} = \sum_{j=1}^{m} e_{t,j} D_{t,j}^{FX}$ are the outstanding domestic currency and foreign currency debt respectively.

- The real unweighted average interest rate is the unweighted average interest rate adjusted for domestic inflation:

$$\bar{i}_t^{\pi} = \bar{i}_t - \pi_t \qquad (6)$$

where $\bar{i}_t^{\pi}$ = the real unweighted average interest rate, and π_t = domestic inflation.

Interest cost adjusted for capital gains/losses on indexed debt

- As described previously, the nominal interest cost ignores any costs associated with capital gains/losses. These capital gains/losses arise from the exchange rate effects on foreign currency denominated debt as the debt is effectively indexed in currencies other than the domestic one. The nominal adjusted interest cost can be measured as:

$$C_t^* = I_t^* + \sum_{j=1}^{m} \left(D_{t-1,j}^{FX} . \Delta e_{t,j} \right) \qquad (7)$$

where C_t^* = adjusted nominal interest cost, $\sum_{j=1}^{m}\left(D_{t-1,j}^{FX}.\Delta e_{t,j}\right)$ = the capital gains/loss arising from the change in the exchange rates associated with outstanding FX debt at $t-1$, and I_t^* is as defined previously.

- The real adjusted interest cost is calculated as:

$$C_t^P = \frac{C_{t_t}^*}{P_t} \qquad (8)$$

where C_t^P = real adjusted interest cost, and all other terms are as defined previously.

- The capital gain/loss adjusted nominal interest cost-to-nominal GDP ratio is calculated as:

$$C_t^y = \frac{C_t^*}{Y_t} \qquad (9)$$

where C_t^y = adjusted nominal interest cost-to-nominal GDP ratio, and all other terms are as defined previously.

- The capital gain/loss adjusted nominal interest cost-to-revenues ratio is calculated as:

$$C_t^{\mathrm{T}} = \frac{C_t^*}{\mathrm{T}_t} \qquad (10)$$

where C_t^{T} = adjusted nominal interest cost-to-revenues ratio, and all other terms are as defined previously.

Risk measures

75. Risk is generally a function of the exposure of the government debt portfolio and the specific risk factor. While the exposure tends to be endogenous to management decisions, the risk factor is exogenous as it is driven by forces beyond the control of the debt manager, including macroeconomic developments in a country and the rest of the world, changes in market sentiment, and other factors that give rise to unanticipated changes in market prices.

76. Debt managers can help reduce the vulnerability of the government debt portfolios to changes in market prices by reducing the portfolio exposure. To this end, appropriate indicators that gauge the extent to which the debt portfolio, and debt cost, are exposed to various types of risks can be measured and monitored over time.

77. Risk measures estimate the potential unexpected increase in debt service payments produced by a surprising shift in market variables such as interest or exchange rates.

78. As noted above, in a deterministic setting, as used in the MTDS analytical tool, risk is measured as the difference between the cost in a given period under a scenario incorporating a specific shock and the cost under a pre-determined baseline scenario.[45] This difference is represented by:

$$risk_t^k = I_t^{k,s} - I_t^{k,b} \text{ or } risk_t^k = C_t^{k,s} - C_t^{k,b}, k = *, P, Y \text{ or } T. \qquad (11)$$

where $I_t^{k,s}$ and $C_t^{k,s}$ are respectively the costs under the scenario with an expected shock and $I_t^{k,b}$ and $C_t^{k,b}$ are the costs under a baseline scenario.

79. In addition to interest and exchange rate risks, debt managers are also exposed to refinancing (or roll-over) risk—i.e., the risk that debt will have to be rolled over at unusually high cost, or, in extreme cases, cannot be rolled over at all. Although refinancing risk may be considered a type of interest rate risk, its materialization can lead to exceptionally large increases in government funding costs, or to the inability to refinance the government loans coming due. Since such an impact can lead to, or exacerbate, a debt crisis and thereby cause severe economic losses in addition to the purely financial effects of higher interest rates, it is important to treat refinancing risk separately. Below we discuss vulnerabilities to interest rate, refinancing, and foreign currency risks and some statistics that can be used to gauge their severity.

Indicators of Exposure to Market Risk Factors

Interest rate risk

80. Interest rate risk refers to the vulnerability of the debt portfolio, and the cost of government debt, to higher market interest rates at the point at which the interest rate on variable rate debt and fixed rate debt that is maturing is being re-priced. The following indicators provide measures of the exposure to this risk:

- Amount of the debt stock refixing the interest rate in a particular period t:

$$D_t^{refix} = D_t^v + A_t^f = D_{t_t^v}^{v,FX} + D_{t_t^v}^{v,DX} + A_t^{f,DX} + A_t^{f,FX} \qquad (13)$$

[45] In a stochastic setting, risk is typically quantified by some measure of dispersion (e.g., the standard deviation) or extreme or tail area of a given distribution (e.g., the 95th percentile of the empirical cost distribution or the upper tail area of the empirical cost distribution beyond the 95th percentile).

where $D_t^v = D_{t_t^v}^{v,FX} + D_{t_t^v}^{v,DX}$ = total variable rate debt; $D_{t_t^v}^{v,DX}$ = domestic currency variable rate debt; and $D_{t_t^v}^{v,FX} = \sum_{j=1}^{m} e_{t,j} D_{t,j_t^v}^{v,FX}$ = foreign currency denominated variable rate debt (converted to domestic currency); $A_t^f = A_t^{f,DX} + A_t^{f,FX}$; A_t^f = principal or amortization repayments of fixed-rate debt falling due in period *t*, $A_t^{f,DX}$ = principal repayments on domestic fixed-rate debt falling due in period *t*, and $A_t^{f,FX} = \sum_{j=1}^{m} \left(A_{t,j}^{f,FX} . e_{t,j} \right)$ = principal repayments on foreign currency denominated fixed-rate debt falling due in period *t*.

- Share of debt in the debt portfolio refixing the interest rate in a particular period t:

$$d_t^{refix} = \frac{D_t^{refix}}{D_t} \tag{14}$$

- Average time to refixing of the debt portfolio. This indicator is a measure of the weighted average time until all principal payments in the debt portfolio become subject to a new interest rate.

$$ATR_t = \frac{\omega^f . \sum_{t=1}^{T} \left(A_t^f . t \right) + \omega^v . \sum_{s=1}^{S} \left(D_{t,s}^v . s \right)}{D_t} \tag{15}$$

where ATR_t = the average interest rate re-fixing period of the debt portfolio, D_t^v, D_t, A_t^f are as defined above, s = time to the next interest rate reset for the variable rate debt, and ω^j, j= v and f, are the respective shares of the variable rate debt outstanding and fixed rate principal falling due. ATR_t shows on average the time it takes for principal payments to be subject to a new interest rate. As an average measure, this indicator gives information over time of the changes in the portfolio's average time to refixing. A shortening of this indicator suggests that the portfolio is, on average, facing a new interest rate more frequently and therefore is more exposed to refixing shocks.

Refinancing (roll-over) risk

81. Refinancing risk captures the exposure of the debt portfolio to unusually higher interest rates at the point at which debt is being refinanced; in the extreme, when this risk is too high debt managers are unable to roll over maturing obligations. The following indicators measure the exposure to this risk[46]:

[46] Note that the indicators discussed here can also be used to assess the exposure to interest rate risk arising only from maturing debt.

- The redemption profile of the outstanding debt. The redemption profile of the debt is the sequence of principal or amortization payments that the outstanding stock of debt gives rise to. It is represented as:

$$RP_t = \left[A_t\right]_{t=1}^{T} = \left[A_t^{DX} + A_t^{FX}\right]_{t=1}^{T} = \left[A_t^{DX} + \sum_{j=1}^{m}\left(A_{t,j}^{FX}.e_{t,j}\right)\right]_{t=1}^{T} = \left\{A_{t=1}, A_{t=2} \ldots, A_{t=T}\right\} \qquad (16)$$

where RP_t = the redemption profile of the outstanding total debt stock that spans the entire expected sequence of principal or amortization payments beginning in period *t* and ending in future period *T* in which the final outstanding principal falls due for repayment; all other terms are as defined previously.

- Proportion of the debt stock falling due within a particular period. The ratio of the debt falling due in a given period to the total outstanding debt can be expressed as: $\frac{A_t^D}{D_t}$.

- Proportion of the debt stock falling due within a particular period adjusted by liquid assets. While $\frac{A_t^D}{D_t}$ provides the gross exposure to refinancing risk, countries may have "liquid cushions" in the form of FX reserves, or cash balances, that reduce the government's vulnerability to refinancing risk. These assets should be netted out from the gross exposure. Consequently, the adjusted ratio of debt falling due at time t can be expressed as: $\frac{\left[A_t^D - R_t - CB_t\right]}{D_t}$,

  where CB_t = cash balances, and R_t = international reserves.

  Separate estimates of the proportion of the debt exposed to refinancing risk can be done for external and domestic portions as follows:

  $\frac{A_t^{DX} - CB_t}{D_t^{DX}}$, and $\frac{A_t^{FX} - R_t}{D_t^{FX}}$

  Finally, the ratio of debt falling due to tax revenues, $\frac{A_t^D}{\mathrm{T}_t}$, provides an idea of the size of the rollover relative to the government ability to raise revenues.

- Average time to maturity. This indicator measures the weighted average time to maturity of all the principal payments in the debt portfolio. It is computed as:

$$ATM_t = \frac{\sum_{t=1}^{T}(A_t \, .t)}{\sum_{t=1}^{T} A_t} \qquad (17)$$

where ATM_t = the average time to maturity of debt portfolio, A_t = tth period principal payment in the portfolio. ATM_t shows how long it takes on average to rollover the debt portfolio. A shortening of this indicator suggests that the portfolio is being rolled over more frequently and therefore is more exposed to refinancing shocks.

Foreign exchange rate risk

82. FX risk relates to the vulnerability of the debt portfolio, and the government's debt cost, to a depreciation/devaluation in the external value of the domestic currency. The following indicators provide a measure to the exposure to this risk:

- Ratio of foreign currency debt to total debt:

$$d_t^{fx} = \frac{D_t^{fx}}{D_t} = \frac{D_t^{FX}}{D_t^{DX} + D_t^{FX}} = \frac{\sum_{j=1}^{m} e_{t,j} D_{t,j}^{FX}}{D_t^{DX} + \sum_{j=1}^{m} e_{t,j} D_{t,j}^{FX}} \qquad (18)$$

where d_t^{fx} is the share of foreign currency debt in the debt portfolio.

- Mismatch in the level of foreign currency liabilities in relation to foreign currency reserves:

$$d_t^{fxr} = \frac{D_t^{fx}}{R_t} = \frac{D_t^{FX}}{R_t} = \frac{\sum_{j=1}^{m} e_{t,j} D_{t,j}^{FX}}{\sum_{h=1}^{n} e_{ht} R_{ht}} \qquad (19)$$

where d_t^{fxr} = the ratio of foreign currency debt to foreign currency reserves; R_t = foreign currency reserves; $h = 1,...,n$ denotes different currencies held by the Central Bank in international reserves.

- Mismatch in the composition of foreign currency liabilities in relation to foreign currency reserves

  $d_t^c = \sum_{j=1}^{W} \omega_t^j D_{t,j} / R_{t,j}$ where d_t^c indicates the degree of currency mismatch FX debt and FX reserves at time t, ω_t^j is the share of FX debt denominated in currency j and $D_{t,j}$ and $R_{t,j}$ are the absolute values of the FX debt and FX reserves denominated in currency j. When debt and reserve levels are too far apart, $D_{t,j}$ and $R_{t,j}$ could be measured as shares rather than absolute values. The farther the indicator departs from 1 the greater the degree of currency mismatch.

Other useful debt indicators

- The net present value (NPV) of the total debt: The present value of the outstanding debt stock is the discounted stream of all its future cash flow payments. It is computed as:

$$NPV_t^D = \sum_{t=0}^{T} \left(CF_t^D . \delta^t \right) \tag{20}$$

  where NPV is the present value of the debt stock, CF the cash flow payments in period *t*, and δ = is the discount factor. Future foreign currency payments are to be first translated to domestic currency using the expected exchange rate.

- LICs have access to concessional sources of financing, which reduces the cost considerably. This is not captured in a normal stock measure of the debt, but can be captured by examining the net present value of debt (NPV) which discounts future (low) debt servicing payments to the present. The drawback of the NPV measure is that it does not assume that a concessional loan is rolled over. Thus if a concessional loan falls due the next day, the NPV is in essence the same as the face value. In a typical country case, concessional loans are often replaced with new loans. In a full-fledged strategy evaluation—see the MTDS spreadsheet tool—this is overcome by assuming rollover strategies for such loans for a very long time horizon. As the distant future is heavily discounted, this problem is reduced.

Appendix IV. Potential Sources of Financing

This appendix provides a brief overview of the main classes of financing sources available to the sovereign. When evaluating alternative funding sources, it is important to take into consideration the all-in-cost of borrowing as there may be fees and hidden costs associated with the borrowing.

External sources

83. There are two main sources of external debt—official and private. Official debt is typically contracted in the form of non-marketable loans. Private sector external debt can be either non-marketable loans or marketable debt securities).

Official sources

Official sources include multilateral institutions and bilateral loans from sovereigns.

84. Concessional loans typically have long maturities (e.g., 40 years) and long grace period (e.g., 10 years). In the case of IDA (LICs), they are fixed rate debt denominated in SDR (composite of US dollars, Euro and the Japanese Yen). In the case of IBRD (MICs) they can be fixed or variable, and with the currency chosen by the borrower. Interest rates are typically very close to or below Libor. Bilateral loan terms vary, and may be at a discount to market terms, but their distinctive characteristic is that they tend to be denominated in the currency of the lending country.

85. Often such creditors set specific conditions before loans are disbursed. Multilateral creditors may either constrain the use of funds to specific purposes or set other policy-related conditions. In terms of bilateral loans, these conditions could include requiring recipients to use or procure goods and services exported by the creditor country have to be met. In the specific case of project loans, there is typically a co-financing element where recipients need to partially match the funding provided by the creditor. All of these factors can indirectly add to the cost of the loan, including through a delay in disbursements.

86. In many countries, the authorities organize a donor conference to coordinate the financial commitment of each donor. This allows the authorities to assess the amount of concessional financing available, to identify the profile of any pre-committed financing that they may want to constrain (i.e., by assuming it is fixed) in the MTDS analysis, and to determine the financing gap after the committed concessional financing, to be accessed through non-concessional borrowing.

Private sources

87. Private sources include borrowing from the international capital markets, or from commercial banks.

88. With MDRI, countries access to international capital markets is increasing. However, access can be uncertain and is subject to sudden shifts in market sentiment and appetite. Consequently, to enhance analysis, it is important to constantly collect market intelligence

and to monitor issuances by sovereigns with similar credit ratings. Developing an advisory relationship with an investment bank may be one way to improve the quality of this information collection. Countries can further mitigate this risk by establishing a strong track record in meeting their debt obligations and by establishing an effective investor relations program. In addition, countries should be aware of any likely constraints on the terms of an issue, such as whether a minimum issue size or currency choice is likely to be required. In addition, the structure of the security—i.e., bullet or amortizing—will also be important. Such factors will affect any analysis of cost and risk of this financing option, and its relative attractiveness.

89. In addition, it may be possible to negotiate bank loans with commercial banks. Credit and market sentiment is likely to influence the quantum available from these sources. Such loans will typically be on a floating interest rate basis, for shorter maturities than are available in the capital markets.

Domestic sources

90. Domestic sources of financing will take the form of either non-marketable instruments or marketable debt securities.

91. The sources of non-market domestic financing will include bank loans, suppliers, and often the central bank. Relying on central bank financing, e.g., through requiring direct participation in the primary market or through an overdraft facility, is not desirable, as it can conflict with the monetary authorities' achievement of its objectives and distort the market. [47] Such financing is inflationary, and will typically lead to a higher general level of interest rates. In addition, depending on the terms agreed on central bank financing, it can impede the price discovery process, hindering the development of an efficient government bond market. Captive investors, such as the public sector institutions, may also be an important source of financing; but reliance on these investors will be counter-productive as regards developing an efficient bond market.[48] As with external bank loans, domestic bank loans are likely to be short-term and on variable rates. Short-term credit from suppliers may also be available in the form of accounts payable.

92. In terms of marketable instruments, the range of available debt securities will be limited by the level of market development. As markets develop, the choice of financing instruments (maturity, instrument type, and so on) expands to include instruments with potentially more desirable risk properties. This creates a role for the DM in encouraging the development of domestic debt markets. For instance, it is necessary for the DM to move from

[47] In most countries, monetary financing of the government is explicitly prohibited by law.

[48] While their presence might appear to be beneficial and help keep interest costs contained, over the long-term, their presence will impede market development and ultimately limit the amount and quality of financing available in domestic markets. Where possible, the DM should seek to minimize, subject to appropriate prudential standards being maintained, the impact of captive investors on the market (e.g., by allowing their participation in auctions on a non-competitive basis to meet regulatory related demands, ensuring that securities are allocated to them on market terms).

a regime of administered rates to fully market determined rates before the market will develop effectively; and the DM may need to commit to a benchmark issuance program in order to develop an effective yield curve.

93. The nature of the investor base, comprising some combination of banks, pension and insurance companies, other domestic institutional investors, foreign investors and retail investors, will determine the capacity of the domestic market to absorb the quantum and the desired range of debt instruments. Market participants tend to have segmented preference for different debt instruments, particularly with respect to maturity, based on their own balance sheet needs.[49] Consequently, the relative composition of the investor base will be a key factor in determining the relative cost of extending the yield curve or introducing different instrument types. Developing these sources of savings will require a long-term effort on a range of fronts, including regulatory, taxation, legal, market infrastructure and financial literacy. Building the foreign investor base will also have consequences for the capital account and the functioning of the foreign exchange market, and will need careful consideration and coordination with the monetary authorities. As with external markets, it is important to gather market intelligence on a regular basis to monitor the market appetite for certain maturities and instrument types (fixed versus floating or other indexation); establishing effective relations with the investor base will facilitate that.

Cost and risk characteristics

94. The cost and risk characteristics of different instrument types can be broadly characterized as in Table 1.

[49] For example, pension funds tend to require long-term inflation-protected assets, while banks tend to have a preference for short-term assets to match short-term deposits.

Table 1. Cost and Risk Factors of Different Financing Instruments

Instrument Type	Cost characteristics	Risk characteristics	Other comments
External Instruments			
Multilateral concessional loan (e.g., IDA, AfDF, ADF)	Highly concessional	Fixed rate; denominated in foreign currency; ultra-long tenor; amortizing structure; long grace period.	Access will decline and terms will harden as income level increases. Limited flexibility to negotiate terms. Typically involves a commitment fee. Disbursement can be dependent on certain conditions being met.
Multilateral non-concessional loan (e.g., IBRD, AfDB, ADB)	Some concessionality	Both fixed and variable rate; denominated in foreign currency	Flexibility to tailor terms (e.g., currency and interest rate structure) to suit recipient risk preferences. Tenor and grace period linked to country category. Involves a commitment fee. Not available to IDA-only countries
Bilateral loan (including project loans)	Typically some concessionality	Both fixed and variable rate; denominated in foreign currency	Limited flexibility on choice of terms. Various transaction charges involved. Project loans tied to specific project use; consequently disbursement highly dependent on progress of project.
Commercial bank loan (including syndicated loans)	Market rates	Can be fixed or variable rate; can be short-, medium- or long-term; typically denominated in foreign currency.	Flexibility to influence terms will depend on relative negotiating power. Can involve significant transaction fees.
Sovereign Bonds	Market rates (depending on liquidity conditions and country credit rating)	Can be fixed or variable rate; typically denominated in foreign currency; typically bullet structure.	Authorities choose key features (e.g., interest rate structure, currency and maturity). Significant transaction fees involved. Resource intensive to launch.

Domestic Instruments			
Treasury bills	Market rates	Short-term; denominated in domestic currency	Typically the first instrument introduced in the domestic market.
Treasury bonds	Market rates	Medium- to long-term; typically denominated in domestic currency. Can be fixed or variable rate. Can be indexed.	Structure of investor base will be determinant of relative cost of different types and maturities.
Retail instruments	Administrative or market rates	Can be fixed or variable rate; denominated in domestic currency; can be indexed. Typically short- to medium-term.	Developing retail investor base can provide some support in face of rollover risk. Can be relatively costly depending on the distribution arrangements.
Commercial bank loan	Market rates	Can be fixed or variable rate; generally short-term; typically denominated in domestic currency.	Flexibility to influence terms will depend on relative negotiating power. Some transaction fees involved.

Appendix V. Formulating the MTDS: Taking Account of the Costs of Monetary Policy Implementation

95. This appendix discusses how the costs of monetary policy implementation can be taken into account when formulating the MTDS. These issues would be automatically resolved where the MTDS is formulated on the basis of a fully consolidated public sector including the central bank; however, it is not typical to formulate an MTDS in that way.

96. In pursuit of its monetary policy objectives, the central bank might need to eliminate excess liquidity in the system, using a variety of instruments to including (i) reserves requirements; (ii) deposit auctions; (iii) central bank bills; (iv) government securities, or (v) liberalizing capital outflows. Using instruments that imply costs that are directly borne by the central bank should be reflected in the projected profit remittances of the central bank. When government securities are issued in the primary market to sterilize excess liquidity, this has direct budget implications as the interest is directly borne by the government—even though the receipts cannot be used for government funding as they are parked in blocked deposits at the central bank—otherwise they would not have a sterilization effect. These costs are normally already taken into account in the baseline macroeconomic projections and can be ignored.

97. However, there are some instances where the choice of MTDS will significantly affect those costs; consequently, the relative difference in costs should be recognized and considered when making the trade-off between alternative debt management strategies. For example, where the exchange rate is pegged or managed, and the capital account *de facto* not very open, external borrowing to fund the budget in excess of that needed for balance of payments purposes, will result in large international reserves accumulation. This may be a particular issue where countries are very dependent on concessional foreign currency loans to fund the budget, as is the case with many LICs. Any additional domestic liquidity injected as a consequence may then need to be temporarily sterilized until it can be absorbed. Where the country has limited capacity to absorb this liquidity, e.g., where opportunities to extend credit to the private sector are poor, this could take a considerable period of time. This net sterilization cost should in principle be factored into the cost of any external financing where that exceeds anticipated balance of payments needs.

98. For scenario analysis, the debt manager should factor the extra cost associated with such external borrowing into the net profit remittances and interest payments of the central bank, as it is not reflected in the baseline macro framework. Alternatively, if the government relies on direct central bank financing as part of its MTDS, then this is likely to need sterilization to avoid inflationary pressures. The DM can usually make the simplifying assumption that all central bank sterilization is at short-term interest rates. Another relevant operation might be where the government receives surplus external resources which it decides to use to repay debt early. Where this debt is held by domestic investors, the central bank may need to sterilize the liquidity injected in the market until it can be absorbed elsewhere. The cost of this sterilization, either direct or indirect, would still be borne by public finances.

Appendix VI. Developing a Medium-Term Debt Management Strategy in Practice: An Illustration

This Appendix illustrates the application of the MTDS framework in the context of two different country cases.

Country A

Existing debt management strategy (Step 1)

99. Until early 2008, Country A's implicit debt management strategy had focused almost exclusively on cost reduction. However, having secured external debt relief and recognizing the importance of developing the domestic debt market, the authorities published for the first time a national public debt management strategy document in April 2008. That strategy document charted a new course for developing the domestic debt market, and sought to institutionalize a closer consideration of the cost and risk trade-offs of new borrowing options going forward, while maintaining long-term debt sustainability. The MTDS exercise was to help provide a framework to quantitatively evaluate these options, by providing the cost and risk trade-offs involved in alternative debt management strategies.

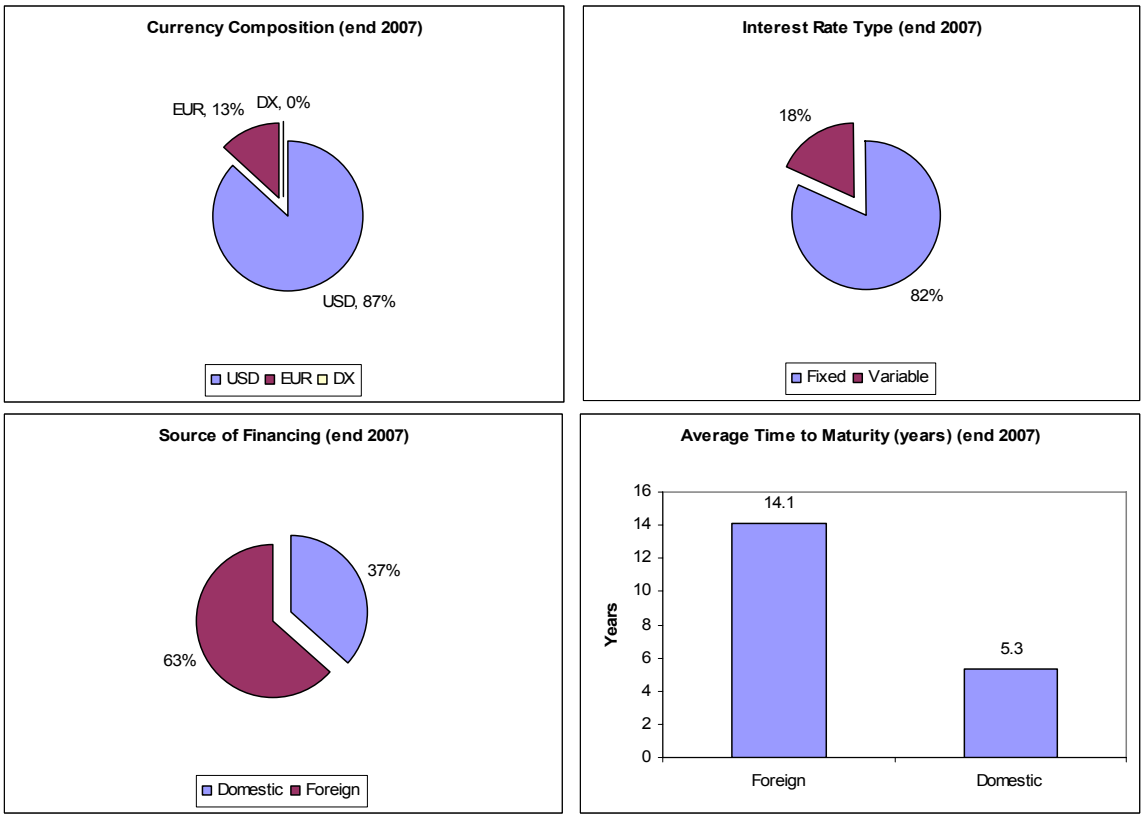
Characteristics of the existing debt portfolio (Step 2)

100. The existing debt portfolio is composed of 63 percent external and 37 percent domestic debt; however, all domestic debt is denominated in foreign currency. Overall the portfolio is relatively low cost. Almost all external debt is contracted at concessional rates, while the presence of captive investors, and practice of forced placements, has kept the cost of domestic debt below a true market rate. With regard to key vulnerabilities, foreign exchange risk is the dominant risk as there is no domestic currency debt. Refinancing risk and interest rate risk represents moderate risk as only 6 percent of the total debt matures within the next five years, and over 80 percent of the total portfolio is fixed rate. A reduction in foreign exchange risk would be desirable, but that would require the introduction of domestic currency debt instruments. Going forward, the combination of the authorities' stated strategy of developing the domestic debt market, and their perception that their access to concessional financing will decline, is likely to change the cost and risk profile of the portfolio significantly.

Potential funding sources (Step 3)

101. As an IDA-only country, Country A relies heavily on grant and concessional financing. Nevertheless, as the country moves towards graduation from IDA, it is expected that the terms at which these funds are available will become less concessional. In the domestic market, a feature of the country's financial market is that more than 70 percent of financial institutions' deposits and more than 95 percent of the investments are in foreign currency, limiting the demand for domestic currency assets. The institution that manages the public pension is the most important institutional investor in government bonds, absorbing between 60 and 65 percent of all new issuances.

Figure 3. Characteristics of the Current Debt Portfolio: Country A



Current macroeconomic challenges and structural features (Steps 4 and 5)

102. Despite substantial debt relief and recent fiscal consolidation, the country remains at a modest risk of debt distress, underlining the importance of continuing to contain debt interest costs. A key factor affecting the risk of debt distress is the country's vulnerability to exchange rate movements, particularly given its dependence on commodity exports and high oil imports. Given persistently high current account deficits, and the limited availability of concessional loans and volatility of aid, the authorities have sometimes felt the need to rely on domestic issuance or external borrowing from nontraditional sources to meet expenditure needs. Weather related events regularly impact the fiscal and balance of payments position, again potentially resulting in unanticipated financing needs. However, the domestic financial market is highly dollarized and shallow with limited institutional investors, limiting its ability to smooth the impact of these temporary budgetary shocks. In addition, the impact of rising food and fuel prices poses an additional challenge with respect to containing domestic financing costs, and pressure on the real exchange rate. Overall, this suggests a need to develop access to a diverse range of financing sources to help mitigate potential expenditure volatility.

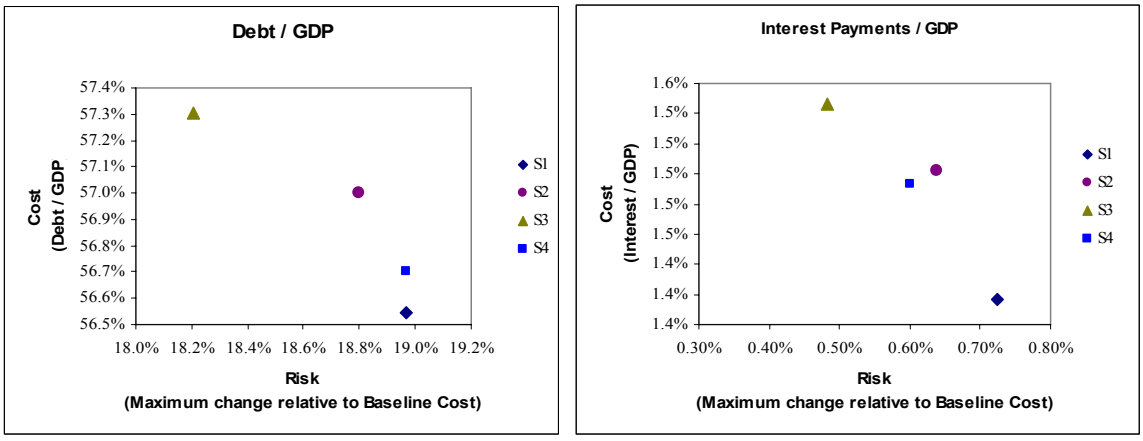
Assessing the alternative debt strategies (Step 6)

103. Taking these factors into account, the relative performance over the medium-term of four alternative debt management strategies was considered. The strategies tested were based on discussion with the authorities with respect to their goal of developing the domestic debt market and their perspective on their options for securing concessional financing going forward. This analysis was undertaken on the basis of a specified set of macroeconomic projections, and a specific set of pricing assumptions. A number of risk scenarios were also specified reflecting some of the vulnerabilities identified above. The four strategies considered were:

- S1: A status quo strategy that (largely) covers the financing need with external concessional debt, while continuing to refinance a small proportion of non-standardized domestic debt with standardized instruments;
- S2: A more aggressive domestic market development strategy that rolls over a greater proportion of non-standardized debt using standardized debt, consequently reducing the recourse to concessional external debt. This is the strategy set out by the authorities going forward;
- S3: A strategy that aims to address the exchange rate risk in the portfolio by considering the introduction of standardized domestic currency denominated debt, at the same pace as domestic debt issued under S2; and
- S4: A strategy that considers a change in the composition of external debt by introducing a decline in the degree of concessionality of external financing.

104. Figure 4 illustrates the relative performance of these strategies on the basis of two key indicators—the end period interest payments/ GDP and debt / GDP. Risk is defined as the maximum increase in these two indicators under stress.[50]

Figure 4. Strategy Trade-offs: Country A



[50] These are calculated using the analytical tool that accompanies the Guidance Note.

105. For a similar level of risk, Strategy 1 is the least costly compared to strategies 2 and 4. This strategy implicitly maximizes concessional borrowing to help maintain debt sustainability. Strategies 2 and 3 are illustrative scenarios that highlight the potential increase in costs associated with the authorities' stated objective of building the domestic debt market. Similarly, these strategies capture the impact of using domestic sources of financing in the event that the total amount of concessional funding is not forthcoming and external non-concessional sources are limited. In addition, Strategy 3 highlights the potential cost of reducing exchange rate exposure in the portfolio. The primary benefit of presenting the cost and risk of each strategy in this context is to highlight the estimated cost to the government budget of pursuing a domestic debt market development strategy. In order to contain these costs, and to ensure that risks of debt distress are not excessively aggravated, this market development strategy would need to be supported by prudent macro policies that would help reduce the cost—by reducing credit and inflation risk premia, while creating sufficient budget space to accommodate these costs. It would also need to be accompanied by a clear strategy to develop the market infrastructure, including adopting an effective communication plan, to ensure that it could be successfully implemented.

Country B

Existing debt management strategy (Step 1)

106. Country B had in place a formal debt strategy of maximizing concessional debt, with a secondary debt management objective of developing the domestic debt market. Nevertheless, after securing debt relief and in light of the extent of its infrastructure investment needs, it was actively developing alternative sources of quasi-concessional and market based financing. The country had recently successfully tapped international capital markets.

Characteristics of existing debt portfolio and funding sources (Steps 2 and 3)

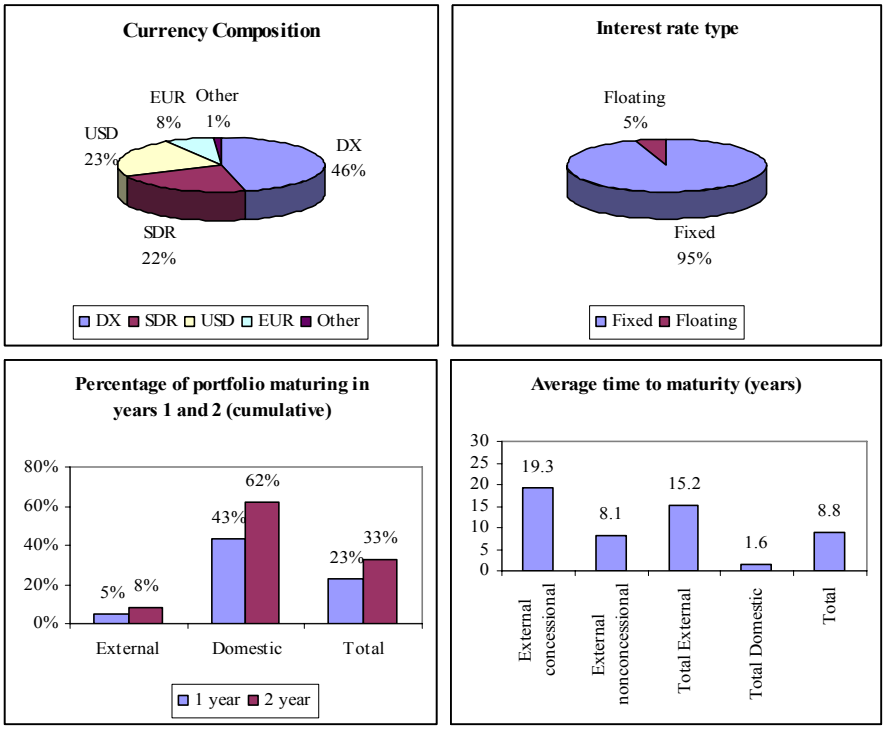
107. The existing debt portfolio consists of a relatively wide range of instruments including concessional financing from multilateral creditors, quasi-concessional financing from bilateral creditors, external commercial loans, a US$ denominated Eurobond, Treasury bills, floating rate Treasury notes (issued with 2- and 3-year maturities), and fixed rate Treasury bonds (issued at 2-, 3- and 5-year maturities).

108. The portfolio broadly consists of 46 percent domestic and 54 percent external debt (Figure 5), suggesting a relatively significant exposure to movements in the exchange rate. While the majority of debt is at fixed rates, the short average maturity of domestic debt—almost of the portfolio will mature in the next 2 years and the average maturity is 1.6 years—means that interest rate risk is not inconsequential. The extent of the refinancing risk in the domestic debt portfolio is further aggravated by the authorities' assessment that the market is relatively underdeveloped, with low capacity to absorb significant quantities of debt at any one time.

109. In summary, this suggests that strategies which lead to a reduction in foreign exchange or refinancing risk would be desirable. Nevertheless, containing the cost will be

imperative given that the underlying fiscal deficit, i.e., excluding grants, is 7 percent of GDP, so fiscal space is severely limited.

Figure 5. Characteristics of the Current Debt Portfolio: Country B



Macroeconomic factors influencing choice of strategy (Steps 4 and 5)

110. The debt manager has reviewed the DSA and more generally discussed macroeconomic policy challenges with officials involved in fiscal, monetary and exchange rate issues.

111. Overall, the fiscal position is relatively weak and expectations have often turned out to be over-optimistic; the country is relatively aid dependent, with grants typically accounting for up to 3–4 percent of GDP—this has lead to volatility in receipts with a consequent impact on the implementation of budgeted expenditure plans; the country is also exposed to significant terms of trade shocks and has a large current account deficit, mainly financed by official flows. Nevertheless, incomes have risen sharply in the last few years and are projected to continue doing so; this itself raises the prospect that access to grants and concessional financing may become more limited going forward. On the monetary side, the country has recently adopted an inflation targeting regime, with a floating exchange rate, and does not factor any specific exchange rate target, or related balance of payments needs, into the choice of domestic versus external borrowing. The foreign exchange market and the money markets are relatively shallow. The inflation rate is several percentage points above the central bank's target level and has recently spiked as a consequence of a significant increase in the price of imported commodities (e.g., oil). Furthermore, the capital account regime is relatively liberalized and non-resident investors can participate in both the equity and fixed income markets, potentially adding further volatility to the capital account.

In summary, the key structural macroeconomic factors that would influence the direction of the debt management strategy are set out in Table 2.

Table 2. Structural Macroeconomic Factors and Link to Choice of MTDS

Nature of exposure	Macroeconomic variables affected	Implication for choice of MTDS
Aid volatility	Government expenditure, level of international reserves	Build cash / reserves buffer; diversify financing sources
Terms of trade	Balance of payments, exchange rate	Bias towards domestic currency instruments to limit exposure to exchange rate movements
Credibility of monetary policy	Interest rates	Consider domestic currency instruments that are insulated against shocks to inflation expectations (e.g., inflation-linked, variable rate, short-term debt); bias towards foreign currency denominated instruments
Capital account	Level of international reserves	Ensure sufficient reserves to cover potential scale of non-resident outflows; limit rollover risk; diversify financing sources
Fiscal (e.g., revenue shortfall)	Budget deficit, government expenditure, growth, exchange rate	Build cash buffers; diversify financing sources; limit rollover risk; limit currency exposure
Rising income levels	Exchange rate, credit premium	Diversify financing sources; access to concessional sources may become more limited.
Shallow markets	Exchange rate, interest rates	Limit rollover risk; diversify financing sources.

112. Overall, highlighted macroeconomic risks, as well as those identified in the existing debt portfolio, point to the need to mitigate foreign exchange and rollover risks, while ensuring sufficient buffers or other means (such as diversifying financing sources) to mitigate the risk of a shortfall or volatility in receipts.

Assessing the alternative debt strategies (Step 6)

113. Taking these factors into account, the DM considers the relative performance of four alternative debt management strategies.[51] A number of risk scenarios were also specified.

114. The four strategies under consideration are broadly as follows:

- S1: Retain the existing portfolio composition
- S2: Increase the proportion of domestic currency debt, but maintain existing maturity structure
- S3: Increase the proportion of domestic currency debt, but lengthen maturity of domestic currency debt

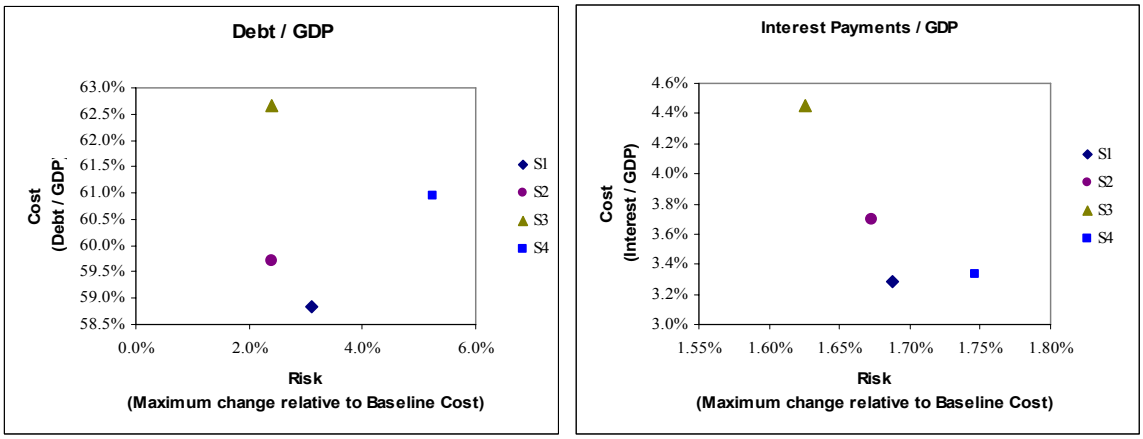
[51] Using in this case the analytical tool that accompanies the Guidance Note.

- S4: Increase the proportion of foreign currency debt; increase the proportion of foreign currency commercial debt; lengthen maturity of domestic currency debt

115. Both S3 and S4 are consistent with diversifying financing sources, and so are broadly consistent with helping to mitigate rollover risk; they would also mitigate some of the volatility in budget execution associated with uncertainty in the timing of disbursement of concessional loans. S2 and S3 are both consistent with the overall objective of reducing the foreign currency exposure of the debt, but rollover risk might be a concern given the associated shortening of the maturity of the portfolio.

116. Figure 6 illustrates the performance of these strategies on the basis of two key cost indicators, and under a specific set of macroeconomic and pricing assumptions used in the exercise.

Figure 6. Strategy Trade-offs: Country B



117. From Figure 6 it is clear that S1 is the least cost of all 4 strategies, while risk is relatively low. This suggests it is a contender for preferred MTDS. Nevertheless, if incomes rise as expected, the implied quantum of concessional financing might not be feasible to achieve. S2 and S3 are both higher cost given that weak monetary policy credibility and the consequent inflation risk premium keeps domestic interest rates high; this is a significant factor given the relatively weak fiscal position. In addition, the implied increase in participation by non-resident investors in the domestic market might suggest that an increase in reserve buffers is needed to mitigate associated rollover risk. Also, if S3 requires banks to hold a significantly greater proportion of longer-dated debt, then a judgment is required as to whether the associated maturity mismatch might add significantly to risk in the banking sector. Finally, while S4 is relatively low cost, especially in terms of interest cost, it aggravates the currency exposure of the portfolio, and so carries the most risk.

118. Overall, it appears that S1, which maximizes the recourse to concessional debt, should be the preferred strategy as long as it is available. Over time, as access to external concessional loans becomes more limited, and as monetary policy becomes more credible, S2 and S3 could be re-evaluated, particularly if the fiscal position strengthens, providing some scope to absorb the higher cost.

Appendix VII. Template for a Published Debt Management Strategy Document

119. This appendix sets out the typical components of a debt management strategy document to illustrate the minimum content of such a document. In general such a publication would have a section discussing the following sections:

Objectives and Scope

- Description of objectives for debt management, the scope of the MTDS, and the types of risks being managed under the MTDS.

Existing Debt Portfolio

- Provide the historical context for the debt portfolio, describing changes in its size (including relative to GDP) and composition through time. Changes in relevant market variables should be included, along with commentary of significant events in the evolution of the debt.

The environment for debt management going forward

- Describe the environment for debt management in the future, including fiscal and debt projections, assumptions about exchange and interest rates and constraints on portfolio choice, including those relating to market development and the implementation of monetary policy.

The MTDS

- Describe the analysis that has been undertaken to support the recommended debt management strategy. The assumptions used and limitations of the analysis should be made clear.

- Set out the recommended strategy and its rationale. Describe the desired debt composition and the core arguments for such composition. This should include a discussion of the key risk factors that influenced the choice of strategy.

- Describe the progress to be made toward the desired composition over the planning horizon (3–5 years). Specify ranges for the key risk indicators of the portfolio and the financing program.

- The documented strategy should also outline any specific measures or projects that are planned to manage non-quantifiable risks and/or in support of debt market development, such as plans to introduce new debt recording systems, or a primary dealer framework.

- The documented strategy should also outline the periodic review process that will apply to check whether key assumptions continue to hold and that the MTDS remains

appropriate. The document should also highlight the process that would be followed if circumstances were to change significantly outside that regular review cycle.

Appendix VIII. Developing a Short-term Borrowing Plan: An Example

120. The following provides an illustration of how a short-term borrowing plan might be derived, given an agreed MTDS.

121. Assume that the agreed MTDS is to finance 60 percent (of the government's cash requirement) through concessional debt, 20 percent through official quasi-concessional financing and 20 percent through medium-term domestic bonds.

122. Assume that in this particular year the total financing requirement is 100. Of the 20 quasi-concessional financing required under the strategy, 5 has already been committed from a development bank for a specific project, with another 10 available from the IBRD, so the DM needs to identify who might provide the final 5. Similarly, while the target is to raise 20 through medium-term bonds, the DM may determine that the market will absorb only 5 in 5-year bonds, so that the remaining 15 will need to come from 3-year bonds (see Table 3).

123. In terms of translating those targets into an actual issuance plan, then assuming the typical size of an auction of 3-year bonds is 2, then the DM needs to plan 7-8 such auctions across the year to meet the total financing target. Similarly, if the anticipated maximum size of a 5-year auction is 1.5, then may need to plan for 3-4 such auctions, giving an overall target of 10–12 auctions. Then the DM needs to consider whether there are any seasonal factors—such as typical holiday periods—when it may be more difficult to tap the market.[52] These periods should be avoided if possible. So, if August and December is a typically slow time in the domestic market, may want to avoid these months; this would leave 10 months in the year to schedule an auction. Finally, the DM should take into account the needs of the market and whether there is any benefit in following a regular schedule of auctions. So, 3-year auctions may generally be held in the first week of the month, while 5-year auctions may be most successful at the beginning of a quarter. Note, where markets are relatively underdeveloped, and access to very short-term financing is limited or its use might conflict with the achievement of the monetary policy objective, it may be desirable to front-load the financing so that gaps are covered early and cash rationing can be avoided.

[52] The underlying seasonality of government cash flows also needs to be taken into account when determining the pace at which new borrowing is undertaken.

Table 3. Sample Borrowing Plan

Total borrowing requirement				**100**
Strategy	*External financing*	Official concessional	IDA	60
		Sub-total official concessional		*60*
		Official non-concessional	AfDB	5
			IBRD	10
			Bilateral creditor	5
		Sub-total official non-concessional		*20*
	Domestic financing	Market	3-year bonds	15
			5-year bonds	5
		Sub-total domestic market-based		*20*

Provisional auction schedule

	Month	**Instrument**	**Target size**	**Cumulative financing**
	January	5-year	1.5	3.5
	February	3-year	2	5.5
	March	3-year	2	7.5
	April	5-year	1.5	9
	May	3-year	2	11
	June	3-year	2	13
	July	5-year	2	15
	August	*Only if needed*		15
	September	3-year	2	17
	October	3-year. 5-year only if needed to reach target financing	1.5	18.5
	November	3-year	1.5	20
	December	*Only if needed*		20

DEBT MANAGEMENT PERFORMANCE ASSESSMENT TOOL

(DEMPA)

February 5, 2008 (Revised November 2008)

Economic Policy and Debt Department (PRMED)

Banking and Debt Management Department (TRE-BDM)

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS

BDM	Banking and Debt Management Department
DeM	Debt Management
DeMPA	Debt Management Performance Assessment Tool
DPI	Debt Management Performance Indicator
DRI	Debt Relief International
DSA	Debt Sustainability Analysis
Guide	Guide to Debt Management Performance Assessment
IMF	International Monetary Fund
LICs	Low-Income Countries
N/R	Not Rated or Assessed
OECD	Organization for Economic Co-operation and Development
PEFA	Public Expenditure and Financial Accountability (Program)
PRMED	Economic Policy and Debt Management Unit
STP	Straight-Through Processing
T-bills	Treasury Bills
T-bonds	Treasury Bonds

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[1] Members of the technical working group are Marcelo Andrade, Alia Moubayed, Ibrahim Levent, Deepak Mishra, Sandeep Mahajan, Sara Calvo, Hiroshi Tsuboto (all World Bank), and Allison Holland (IMF).

1 INTRODUCTION

The World Bank is developing a program to assist developing countries improve debt management in collaboration with other partners.[2] The objective of the program is to help strengthen capacity and institutions in developing countries to manage government debt in an effective and sustainable manner in the medium to long term. A cornerstone of the program is the Debt Management Performance Assessment Tool (DeMPA), a methodology for assessing performance through a comprehensive set of performance indicators spanning the full range of government debt management (DeM) functions. The intention is that the indicator set will be an internationally recognized standard in the government debt management field and may be applied in all developing countries.

The DeMPA highlights strengths and weaknesses in government DeM practices in each country. Performance assessment facilitates the design of plans to build and augment capacity and institutions tailored to the specific needs of a country. The debt management performance report will not, however, contain specific recommendations or make assumptions as to the potential impact of ongoing reforms on government DeM performance. The DeMPA also facilitates the monitoring of progress over time in achieving the objectives of government DeM consistent with international sound practice.[3]

The DeMPA is modeled after the Public Expenditure and Financial Accountability (PEFA) indicators. It can be considered a more detailed and comprehensive assessment of government debt management than is currently reflected in the PEFA indicators.[4] The two frameworks are complementary: the DeMPA can be used to undertake a detailed assessment of the underlying factors leading to poor PEFA ratings in the area of debt management; alternatively, if the assessment using the DeMPA framework precedes a PEFA assessment, the latter can use the DeMPA results to inform its assessment of the relevant indicators.

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[2] The DeMPA has been developed through a broad collaborative effort involving consultation with international and regional agencies and donors involved in debt management capacity building, as well as government authorities during country-level field testing. The World Bank is grateful to the government of Norway for providing generous financial support to this work through the Norwegian Trust Fund for Debt Sustainability, Volatility, and Relief.

[3] Issued with the DeMPA document is a Guide to the Debt Management Performance Assessment (Guide), which provides supplemental information, key questions to ask during an assessment, and detailed descriptions of individual indicators.

[4] The links between the PEFA and the DeMPA indicators are set out in the Guide.

2 ASSESSMENT METHODOLOGY

2.1 SCOPE AND COVERAGE OF THE FRAMEWORK

The scope of the DeMPA is central government debt management activities and closely related functions such as issuance of loan guarantees, on-lending, and cash flow forecasting and cash balance management. Thus, the DeMPA does not assess the ability to manage the wider public debt, including debt of state-owned enterprises if these are not guaranteed by the central government. The indicators, however, are flexible and can be broadly applied to assess DeM performance in sub-national governments. However, because of the normal obligation of central government to report total nonfinancial public sector debt and loan guarantees, these liabilities are included in the indicator "Debt Reporting" and in the indicator on "Coordination with Fiscal Policy" as it relates to debt sustainability analysis.

2.2 DEBT MANAGEMENT PERFORMANCE INDICATORS

A set of 15 performance indicators aim to measure government DeM performance and capture the elements recognized as being indispensable to achieving sound debt management practices. Each indicator in turn comprises dimensions for assessment that reflect established sound practice. The assessment is incorporated into a Debt Management Performance Report.

The performance indicators encompass the complete spectrum of government DeM operations, as well as the overall environment in which these operations are conducted. Although the DeMPA does not specify recommendations on reforms or capacity- and institution-building needs, the performance indicators do stipulate a minimum level that should be met under all conditions (see section 2.3). Consequently, if the assessment shows that the DeMPA minimum requirements are not met, this will clearly indicate an area requiring reform or capacity building or both.

	Governance and Strategy Development
DPI-1	Legal Framework
DPI-2	Managerial Structure
DPI-3	Debt Management Strategy
DPI-4	Evaluation of Debt Management Operations
DPI-5	Audit
	Coordination with Macroeconomic Policies
DPI-6	Coordination with Fiscal Policy
DPI-7	Coordination with Monetary Policy
	Borrowing and Related Financing Activities
DPI-8	Domestic Market Borrowing
DPI-9	External Borrowing
DPI-10	Loan Guarantees, On-Lending, and Derivatives
	Cash Flow Forecasting and Cash Balance Management
DPI-11	Cash Flow Forecasting and Cash Balance Management
	Operational Risk Management
DPI-12	Debt Administration and Data Security
DPI-13	Segregation of Duties, Staff Capacity, and Business Continuity
	Debt Records and Reporting
DPI-14	Debt Records
DPI-15	Debt Reporting

2.3 SCORING METHODOLOGY

The Debt Management Performance Indicators (DPIs) have one or more dimensions linked to the subject of the DPI. Each of these dimensions should be assessed separately. An aggregate score of each indicator is then based on the assessments for the individual dimensions of the indicator.

The scoring methodology will assess each dimension and assign a score of either A, B, or C, based on the criteria listed. If the minimum requirements set out in C are not met, then a D score should be assigned. In the cases where a dimension cannot be assessed, an N/R (not rated or assessed) score should be assigned.

Special attention was given to the consideration of the C scores for each dimension in each indicator. A score of C indicates that a minimum requirement for that dimension has been met. A minimum requirement is considered the necessary condition for effective performance under the particular dimension being

measured. A score of D, which indicates that the minimum requirement has not been achieved, signals a serious deficiency in performance, requiring priority corrective action to be taken.

The A score reflects sound practice for that particular dimension of the indicator. The B score is an in-between score, lying between the minimum requirements and sound practice for that aspect.

For DPIs that have two or more dimensions, an aggregate score can be determined by averaging the scores for individual dimensions of an indicator and referring to the conversion tables below.[5] Although the dimensions all fall within the same performance indicator, progress on individual dimensions can be made independently of the others and without logically having to follow any particular sequence. The steps in determining the overall or aggregate indicator score are as follows:

- For each dimension, assess what standard has been reached (**A**, **B**, **C,** or **D**).
- Go to the Conversion Tables (below), and find the appropriate section of the two-, three-, or four-dimensional indicators.
- Identify the line in the table that matches the combination of scores that has been given to the dimensions of the DPI (the order of the dimensional scores is immaterial).
- Identify the corresponding overall score for the DPI.

[5] N/R scores should not be included in this aggregation.

CONVERSION TABLES

Individual Scores		Overall Score
Two-dimensional indicators, excluding any N/R		
D	D	D
D	C	D+
D	B	C
D	A	C+
C	C	C
C	B	C+
C	A	B
B	B	B
B	A	B+
A	A	A

Individual Scores			Overall Score
Three-dimensional indicators, excluding any N/R			
D	D	D	D
D	D	C	D+
D	D	B	D+
D	D	A	C
D	C	C	D+
D	C	B	C
D	C	A	C+
D	B	B	C+
D	B	A	B
D	A	A	B
C	C	C	C
C	C	B	C+
C	C	A	B
C	B	B	B
C	B	A	B
C	A	A	B+
B	B	B	B
B	B	A	B+
B	A	A	A
A	A	A	A

Individual Scores				Overall Score
Four-dimensional indicators				
D	D	D	D	D
D	D	D	C	D
D	D	D	B	D+
D	D	D	A	D+
D	D	C	C	D+
D	D	C	B	D+
D	D	C	A	C
D	D	B	B	C
D	D	B	A	C+
D	D	A	A	C+
D	C	C	C	D+
D	C	C	B	C
D	C	C	A	C+
D	C	B	B	C+
D	C	B	A	C+
D	C	A	A	B
D	B	B	B	C+
D	B	B	A	B
D	B	A	A	B
D	A	A	A	B+
C	C	C	C	C
C	C	C	B	C+
C	C	C	A	C+
C	C	B	B	C+
C	C	B	A	B
C	C	A	A	B
C	B	B	B	B
C	B	B	A	B
C	B	A	A	B+
C	A	A	A	B+
B	B	B	B	B
B	B	B	A	B+
B	B	A	A	B+
B	A	A	A	A
A	A	A	A	A

2.4 DEBT MANAGEMENT PERFORMANCE REPORT

The objective of the Debt Management Performance Report is to provide an assessment of government DeM performance based on the indicator-led analysis in a concise and standardized manner.

The report is a concise document (10–20 pages) that has the following structure and content:

- A summary assessment (using the DPIs) that provides an aggregate performance assessment of government debt management
- A section on the government DeM reform process that briefly summarizes recent and ongoing reform measures implemented by government and assesses options available (including financing) to arrange a follow-up mission to assist the country in preparing a detailed and sequenced reform plan based on the results of the DeMPA
- A section that provides country-related information that is necessary to understand the overall assessment of DeM performance
- An introductory section that sets out the process for undertaking the assessment and preparing the report
- The main body of the report, which assesses the current performance of government DeM based on the DPIs

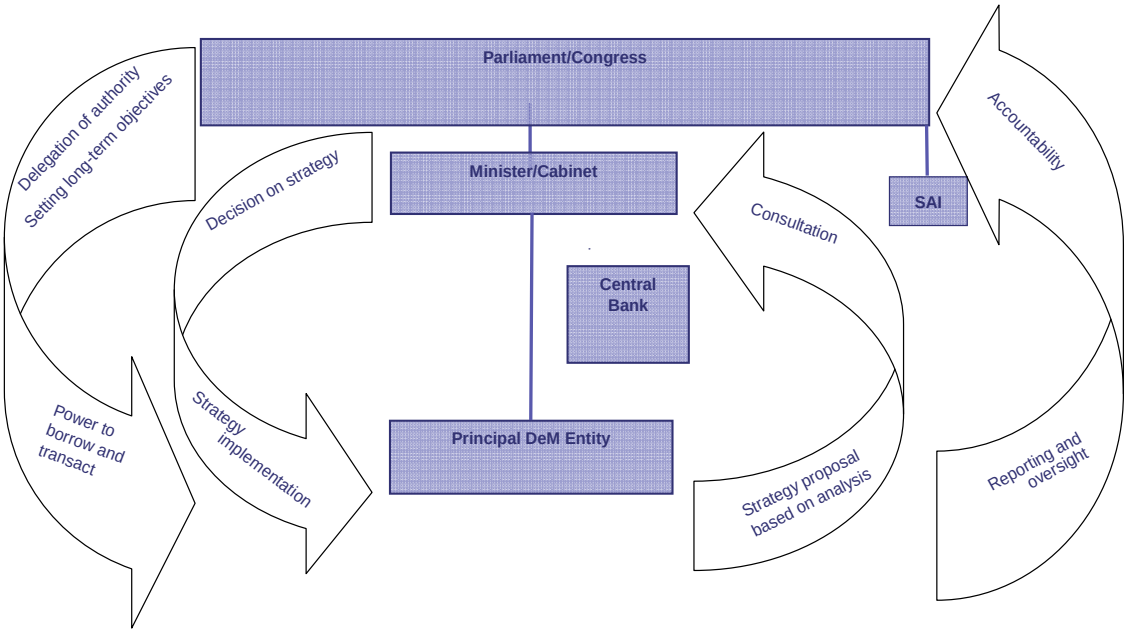
As mentioned above, the report is a statement of current government DeM performance and does not include recommendations for reforms nor action plans. If the views of the assessment team and the government on the findings of the report differ, all opinions would be reflected in the report.

3 DEBT MANAGEMENT PERFORMANCE INDICATORS

3.1 GOVERNANCE AND STRATEGY DEVELOPMENT

In the context of government debt management, "governance" refers to the legal and managerial structure that shapes and directs the operations of government debt managers. It includes the broad legal apparatus (statutory legislation, ministerial decrees, and so on) that defines goals, authorities, and accountabilities. It also embodies the management framework, covering issues such as the formulation and implementation of strategy, operational procedures, quality assurance practices, and reporting responsibilities (Wheeler 2004, 49).

A simplified governance structure is illustrated below:



The Principal DeM Entity (commonly called the "debt management office") is the government entity with overall responsibility for the execution/implementation of the debt management strategy through borrowing, derivatives, and other debt-related transactions. With this structure, it is acceptable that some debt management activities are conducted by other entities as "agents" for the Principal DeM Entity (for example, a Central Bank to undertake auctions in the domestic market or a "Saving Directorate" to issue saving certificates in the domestic retail sector). In these cases, the rights and obligations of the parties should be clarified, preferably in a formalized agency agreement or in the secondary legislation or both.

It is common, though, to find a much more fragmented managerial structure, particularly in developing countries. In some countries, one entity is responsible for external concessionary borrowing, a second entity for external borrowing on commercial terms, a third entity for domestic borrowing from institutional investors, a fourth entity for borrowing from the domestic retail sector, and so forth. This organizational model works reasonably well when the main debt management

objective is to raise the needed funds with little priority to the risks in the overall debt portfolio. However, where the focus on government debt management is more on cost/risk trade-offs in the debt portfolio, promotion of domestic debt market development, strategy development, accountability, and coordination with fiscal and monetary policies, it becomes increasingly difficult and inefficient to keep this fragmented managerial structure.

Realizing that many countries do not have a Principal DeM Entity, the DeMPA is neutral with regard to the structure of DeM entities. In the case in which a country has multiple DeM entities, however, it is essential that these entities closely coordinate their debt management activities, which also is reflected in the governance indicators.

In many countries where the daily debt management activities have been delegated to a Principal DeM Entity (or to different DeM entities), and particularly when those are located within a ministry (normally the Ministry of Finance), it is common that the Minister or the Deputy Minister has retained the power to approve formally any borrowing and to sign the loan agreements.[6] This is acceptable within the structure described above, as long as there is no undue political interference.[7]

The managerial structure should ensure that there is a clear division between the political level (Parliament/Congress, the Cabinet/Council of Ministers, or the Minister of Finance) that sets the overall long-term DeM objectives and strategy and the entity(ies) responsible for implementing the strategy. The advantages of this approach are that it leaves major decisions as to the overall volume of indebtedness and the acceptable risks in the debt portfolio—in terms of their impact on the budget, taxes, government spending programs, or other such fiscal indicators—with political decision makers while allowing technical professionals to seek the optimum risk-adjusted outcome within those parameters.

[6] The alternative structure is to set up the Principal DeM Entity outside the Ministry of Finance as a separate agency or corporate body. In such structure, all the operational decisions are taken within the agency.

[7] For guidance on this, refer to the Guide to the Debt Management Performance Assessment Tool, section 3, DPI-2.

DPI–1 LEGAL FRAMEWORK

The legal framework for government debt management comprises both primary legislation (laws enacted with approval of Parliament/Congress) and secondary/delegated legislation (executive orders, decrees, ordinances, and so forth) determined by the executive branch of government.

The legal framework should preferably include the following:

- Clear authorization by Parliament/Congress to the executive branch of government (the Cabinet/Council of Ministers, the President, or directly to the Minister of Finance) to approve borrowings and loan guarantees on behalf of the central government[8]
- Clear authorization within the executive branch of government to one or more DeM entities to undertake borrowing and debt-related transactions (for example, currency and interest-rate swaps)
- Clear authorization within the executive branch of government to one or more guarantee entities to issue loan guarantees after the political decision to support a certain activity by the use of loan guarantees has been taken[9]
- Specified borrowing purposes[10]
- Clear debt management objectives
- Requirement to develop a debt management strategy
- Mandatory reporting of DeM activities—on an annual basis—covering evaluation of outcomes against stated objectives and the determined strategy
- Requirement for external audit

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[8] After delegation by Parliament/Congress to the executive branch to approve single borrowings, it is acceptable for the Parliament/Congress to ratify certain borrowings in accordance with the law of the country. Preferably, however, this ratification procedure should be limited to loan agreements that are classified as treaties (for example, international agreements concluded between sovereign governments or agreements between a sovereign government and another subject of international law (such as the World Bank) that is governed by international law.

[9] As explained in the introductory remarks under "Governance and Strategy Development" above, it is acceptable with this delegated structure that the Minister of Finance formally approves the single borrowing transactions and signs the final loan agreements and guarantees. The decision on terms and conditions of single transactions, however, as well as the risk assessment in case of loan guarantees, should preferably be delegated to the relevant DeM or guarantee entity.

[10] Examples are presented in the Guide to the Debt Management Performance Assessment tool (DeMPA)

It goes without saying that the legislation must be adhered to. If that is not the case, the indicators below should be read as if the legislation were not in place.

DIMENSIONS TO BE ASSESSED:

1. The existence, coverage, and content of the legal framework

Score	Requirements
A	The requirements for score B are met. In addition, primary legislation includes requirement to develop a debt management strategy, and mandatory annual reporting of the debt management activities to Parliament/Congress covering evaluation of outcomes against the debt management objectives.
B	The minimum requirement for score C is met. In addition, primary legislation includes clear debt management objectives; mandatory annual reporting to Parliament/Congress covering the debt management activities and issued loan guarantees; and a requirement for external audits of debt management activities, policies, and operations.
C	The legislation (primary and secondary) provides clear authorization to borrow and to issue new debt, to undertake debt-related transactions (where applicable), and to issue loan guarantees (where applicable), on behalf of the central government and for specified purposes.
D	The minimum requirement for score C is not met.

DPI–2 MANAGERIAL STRUCTURE

The managerial structure should ensure a clear division between the political level (Parliament/Congress, the Cabinet/Council of Ministers, or the Minister of Finance) that sets the overall long-term DeM objectives and strategy, and the entity(ies) responsible for implementing the strategy. It is desirable to leave overall responsibility for the execution of the strategy to one Principal DeM Entity with the mandate and skill (a) to transact in the markets within the parameters established at the political level and (b) to propose a feasible debt management strategy for the total debt, based on its analyses of the market conditions and the cost/risk of the debt. With this structure, it is acceptable that some debt management activities are conducted by other entities as "agents" for the Principal DeM Entity (for example, a Central Bank to undertake auctions in the domestic market or a "Saving Directorate" to issue saving certificates in the domestic retail sector). In these cases, the rights and obligations of the parties should be clarified, preferably in a formalized agency agreement or in the secondary legislation or both.

Loan guarantees (contingent debt) are typically issued to support financially a certain beneficiary/project or a specific sector of the economy. Because this is a political decision, the approval of the use of these guarantees should be taken at the political level and before any guarantee can be issued. However, as with debt transactions, it is desirable to leave overall responsibility for the preparation and issuance of the loan guarantees to one single entity (the Principal Guarantee Entity) with the mandate and skill to assess and price the credit risk, mitigate the financial effects of a default/trigger event, monitor this risk during the term of the guarantee, coordinate the borrowings of the guarantee beneficiaries with central government borrowing, and to record these guarantees properly. With this structure, it is acceptable that certain loan guarantees are issued by other entities as "agents" for the Principal Guarantee Entity (for example, a designated guarantee entity to issue individual loan guarantees to support farmers under a certain guarantee scheme). In these cases, the rights and obligations of the parties should be clarified, preferably in a formalized agency agreement or in the secondary legislation or both.

DIMENSIONS TO BE ASSESSED:

1. The managerial structure for central government borrowings and debt-related transactions
2. The managerial structure for preparation and issuance of central government loan guarantees

Score	Requirements
A	1. The borrowings and debt-related transactions are steered by a formalized debt management strategy and undertaken by the Principal DeM Entity without undue political interference. 2. Loan guarantees are prepared and issued by the Principal DeM Entity.
B	1. The minimum requirement for score C is met. In addition, the borrowings and debt-related transactions are steered by a formalized debt management strategy and undertaken without undue political interference. 2. Loan guarantees are prepared and issued by the Principal Guarantee Entity that, in the case in which there is a Principal DeM Entity, closely coordinates its activities with the Principal DeM Entity.
C	1. Borrowings and debt-related transactions are undertaken either by the Principal DeM Entity or, if there is no Principal DeM Entity, by the DeM entities that regularly exchange debt information and closely coordinate their respective activities. 2. Loan guarantees are prepared and issued by more than one government entity that regularly exchange information and closely coordinate their respective activities both between themselves and, in the case in which there is a Principal DeM Entity, with this Principal DeM Entity.
D	1. The minimum requirement for score C is not met. 2. The minimum requirement for score C is not met.

DPI–3 DEBT MANAGEMENT STRATEGY

The Principal DeM Entity, or in the case in which there is no Principal DeM Entity, the DeM entities jointly should develop in an open and transparent manner a debt management strategy that is based on the longer-term debt management objectives and set within the context of the government's fiscal policy and budget framework. It is desirable that the strategy development process include consultation with the Central Bank for consistency with monetary policy and that the strategy is ultimately approved at the political level (for example, by the Cabinet/Council of Ministers).

The strategy document should preferably include the following:

- Description of the market risks being managed (currency, interest-rate, and refinancing/rollover risks) and the historical context for the debt portfolio.
- Description of the future environment for debt management, including fiscal and debt projections, assumptions about interest and exchange rates, and constraints on portfolio choice—including those relating to market development and the implementation of monetary policy.
- Description of the analysis undertaken to support the recommended debt management strategy, clarifying the assumptions used and limitations of the analysis.
- Recommended strategy and its rationale. This should specify targets and ranges for key risk indicators of the portfolio and the financing program over the projected horizon. As an interim step, it would be sufficient to express the strategy in the form of guidelines to indicate the direction in which certain key indicators are expressed to evolve (for example, a statement that "the amount of local currency debt maturing within 12 months shall be reduced"). In addition, if one of the debt management objectives is to promote development of the domestic debt market, the strategy should include measures to support such development.

While the strategy should be specified for the medium term, it should be reviewed periodically to assess whether the assumptions still hold in light of changed circumstances. Such a review should be undertaken annually, preferably as part of the budget process, and if the existing strategy is viewed as appropriate, the rationale for its continuation should be stated.

DIMENSIONS TO BE ASSESSED:

1. The quality of the debt management strategy document
2. The decision-making process, updating, and publication of the debt management strategy

Score	Requirements
A	1. The requirements for score B are met. In addition, the target levels for the risk indicators are based on thorough analysis of costs and risks, identifying the vulnerability of the debt portfolio to shocks in market rates, and these analyses are clearly described, clarifying the assumptions used and limitations of the analyses. 2. The decision-making process and publication of the debt management strategy meet the requirements for score B, and in addition it is updated annually, following the same procedure described for scores C and B.
B	1. The strategy includes the minimum requirement described for score C. In addition, it has realistic target levels for indicators of the interest-rate, refinancing, and foreign currency risks, reflecting the specific country environment. 2. The decision-making process and publication of the debt management strategy meet the minimum requirement for score C. In addition, if the proposal were not accepted, the rationale for this is presented in the strategy document. Also, the strategy is updated at least every third year, following the procedure described for score C.
C	1. There is a medium-term (three- to five-year) strategy covering at least 90 percent of the existing and projected central government debt, based on debt management objectives. The strategy is expressed at least as guidelines for the preferred direction of specific indicators for interest-rate, refinancing, and foreign currency risks. In addition, if applicable, the strategy document contains the minimum target of the grant element in external borrowing, as well as a description of measures aimed at supporting domestic debt market development. 2. The strategy proposal is prepared by a Principal DeM Entity or, if there is no Principal DeM Entity, jointly by the DeM entities. The views of the Central Bank are formally obtained, the strategy is approved by the Cabinet/Council of Ministers or the Minister of Finance, and the strategy is made publicly available.
D	1. The debt management strategy does not meet the minimum requirement for score C. 2. The decision-making process does not meet the minimum requirement for score C.

DPI–4 EVALUATION OF DEBT MANAGEMENT OPERATIONS

A policy-based debt management framework steered by long-term debt management objectives and a strategy to achieve these objectives must be complemented by an accountability process. This involves publishing an annual report covering DeM activities, evaluation of outcomes against stated objectives, and compliance with the government's debt management strategy.

The report will include information on the costs and risks of the debt portfolio, performance (such as compliance with the DeM strategy), and performance relative to benchmarks or limits (or both) that may have been set in the strategy document. The following process should preferably be used for reporting government DeM operations:

- A written report is sent at least annually to the Cabinet/Council of Ministers, including an internal evaluation on how the borrowings, derivatives, and other debt-related transactions have complied with the requirements set in the strategy. In the case in which there is a Principal DeM Entity, this report is prepared and sent by this entity; in the case in which there is no Principal DeM Entity, the DeM entities either jointly prepare this report or send separate reports covering their respective activities.
- The Cabinet/Council of Ministers sends a comprehensive report to Parliament/ Congress, presenting the chosen strategy and the rationale behind it and explaining in what way the strategy decision has assisted in achieving the government's DeM objectives.

DIMENSIONS TO BE ASSESSED:

1. Level of disclosure—in an annual report or its equivalent—of government DeM activities, central government debt, evaluation of outcomes against stated objectives, and compliance with the government's debt management strategy

Score	Requirements
A	The requirements for score B are met. In addition, the report contains an evaluation of outcomes against stated DeM objectives, the chosen DeM strategy and the rationale behind it, and compliance with the strategy, and is made available publicly.
B	The minimum requirement for score C is met. In addition, the annual report contains an evaluation on how the government DeM activities have complied with the government's debt management strategy.
C	A report providing details of government DeM activities and outstanding central government debt is submitted annually to the Parliament /Congress.
D	The minimum requirement for score C is not met.

DPI–5 AUDIT

Accountability for government DeM is strengthened by introducing regular internal audits (for example, by the internal audit function of the Principal DeM Entity or the Ministry of Finance) and periodic external auditing (for example, by the country's Supreme Audit Institution) of government DeM activities in relation to (a) reliability and integrity of financial and operational information; (b) effectiveness and efficiency of debt management operations; (c) safeguarding of public funds; (d) compliance with laws, regulations, and contracts; and (e) when applicable, compliance with the debt management objectives and strategy.

The goal of internal and external auditing is to promote accountability in debt contracting and management. In addition, there should be mechanisms allowing the adoption of corrective measures, according to audit reports and the appropriate responses from the relevant decision makers, to ensure that the outcomes from audits are addressed. Sound practice in this area suggests that the transparency of DeM operations is enhanced when the results of external audits are made available to the public.

DIMENSIONS TO BE ASSESSED:

1. Frequency of internal and external audit of central government debt management activities, policies, and operations, as well as publication of external audit reports
2. Degree of commitment to address the outcomes from internal and external audits

Score	Requirements
A	1. The requirements for score B are met. In addition, the external audits are conducted at least every two to three years, and the external audit reports are made available to the public within six months of completion of the audit. 2. There is a strong and immediate commitment from the relevant decision makers to address the outcomes from internal and external audits of government DeM activities, policies, and operations.
B	1. The minimum requirement for score C is met. In addition, there are frequent (at least every three to five years) external audits, as well as annual internal audits of government DeM activities, policies, and operations. 2. There is strong commitment from the relevant decision makers to address the outcomes from internal and external audits of government DeM activities, policies, and operations.
C	1. There has been an external audit of government DeM activities, policies, and operations within the past five years. 2. There is commitment from the relevant decision makers to address the outcomes from internal or external audits of government DeM

	activities, policies, and operations.
D	1. The minimum requirement for score C is not met. 2. There has been no response to the outcomes from internal and external audits.

3.2 COORDINATION WITH MACROECONOMIC POLICIES

The debt managers, fiscal policy advisors, and monetary policy authority (for example, the Central Bank) should share an understanding of the objectives of government DeM, fiscal, and monetary policies. Given their interdependencies, it is important to understand how the policy instruments operate, how they can reinforce one another, and how policy tensions can arise. Clarity in the roles and objectives for government DeM and monetary policy can minimize potential conflicts. For example, the Central Bank may prefer that the government issue inflation-indexed bonds or borrow in foreign currency to bolster the credibility of monetary policy. The debt manager may believe that the market for such inflation-indexed debt has not been fully developed and that foreign-currency debt introduces greater risk onto the government's balance sheet. Coordination is necessary to formulate debt management objectives and strategy within the context of government's fiscal and monetary policy framework.

DPI–6 COORDINATION WITH FISCAL POLICY

The Principal DeM Entity (or the DeM entities jointly) should provide fiscal authorities with total debt service forecasts under different scenarios. The Principal DeM Entity (or the DeM entities) should also inform the fiscal authorities on a timely basis of any emerging debt sustainability problems that it encounters in its efforts to sell the government securities in the markets at a reasonable price. The Principal DeM Entity (or the relevant DeM entities) is (are) in direct contact with market participants, and their observation of investor behavior in both the primary and secondary markets, as well as their discussions with market participants, may provide some useful insights into the willingness of investors to hold that debt.

The appropriate debt management strategy depends ultimately on the government's tolerance for risk. The degree of risk that a government is willing to take may evolve over time, depending on the size of the government debt portfolio and the government's vulnerability to economic and financial shocks. In general, the larger the debt portfolio and the vulnerability of the country to economic shocks, the larger the potential risk of loss from financial crisis or government default, and the greater the emphasis should be on reducing risks.[11]

To analyze the cost and risk of the debt portfolio properly, it is important that the debt manager(s) has (have) access to key fiscal variables and an analysis of debt sustainability. These key fiscal variables typically include actuals and forecasts of total expenditures, revenues, primary balance, the levels of total debt, and explicit contingent liabilities.[12] That will allow users to assess the sustainability of the fiscal position and its sensitivity to changes in policy. The debt sustainability analysis includes variables such as the level of total public and publicly guaranteed debt, GDP, export earnings, and government revenues and expenditures. Both the key fiscal indicators and the debt sustainability analysis determine the environment in which the debt manager(s) will operate, which is essential for the debt management strategy development.

It is essential that the government has the capacity to prepare the key fiscal variables (actuals and forecasts) and to conduct a debt sustainability analysis without external assistance. Moreover, the results of the DSA should be used to influence macro policy.

DIMENSIONS TO BE ASSESSED:

1. Coordination with fiscal policy through the provision of accurate and timely forecasts on total debt service under different scenarios

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[11] However, in a high-risk-category country—meaning that even under baseline macroeconomic assumptions, the debt burden is expected to pose a serious threat of debt distress emerging—cost reduction might be the only alternative left.

[12] The key fiscal variables would ideally be found in a fiscal strategy.

2. Availability of key fiscal variables and an analysis of debt sustainability, and the frequency with which it is undertaken

Score	Requirements
A	1. The requirements for score B are met. In addition, the forecasts include scenario analysis, including a worst-case scenario. 2. Analysis of debt sustainability is undertaken or updated annually by the government.
B	1. The minimum requirement for score C is met. In addition, the forecasts include sensitivity analyses of the base case to interest and exchange rate shocks. 2. Analysis of debt sustainability is undertaken or updated by the government at least once every two years.
C	1. As part of the yearly budget preparation, forecasts are provided on total central government debt service. 2. The Principal DeM Entity (or DeM entities) has (have) access to key fiscal variables (actuals and forecasts), and an analysis of debt sustainability that has been undertaken by the government within the past three years.
D	1. The minimum requirement for score C is not met. 2. The minimum requirement for score C is not met.

DPI–7 COORDINATION WITH MONETARY POLICY

In a developing country context in which the level of financial development may not allow for a clear separation between debt management and monetary policy objectives and accountabilities, transparency and sharing of relevant information are necessary. It should be clear for the market participants whether a Central Bank transaction in the domestic market is aimed to meet its monetary policy objectives or whether the Central Bank transacts as the debt management agent. It is essential that debt management decisions are not perceived to be influenced by inside information on interest-rate decisions at the Central Bank. Moreover, the Central Bank must aim to avoid perceptions of conflicts of interest in market operations. Likewise, debt management objectives should be prudently understood and not override the Central Bank's formulation of monetary policy objectives. For example, a goal of cost minimization over time for the government's debt, subject to a prudent level of risk, should not be viewed as a mandate to reduce interest rates or to influence domestic monetary conditions. Neither should the cost/risk objective be seen as a justification for the extension of low-cost Central Bank credit to the government.

In this regard, it is important for the Central Bank to be informed about the central government's current and future cash flows because of the size of the flows. In addition, because both the central government and the Central Bank transact in the domestic market, good information sharing of the borrowing and debt management activities is essential.

Whenever possible, the central government should avoid direct borrowing from the Central Bank and otherwise be legally restricted in both amount and tenors. Monetary financing of government deficits imposes undesirable constraints on monetary policy operations and, in addition, is detrimental to domestic debt market development.

DIMENSIONS TO BE ASSESSED:

1. Clarity of separation between monetary operations and debt management transactions, and coordination through regular information sharing on debt transactions and central government's current and future cash flows with the Central Bank

2. Extent of a limit to direct access of resources from the Central Bank

Score	Requirements
A	1. The requirements for score B are met. In addition, there is at least weekly information sharing on debt transactions and central government cash flows with the Central Bank. 2. Direct access to financing from the Central Bank is—by law—limited to emergency situations in which other funding operations are not viable, and when used, the tenor is limited to two weeks.
B	1. The minimum requirement for score C is met. In addition, there is at least bi-monthly information sharing on debt transactions and central government cash flows with the Central Bank. 2. The minimum requirement for score C is met. In addition, access to financing from the Central Bank is—by law—limited to a tenor of not more than three months.
C	1. In the case in which the Central Bank acts as a debt management agent, monetary operations are kept separate from debt management transactions. In addition, the Central Bank keeps the government and the market informed when its transactions are undertaken for monetary policy purposes and when the Central Bank transacts in the market as a debt management agent on behalf of the central government. There is at least monthly information sharing on debt transactions and central government cash flows with the Central Bank. 2. Access to financing from the Central Bank has a ceiling limit imposed by legislation.
D	1. The minimum requirement for score C is not met. 2. The minimum requirement for score C is not met.

3.3 BORROWING AND RELATED FINANCING ACTIVITIES

DPI–8 DOMESTIC MARKET BORROWING

Local capital markets are important to obtain stable funding sources in domestic currency for both public and private sectors and to allow liabilities to be more closely matched to the revenues that will service them. In addition, well-developed domestic markets enhance the efficiency and stability of financial intermediation, provide a broader range of assets, and facilitate better risk management. To the extent possible, debt issuance should use market-based mechanisms, including competitive auctions, tap issues, and syndications.

Also, debt issued to retail investors should preferably be at market rates. In cases where the government intends the retail instruments to achieve social protection objectives by offering higher yields on these instruments than is necessary to meet the borrowing requirements, the savings placed with these instruments are generally not those of the most vulnerable sectors of the community, but instead those sufficiently prosperous to maintain substantial deposits. A more effective and transparent means of directing government subsidies to people in need would be to pay direct grants to the poor. Realizing, however, that some governments might prefer using a part of retail borrowing for this purpose or for promoting household savings in general, the requirement of market-based borrowings in this indicator is limited to 90 percent of the total projected borrowing amount in the domestic market.

In some cases, the interest rate on retail debt may be slightly below market rates because it may be set at a margin below wholesale rates to cover the higher administrative costs of running the retail program.

The Principal DeM Entity (or the DeM entity responsible for borrowing in the domestic institutional or wholesale market) should maintain an ongoing dialogue with market participants and monitor market developments so as to react quickly when circumstances require. Operations in the domestic primary market should be transparent and predictable, including publishing borrowing plans well in advance and acting consistently when issuing new securities in the wholesale market, regardless of the mechanism used for borrowing.

The terms and conditions of new issues should be publicly disclosed and clearly understood by investors. There should be documented procedures for borrowing in the domestic market (for example, for auctioning Treasury bills and bonds (T-bills and T-bonds). This can include an information memorandum or prospectus for each instrument and published operational procedures. If primary dealers have been introduced, it is important that the incentives and obligations, as well as eligibility criteria, are well defined and disclosed.

All borrowing in the domestic market should be in accordance with the government's DeM strategy.

DIMENSIONS TO BE ASSESSED:

1. The extent to which market-based mechanisms are used to issue debt, the publication of a borrowing plan for T-bills and T-bonds, and the preparation of

an annual plan for aggregate amount of local currency borrowing in the domestic market, divided between the wholesale and retail markets

2. The availability and quality of documented procedures for local currency borrowing in the domestic market

Score	Requirements
A	1. The requirements for score B are met. In addition, the borrowing plan for T-bills and T-bonds is extended to at least three months. 2. The terms and conditions, borrowing procedures, and criteria for access to the primary market for all T-bills and T-bonds, as well as for at least 90 percent of the total projected borrowing amount in the domestic market, are publicly available on the government/Central Bank Web sites.
B	1. The minimum requirement for score C is met. In addition, the borrowing plan for T-bills and T-bonds includes indicative borrowing amounts. Also, an annual plan for the projected aggregate amount of borrowing in the domestic market—divided between the wholesale and retail markets—has been prepared. 2. The minimum requirement for score C is met. In addition, the terms and conditions, borrowing procedures, and criteria for access to the primary market for all T-bills and T-bonds are publicly available in print media or on the central government/Central Bank Web sites.
C	1. The central government accesses the domestic market, using market-based instruments (for example, T-bills and T-bonds by auction, tap issue, or syndication and retail securities issued at market rates) to fund at least 90 percent of the projected borrowing amount in this market, and prepares and publishes a borrowing plan for T-bills and T-bonds at least one month ahead, containing issue dates and instruments. 2. Terms and conditions for each instrument, borrowing procedures, and criteria for access to the primary market are available on request.
D	1. The minimum requirement for score C is not met. 2. The minimum requirement for score C is not met.

DPI–9 EXTERNAL BORROWING

For many developing countries, borrowing from foreign or external sources is primarily from multilateral and bilateral sources. Countries will be eligible for funding on either concessional or market-based interest rates, depending on their respective borrowing status. The primary task of the Principal DeM Entity (or the DeM entity responsible for external borrowing) is to liaise with the government entity responsible for formulating the project, identify the creditor that can offer the most beneficial/cost-effective terms and conditions for the external borrowing, negotiate the terms and conditions of the loan with that creditor (including currency, maturity, interest rate, and fees), and finalize all loan documentation. During the disbursement period of the loan, there is a need to coordinate with each creditor to ensure that disbursements are completed in accordance with the loan terms and conditions.

If a government is able to access international capital markets, the primary task of the Principal DeM Entity (or the DeM entity responsible for external borrowing on commercial terms) is to undertake market analysis and consultation to identify the choice of market and instrument, as well as the loan terms and conditions, including price, currency, maturity, and interest rate. An investor relations program is normally required before any public issue, involving "road shows" and discussions with financial institutions, rating agencies, and investors. The finalization of the pricing terms and conditions and timing of issuance will be agreed on when market conditions are acceptable for the public issue. Post issue will involve the completion of all loan documentation and receipt of loan proceeds.

Once the loan contract has been signed, the debt manager who participated in negotiating the financial terms and conditions of the loan should without undue delay prepare and sign a terms sheet for all financial terms. This will be used as a reference for future loan negotiations, and also form an important document, together with the loan contract, for the transaction data entries into the debt recording/management system. With this procedure, the debt data recording unit will be in the position to validate the entries on the terms sheet, which will reduce the risk that some financial terms in the loan agreement are not fully understood, and thus entered incorrectly into the system.[13]

There should be documented procedures for all external borrowings, covering all creditors and market-based funding sources. All borrowings should be in accordance with the DeM strategy.

It is important for debt managers to receive appropriate legal advice and to ensure that the transactions they undertake are backed by sound legal documentation. In doing so, debt managers can help governments clarify their rights and obligations and protect their position to the greatest degree possible in the relevant jurisdictions. Several issues deserve particular attention, including the design of important provisions of debt instruments, such as clearly defining events of default, especially if such events extend beyond payment defaults on the relevant obligations (for

[13] Example of a terms sheet is presented in the Guide to the Debt Management Performance Assessment tool (DeMPA).

example, cross-defaults and cross-accelerations); the breadth of a negative pledge clause; inclusion of collective action clauses; and the scope of the waiver of sovereign immunity. Disclosure obligations in the relevant markets must be analyzed in detail because they can vary from one market to another.

The documented procedures referred to in dimension 2 below must be adhered to. If that is not the case, the indicators under dimension 2 should be read as if the documented procedures are not in place.

DIMENSIONS TO BE ASSESSED:

1. Degree of assessment of the most beneficial/cost-effective borrowing terms and conditions (lender or source of funds, currency, interest rate, and maturity)
2. Availability and quality of documented procedures for external borrowings
3. Availability and degree of involvement of legal advisors before signing of the loan contract.

Score	Requirements
A	1. The requirements for score B are met. In addition, assessments of the most beneficial/cost-effective terms and conditions for external borrowing that are obtainable from potential creditors and markets are undertaken before the start of each loan negotiation. 2. The requirements for score B are met. In addition, the terms sheet is prepared not later than one week after the loan negotiation was concluded. 3. Legal advisors are involved from the first stage of the negotiating process of concluding the legal agreements related to the borrowing.
B	1. The minimum requirement for score C is met. In addition, the borrowing plan, including the underlying assessment, is updated frequently during the year. 2. The minimum requirement for score C is met. In addition, the terms sheet is prepared not later than two weeks after the loan negotiation was concluded. 3. Legal advisors are involved during a substantial part of the negotiating process of concluding the legal agreements related to the borrowing.
C	1. A yearly borrowing plan for external borrowing is prepared, which includes assessments of the most beneficial/cost-effective terms and conditions for external borrowing that are obtainable from potential creditors and markets. 2. There are internal documented procedures for all external borrowings, including preparation of a terms sheet (physical or electronic) by the debt manager(s) who participated in the loan negotiation for all financial terms of the loan transaction not later

	than three weeks after the loan negotiation was concluded. 3. Legal advisors are involved before concluding the negotiating process of the legal agreements related to the borrowing.
D	1. The minimum requirement for score C is not met. 2. The minimum requirement for score C is not met. 3. The minimum requirement for score C is not met.

DPI-10 LOAN GUARANTEES, ON-LENDING, AND DERIVATIVES

There should be operational guidelines for approval and issuance of loan guarantees and government on-lending. These guidelines should provide details of how the credit risk should be assessed, along with measures to minimize the budget effect of a default/trigger event. This risk assessment should be undertaken before the decision has been taken to support a certain activity by the use of loan guarantees or on-lending.

Derivatives used as hedging instruments (for example, swaps, caps, and futures) normally entail market and credit risks, as well as substantial operational risks. It is important that these instruments are transacted within a clear risk management framework and backed by sound legal documentation and that there are systems in place for proper recording and accounting of these transactions.

The formal documented policies and procedures referred to below must be adhered to. If that is not the case, the indicators below should be read as if the policies and procedures are not in place.

DIMENSIONS TO BE ASSESSED:

1. Availability and quality of documented policies and procedures for approval and issuance of central government loan guarantees
2. Availability and quality of documented policies and procedures for on-lending of borrowed funds
3. Availability of a debt management system with functionalities for handling derivatives, as well as availability and quality of documented procedures for the use of derivatives

Score	Requirements
A	1. The requirements for score B are met. In addition, these policies and procedures contain a requirement to calculate a guarantee fee covering the credit risk, as well as a requirement for the guarantee entity to monitor the risks during the life of the loan guarantee. 2. The requirements for score B are met. In addition, these policies and procedures contain a requirement to calculate an on-lending charge covering the credit risk, as well as a requirement for the on-lending entity to monitor the risks during the life of the on-lending. 3. The requirements for score B are met. In addition, the terms sheet is prepared not later than two business days after the derivative transaction was concluded.
B	1. The minimum requirement for score C is met. In addition, these policies and procedures contain a requirement to assess the credit risks before the decision has been taken to support a certain activity by loan guarantees, as well as guidelines on how this assessment

	would be conducted. 2. The minimum requirement for score C is met. In addition, these policies and procedures contain a requirement to assess the credit risks before the decision has been taken to support a certain activity by on-lending , as well as guidelines on how this assessment would be conducted. 3. The minimum requirement for score C is met. In addition, the documented procedures include rules for managing the counterparty exposure risk, and all risks connected with the derivatives are monitored by a separate unit responsible for risk monitoring and compliance.
C	1. There are documented policies and procedures for the approval and issuance of loan guarantees. 2. There are documented policies and procedures for the approval and lending of borrowed funds. 3. There is a debt management system with functionalities for handling derivatives. In addition, there are documented procedures for the use of derivative transactions, including (a) the purposes of derivative transactions, (b) a clear decision-making process, (c) preparation of a terms sheet (physical or electronic) by the debt manager(s) who negotiated the terms of the transaction for all financial terms not later than one week after the transaction was concluded, (d) rules for debt database entry and accounting, and (e) involvement of legal advisors from the first stage of the negotiating process of concluding the legal agreements with the counterparty.
D	1. The minimum requirement for score C is not met. 2. The minimum requirement for score C is not met. 3. The minimum requirement for score C is not met.

3.4 CASH FLOW FORECASTING AND CASH BALANCE MANAGEMENT

DPI–11 CASH FLOW FORECASTING AND CASH BALANCE MANAGEMENT

The Principal DeM Entity (or the DeM entities) require(s) information on the aggregate level of overnight cash balances or "float" to determine borrowing and debt-related activities and ensure that the float is in accordance with the level or range set by government policy. This requires accurate and timely forecasts of central government cash flows and end-of-day account balances. If there is an excess pool of liquidity in government accounts, this will be available for investment or buyback of domestic debt through transactions such as entering into reverse repurchase agreements or buyback of T-bills. To the extent that the government has a credit facility at the Central Bank (that is, ways & means or overdraft facility[ies]), the float should include the credit facility balance.

The government entity(ies) responsible for settlement of all debt-related transactions must ensure that these are processed through bank accounts that provide a high level of security and control. Direct responsibility will be with the government entity that manages the government account(s) at the Central Bank and other bank accounts necessary for the processing of debt-related transactions. This may be the responsibility of the Central Bank, the Accountant General, the Comptroller General, or the Principal DeM Entity (or the relevant DeM entity) directly. All bank accounts that are used for debt-related transactions should be reconciled regularly and cash balances monitored.

DIMENSIONS TO BE ASSESSED:

1. Effectiveness of forecasting the aggregate level of cash balances in government bank accounts
2. Effectiveness of managing the aggregate cash balance in government bank account(s), including the integration with the domestic debt borrowing program
3. Where the Principal DeM Entity (or the DeM entities) operate(s) its (their) own bank accounts, the frequency of reconciliation of these bank accounts

Score	Requirements
A	1. Reasonably reliable rolling 30-day forecasts of the aggregate level of overnight cash balances in central government bank accounts are provided daily to the Principal DeM Entity (or to the DeM entities). 2. The central government undertakes transactions (such as issuance/buyback of T-bills or entering into repurchase/reverse repurchase agreements) on a daily basis to ensure that the float is in accordance with the level or range set by government policy. 3. All bank accounts operated directly by the Principal DeM Entity (or the DeM entities) are reconciled on a daily basis.
B	1. The minimum requirement for score C is met. In addition, reasonably reliable weekly forecasts of the aggregate level of overnight cash balances in central government bank accounts are provided to the Principal DeM Entity (or to the DeM entities) by the start of the relevant week. 2. Central government undertakes transactions (such as issuance/ buyback of T-bills) on a weekly basis to maintain the cash balance target set by the government. 3. All bank accounts operated directly by the Principal DeM Entity (or the DeM entities) are reconciled at least weekly.
C	1. Reasonably reliable monthly forecasts of the weekly aggregate level of cash balances in central government bank accounts are provided to the Principal DeM Entity (or to the DeM entities) by the start of the relevant month. 2. The central government invests its cash in excess of the target on at least a monthly basis in the market or with the Central Bank at market rates. 3. All bank accounts operated directly by the Principal DeM Entity (or the DeM entities) are reconciled at least monthly.
D	1. The minimum requirement for score C is not met. 2. The minimum requirement for score C is not met. 3. The minimum requirement for score C is not met.

3.5 OPERATIONAL RISK MANAGEMENT

DPI–12 DEBT ADMINISTRATION AND DATA SECURITY

Government DeM operations involve the processing and recording of all borrowing and debt-related transactions and maintenance of systems and procedures required for effective and secure debt administration. A procedures manual for all debt administration, including procedures for the processing of debt service, debt data recording and validation, and storing of agreements and debt administration records, should be readily accessible.

Processing and controlling payments to effect settlement of government debt and debt-related transactions are key responsibilities. This involves accurate, timely, and secure processing with minimum errors. The payment notifications normally received from lenders/counterparties should be checked with internal records before the payment is effected. Payments should be made on the due date; in addition, there should be procedures to monitor payment arrears and measures to control the level of arrears. All payments should be subject to a minimum two-person authorization process.

The procedure for debt data entries should include a separate check of the correctness of these entries. Debt data should constantly be validated against received payment notifications; in addition, a preferably independent confirmation of all data should be conducted annually with external creditors and the major domestic investors.

- An original signed copy of each loan and derivative agreement should be stored in a secure location that will protect the documents from incidents such as theft, fire, flood or other incidents that may damage or destroy any of these records. A copy of each agreement should be available with the Principal DeM Entity (or the DeM entities). All correspondence with the lender/counterparty during the life of each loan/derivative (referred to as "debt administration records") should be kept in a secure filing system.

There should be clearly documented authorities and controls around access to the debt management system, with active management of individual access permissions and passwords. Preferably the systems should be able to produce audit trails that show who has accessed the system and the level accessed.

A copy of the debt data (backups) should frequently be taken and stored in a secured location outside the building where the debt database is located. The location where the back-ups are stored should protected from incidents such as theft, fire, flood or other incidents that may damage or destroy any of these back-ups

The documented procedures referred to below must be adhered to. If that is not the case, the indicators below should be read as if the procedures manuals are not in place.

DIMENSIONS TO BE ASSESSED:

1. Availability and quality of documented procedures for the processing of debt service
2. Availability and quality of documented procedures for debt data recording and validation, as well as storing of agreements and debt administration records
3. Availability and quality of documented procedures for controlling access to the central government debt recording/management system and payment system
4. Frequency and off-site, secure storage of debt recording/management system backups

Score	Requirements
A	1. The requirements for score B are met. In addition, the internal payment orders are prepared and issued electronically via straight-through processing (STP). 2. The requirements for score B are met. In addition, an independent confirmation of all data is annually conducted with external creditors and the major domestic investors. 3. The requirements for score B are met. In addition, the systems produce audit trails that show who has accessed the system and the level accessed. 4. The requirements for score B are met. In addition, debt recording/management system backups are taken daily and kept in a secure filing system before they are moved to the separate secure location at the end of the week.
B	1. The minimum requirement for score C is met. In addition, the internal payment orders are prepared electronically, and the procedures manual is updated at least every second year. 2. The minimum requirement for score C is met. In addition, the procedures manuals are updated at least every second year. 3. The minimum requirement for score C is met. In addition, the documented procedures are frequently updated whenever staff changes occur. 4. Debt recording/management system backups are taken at least once a week and stored in a separate secure location where the backups are protected from incidents such as theft, fire, flood or other incidents that may damage or destroy any of these back-ups.
C	1. There is a readily accessible procedures manual for the processing of debt service, including (a) all payment notifications are checked with internal records before payments are made, (b) internal payment orders are subject to a minimum two-person authorization

	process, and (c) the payments are made by the due date. 2. There are readily accessible procedures manuals for debt data recording and validation, as well as storing of agreements and debt administration records, including (a) correctness of debt data entries is separately checked before the entries are deemed to be completed, (b) debt data are constantly validated against received payment notifications, (c) all original signed copies of loan and derivative agreements are stored and filed in a secure location where the documents are protected from incidents such as theft, fire, flood or other incidents that may damage or destroy any of these records, and (d) all debt administration records are kept in a secure filing system. 3. There are documented procedures for controlling access to the central government debt recording/management system. 4. Debt recording/management system backups are taken at least once a month and stored in a separate secure location where the backups are protected from incidents such as theft, fire, flood or other incidents that may damage or destroy any of these back-ups.
D	1. The minimum requirement for score C is not met. 2. The minimum requirement for score C is not met. 3. The minimum requirement for score C is not met. 4. The minimum requirement for score C is not met.

DPI–13 Segregation of Duties, Staff Capacity, and Business Continuity

An efficient organizational structure should be in place across the Principal DeM Entity (or the DeM entities) to maintain security and control over government borrowing and debt-related transactions, as well as the use of public funds. The organizational structure should support clear separation between the debt managers with the authority to negotiate and contract on behalf of the central government and those responsible for settlement of the transactions, including arranging payments, bank account management, and recording in the government accounting system (referred to as "segregation of duties"). In addition, there should be a risk-monitoring and compliance function within the Principal DeM Entity (or the DeM entities) to monitor whether all government DeM operations are within the authorities and limits set by government policies and comply with statutory and contractual obligations. This could be an individual staff member or more ideally a specialized unit with this role and the associated responsibilities.

The organizational structure and management policies should support sound human resource management practices with sufficient and adequately trained staff, formal job descriptions, individual training and development plans, and performance assessments. Furthermore, the debt managers should be subject to code-of-conduct and conflict-of-interest guidelines. Preferably, these should all be reviewed and updated at least annually.

There should be a strong emphasis on mitigation/control of operational risks defined as "the risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events." There should be a business-continuity and disaster-recovery plan to cover the adverse impact of major operational risks, and preferably also documented guidelines for overall operational risk management.

Dimensions to be Assessed:

1. Segregation of duties for some key functions, as well as the presence of a risk-monitoring and compliance function
2. Staff capacity and human resource management
3. Presence of an operational risk management plan, including business-continuity and disaster-recovery arrangements

Score	Requirements
A	1. There is clear organizational and physical separation between the debt managers with the authority to negotiate and contract, those responsible for arranging payment, and those responsible for recording/accounting for these transactions. The staff entering data and checking data entries in the debt recording system are organizationally separate. There is also a separate unit responsible for risk monitoring and compliance that reports directly to the head of the relevant DeM entity. 2. The requirements for score B are met. In addition, there are individual training and development plans and yearly performance assessments for key debt management staff. 3. There are documented guidelines for operational risk management, including a business-continuity and disaster-recovery plan incorporating relocation to an operational recovery site, which is tested at least annually.
B	1. There is clear organizational separation between the debt managers with the authority to negotiate and contract, those responsible for arranging payment, and those responsible for recording/accounting for these transactions. The staff entering data and checking data entries in the debt recording system are organizationally separate. There are dedicated staff responsible for risk monitoring and compliance. 2. The minimum requirement for score C is met. In addition, there are code-of-conduct and conflict-of-interest guidelines that are reviewed and updated periodically. 3. There is a business-continuity and disaster-recovery plan that identifies a recovery site, which has been tested in the past three years.
C	1. There is clear separation between the debt managers with the authority to negotiate and contract, those responsible for arranging payment, and those responsible for recording/accounting for these transactions. The staff entering data and checking data entries in the debt recording system are different. There is at least one person responsible for risk monitoring and compliance. 2. There are sufficient and adequately trained staff with formal job descriptions that are reviewed and updated periodically. 3. There is a business-continuity and disaster-recovery plan.
D	1. The minimum requirement for score C is not met. 2. The minimum requirement for score C is not met. 3. The minimum requirement for score C is not met.

3.6 DEBT RECORDS AND REPORTING

DPI–14 DEBT RECORDS

Sound practice requires comprehensive debt management systems to record, monitor, settle, and account effectively for all central government debt and debt-related transactions, including past debt relief and debt restructuring (such as Paris Club rescheduling). These systems should provide for an accurate, consistent, and complete database of the domestic, external, and guaranteed debt.[14]

The holders of government securities issued in the domestic market require accurate recording of the holders of each security. This requires having in place an efficient and secure central depository (registry) system. The registry system should provide accurate and timely information on all holders of government securities. It is normal practice to have a registry agreement between the issuer and registrar.

Most registry systems allow nominee accounts (that is, accounts in the name of a local custodian bank holding the securities on behalf of its clients). For these nominee-registered securities, beneficial ownership can be determined only from the books of the custodian. For reporting and statistical purposes, someone (normally the Central Bank) must possess the power to require the domestic custodians to share information on the amounts held by foreign investors. In the indicators below, "holders of government securities" do not include the end investors in the case of nominee accounts.

DIMENSIONS TO BE ASSESSED:

1. Completeness and timeliness of central government debt records
2. Complete and up-to-date records of all holders of government securities in a secure registry system

[14] The dimensions for assessing this indicator and the following indicator on debt reporting draws heavily on the Data Quality Assessment Framework (DQAF) for External Debt Statistics, an internationally accepted framework to assess the quality of data, including good practices for data compilation and dissemination. Additional details on the DQAF are provided in the accompanying Guide to the indicators.

Score	Requirements
A	1. There are complete debt records within a one-month lag for central government domestic, external, and guaranteed debt, as well as all debt-related transactions, including past debt relief and debt restructuring. 2. The registry system has up-to-date and secure records of all holders of government securities, which are subject to an annual audit.
B	1. There are complete debt records within a two-month lag for central government domestic, external, and guaranteed debt, as well as all debt-related transactions, including past debt relief and debt restructuring. 2. The registry system has up-to-date records of all holders of government securities, which have been audited within the past three years.
C	1. There are complete debt records within a three-month lag for central government domestic, external, and guaranteed debt, as well as all debt-related transactions, including past debt relief and debt restructuring. 2. The registry system has up-to-date and secure records of all holders of government securities.
D	1. The minimum requirement for score C is not met. 2. The minimum requirement for score C is not met.

DPI–15 DEBT REPORTING

The government should report both central government and total nonfinancial public sector[15] debt and loan guarantees outstanding to meet statutory or contractual reporting obligations or both. Externally, this will include reporting to international financial institutions, stock exchanges, and foreign regulatory authorities, where applicable.[16]

A debt statistical bulletin (or its equivalent) covering domestic and external central government debt and loan guarantees should be prepared. This could be in the form of regular Central Bank publications, statistical tables produced by a bureau of statistics, or tables published in the government financial accounts. The bulletin should be published at least annually (preferably quarterly or semiannually) and provide information on central government debt stocks (by creditor, residency classification, instrument, currency, interest-rate basis, and residual maturity), debt flows (principal and interest payments), debt ratios/indicators, and basic risk measures of the debt portfolio.

DIMENSIONS TO BE ASSESSED:

1. Meeting statutory and contractual reporting requirements of central government debt to all domestic and external entities
2. Meeting statutory and contractual reporting requirements for total nonfinancial public sector debt and loan guarantees to all domestic and external entities
3. Quality and timeliness of the publication of a debt statistical bulletin (or its equivalent) covering central government debt

[15] The nonfinancial public sector consists of the central government (budgetary, extra-budgetary, and social security funds), the state and local governments, and the nonfinancial public corporations. Therefore, it excludes financial public corporations (among which are state-owned banks) and the monetary authority.

[16] The accompanying Guide to the DeMPA Tool indicators provides the key international references governing sound practice in the area of debt data reporting. Examples include the *External Debt Statistics: Guide for Compilers and Users* and the *Government Finance Statistics Manual (GFSM)*.

Score	Requirements
A	1. Reporting of central government domestic and external debt fully meets all statutory and contractual reporting requirements, with debt data that are within one month of the reporting period. 2. Reporting of total nonfinancial public sector debt and loan guarantees fully meets all statutory and contractual reporting requirements, with data that are within three months of the reporting period. 3. A debt statistical bulletin or equivalent covering central government debt, with all the categories listed in the introductory section above, is published at least semiannually, with debt data that are not more than three months old from the date of publication.
B	1. Reporting of central government domestic and external debt fully meets all statutory and contractual reporting requirements, with debt data that are within two months of the reporting period. 2. Reporting of total nonfinancial public sector debt and loan guarantees fully meets all statutory and contractual reporting requirements, with data that are within six months of the reporting period. 3. A debt statistical bulletin (or its equivalent) covering central government debt, with all the categories listed in the introductory section above, is published at least annually, with debt data that are not more than three months old from the date of publication.
C	1. Reporting of central government domestic and external debt fully meets all statutory and contractual reporting requirements, with debt data that are within three months of the reporting period. 2. Reporting of total nonfinancial public sector debt and loan guarantees fully meets all statutory and contractual reporting requirements, with data that are within nine months of the reporting period. 3. A debt statistical bulletin (or its equivalent) covering central government debt, with all the categories listed in the introductory section above (with the exception of the basic risk measures of the debt portfolio), is published annually, with debt data that are not more than six months old from the date of publication.
D	1. The minimum requirement for score C is not met. 2. The minimum requirement for score C is not met. 3. The minimum requirement for score C is not met.