

EXECUTIVE SUMMARY

1. Recognizing the important role that public debt management can play in helping countries cope with economic and financial shocks, the International Monetary and Financial Committee (IMFC) requested that staff from the IMF and World Bank work together in cooperation with national debt management experts to develop a set of guidelines for public debt management to assist countries in their efforts to reduce financial vulnerability. When the Executive Boards of the IMF and the World Bank endorsed the Guidelines in the Spring of 2001, they requested that the staffs of the two institutions also prepare an accompanying document to the Guidelines containing sample case studies to illustrate how a range of countries from around the world and at different stages of economic and financial development are developing their debt management capacity in a manner consistent with the Guidelines. The experiences of these countries should offer some useful practical suggestions of the kinds of steps that other countries could take as they strive to build their capacity in public debt management.
2. The eighteen case studies presented in this report clearly illustrate the rapid evolution that is taking place in the field of public debt management. In contrast to 15 or 20 years ago, countries are much more focused on managing the financial and operational risks inherent in the debt portfolio than was the case in the past. And the way in which the stock of debt is managed is becoming increasingly sophisticated, especially in those countries that have had histories of excessive debt levels or have experienced shocks associated with the reversal of capital flows. These points are embodied in several over-arching themes that emerge from the country case studies. These themes are highlighted below.
3. The first key theme is that the objectives for managing debt and the institutional framework for meeting these objectives are becoming more formalized. All of the countries surveyed have explicit objectives for managing their debt, which focus on managing the need to borrow at the lowest possible cost over a medium- to long-term time frame. While most countries' statements of objectives also make explicit reference to the need to manage risks prudently, this is not universal. Even so, the reference to managing costs over the medium- to long-term can be seen as an awareness of the need to avoid taking on dangerous debt structures that might have lower costs in the short-run but could trigger much higher debt service costs in the future. They clearly do not strive to minimize costs in the short-run without regard to risk. Avoiding dangerous debt structures is, of course, easier said than done. In some countries, the costs of borrowing domestically by issuing long-term fixed-rate instruments may simply be too prohibitive in the short run due to weak macroeconomic conditions or because this segment of the market is not functioning well. As a result, many countries are dedicating significant effort and resources towards developing the domestic market for government debt so that down the road they can reduce rollover risk and other market risks in the debt stock, even though the benefits of doing so may only emerge over time, and entail higher debt service costs in the short run.

4. Another aspect of the more formal institutional framework can be seen in the organizational structure underpinning debt management. There is a clear trend towards providing a proper legal framework to support debt management, and centralizing debt management activities as much as possible in one entity, even though the preferred entity varies depending on country circumstances. As circumstances permitted, the countries surveyed took steps to separate the conduct of monetary policy from debt management, while ensuring that there continues to be adequate coordination at the operational level, so that there is appropriate sharing of information on the government's liquidity flows between debt managers, fiscal, and monetary policy authorities, and so the two activities do not operate at cross-purposes in financial markets. They have also taken a number of steps to clearly specify the roles and responsibilities of those involved in debt management, and subject the conduct of debt management activities to appropriate financial and management controls. This has helped to ensure that appropriate safeguards are in place to manage the operational risks associated with debt management.

5. The more formal institutional framework has also been accompanied by transparency in debt management activities and appropriate accountability mechanisms. Debt managers in all of the case study countries emphasized the need to ensure that the public is fully informed on the government's financial condition, the objectives governing debt management, and the strategies and modalities employed by debt managers to pursue these objectives. They also make use of a variety of communication vehicles, such as regular formal reports and media announcements, to report on their performance in meeting the objectives laid out for them, and to outline in general terms their plans and priorities for the year ahead. In some countries, their performance in both a financial and broader stewardship sense is also subject to regular external review. This reflects a general consensus among the countries that markets work best, and debt service costs are minimized, when uncertainty regarding the objectives and conduct of debt management and the state of government finances is kept to a minimum.

6. A second key theme relates to the high level of awareness of the importance of risk management of public debt and of a growing consensus for the appropriate techniques for managing risk. Many of the countries surveyed use cash flow modeling for analyzing the costs and risks of different debt strategies, where cost is measured as the expected, or most likely, cost of debt service over the medium- to long-term, while risk is the potential increase or volatility in cost over the same period. One rationale for this is that the cost of debt is best considered in terms of its impact on the government's budget, and that cash flow measures are a natural way of quantifying this impact. A few countries are beginning to experiment with modeling debt service and macro-variables jointly in order to more directly measure cost and risk of debt relative to the government's revenues and other expenditures—that is to model the government's assets and liabilities jointly. In a number of other cases, this asset-liability management or ALM approach has been used in a more limited way by analyzing the risk characteristics of government financial assets (such as foreign exchange reserves) and debt jointly in order to determine the appropriate structure of debt and assets.

7. The management of operational risk is also receiving increased attention. In large part this is addressed by having institutional structures that permit clear assignment of authority and responsibility, operations manuals detailing all important procedures, conflict of interest rules, clear reporting lines, and formal audits. But many debt offices now also have separate middle offices with responsibility for analyzing risk and designing and implementing risk control procedures (some of these same offices also have responsibility for analyzing strategies for managing the costs and risks of debt, although in others, the responsibility for strategic analysis is separate from the risk control unit).

8. Those debt offices, which trade their debt or take tactical risk positions, have particularly strong middle office control structures. The focus on formal risk analysis and control structures is not universal, however, as it depends largely on country circumstances. In the past, the industrial countries seen as leaders in this field also had large and risky debt structures, including a substantial share of foreign currency debt. Consequently, the benefits of taking a more systematic approach to the financial and risk management of the government's debt were substantial. While others, which have deep and liquid domestic debt markets and consequently little or no foreign currency debt, have a much less risky debt structure and less of a need for a formal strategy for managing debt based on cost/risk tradeoffs. On the other hand, emerging market and developing countries, many of which also have had risky debt structures, had a later start in building the capacity for managing this risk. While some of these countries are now using models and systems which are similar to the industrialized countries, others are still in the process of building this capacity, and while good progress has been made, the experience of the leading practitioners demonstrate that this process can take several years. That said, some countries may not need to build models and systems as sophisticated as those found in the industrial countries because their debt issuance options are narrower and their markets less amenable to statistical analysis. Instead, they should strive to set achievable goals for their models that are limited to the genuinely useful aspects.

9. It also is clear that a lot of financial resources and management time is being devoted to developing the technology and systems needed to perform these tasks. This speaks to the need to ensure that the systems acquired are appropriate to the government's needs given a country's stage of development. The systems acquired do not necessarily have to include all of the latest and most sophisticated features—many of the cash flow simulation models used for cost/risk analysis are spreadsheet based. Countries also have pursued the acquisition of technology in different ways, depending on country-specific circumstances. Some have opted to acquire these systems by purchasing commercially available systems that were designed for private sector financial institutions and customizing them to suit their own needs, while others have opted instead to develop their own systems in-house. Some systems are very basic, focusing on the primary needs of debt recording, reporting and analysis, while others are integrated with other cash management, accounting, and budget systems. This highlights the fact that the appropriate technology varies considerably depending on country-specific circumstances, and that many countries are still experimenting to find out which systems work best.

10. A third key theme that emerged from the case studies is the striking convergence in approaches taken by countries to issue debt and promote a well-functioning domestic financial market. Auctions of standardized market instruments are commonly used to issue debt in domestic markets, and debt managers are cognizant of the need to avoid excessive fragmentation of the debt stock if they are to encourage deep and liquid markets for government securities. Where differences exist, they tend to be at the level of execution, such as in terms of the features of instruments issued and the extent to which debt managers are prepared to rely on primary dealers to market their debt to end-investors. Nonetheless, it is important to note that all of the countries surveyed made reference to the advantages of working with market participants in a collaborative fashion to develop their domestic government securities markets and minimize the amount of uncertainty in the market regarding government financing activities. Over time, this appears to be paying off in the form of more efficient domestic financial markets, and ultimately lower borrowing costs for the government, in that the presence of a thriving domestic market makes it easier for debt managers to achieve a debt stock structure that embodies the government's preferred risk-cost tradeoff.

11. Fourth, it is important to highlight what sound debt management in and of itself cannot deliver. It is no substitute for sound macroeconomic and fiscal policies, and on its own will not be enough to ensure that a country is well insulated from economic and financial shocks. Developing public debt management in a manner consistent with the Guidelines clearly has an important role to play in fostering prudent debt management practices and contributing to the development of a well-functioning market for government securities. However, many countries also stressed the need for a sound macroeconomic policy framework, characterized by an appropriate exchange rate regime, a monetary policy framework that is credibly focused on the pursuit of price stability, sustainable levels of public debt, a sound external position, and a well-supervised financial system. Such a framework is an important underpinning to instilling confidence among financial market participants that they can invest in government securities with a minimum of uncertainty. It is thus an important precondition if debt managers are to succeed in achieving a debt structure that reflects the government's preferred risk-cost trade-off, and helping the country at large to minimize its vulnerability to economic and financial shocks. Indeed, through their links to financial markets and their risk management activities, government debt managers are well-positioned to gauge the effects of government financing requirements and debt levels on borrowing costs, and to communicate this information to fiscal policy advisors.

12. Finally, while the examples of debt management practices presented in the case studies and the lessons drawn here offer some practical guidance for policymakers in all countries that are striving to strengthen the quality of their public debt management and reduce their country's vulnerability to economic and financial shocks, they are especially relevant for the HIPC's and less developed transition economies. These are at an earlier stage of developing their capacity in public debt management. For them, in addition to continuing to strengthen their budget and cash management functions, an important priority will be to draw from the experiences outlined in the case studies to build a proper foundation for conducting debt management. In this regard, some

important first steps for many of these countries are the need to introduce appropriate governance and institutional structures so that the operational and financial risks associated with debt management are properly managed, to develop information systems that fully capture the financial characteristics of all of the government's financial obligations and contingent liabilities, and the need to develop a debt strategy that encompasses both domestic and external debt. The latter is especially important, and the experiences of the countries covered by the case studies suggests that the development of a domestic debt market can play an important role over time in helping to broaden the range of borrowing opportunities for a country, and making it easier for it to achieve its desired cost-risk trade-off.

PART I – IMPLEMENTING THE GUIDELINES IN PRACTICE

I. INTRODUCTION

13. A government's debt portfolio is usually the largest financial portfolio in the country. It often contains complex financial structures and can create substantial balance sheet risk for the government. Large and poorly structured debt portfolios also make governments more vulnerable to economic and financial shocks and have often been a major factor in economic crises. Recognizing the important role that public debt management can play in helping countries cope with economic and financial shocks, the International Monetary and Financial Committee (IMFC)¹ requested that staff from the IMF and World Bank work together in cooperation with national debt management experts to develop a set of guidelines on public debt management to assist countries in their efforts to reduce financial vulnerability. The IMFC's request, which was endorsed by the Financial Stability Forum, was made as part of a search for broad principles that could help governments improve the quality of their policy frameworks for managing the effects of volatility in the international monetary and financial system.

14. By involving national debt management authorities in the preparation of the Guidelines, the process was one that sought to strengthen countries' sense of ownership of them and helped to ensure that they are in line with sound practice. Government debt managers from around 30 countries provided input into an initial draft that was discussed by the Executive Boards of the IMF and World Bank in July 2000. Following these discussions, more than 300 representatives from 122 countries attended five outreach conferences on the Guidelines in Abu Dhabi, United Arab Emirates; Hong Kong Special Administrative Region; Johannesburg, South Africa; London, United Kingdom; and Santiago, Chile.² The feedback provided was taken into account in the final version that was approved by the Executive Boards of the two institutions in March 2001, and endorsed by the IMFC and the Development Committee³ at their Spring meetings in April 2001. Since then, the Guidelines have been available on the IMF and World Bank web sites in five languages (English,

¹ The IMFC is an advisory body that reports to the IMF's Board of Governors on issues regarding the management of the international monetary and financial system.

² In addition, staff from the IMF and the World Bank participated in a seminar on Debt and Fiscal Management in Whistler, Canada, attended by representatives from Western Hemisphere countries, which included a discussion of the Draft Guidelines.

³ The Development Committee of the Boards of Governors of the IMF and the World Bank advises the two Boards on critical development issues and on the financial resources required to promote economic development in developing countries.

French, Spanish, Russian, and Arabic), and a hard copy version was published by the two institutions in September 2001.⁴ The Guidelines are summarized in Appendix I.

15. In the course of the Board discussions, Executive Directors of the IMF and the World Bank asked the staffs to prepare an accompanying document to the Guidelines that would contain sample case studies of countries that are developing strong systems of public debt management. At the same time, the Boards requested that this report should not expand or add to the Guidelines, but instead delineate the experiences of various countries in the form of case studies. In response, staff from the IMF and World Bank have prepared this document, which contains 18 country case studies to illustrate how a range of countries from around the world and at different stages of economic and financial development are developing their capacity in debt management in a manner consistent with the Guidelines. The diverse nature of the countries represented in the case studies is illustrated by the economic and financial indicators presented in Table 1. The experience of these countries should offer some useful practical suggestions of the kinds of steps that other countries could take as they strive to build their capacity in government debt management.

16. In line with the process adopted for the Guidelines, the preparation of the Accompanying Document has been one that has sought to foster countries' sense of ownership of the product, and ensure that the descriptions of individual country practice and the lessons learned are well grounded. The 18 country case studies were prepared by government debt managers coordinated by IMF and World Bank staffs. They cover both their domestic debt management and foreign financing activities. After collecting the information and preparing initial drafts of the case studies, the officials involved in preparing the case studies were invited to an Outreach conference in Washington in September 2002 to discuss the conclusions drawn from the cases by IMF and World Bank staff, and the document as a whole.

A. What Is Public Debt Management and Why Is It Important?

17. Public debt management is the process of establishing and executing a strategy for managing the government's debt in order to raise the required amount of funding, pursue its cost and risk objectives, and to meet any other public debt management goals the government may have set, such as developing and maintaining an efficient and liquid market for government securities.

⁴ International Monetary Fund and The World Bank, 2001, *Guidelines for Public Debt Management*, (Washington, D.C).

Table 1. Selected Macroeconomic and Financial Indicators for Case Study Countries in 2001

	Nominal GDP per Capita (U.S. dollars)	General Government Net Debt	Broad Money (M2)	Stock Market Capitalization (1999 data)	Standard and Poor's Long-term Debt Ratings		Moody's Long-term Debt Ratings
		(In Percent of GDP)			Foreign Currency	Local Currency	
Brazil	2,986	56	25	30	BB-	BB+	B1
Colombia	2,021	47 1/	31	13	BB	BBB	Ba2
Denmark	30,160	39	39	60	AAA	AAA	Aaa
India	466	90	65	41	BB	BBB-	Ba2
Ireland	26,596	25	n.a. 2/	45	AAA	AAA	Aaa
Italy	18,904	104	n.a. 2/	62	AA	AA	Aaa
Jamaica	3,758	130 3/	44	38	B+	BB-	Ba3
Japan	32,637	66	131	105	AA	AA	Aa1
Mexico	6,031	42	29	32	BBB-	A-	Baa2
Morocco	1,147	76	75	39	BB	BBB	Ba1
New Zealand	12,687	18	89	52	AA+	AAA	Aa2
Poland	4,562	36	46	19	BBB+	A+	Baa1
Portugal	10,587	59 1/	n.a. 2/	58	AA	AA	Aa2
Slovenia	10,605	1	52	11	A	AA	A2
South Africa	2,490	43 1/	60	200	BBB-	A-	Baa2
Sweden	23,547	-3	46	156	AA+	AAA	Aa1
United Kingdom	23,765	31	95	203	AAA	AAA	Aaa
United States	36,716	42	53	182	AAA	AAA	Aaa

Source: IMF World Economic Outlook, Bankscope databases, and IMF staff estimates.

1/ Gross debt as a percent of GDP.

2/ M2 data are not available at the national level for members of the European Monetary Union.

3/ End of fiscal year 2001/2002.

18. In a broader macroeconomic context for public policy, governments should seek to ensure that both the level and rate of growth in their public debt is fundamentally sustainable over time, and can be serviced under a wide range of circumstances while meeting cost and risk objectives. Government debt managers share fiscal and monetary policy advisors' concerns that public sector indebtedness remains on a sustainable path and that a credible strategy is in place to reduce excessive levels of debt. Debt managers should ensure that the fiscal authorities are aware of the impact of government financing requirements and debt levels on borrowing costs.⁵ Examples of

⁵ Excessive levels of debt that result in higher interest rates can have adverse effects on real output. See for example: A. Alesina, M. de Broeck, A. Prati, and G. Tabellini, "Default Risk on

(continued...)

indicators that address the issue of debt sustainability include the public sector debt service ratio, and ratios of public debt to GDP and to tax revenue.⁶

19. Every government faces policy choices concerning debt management objectives, its preferred risk tolerance, which part of the government balance sheet those managing debt should be responsible for, how to manage contingent liabilities, and how to establish sound governance for public debt management. On many of these issues, there is increasing convergence in the global debt management community on what are considered prudent sovereign debt management practices that can also reduce vulnerability to contagion and financial shocks. These include: (i) recognition of the benefits of clear objectives for debt management; (ii) weighing risks against cost considerations; (iii) the separation and coordination of debt and monetary management objectives and accountabilities; (iv) a limit on debt expansion; (v) the need to carefully manage refinancing and market risks and the interest costs of debt burdens; (vi) the necessity of developing a sound institutional structure and policies for reducing operational risk, including clear delegation of responsibilities and associated accountabilities among government agencies involved in debt management; and (vii) the need to carefully identify and manage the risks associated with contingent liabilities.

20. Public debt management problems often find their origins in the lack of attention paid by policymakers to the benefits of having a prudent debt management strategy and the costs of weak macroeconomic management and excessive debt levels. In the first case, authorities should pay greater attention to the benefits of having a prudent debt management strategy, framework, and policies that are coordinated with a sound macro policy framework. In the second, inappropriate fiscal, monetary, or exchange rate policies generate uncertainty in financial markets regarding the future returns available on local currency-denominated investments, thereby inducing investors to demand higher risk premiums. Particularly in developing and emerging markets, borrowers and lenders alike may refrain from entering into longer-term commitments, which can stifle the development of domestic financial markets, and severely hinder debt managers' efforts to protect the government from excessive rollover and foreign exchange risk. A good track record of implementing sound macropolicies can help to alleviate this uncertainty. This should be supplemented with appropriate technical infrastructure—such as a central registry and payments and settlement systems—to facilitate the development of domestic financial markets.

Government Debt in OECD Countries,” in *Economic Policy: A European Forum* (October 1992), pp. 428–463.

⁶ See page 1 of *Guidelines for Public Debt Management*. For a discussion of indicators of external vulnerability for a country, see: International Monetary Fund, 2000, *Debt- and Reserve-Related Indicators of External Vulnerability*, (SM/00/65).

21. In addition, poorly structured debt in terms of maturity, currency, or interest rate composition and large and unfunded contingent liabilities have been important factors in inducing or propagating economic crises in many countries throughout history. For example, irrespective of the exchange rate regime, or whether domestic or foreign currency debt is involved, crises have often arisen because of an excessive focus by governments on possible cost savings associated with large volumes of short-term or floating rate debt. This has left government budgets seriously exposed to changing financial market conditions, including changes in the country's creditworthiness, when this debt has to be rolled over. Foreign currency debt also poses particular risks, and excessive reliance on foreign currency debt can lead to exchange rate and/or monetary pressures if investors become reluctant to refinance the government's foreign-currency debt. By reducing the risk that the government's own portfolio management will become a source of instability for the private sector, prudent government debt management, along with sound policies for managing contingent liabilities, can make countries less susceptible to contagion and financial risk.

22. The size and complexity of a government's debt portfolio often can generate substantial risk to the government's balance sheet and to the country's financial stability. As noted by the Financial Stability Forum's Working Group on Capital Flows, "recent experience has highlighted the need for governments to limit the build-up of liquidity exposures and other risks that make their economies especially vulnerable to external shocks."⁷ Therefore, sound risk management by the public sector is also essential for risk management by other sectors of the economy "because individual entities within the private sector typically are faced with enormous problems when inadequate sovereign risk management generates vulnerability to a liquidity crisis." Sound debt structures help governments reduce their exposure to interest rate, currency and other risks. Sometimes these risks can be readily addressed by relatively straightforward measures, such as lengthening the maturities of borrowings and paying the associated higher debt servicing costs (assuming an upward sloping yield curve), adjusting the amount, maturity, and composition of foreign exchange reserves, and reviewing criteria and governance arrangements for contingent liabilities.

23. There are, however, limits to what sound debt management policies can deliver in and of themselves. Sound debt management policies are no panacea or substitute for sound fiscal and monetary management. If macroeconomic policy settings are poor, sound sovereign debt management may not by itself prevent any crisis. Even so, sound debt management policies can reduce susceptibility to contagion and financial risk by playing a catalytic role for broader financial market development and financial deepening.

B. Purpose of the Guidelines

⁷ Financial Stability Forum, *Report of the Working Group on Capital Flows*, April 5, 2000, p. 2.

24. The Guidelines are designed to assist policymakers in considering reforms to strengthen the quality of their public debt management and reduce their country's vulnerability to domestic and international financial shocks. Vulnerability is often greater for smaller and emerging market countries because their economies may be less diversified, have smaller bases of domestic financial savings (relative to GDP), and less developed financial systems. They could also be more susceptible to financial contagion, if foreign investor exposures are significant, through the relative magnitudes of capital flows. As a result, the Guidelines should be considered within a broader context of the factors and forces affecting a government's liquidity more generally, and the management of its balance sheet. Governments often manage large foreign exchange reserves portfolios, their fiscal positions are frequently subject to real and monetary shocks, and they can have large exposures to contingent liabilities and to the consequences of poor balance sheet management in the private sector. However, irrespective of whether financial shocks originate within the domestic banking sector or from global financial contagion, prudent government debt management policies, along with sound macroeconomic and regulatory policies, are essential for containing the human and output costs associated with such shocks.

25. The Guidelines cover both domestic and external public debt and encompass a broad range of financial claims on the government. They seek to identify areas in which there is broad agreement on what generally constitutes sound practices in public debt management. The Guidelines endeavor to focus on principles applicable to a broad range of countries at different stages of development and with various institutional structures of national debt management. They should not be viewed as a set of binding practices or mandatory standards or codes. Nor should they suggest that a unique set of sound practices or prescriptions exists, which would apply to all countries in all situations. The Guidelines are mainly intended to assist policymakers by disseminating sound practices adopted by member countries in debt management strategy and operations. Their implementation will vary from country to country, depending on each country's circumstances, such as its state of financial development. Heavily Indebted Poor Countries (HIPCs) face special challenges in this regard.⁸ The terms and conditions surrounding debt relief provided to them typically include provisions that focus on the need to improve debt management practices in ways that are consistent with the Guidelines (Box 1).

Box 1. Applying the Guidelines to HIPCs

The Heavily Indebted Poor Countries (HIPC) Initiative was launched by the World Bank and IMF in 1996 (and later enhanced in 1999) as a comprehensive effort to eliminate unsustainable debt in the world's poorest, most

⁸ Forty-one countries are considered to be HIPCs. A listing of HIPCs and an overview of the HIPC initiative can be found in International Monetary Fund and The World Bank, *Debt Relief for Poverty Reduction: The Role of the Enhanced HIPC Initiative* (Washington, 2001).

heavily indebted countries. Through the provision of debt relief to eligible HIPCs that show a strong track record of economic adjustment and reform, the Initiative was designed to help these countries achieve a sustainable debt position over the medium term. Insufficient attention paid to public debt management is widely thought to have been one of the most important factors that contributed to the accumulation of unsustainable levels of debt in these countries. Together with sound overall macroeconomic policy settings, prudent debt management in the HIPCs remains central to ensuring a durable exit from the unsustainable debt burden.

A recent survey by staffs of the World Bank and the IMF revealed that several very important weaknesses continue to exist in key aspects of debt management in the HIPCs, notably in the design of their legal and institutional frameworks, coordination of debt management with macroeconomic policies, new borrowing policy, and in the human and technical requirements for performing basic debt management functions.¹⁷ In the area of the legal framework, while most HIPCs have an explicit legal instrument governing the debt office and its functions, the legal framework is not always clearly defined and adequately implemented. In addition, transparency and accountability in debt management, including public access to debt information, requires strengthening. Institutional responsibilities for debt management in many HIPCs are also not clearly defined and coordinated. Moreover, their debt management activities are undermined by a number of institutional weaknesses and low implementation capacity due to insufficient human, technical, and financial resources. To overcome these difficulties, a first step could be to implement clear and transparent legal and institutional frameworks. The Guidelines and the governance lessons drawn from the case studies can help HIPCs strengthen their legal and institutional frameworks for debt management. For example, they highlight some ways in which borrowing authority can be delegated from the Parliament and the Council of Ministers to debt managers with appropriate accountability mechanisms, the merits of centralizing debt management activities in a single unit, and some ways in which appropriate controls can be introduced to manage the operational risks associated with debt management activities. And, they illustrate how some countries have taken steps to obtain more control over contingent liabilities issued in the name of the government.

Regarding policy coordination, the survey showed that less than half of HIPCs have in place a comprehensive forward-looking strategy focused on medium-term debt sustainability. Many do not conduct a debt sustainability analysis on a regular basis, and very little coordination of information between debt offices and other agencies involved in macroeconomic management takes place. Clearly, coordination of debt management with macroeconomic policies, as well as regular conduct of debt sustainability analysis are critical, not only as part of the requirements for the HIPC process, but also if these countries are not to relapse into an unsustainable debt position. In particular, close coordination between the budget, cash management, planning functions, and the debt management office is essential. Again, the Guidelines and the lessons drawn from the case studies provide some insights into how they can develop debt management strategies that pay attention to the medium-to-long term implications of economic policies, and the resulting implications for debt sustainability. For example, they show how various countries have built linkages between debt managers, cash managers, and monetary and fiscal policymakers to ensure that relevant information is shared on a regular basis, and that their respective policies and operational activities are appropriately coordinated.

Unsustainable debt burdens in HIPCs have, in the past, also resulted from unsound policies regarding new borrowing even after benefiting from concessions, including rescheduling. To date, up to two-thirds of these countries still do not have in place a sound policy framework for new borrowing, a direct consequence of the fact that they have yet to develop a comprehensive debt strategy, and many lack complete information on the total debt they have incurred or guaranteed. Moreover, even though domestic debt is becoming an important aspect of fiscal sustainability in some low-income countries, including HIPCs, underdeveloped domestic financial markets seriously limit the role of domestic debt in most HIPCs. If they are to ensure long-term

Box 1. Applying the Guidelines to HIPCs (Continued)

sustainability beyond the HIPC completion point, however, they need to develop borrowing strategies that are clear, transparent and enforceable and begin to develop a domestic debt market so that they can broaden the

range of borrowing options available to them. The Guidelines and the case studies offer some lessons on how they could implement a framework that could not only be used by them to develop an overall debt management strategy—including sound new borrowing policies—and develop their domestic debt markets, but would also allow debt managers in these countries to identify and manage the trade-offs between the expected costs and risks in the government debt portfolio. For example, they highlight the benefits of using an asset-liability management (ALM) approach to assessing the debt service costs of different borrowing strategies in tandem with the financial characteristics of government revenues, expenditures, and financial assets. They encourage debt managers to stress test the results obtained so that debt strategy decision-makers have an understanding of how the chosen strategy will perform in a variety of economic and financial settings. And, they note how increased transparency in debt management activities and the choice of borrowing instruments can be used to promote the development of a liquid market for domestic government securities.

To be able to develop strong systems for debt management in a manner consistent with the Guidelines, HIPC's will continue to need technical assistance to build their debt management capacity. Long-term debt sustainability should be viewed not only in relation to the debt burden but also in terms of the structures, processes and management information services required to manage the debt burden effectively. The HIPC process itself recognizes this by focusing on, among other things, the technical assistance requirements of HIPC's reaching the decision point. At the same time, the countries themselves must supplement the assistance efforts by ensuring that there are adequate numbers of motivated staff in debt offices that could benefit from technical assistance. In addition, full political support is critical to the success of any efforts to strengthen debt management capacity.

In general, while the Guidelines and the lessons drawn from the case studies should be useful for all countries striving to develop their policy frameworks and capacity for debt management, they are particularly relevant for HIPC's. For them, the Guidelines and lessons drawn can not only facilitate achievement of the decision and completion points of the HIPC process, more importantly they can help ensure that debt sustainability is maintained for many years to come.

^{1/} See *External Debt Management in Heavily Indebted Poor Countries*, Board Discussion Paper, IDA/SecM2002-0148, Washington D.C., 2002.

26. Building capacity in sovereign debt management can take several years and country situations and needs vary widely. Their needs are shaped by: the capital market constraints they face; the exchange rate regime; the quality of their macroeconomic, fiscal, and regulatory policies; the effectiveness of the budget management system; the institutional capacity to design and implement reforms; and the country's credit standing. Capacity building and technical assistance therefore must be carefully tailored to meet stated policy goals, while recognizing the policy settings, institutional framework, technology, and human and financial resources that are available. The Guidelines should assist policy advisors and decision makers involved in designing debt management reforms as they raise public policy issues that are relevant for all countries. This is the case whether the public debt comprises marketable debt or debt from bilateral or multilateral official sources, although the specific measures to be taken will differ, to take into account a country's circumstances.

II. LESSONS FROM THE COUNTRY CASE STUDIES

27. This chapter pulls together the main lessons from the 18 country case studies contained in Part II of the document plus the results of a survey of debt management practices, summarized in Table 2, to show how many countries at different stages of economic and financial developments are developing their public debt management practices in a manner consistent with the Guidelines. The aim is to highlight the different ways in which countries can improve their debt management activities by illustrating the variety of ways that the key principles contained in the Guidelines have been implemented in practice. References to specific practices contained in the case studies demonstrate how the Guidelines are applied; further details on individual country practices can be found in the country cases in Part II of the document. Implications of these practices for countries seeking to improve their own debt management capabilities are also discussed. The conclusions are grouped in accordance with the six sections of the Guidelines: objectives for debt management and coordination with fiscal and monetary policies; transparency and accountability for debt management activities; institutional framework governing debt management activities; debt management strategy; the framework used for managing risks; and developing and maintaining an efficient market for government securities.

Table 2. Survey of Debt Management Practices

	Yes		No	
<i>Institutional Framework</i>				
Annual borrowing authority	14	78%	4	22%
Debt ceiling limit	10	56%	8	44%
Domestic and foreign currency debt programs managed together	13	76%	4	24%
Separate debt agency	4	22%	14	78%
Separate front and back offices	15	83%	3	17%
Separate Risk Management Unit (middle office)	12	67%	6	33%
Formal guidelines for managing market and credit risk	10	56%	8	44%
Annual debt management reports	15	83%	3	17%
Regular external peer reviews of debt management activities	10	63%	6	38%
Annual audits of debt management transactions	16	89%	2	11%
Code-of-Conduct and conflict of interest guidelines for debt management staff	12	67%	6	33%
Business recovery procedures in place	11	69%	4	25%
<i>Portfolio Management</i>				
Stress test of market risk exposures	10	59%	7	41%
Trading conducted to profit from expected movements in interest or exchange rates	5	29%	12	71%
Government cash balances managed separately from debt	11	65%	6	35%
Foreign currency borrowing integrated with foreign exchange reserves management	5	31%	11	69%
Specialized management information technology in place for risk management	9	56%	7	44%

Table 2. Survey of Debt Management Practices (Continued)

Primary Market Structure for Government Debt

Auctions used to issue domestic debt	18	100%	0	0%
UP = Uniform price	10	56%	8	44%
MP = Multiple price	15	83%	3	17%
Fixed-price syndicates used to issue domestic debt	5	28%	13	72%
Benchmark issues for domestic market	16	89%	2	11%
Pre-announced auction schedule	17	94%	1	6%
Central bank participates in the primary market	6	33%	12	67%
- only on a non-competitive basis	6	43%	8	57%
Primary dealer system	13	72%	5	28%
Universal access to auctions	10	56%	8	44%
Limits on foreign participation	1	6%	17	94%
Collective Action Clause, domestic issues	0	0%	18	100%
Collective Action Clause, external issues	6	33%	12	67%

Secondary Market for Government Debt

Over-the-counter (OTC) market	15	88%	2	12%
Exchange-traded market mechanism	14	82%	3	18%
Clearing and settlement systems reflect sound practices	17	94%	1	6%
Limits on foreign participation	1	6%	17	94%

Portfolio Management Statistics: Strategic Benchmarks

Duration	11	65%	6	35%
Term-to-Maturity	12	71%	5	29%
Fixed-Floating Ratio	12	71%	5	29%
Currency Composition	14	88%	2	13%
Are benchmarks publicly disclosed?	8	50%	8	50%
Use of Derivatives	9	56%	7	44%

Note: Percentages are computed on the basis of the number of responses to each question, since some countries did not answer all of the questions.

A. Debt Management Objectives and Coordination

28. The guidelines in this section address the main objectives for public debt management, the scope of debt management, and the need for coordination between debt management and monetary and fiscal policies. They encourage authorities to consider the risks associated with dangerous debt strategies and structures when they set the objectives for debt managers, and suggest that debt management should encompass the main financial obligations over which the central government exercises control. Given the importance of ensuring appropriate coordination between debt management, fiscal, and monetary policies, they recommend that authorities share an understanding of the public policy objectives in these domains. They also promote the sharing of information on the government's current

and future liquidity needs, but argue that where the level of financial development allows, there should be a separation of debt management and monetary policy objectives and accountabilities.

Application

Objectives

29. The objectives governing debt management in all 18 countries emphasize the need to ensure that the government's financing needs and its payment obligations are met at the lowest possible cost over the medium to long run. However, while most countries' statement of objectives makes explicit references to the need to manage risks in a prudent fashion, this is not universal. For example, the goals governing debt management in the U.S. emphasize the need to "meet the financing needs of the government at the lowest cost over time." Similarly, Jamaica's objectives are defined as "to raise adequate levels of financing on behalf of the Government of Jamaica at minimum costs, while pursuing strategies to ensure that the national public debt progresses to and is maintained at sustainable levels over the medium term." Even though no explicit reference is made to the need to manage risks in a prudent fashion, these countries do not simply strive to minimize costs in the short-run without regard to risk.

30. Many countries also promote the development and maintenance of an efficient primary and secondary market for domestic government securities as an important complementary objective for debt management. In the short-run, governments may have to accept higher borrowing costs as they seek to develop a domestic market for their securities. However, most governments are willing to incur these costs because they expect that over time they will be rewarded with lower borrowing costs as the domestic market matures and becomes more liquid across the yield curve. In turn, this also should help them achieve a less-risky debt stock, since a well-functioning domestic market would enable them to issue a larger share of their debt in longer-term, fixed-rate domestic currency-denominated securities, and thus, reduce interest rate, exchange rate, and rollover risks in the debt stock.⁹ For example, countries such as Brazil, Jamaica, Morocco, and South Africa have focused on the need to develop the domestic debt market as a means of lessening dependence on external sources of financing. And even when this objective is not explicitly included in the list of objectives governing debt management, in practice debt managers play an active role in developing the domestic government securities market. An example in this regard is the active role played by debt managers in many countries in working with market participants to introduce electronic trading in their domestic government debt markets.

⁹ Developing a well functioning domestic financial market also helps to improve the conduct of monetary policy. See: A. Carare, A. Schaechter, M. Stone, and M. Zelmer, 2002, *Establishing Initial Conditions in Support of Inflation Targeting*, IMF Working Paper WP/02/102.

31. Developing the market for government securities can also help to stimulate the development of domestic markets for private securities. For example, in Japan the development of the secondary market for government securities is considered to be an important objective for debt management because this market, by virtue of being low credit risk, serves as the foundation for domestic financial markets, and is by far the most actively traded segment of the domestic bond and debenture market.

Scope

32. Debt management activities in most countries surveyed encompass the main financial obligations over which the central government exercises control. Where differences arise, they tend to be over the extent to which debt managers play a role in managing: retail debt issued directly to households (e.g., non-marketable savings instruments); contingent liabilities; debt issued by sub-national governments; and also on the extent to which foreign currency debt management is integrated with domestic debt management. For example, in the U.K., the wholesale and retail debt programs are managed by separate agencies, while in the U.S., both debt programs are managed by a single group. In Ireland, the management of explicit contingent liabilities is handled by the Ministry of Finance (Exchequer), while wholesale debt funding is managed by the debt management agency, whereas in Colombia and Sweden, debt managers play an active role in the management of explicit contingent liabilities. The Colombian approach reflects, in part, a response to past experience where these obligations had grown rapidly due to weak oversight and inappropriate pricing. In the latter two countries, involving debt managers in the valuation of explicit contingent liabilities enabled governments to tap the expertise needed to price them in a more rigorous fashion.

33. Most national debt managers do not play a role in the management of debt issued by other levels of government, since the national governments typically are not liable for debts incurred by those governments. The U.S. is a good example in this regard. However, in Colombia and India, debt managers are actively involved in the management of debt at both national and sub-national levels of government. In the case of Colombia, difficulties encountered by some other Latin American countries due to excessive borrowing by sub-national governments led federal debt managers to set limits on sub-national government borrowing in order to ensure that the financial condition of these governments do not undermine the health of federal finances. In India, the involvement of the central bank in the management of the debts of the states is a voluntary contractual arrangement that enables the states to access the debt management expertise and resources that exist within the central bank.

34. Even if national debt managers are not directly involved in the management of debt issued by other levels of government, recent financial crises have shown that these debts can contribute to financial instability. Thus, the national government in some countries, such as Italy, require other levels of government to provide it with information on their borrowing activities. And, situations can arise where the national government may need to play a role in managing these debts even if it does not directly involve the national debt managers. For example, when the Brazilian central government

refinanced debts issued by Brazilian states in 1997 and municipalities in 1999, as a condition of these refinancing programs, the Brazilian Treasury established contracts with these sub-national borrowers. These contracts have strict rules on sub-national spending and new borrowings. Adherence to these rules and those governments' fiscal situations are regularly monitored by the Treasury.

Coordination with monetary and fiscal policies

35. The industrial countries have advanced the furthest in separating the objectives and accountabilities of debt management from those of monetary policy and introducing appropriate mechanisms for sharing information between debt managers and the central bank on government cash flows. This is most evident for those countries surveyed that are members of the European Monetary Union (EMU), since monetary policy is conducted by the European System of Central Banks (ESCB), while debt management is conducted by the national authorities, thereby minimizing the risk of possible conflicts of interest between debt management and monetary policy. Reinforcing the separation of debt management from monetary policy in the EMU are provisions in the Maastricht Treaty, which prevent governments from borrowing from their national central banks, and debt limits, which foster debt sustainability. And, there are appropriate information-sharing mechanisms in place to ensure that the national central banks have the information they need on their governments' liquidity flows so that they and the European Central Bank can work together to manage the amount of liquidity circulating in the eurosystem. For example, in Italy debt managers from the Italian Treasury continuously monitor and formulate projections of expected government cash flows, taking into account the usual annual cyclical and extraordinary patterns of revenues and expenditures. In addition, debt managers and the Bank of Italy regularly exchange information on the movements of cash in and out of the cash account that the Treasury holds with the Bank, through which most government cash flows are channeled. Only the Treasury is authorized to transact through this account in order to ensure proper financial control over the government's finances.

36. The industrialized countries surveyed have also taken steps to ensure that debt managers and central banks coordinate their activities in financial markets so that they are not operating at cross-purposes. In the U.K., for example, the Debt Management Office avoids holding auctions at times when the Bank of England is conducting money market operations, and does not hold reverse repo tenders at the 14-day maturity range. It also does not conduct ad hoc tenders on days when the Bank's Monetary Policy Committee is announcing its interest rate settings. However, these restrictions do not apply to bilateral operations conducted by the DMO owing to their relatively low market profile compared to auctions. An example of what can happen when there is insufficient coordination at an operating level was cited by one country at the Outreach conference. It admitted that a past failure to coordinate activities between the central bank and debt managers in financial markets led to an awkward situation where the Ministry of Finance was repaying foreign currency debt at the same time as the central bank was in need of foreign exchange reserves.

37. Industrial countries have also found ways to deal with the potential conflicts that can arise between central banks and debt managers when central banks seek to use government securities in their open market operations. This issue is especially acute when government borrowing requirements are modest or non-existent, but the central bank needs a large volume of low-risk assets for use in implementing monetary policy. In the EMU, for example, the ESCB has developed a broad list of public and private securities that it is willing to use in its open market operations so as to avoid the need to rely strictly on government securities. Similar steps have also been taken by central banks in the other industrial countries surveyed.¹⁰

38. The coordination challenges are more acute for emerging market and developing countries that do not have well-developed financial markets. The lack of central bank independence and the absence of well-developed domestic markets makes it difficult for them to wean governments off of central bank credit. It also makes it difficult to separate debt management and monetary policy objectives because both activities often need to rely on the same market instruments and are forced to operate at the short end of the yield curve.

39. Many countries, such as Poland, have also experienced difficulties in projecting government revenues and expenditures,¹¹ and in establishing appropriate coordination mechanisms and information sharing arrangements between the Ministry of Finance and the central bank.¹² Nonetheless, some have taken important steps towards ensuring proper coordination between debt management and monetary policy activities. For example, in Brazil and Colombia, debt managers and central bankers regularly meet to share information and construct projections of the government's current and future liquidity needs.¹³ In Mexico, debt management, fiscal policy, and monetary policy are formulated using a common set of economic and fiscal assumptions. Moreover,

¹⁰ Issues surrounding the securities used by industrial country central banks in their open market operations and held on their balance sheets are discussed in M. Zelmer, 2001, *Monetary Operations and Central Bank Balance Sheets in a World of Limited Government Securities*, IMF Policy Discussion Paper PDP/01/7.

¹¹ At the Outreach conference, one country noted that a past failure to take account of the uncertainty in fiscal projections led it to issue too much short-term debt. This debt ultimately had to be rolled-over into longer-term debt in the middle of a financial crisis when interest rates were high.

¹² Information on the Polish experience can be found in: P. Ugolini, 1996, *National Bank of Poland: The Road to Indirect Instruments*, IMF Occasional Paper 144.

¹³ In Brazil, the central bank also has an opportunity to comment ahead of time on the annual financing program, and the government is legally prevented from borrowing directly from the central bank.

the Mexican central bank acts as the financial agent of the government in many transactions. This helps to cement a continuous working relationship in Mexico between fiscal, debt management, and monetary policy authorities, and to foster the appropriate sharing of information. In Slovenia, the central bank is given an opportunity to comment ahead of time on the annual financing program contained within the fiscal documents, and the government is legally prohibited from borrowing directly from the central bank. In addition, under a formal agreement the Slovenian Ministry of Finance supplies the central bank with regularly updated forecasts of projected day-to-day cash flows of all government revenues and expenditures over a one and three month horizon. Officials from both institutions also meet regularly to share information on the technical details regarding the implementation of their respective policies.

40. Among other emerging market countries, in Jamaica, for example, the transfer of debt management activities from the central bank to the Ministry of Finance and Planning has resulted in greater coordination of fiscal policy and debt management activities, and, as in many countries, has also allowed for a more clearly defined set of debt management objectives that are determined independently of monetary policy considerations. At the policy level, there are regular meetings between senior officials of the planning authorities—the Ministry of Finance and Planning, the Bank of Jamaica, the Planning Institute of Jamaica, and the Statistical Institute of Jamaica—to ensure consistency in government’s economic and financial program. At the technical level there are regular weekly meetings where information is shared on the government’s liquidity requirements and borrowing programs, as well as on current monetary conditions and developments in financial markets. In India, the requisite coordination among debt management, fiscal, and monetary policies is achieved through various regular meetings within the central bank, as well as through regular discussions between central bank and Ministry of Finance staff on the government’s fiscal situation and the implications for borrowing requirements. In addition, debt management officials attend the monthly monetary policy strategy meeting, and there is an annual pre-budget exercise that seeks to ensure consistency between the monetary and fiscal programs (at both the central and state government levels). However, the Indian authorities believe that a formal separation of debt management from monetary policy in the future would depend on: (i) the development of domestic financial markets; (ii) the achievement of reasonable control over the fiscal deficit; and (iii) legislative changes. In Morocco, the Treasury and External Finance Department, which is responsible for debt management, participates actively in defining the orientations of the budget law, particularly the level of the budget deficit and the resources to cover it.

Implementation considerations

41. The introduction of appropriate well-articulated objectives for debt management is an important step that can be introduced by any country regardless of its state of economic and financial development. Indeed, in recent years many countries have introduced objectives that explicitly mention the need to manage risks as well as achieve low funding costs for the government, or at least make clear that the focus on costs is over a medium to long-run horizon so that debt

managers are not tempted to pursue short-term debt service cost savings at the expense of taking on dangerous debt structures that expose them to a higher risk of sovereign default. Highlighting the cost-risk trade-off in the objectives can be a useful way of anchoring ensuing discussions on debt management strategy and the execution of borrowing decisions.

42. Country circumstances, such as the state of domestic financial markets and the degree of central bank independence, play an important role in determining the range of activities that are handled by debt management, and the extent to which debt management and monetary policy objectives and instruments can be separated. Coordination between the budget management and debt management functions is crucial. This is particularly the case in transition and developing economies, where the lack of capacity in accurately forecasting government revenues and expenditure flows means that coordination on government liquidity requirements and day-to-day cash flows needs to be frequent and well-structured. Nonetheless, as shown above, there are many steps that countries can take to build appropriate coordination mechanisms over time regardless of their state of economic and financial development.

43. Particularly for developing and emerging market countries, it is important to have good coordination between the fiscal policy advisors and the debt management function. The debt managers' role here is to convey their views not only on the costs and risks associated with government financing requirements, but also the financial market's views on the sustainability of the government's debt levels.

B. Transparency and Accountability

44. The guidelines in this section argue in favor of disclosing the allocation of responsibilities among those responsible for executing different elements of debt management, the objectives for debt management, and the measures of cost and risk that are used. They also encourage countries to disclose materially important aspects of debt management operations and information on the government's financial condition and its financial assets and liabilities, and highlight the need to ensure that debt management activities are audited in order to foster proper accountability.

Application

Clarity of roles, responsibilities, and objectives of financial agencies responsible for debt management

45. In many industrial countries the objectives for debt management and the roles and responsibilities of the institutions involved are explicitly stated in the laws governing debt management activities. This information often also is published in annual reports prepared by debt management authorities and on official web sites. Indeed, as indicated in Table 2, fifteen countries reported that they produce annual debt management reports. Among emerging market and developing countries one finds less formal ways to disclose these items. In Morocco, for example,

the Minister of Economy and Finance announces the objectives for debt management each year at an annual press conference, while Slovenia announces the goals and instruments for debt management in the annual Financing Program and other policy documents, which are available on government web sites.

46. Not all countries in the survey set specific targets for risk (such as targets for duration and currency composition)—the results in Table 2 suggest that about one-third, including Japan and the U.S. do not—but most of those that do disclose them. For example, Brazil's benchmark targets are publicly disclosed in the government's annual borrowing program, which also provides a comprehensive overview of debt management activities and the government's financial situation. Denmark publishes its targets in a special announcement to the stock exchange and as part of its annual report, while Sweden's targets are published in the annual debt management guidelines given to the Swedish National Debt Office (SNDO) by the Government (Cabinet) before the start of the fiscal year. In the case of Italy, public disclosure of strategic cost/risk analysis is at an early stage of development; however, current versions are available on the Italian Treasury's web site.

Public availability of information on debt management policies

47. All countries disclose materially important aspects of their debt management operations and information on the government's financial condition and its financial assets and liabilities. The Italian Treasury, for example, maintains an extensive web site that includes information on the government's annual auction calendar; the quarterly issuing program; tender announcements; auction results; and information on government securities and the primary dealers in Italian government securities markets.

48. Among emerging market countries, the Jamaican government's debt strategy is presented to Parliament at the start of the fiscal year in the form of a Ministry Paper that has widespread public distribution and is available on the Ministry's web site. Comprehensive information on Jamaica's debt is also available on the web site. In addition, the rules for participating in primary debt auctions are widely disclosed, and notices for future domestic debt issues and auction results are reported through print and electronic media and on the Ministry's web site. In India, an auction calendar was introduced in April 2002, which has improved the transparency of the borrowing program. In addition, the Reserve Bank of India regularly disseminates statistical information on the primary and secondary markets for government securities, and began disseminating data on trades in government securities on a real-time basis through its web site in October 2002. In Morocco, the Minister of Economy and Finance's annual press conference mentioned previously also includes a presentation on the key results and statistics on government debt for the previous year plus an overview of the measures and actions to be implemented in the coming year. Moroccan authorities also issue monthly announcements on the results from the previous month's auctions and details of upcoming auctions, and hold regular meetings with market participants to enhance their understanding of debt management activities.

Accountability and assurances of integrity by agencies responsible for debt management

49. Almost all countries' debt management activities are audited annually by a separate government-auditing agency that reports its findings to parliament. The data in Table 2 indicated that sixteen countries have annual debt management audits, and ten have regular external peer reviews. For example, in Ireland, the annual accounts are audited by the state auditor (Comptroller and Auditor General) even though the Irish debt management agency engages a major international accounting firm to undertake an internal audit of all data, systems, and controls. In Denmark, the state auditor (Auditor General) audits government debt management with the help of the central bank's internal audit department. On the other hand, in India separate financial accounts for the debt management operations at the central bank are not prepared, and thus cannot be subjected to a formal audit. While accounting for government debt is done by the government's Controller General of Accounts, the accounts are subject to the audit by the Comptroller and Auditor General of Accounts, a constitutional body. The relevant central bank departments are also subjected to an internal management audit and concurrent audit.

Implementation considerations

50. All countries surveyed disseminate a wide range of information on their debt management objectives, issuance procedures, and financial requirements to market participants and the general public, and the level of disclosure does not appear to be overly dependent on a country's state of economic and financial development. This process has been helped immeasurably by the introduction of the Internet, which provides a vehicle for disseminating this information in a cost-effective manner to a worldwide audience. However, as noted in Box 1 for HIPC's, for many developing countries, an important step towards improving transparency in their debt management activities is obtaining complete and reliable data on their debt obligations. Such a step is a necessary precondition to operating in a manner consistent with the disclosure requirements of the Guidelines.

C. Institutional Framework

51. The guidelines in this section address the importance of sound governance and good management of operational risk. They recommend that the authority to borrow and undertake other transactions related to debt management as well as the organizational framework be clear and well specified. In order to reduce operational risk, they highlight the need for well-articulated responsibilities for staff, and a system of clear monitoring and control policies and reporting arrangements. They also stress the importance of separating the execution of market transactions (front office) from the entering of transactions into the accounting systems (back office). The development of an accurate and comprehensive management information system, a code-of-conduct, conflict-of-interest guidelines, and sound business recovery procedures are also encouraged.

Application

Governance

52. In all of the countries surveyed, the legal authority to borrow in the name of the central government rests with the parliament or congressional legislative body. However, practices differ with respect to the delegation of borrowing power from the parliament to debt managers. In most of the countries, legislation has been enacted authorizing the Ministry (or Minister) of Finance (or its equivalent) to borrow on behalf of the government. In some others, that power has been delegated to the Council of Ministers (the Cabinet), and in one case (India) directly to the central bank. Whether the delegation is to the Council of Ministers, the Ministry, or Minister of Finance seems to be more of a formality that recognizes country conventions regarding the decision making within the Government than a practical matter.

53. The mandate to borrow is usually restricted, either by a borrowing limit expressed in net or gross terms, or by a clause regarding the purpose of the borrowing. Most countries surveyed rely on borrowing limits (Table 2), defined in terms of a debt ceiling or an annual borrowing limit. The most common structure is that the parliament sets an annual limit in connection with the approval of the fiscal budget, which then functions as a means for it to control the budget. With the “purpose” clause, the mandate is restricted to certain borrowing purposes, the main ones being to finance the budget deficit and refinance existing obligations. In practice, the parliament has significant control over the debt even when the borrowing is restricted to certain purposes. The main purpose is always to cover any budget deficit, which the parliament influences when it approves the expenditures and tax measures contained in the budget. If the deficit deviates significantly from the path projected in the budget, it is possible for the parliament to intervene, either during the fiscal year or by modifying the budget for subsequent fiscal years.

54. Another example of a legislative debt ceiling is the one used by Poland, a prospective EMU-member. Poland has inserted into its Constitution a requirement that total government debt,

augmented by the amount of anticipated disbursements on guarantees, is not allowed to exceed 60 percent of GDP, the debt limit stipulated by the Maastricht treaty. Denmark and the U.S. are examples of other countries that also have legislative limits on the stock of debt outstanding.

55. The country with the most open mandate is the U.K., where the National Loans Act of 1968 permits the Treasury to raise any money that it considers expedient for the purpose of promoting sound monetary conditions, and in such manner and on such terms and conditions as the Treasury sees fit. However, the U.K. Parliament has an indirect influence on the size of the deficit, and hence the debt level, in that it approves tax rates and the Government's spending plans. Moreover, in the current fiscal policy framework the Government has the stated objective to limit net debt to a maximum of 40 percent of GDP.

56. Delegation of debt management authority from the Council of Ministers or the Ministry of Finance to the unit responsible for the debt management is usually stipulated in the form of either a governmental ordinance or a power of attorney. However, most countries surveyed ensure that the Government or the Ministry retains the power to decide on the debt management strategy, normally after considering a proposal from the debt managers. Most countries, especially those with a separate debt agency, have adopted formal guidelines for that purpose. At the Outreach conference, it was noted that it is important to ensure that decision-makers are fully informed about the consequences of their chosen debt management strategy. In one country the failure to do so left its debt managers exposed to criticism when the debt strategy did not achieve the expected results. In addition, some other countries admitted that in the past, the lack of clear objectives and weak governance arrangements led to political pressure on them to focus on achieving short-term debt service cost savings, at the expense of leaving the debt portfolio exposed to the risk of higher debt service costs in the future. In one country this also led to an awkward situation where political interference in the timing of debt issues forced the debt managers to have to raise a significant amount of the annual borrowing requirement towards the end of the fiscal year after it became apparent that interest rates were not going to evolve as expected.

57. The details contained in these guidelines differ across countries. In Sweden, for example, the guidelines are set each year by the Council of Ministers, and specify targets for the amount of foreign currency debt, inflation-linked debt, and nominal domestic currency debt. They also indicate the government's preferred average duration for total nominal debt, the maturity profile of the total debt, and rules for the evaluation of the debt management. On the other hand, in Portugal, which also has a separate debt agency, the guidelines are determined by three different decisions. First, the Minister of Finance sets long-term benchmarks for the composition of the debt portfolio. These reflect selected targets concerning the duration, currency risk and refinancing risk, and are used to evaluate the cost and performance of the debt portfolio. Secondly, the Government (Council of Ministers) specifies annually which debt instruments are to be used and their respective gross borrowing limits. Finally, the Minister of Finance annually approves guidelines for specific operations, such as: buybacks; repos; the issuing strategy in terms of instruments, maturities, timing

and placement procedures; measures regarding the marketing of the debt; and the relationship with the primary dealers and other financial intermediaries.

58. The case studies reveal a clear trend towards centralizing public debt management functions. Most countries have placed them in the Ministry of Finance. For example, as mentioned previously, Jamaica centralized the core debt management functions in the Debt Management Unit of the Ministry of Finance and Planning in 1998. Prior to then, they had been divided between the Ministry and the central bank. In the same year, Poland also centralized its domestic and foreign debt management in the Public Debt Department of the Ministry of Finance. Brazil plans to centralize all aspects of debt management within the Treasury in September 2003; the central bank currently handles the front office activities associated with international capital market borrowings, while domestic debt management is handled by the Treasury. Four countries (Ireland, Portugal, Sweden and the U.K.) have located their debt agencies outside the Ministry of Finance in that these agencies are from an organizational point of view not directly part of the Ministry (Table 2). These agencies also have some independence regarding staffing policies, and are physically located in offices outside the Ministry. However, they report to and their activities are evaluated by the Council of Ministers or the Ministry of Finance. For example, Portugal consolidated its debt management functions into a separate debt agency in 1997. Prior to then, this activity had been split between the Treasury Department (external debt and treasury bills) and the Public Credit Department (the domestic debt, excluding the treasury bills). In two countries (Denmark and India) the debt management unit is located in the central bank. In Denmark's case this reflects a consolidation of activities that had previously been split between the Ministry and the central bank. In India, the central bank manages domestic debt while the Ministry of Finance has responsibility for external debt.

59. All countries with a debt management unit in the Ministry of Finance, except Slovenia, use the central bank to conduct auctions in the domestic debt market. This stands in contrast to those with separate debt agencies, where all market contacts, including the conduct of auctions, are handled by the agency. In Sweden, even the acquisition of foreign currencies in the market needed to service the external debt has been shifted to the debt agency from the central bank, starting from July 2002.

60. The rationale behind the different organizational structures differs across countries. For example, while the U.K. and Denmark delegate the management of foreign currency debt and foreign exchange reserves to the central bank, they have taken different approaches in the management of domestic debt. The U.K., which shifted domestic debt management from the central bank to a debt agency in 1998, believes it is important to have separate objectives for monetary policy and domestic debt management to mitigate any perception that the debt management might benefit from inside knowledge over the future path of interest rates. Denmark, which moved debt management functions from the Ministry of Finance to the central bank in 1991, has in place strict funding rules between debt management and monetary policy, and found that the move to the central bank has helped to centralize the retention of knowledge of most aspects of financial markets

within a single authority. Moreover, since Danish interest rates are largely determined by interest rate developments in the euro area, the involvement of the Danish central bank in domestic debt management is unlikely to generate a perception that domestic debt management benefits from inside information on the future path of interest rates.

61. Ireland and Portugal, which both created separate debt agencies (in 1990 and 1996, respectively), highlighted the need to attract and retain staff with the relevant skills, and to centralize all debt management functions in one unit. Sweden, whose separate debt agency was founded in 1789, notes the historical reason and that the system provides a clear distribution of responsibilities between the parties concerned. However, it also reflects a long-standing tradition in Sweden of working with small ministries, responsible for policy decisions, and delegating operational functions to agencies that have separate management teams and are at arm's length from the ministries.

62. Poland placed debt management activities in the public debt department of the Ministry of Finance on the grounds that at the very early stage of development of its domestic financial market, when the transition to the free market economy had just begun, that department had more instruments to support development of the market, to cooperate with other regulatory institutions, and to prepare an efficient legal and infrastructure environment. New Zealand, which also chose to set up a unit within the Ministry of Finance (the New Zealand Debt Management Office or NZDMO) instead of a separate debt agency, suggested that important linkages would otherwise be lost. In addition to debt-servicing forecasts for the budget and other fiscal releases, the NZDMO provides a range of capital markets advice to other sections of Treasury.

63. The role of the parliament or congress in the management of the debt, apart from delegating its borrowing power, differs between the countries. In Sweden, for example, the parliament has stated the objective of the central government debt management in an Act, and the Council of Ministers is obliged to send an annual report to the parliament evaluating the management of the debt. In Mexico, the Congress approves the annual limit for net external and domestic borrowing as well as the debt strategy; the latter is scrutinized closely, since debt management issues have been a contributing factor to past financial crises in Mexico. At the end of the year, the Mexican Congress also (through its auditing organization) reviews the accounts and other specific topics that are of interest to its members. In Ireland and U.K., the Chief Executive of the debt agency reports directly to the parliament in the presentation of the accounts.

Management of internal operations

64. Fifteen countries have separate front and back offices for the management of the debt (Table 2). Twelve countries, including all of the countries which actively trade to profit from expected movements in interest rates or exchange rates, have a separate middle office too (Table 2). From an operational risk point of view it is useful to have a separate middle office in a debt unit where many transactions are being conducted on a regular basis. Its main functions are to: ensure that all transactions done by the front office are within predetermined risk limits; assess the

performance (where relevant) of the front office's trading against a strategic benchmark portfolio; set proper operational procedures and ensure that they are followed; and, in some countries, play a leading role in the development of the debt management strategy.

65. Most of the surveyed countries have code-of-conduct and conflict of interest guidelines for the debt management staff, and business recovery procedures in place (Table 2). Brazil has also created an Ethics and Professional Conduct Committee.

66. Some countries, such as Ireland, New Zealand, Portugal, Sweden, and the U.K., have boards, which provide external input on specific areas of expertise. In Ireland's case, the board assists and advises the National Treasury Management Agency (NTMA) (the Irish debt agency) on matters referred to it by NTMA. In New Zealand, the board has a quality assurance role. It oversees the NZDMO's activities, the risk management framework, and the business plan, and reports directly to the Secretary to the Treasury. In Portugal, it plays an advisory role on strategic matters. Sweden has a decision-making board, chaired by the Director General of the SNDO. Of the external members, four are members of parliament and the other three have professional experience as economists. In the U.K., the board advises the DMO's senior management on strategic, operational, and management issues, but only in an advisory capacity as it has no formal decision-making role.

67. Many debt managers noted that they are confronted with significant challenges in attracting and retaining staff due to intense competition for such staff from the private sector. As described above, in some cases this has been one of the driving forces behind the transfer of the debt management function from the Ministry of Finance to either the central bank or to a separate debt agency. In order to alleviate this problem, many countries have sought to offer their staff challenging and interesting tasks, good training, and further education. Brazil, for instance, offers a graduate course in debt management. Slovenia and it also support post-graduate education through time-off allowances and payment of tuition fees.

68. In all of the cases where management information systems were discussed (Colombia, Denmark, Ireland, Morocco, New Zealand and Portugal), countries have experimented with different approaches. Some have developed their own systems, while others purchased off-the-shelf systems and customized them to meet their particular needs. For example, New Zealand relied on its own internally developed system until the mid-1990s, when it acquired a commercial system. However, significant customization was required, and work on it has continued over the years to meet the NZDMO's evolving requirements.

69. Portugal provides an example of a strategy to reduce operational risk. When the Portuguese debt agency was created, an analysis of operational risk led to the adoption of an organizational structure based on the financial industry standard of front, middle and back office areas with clearly segregated functions and responsibilities. It has since been a focus of attention by means of three main initiatives, namely: a significant investment in IT (including the purchase of a management

information system), followed by the development of a manual of internal operating procedures, and finally attracting and retaining specialized expertise. In the future these measures will be complemented with an internal auditing function, to complement the external auditing that is already done by the Audit Court.

Implementation considerations

70. The case studies show that only four countries (Ireland, Portugal, Sweden, and the U.K.), all highly developed and with well functioning domestic capital markets, have created separate debt agencies for the management of the central government debt. However, in other countries there are ongoing discussions about the merits of such an agency. One argument, which is often mentioned in favor of a separate agency is that it provides for more focused debt management policy, in part because there is a top management whose main responsibility is debt management, not fiscal or monetary policy, and thus have the time to focus on debt management issues. When debt management is part of the Ministry of Finance or central bank, there is a risk that debt management policy could be a secondary consideration. This focus fosters professionalism and gives debt management staff attention from top management, which together with competitive salaries, makes it easier to hire and retain skilled staff. However, as noted by some countries at the Outreach conference, if one goes down this path, the introduction of a separate debt agency should be accompanied by strong internal governance, accountability, and transparency mechanisms to ensure that the agency performs as expected, and is held accountable for decisions within its remit.

71. This is not to say that every country should have a separate debt agency. A common argument for placing the debt office in the Ministry of Finance is the importance of maintaining key linkages to other parts of the government, such as budget and fiscal policy. Especially in countries with less developed financial markets, coordination of debt management policy with that of fiscal and monetary policy is of such importance that centralization of responsibilities either in the Ministry of Finance or the central bank often makes sense. Moreover, even when separate, the debt agency always reports to the Council of Ministers (Cabinet) or Ministry of Finance, which decides on the debt management strategy and evaluates the work of the debt agency. In order to fulfill these duties, the Ministry of Finance may also find it advantageous to have some staff skilled in debt management.

72. The role of the parliament differs among the countries, partly because of historical reasons. However, if the parliament is the political body that approves tax and spending measures, which is normally the case, one could argue that it should also approve overall borrowing by the government as well as broad debt management policy issues, such as debt limits and the objectives for managing debt, given that the management of debt ultimately has significant repercussions for future tax and spending levels. Within these limits and policy objectives, the Council of Ministers and debt managers should have sufficient authority to implement the approved policies as they deem appropriate, subject to being held accountable for their actions by the parliament.

D. Debt Management Strategy

73. The guidelines in this section stress the importance of monitoring and assessing the risks in the debt structure, and recommend that the financial and other risk characteristics of the government's cash flows be considered when setting the desired debt structure. In particular, the debt manager should carefully assess and manage the risks associated with foreign currency and short-term or floating-rate debt, and ensure there is sufficient access to cash to avoid the risk of not being able to honor financial obligations when they fall due.

Application

74. Debt managers' risk awareness is high, and most have formal guidelines for managing market and credit risk (Table 2). However, the risks that countries focus on vary depending on country-specific circumstances. For example, Colombia aims to limit the exposure of its foreign currency debt portfolio to market shocks and international crises, while Italy concentrates its efforts on reducing both interest rate risk and rollover risk after having experienced government indebtedness levels that reached 124 percent of GDP in 1994. Recent financial crises in Latin America and Russia have shown that the management of rollover risk is an especially important task for many developing and emerging market countries. An inability to rollover debt when markets are turbulent can severely compound the effects of economic and financial shocks.

75. The cases also show a trend towards using an asset-liability management (ALM) framework, at least conceptually, to assess the risks and cost of the debt portfolio by evaluating the extent to which debt service costs are correlated with government revenues and non-interest expenditures.¹⁴ One issue that arises is how to measure cost and risk. In Portugal, for example, one of the objectives, stated in the Portuguese Public Debt Law, is to ensure a balanced distribution of debt costs over several years. Against that background and with the focus on budget volatility, the Portuguese debt agency has found it useful to measure market risk on a cash-flow basis. However, it is still working on the development and implementation of an integrated budget-at-risk indicator for the debt portfolio. In Sweden, the SNDO is using a cost-to-GDP ratio in its analysis of the costs for different debt portfolios. This is a step in the direction of ALM as the assumption here is that the budget balance co-varies with GDP via both tax and expenditure channels. A debt portfolio with a relatively stable cost-to-GDP ratio will thus contribute to deficit (tax) smoothing.

76. Some countries also explicitly incorporate specific government assets and liabilities (such as foreign exchange reserves and contingent liabilities) into an overall risk management framework.

¹⁴ Further information on ALM in the context of public debt management can be found in: G. Wheeler and F. Jensen, Forthcoming, *Sound Practice in Sovereign Debt Management* (The World Bank: Washington D.C.).

Countries using this approach, or which have started to look at it, are: Brazil; Denmark; New Zealand; and the U.K. They have found, for example, that usage of such a framework highlights the benefits of coordinating the maturity and currency composition of foreign currency debt issued by the government with that of the foreign exchange reserves held by either the government or the central bank so as to hedge the government's exposure to interest rate and exchange rate risk. Indeed, in the U.K., foreign exchange reserves and foreign currency borrowings are managed together by the Bank of England using an ALM framework.

77. The debt management section of the Danish central bank also manages the assets of the Social Pension Fund. In managing interest rate risk, it integrates assets and liabilities, and monitors the duration of the net debt. As a result, a reduction in the duration of net debt can be achieved by raising the duration of the asset portfolio. New Zealand, which has been using the ALM approach for more than a decade, created an Asset and Liability Management Branch in the Treasury in 1997, of which the NZDMO constitutes one part. The ALM strategy is implicitly incorporated into the NZDMO's strategic objective to maximize the long-term economic return on the government's financial assets and debt in the context of the government's fiscal strategy, particularly its aversion to risk. The objective has regard to both the balance sheet and fiscal implications of the debt strategy. Going forward, debt strategy in New Zealand is likely to be influenced by an analysis underway in Treasury aimed at understanding the financial risks that exist throughout the government's operations, and how its "balance sheet" is likely to change through time.

78. Debt management strategies, such as the selection of debt maturities and the choice between raising funds in domestic or foreign currencies, depend to a large degree on the special circumstances in the countries, such as the characteristics of the debt portfolio, the vulnerability of the economy to economic and financial shocks, and the stage of development of the domestic debt market. Brazil, for example, which prior to the Asian financial crisis sought to lengthen the average term-to-maturity of its debt by issuing longer fixed-rate securities, switched in October 1997 to floating rate and inflation-indexed securities in order to achieve a quicker reduction in rollover risk. At that time, investors were more willing to invest longer-term if the securities in question carried floating-rate or inflation-indexed coupons than if they were fixed for the tenor of the instrument. However, the reduction in rollover risk came at the expense of making its debt dynamics more sensitive to changes in interest rates. Prior to the onset of financial market turbulence in 2002, it also sought to reduce its vulnerability to interest rate fluctuations by extending the domestic yield curve and by building up cash reserves.

79. Mexico's experience underlines the need for sound macroeconomic policies, fiscal discipline and a prudent and consistent debt management policy. In the wake of the 1994-95 financial crisis where its public finances were undermined by excessive reliance on short-term foreign currency-linked debt, the government has been actively promoting the development of the domestic debt markets by introducing new instruments and making the necessary regulatory adjustments in order to reduce its dependence on short-term domestic debt and foreign currency (and foreign currency-linked) debt. Today, Mexico's debt management strategy aims to reduce rollover, interest rate, and

exchange rate risks by issuing a combination of domestic currency medium-term floating rate notes and medium- to long-term fixed-rate instruments. The issuance of the floating-rate debt helps to reduce rollover risk. Over time, the issuance of domestic currency fixed-rate instruments at increasingly longer tenors should reduce rollover risk further, and at the same time, lower interest rate and exchange rate risk.

80. In Morocco, debt managers have sought to reduce debt service costs of the external debt by exercising debt/equity swap options, triggering cancellation and prepayment rights to retire onerous debt, and by refinancing or revising interest rates as permitted by the loan agreements. They also have a policy of promoting the development of the domestic debt market so that more financing needs can be met in domestic currency.

81. Turning now to the most developed countries, the U.S., for example, has sought to minimize debt service costs over time by championing a deep and liquid market for U.S. Treasury securities. This has involved taking steps to ensure that Treasury securities maintain their consistency and predictability in the financing program, issuing across the yield curve in order to appeal to the broadest range of investors, and aggregating all the financing needs of the central government into one debt program. Portugal, a participant in the euro-area, has a strategy of building a government yield curve of liquid bonds (at least euro five billion outstanding for each series) along different maturity points. Since 1999, the priority has been every year to launch a new ten-year issue, and secondly to launch a new five-year issue. As part of this strategy, priority has been given to the development of efficient primary and secondary treasury debt markets. At the highest level, New Zealand's strategy regarding domestic debt management is to be transparent and predictable. The NZDMO maintains a mix of fixed and floating rate debt, and a relatively even maturity profile for debt across the yield curve. It has taken steps to develop the market for domestic government securities, including a derivatives market, which the commitment to transparency, predictability, and even-handedness supports.

82. Participation in ERM II for Denmark and prospective EMU membership for Slovenia are important factors in managing the exchange rate risk of debt issued by these countries. Since 2001, all of Denmark's foreign currency exposure is in euro. In Slovenia, over 90 percent of its foreign currency exposure is in euro. Slovenia also issues bonds denominated in euro in its own domestic market to support the pricing of long-term instruments issued by other Slovenian borrowers.

83. Although all countries pay close attention to the cost-risk trade-off, some countries with stable macroeconomic conditions, strong fiscal positions, and well-developed domestic debt markets are in a better position than others to pursue cost savings at the expense of some increase in the riskiness of the debt. Sweden, for instance, has decided to have a 2.7-year duration target for its nominal debt, while Denmark has shortened the duration of its debt from 4.4 years at the end of 1998 to 3.4 years at the end of 2001. In both countries, these actions reflect: first, a significant decline in their debt loads in recent years; second, a view that debt service cost savings can be realized over time in an upward-sloping yield curve environment; and third, a view that these

countries are generally well-insulated from economic and financial shocks due to their strong macroeconomic policy frameworks.

84. The benefit of having well functioning domestic currency markets is also shown in cash management. Most of the countries hold cash balances so that they can honor their financial obligations on time even when their ability to raise funds in the market is temporarily curtailed or very costly. On the other hand, Sweden is sufficiently secure in its ability to access markets at any time that it has opted not to hold cash balances, but instead rely completely on its ability to raise funds in the market. However, in order to do that it is also important to have complete control over the government cash flows, so that the timing of these flows can be managed accordingly.

85. As will be discussed in more detail below, almost all the surveyed countries are, or have plans to, building up liquid benchmark securities in their domestic currency markets (Table 2). The most common methods used to reduce the rollover risk associated with large benchmark securities are buyback or bond-switching operations near the maturity dates.

86. Countries typically adjust the financial characteristics of the debt portfolios by adjusting the mix of securities issued in their borrowing programs or by repurchasing securities before they mature and replacing them with new ones that better reflect its cost-risk preferences. In addition, as indicated in Table 2, half of the countries use financial derivatives, mainly interest rate swaps and cross-currency swaps, to separate funding decisions from portfolio management decisions, and adjust the risk characteristics of their debt portfolios. However, this is not an option available to all countries. Those with underdeveloped domestic markets may not have access to domestic derivatives markets, and those with weak credit ratings may not be able to access global derivatives markets at a reasonable cost. Moreover, there is a need for careful management of the counterparty risks associated with derivatives transactions. Denmark, New Zealand and Sweden, for example, noted that they use credit exposure limits and collateral agreements to reduce the credit (counterparty) risks associated with these transactions.

Implementation considerations

87. The debt management strategies pursued by countries generally reflect their particular circumstances and their own analysis of the risks associated with their debt portfolios. Thus, it is not surprising that the strategies pursued differ significantly across countries. However, one element that seems to be common across all countries, regardless of their stage of development, is the focus on developing/maintaining the efficiency of the domestic debt market as a means of reducing excessive reliance on short-term and foreign currency-linked debt. Another aspect worthy of note is the move towards using an ALM framework to assess the risks and costs of debt and determine an appropriate debt structure.

88. Particularly for developing and emerging market countries, the level of the debt and the soundness of the macroeconomic policies are important constraints on the amount of discretion that

countries have in setting and pursuing their debt management strategies. Regarding the debt level, decisive factors are the central government's capacity to generate tax revenues and savings, and its sensitivity to external shocks.

E. Risk Management Framework

89. The guidelines in this section recommend that a framework should be developed to enable debt managers to identify and manage the trade-offs between expected costs and risks in the government debt portfolio. They also argue in favor of stress tests of the debt portfolio as part of the risk assessment, and that the debt manager should consider the impact of contingent liabilities. They also discuss the importance of managing the risks of taking market positions.

Application

90. The framework used to trade-off expected costs and risks in the debt portfolio differs across countries. Most seem to use rather simple models, based on deterministic scenarios, and judgment. However, new risk models are under development in many countries. Only a few (Brazil, Denmark, Colombia, New Zealand and Sweden) use stochastic simulations. For example, New Zealand developed a stochastic simulation model to improve its understanding of the trade-off between the cost and risk associated with different domestic debt portfolio structures. Most countries also employ stress testing as a means to assess the market risks in the debt portfolio, and the robustness of different issuance strategies. Stress testing is particularly important for the assessment of debt sustainability.

91. Consistent with the ALM framework discussed above, most countries measure cost on a cash flow basis over the medium- to long-term. This facilitates an analysis of debt in terms of its budget impact. Risk is typically measured in terms of the potential increase in costs resulting from financial and other shocks. Some countries, such as Brazil, Portugal and Sweden, are experimenting with measures such as cost-to-GDP or concepts such as "budget-at-risk" to reflect the explicit incorporation of a joint analysis of debt and GDP or budget flows to shocks.

92. Four countries (Brazil, Colombia, Denmark and New Zealand) use "at-risk" models to quantify the market risks. For example, Colombia uses a debt-service-at-risk (DsaR) model to quantify the maximum debt service cost of the debt portfolio with 95 percent likelihood. The methodology takes into consideration the exposure to different market variables, such as interest rates, exchange rates and commodity prices (24.5 percent of the debt is price indexed). For managing the cost and risk dimensions of the debt portfolio, the middle office presents a monthly report of funding alternatives based on DsaR analysis. This report compares the cost of the expected scenario versus the 95 percent risk scenario for each of the different funding alternatives. Denmark uses a cost-at-risk (CaR) model to quantify the interest rate risk by simulation of multiple interest scenarios. In the model, different strategies, such as the issuing strategy, the amount of buybacks, and the duration target, are analyzed.

Scope for active management

93. Among the countries in this survey, only Ireland, New Zealand, Portugal, and Sweden actively manage their debt portfolios to profit from expected movements in interest rates and exchange rates. New Zealand and Sweden limit the positions taken to the foreign currency portfolios, while Ireland and Portugal, being relatively small players in the euro zone, are prepared to trade the euro segment of their debt. The arguments for position taking vary, and it is worth noting that these countries have centralized their debt management activities outside of the central bank. It might be difficult for debt managers located in the central bank to take active positions in the market due to concerns that such actions may be seen to convey signals with respect to other policies that affect financial markets. New Zealand argues that temporary pricing imperfections sometimes occur, making it possible to generate profit from tactical trading. In addition, it believes that tactical trading helps to build understanding for debt managers of how various markets operate under a variety of circumstances, which improves the NZDMO's management of the overall portfolio. For example, it suggested that tactical trading enables it to develop and maintain skills in analysis, decision making under uncertainty, deal negotiations, and deal closure. The immediate benefit is a reduced risk of mistakes when transacting, and the projection of a more professional image to counterparties. However, it is important to make sure that tactical trading activities are properly controlled. At the Outreach conference, it was noted that one country experienced had used swaps to speculate on an expected convergence in European interest rates in the early 1990s. This strategy led to losses when the European Exchange Rate Mechanism broke down in the Autumn of 1992.

94. To mitigate the market risk associated with the tactical trading, New Zealand uses both value-at-risk (VaR) and stop-loss limits, the determination of which are aided by stress tests of the portfolio. The VaR is measured at a 95 percent confidence level relative to notional benchmark portfolios or sub portfolios, which embody the approved strategy. Trading performance is measured on a risk-adjusted basis, using a notional risk capital for market, credit and operational risk utilization. The risk-adjusted performance return is defined as the net value added divided by the notional risk capital.

95. Even if only a few countries are actively taking positions in the market, most of them do try to take advantage of pricing anomalies in the market. The most common approach is to buyback illiquid bond issues, financed through new issues in liquid benchmark securities. Another similar method, noted by Morocco, is to refinance onerous bank loans by exercising prepayment rights in the loan agreements and refinancing the prepayments through new loans with more favorable terms. Other examples include using the swap market to achieve lower borrowing costs. Ireland, for example, obtains cheaper short-term domestic currency funding by issuing commercial paper denominated in U.S. dollars and swapping the proceeds into euro, compared to raising euro-denominated funds.

Contingent liabilities

96. Most of the case studies did not comment on the management of contingent liabilities.¹⁵ Among the countries which did, only Colombia, Morocco, New Zealand, and Sweden seem to have an organizational structure within the debt management unit/Ministry of Finance that facilitates the coordination of the management of explicit financial guarantees with the management of the debt. Such coordination is essential, since government guarantees have been significant contributors to the public debt burden in many developing and transition economies. At the Outreach conference, some countries noted that the level of these guarantees are typically determined elsewhere in the government, and their contingent nature makes them very difficult to quantify. However, others argued that while their valuation is difficult, they should not be ignored. Consequently, they recommended that these guarantees be borne in mind when setting debt strategy, especially when conducting stress tests of prospective strategies.

97. None of the countries surveyed appear to involve debt managers in the management of implicit contingent liabilities. The latter finding is not too surprising, since these claims often arise in response to weaknesses in prudential supervision and regulation—areas that are usually outside the scope of debt management. Nonetheless, these claims can pose major risks for governments, as evidenced by the costs imposed on several countries in Asia and Latin America in the 1990s when governments were forced to recapitalize failed banking systems. Thus, they need to be judged in conjunction with other macroeconomic risk factors. Similarly, national governments in Argentina and Brazil found themselves unexpectedly taking on significant liabilities when they had to assume the liabilities of sub-national governments that had borrowed excessively. In Brazil's case controls have since been placed on sub-national government borrowings, and these governments are repaying the amounts refinanced by the national government. As noted previously, the latter issue has led countries like Brazil and Colombia to set limits on sub-national government borrowing, while others regularly monitor these borrowings and ensure that the sub-national governments in question have independent sources of revenue to service their obligations.

Implementation considerations

98. Most of the countries in the case studies rely on fairly simple models to assess the trade-offs between expected costs and risks in the debt portfolios. Some countries may lack enough data needed to run more complicated models. It is also important to bear in mind that the usefulness of all models depends to a large degree on the quality of the data used as inputs and the assumptions that underpin the model. The latter may behave differently in extreme situations, can change over time,

¹⁵ Further information on the management of contingent liabilities in a sovereign context can be found in The World Bank, 2002, *Government at Risk: Contingent Liabilities and Fiscal Risk*, H.P. Brixi and A. Schick (eds.) (Washington D.C.).

and can be influenced by policy responses. Thus, the parameters and assumptions underpinning these models should be regularly reviewed, and it is important to be aware of the limitations and underlying assumptions of the model. These should be carefully described and understood when results are applied in the decision-making process.

F. Developing and Maintaining an Efficient Market for Government Securities

99. Most of the guidelines in this section focus on the benefits of governments raising funds using market-based mechanisms in a transparent and predictable fashion, and the merits of a broad investor base for their obligations. Others discuss the benefits of governments and central banks working with market participants to promote the development of resilient secondary markets and the need for sound clearing and settlement systems to handle transactions involving government securities. Further information on the steps that countries can take to develop a domestic government debt market can be found in a handbook published by the World Bank and the IMF in 2001.¹⁶

Application

Primary market

100. Most of the countries surveyed use similar techniques for issuing government securities in the domestic market in that all of them except Denmark use pre-announced auctions to issue debt. Most also use multiple-price auction formats for conventional securities and in some cases uniform-price formats to issue inflation-indexed instruments, although the U.S. Treasury now issues all of its securities using uniform price auctions. It shifted away from multiple price auctions after evidence showed that the range of successful bidders tended to be broader in uniform price auctions, and that bidders tend to bid more aggressively due to a reduction in the so-called “winner’s curse,” (the risk that a successful bidder will pay more than the common market value of the security in the post-auction secondary market).

101. The advent of the euro has led to significant changes in the debt management practices of some smaller EMU members. For example, Portugal now uses syndications to launch the first tranche of each new bond, since this tranche corresponds to around 40 percent of the targeted final amount to be issued. It believes that being a small player in the euro government bond market, syndications help it to achieve more control over the issue price and help to foster a broader diversification of the investor base. Auctions are then used for future issues of the same security.

¹⁶ The World Bank and International Monetary Fund, 2001, *Developing Government Bond Markets: A Handbook* (Washington, D.C.).

102. When borrowing in foreign markets, most countries rely on underwriting syndicates to help them price and place securities with foreign investors, since these borrowings are usually not undertaken in sufficient volume or on a regular enough basis to warrant the use of an auction technique. However, some countries like Sweden and the U.K. have found it more cost-effective to separate funding decisions from portfolio decisions by using financial derivatives, and raise foreign currency funds by issuing more domestic currency debt and swapping it into foreign currency obligations—a technique that has the added benefit of helping to maintain large issuance volumes in domestic markets when domestic borrowing requirements are modest. The largest industrial countries—the U.S. and Japan—have a long standing policy of only issuing domestic currency-denominated securities in their domestic markets, and avoid raising funds offshore. Potential EMU members like Poland and Slovenia, and the ERM II participant, Denmark, prefer to issue euro-denominated securities when raising external financing, since these would ultimately become domestic currency instruments if they join EMU.

103. Most countries have taken steps to increase the transparency of the auction process in the domestic market in order to reduce the amount of uncertainty in the primary market and achieve lower borrowing costs. Almost all countries pre-announce their borrowing plans and auction schedules (Table 2) so that prospective investors can adjust their portfolios ahead of time to make room for new issues of government securities, and the rules and regulations governing the auctions and the roles and responsibilities of primary dealers are publicly disclosed so that market participants fully understand the rules of the game. For example, in Brazil and Poland the basic rules for Treasury bills and bond issuance are covered by ordinances issued by the Minister of Finance, and the details of specific issues are described in Letters of Issue published on the Ministry's web site. Dates of auctions are announced at the beginning of each year in Poland and monthly in Brazil, and a calendar is maintained on the Ministry's web site. Two days prior to the tender in Poland, detailed information on the forthcoming auction is made available on the web site and on Reuters.

104. Auction processes are also becoming more efficient as countries automate their auction processes and explore the possibility of using the Internet to issue securities. For example, Ireland and Portugal conduct their auctions using the electronic Bloomberg auction system, which has reduced the lag between the close of bidding to the release of auction results to less than 15 minutes. Among emerging market and developing countries, India and Jamaica have moved to introduce electronic bidding in its debt auctions, and Brazil, besides using electronic bidding in its debt auctions since September 1996, began issuing securities to small investors over the Internet in January 2002.

105. Countries are also taking steps to remove regulations that have created captive investor classes and distorted auction outcomes and only one country reported limits on foreign participation in auctions (Table 2). Such regulations have been a particular problem in many emerging market and developing countries, especially where prudential regulations required some institutions to hold a prescribed portion of their assets in government securities. As a result, Morocco and South Africa, for example, took steps to gradually remove these requirements and broaden the base of investors

that hold government securities. While the removal of these requirements may result in interest rates moving up in the short run to market-clearing levels, the ensuing broadening of the investor base should bring about a deeper and more liquid domestic market for government securities. This should result in debt service cost savings over time as the government is better positioned to implement its preferred debt structure.

106. One issue of debate is over the merits of using primary dealers to support the issuance of securities in the domestic market.¹⁷ According to Table 2, thirteen countries surveyed have introduced primary dealer systems on the grounds that these institutions help to ensure that auctions are well-bid, that there is a regular source of liquidity for the secondary market, and have found that primary dealers can be a useful source of information for debt managers on market developments and debt management policy issues. Moreover, at the Outreach conference, some countries suggested that a primary dealer system offering special privileges can help to encourage market participants to play a role in the development of the market as a whole, especially when the market is at an early stage of development. However, there are several industrial countries—Denmark, Japan, and New Zealand—that have not found it necessary to introduce a primary dealer system. Indeed, at the Outreach conference, one country noted that its borrowing costs declined significantly after it abolished its primary dealer system. Similarly, some developing and emerging market countries have questioned the benefits of introducing primary dealer systems as their markets are too small, and the number of market participants too few, to warrant such a system. Thus, they have been prepared to let the secondary market participants themselves determine which of them can profit from playing the role of market maker in the secondary market. Moreover, some countries that have primary dealer systems, such as the U.S., do not restrict access to the auctions to primary dealers, but also allow other market participants to bid provided they have a payment mechanism in place to facilitate settlement of their auction obligations. Consequently, each country needs to evaluate in their own situation whether the potential benefits of a primary dealer system outweighs the costs. The tradeoff will likely depend on the state of financial market development, and some countries may not need to offer special privileges to encourage market participants to take the lead in developing the market.

107. In order to foster deep and liquid markets for their securities, most governments have taken steps to minimize the fragmentation of their debt stock. Sixteen countries reported that they strive to build a limited number of benchmark securities at key points along the yield curve (Table 2). They generally use a mixture of conventional treasury bills and coupon-bearing bonds that are devoid of

¹⁷ Primary dealers are a group of dealers in government securities designated by the authorities to play a role as specialist intermediaries between the authorities and investors. They are usually granted special bidding privileges in primary auctions of government securities (and in some cases access to central bank credit), in exchange for agreeing to ensure that the auctions are fully subscribed and to perform market-making functions in the secondary market.

embedded option features. These benchmark securities are typically constructed by issuing the same security over the course of several auctions (“reopenings”) and, in some cases, by repurchasing older issues prior to maturity that are no longer actively traded in the market. Extending the yield curve for fixed-rate instruments beyond a limited number of short-term tenors has posed a major challenge for countries that have had a history of weak macroeconomic policy settings. Consequently, Brazil, Colombia, Jamaica, and Mexico, for example, have sought to extend the maturity of their debt by initially offering securities that are indexed to inflation or an exchange rate until such time as they can develop investor interest in longer-term fixed-rate securities.

108. Despite the desire to minimize the fragmentation of the debt stock, some industrial countries plus South Africa have been working hard to develop a market for government securities that are indexed to inflation. In contrast to emerging market and developing countries where such instruments are thought to be a useful device for extending the yield curve, the attraction of these instruments for industrial countries and South Africa is that they have enabled some of them to reduce borrowing costs by avoiding the need to compensate investors for the inflation uncertainty premium that is thought to exist in nominal bond yields. This was especially true when these programs were first launched, since in many cases the spread between nominal and inflation-indexed yields at that time (an indicator of the market’s expectations for future inflation) tended to be above the central bank’s stated inflation objective even though the inflation-indexed securities were less liquid than their nominal counterparts. They also help to reduce the total risk embedded in the debt stock because the debt service costs of inflation-indexed securities are not highly correlated with those for conventional securities.¹⁸ That said, most countries have found it difficult to develop a liquid secondary market for inflation-indexed securities, implying that the yields paid by governments may include a premium to compensate investors for their liquidity.

109. In situations where domestic borrowing requirements are modest or declining over time in response to fiscal surpluses, debt managers in Brazil, Denmark, Ireland, New Zealand, South Africa, Sweden, the U.K., and to a lesser extent the U.S. have repurchased securities that are no longer being actively traded in the market in order to maximize the size of new debt issues, and will often offer to exchange older securities for newly-issued benchmark securities of similar terms-to-maturity. This helps to minimize debt stock fragmentation and concentrate market liquidity in a small

¹⁸ A useful side-benefit of issuing inflation-indexed securities is that central banks in countries that have such securities have found that the spread between yields on nominal and inflation-indexed debt can be a useful indicator of expected inflation for the conduct of monetary policy. However, the reliability of this indicator requires that the market for inflation-indexed securities be sufficiently liquid so that prices are not distorted by technical factors associated with individual transactions, or at least that the distortions be fairly stable over time. Further information on the benefits and design of inflation-indexed securities can be found in: R.T. Price, 1997, *The Rationale and Design of Inflation-Indexed Bonds*, IMF Working Paper WP/97/12.

number of securities, thereby helping to ensure that they can still be actively traded even though the total debt outstanding may be on the decline. The U.K. has also sought to maintain new issuance volumes in the bond market in a period of fiscal surpluses by allowing its holdings of financial assets to rise temporarily when it received an unexpectedly large injection of cash from the sale of mobile phone licenses. In addition, Denmark, Sweden, and the U.K., offer market participants a facility to borrow temporarily or obtain by repo specific securities that are in short supply in the market, albeit at penalty interest rates, in order to ensure that the government securities market is not unduly affected by pricing distortions in the market.

110. The countries surveyed also maintain an active investor relations program, whereby they meet regularly with major market participants to discuss government funding requirements and market developments, and examine ways in which the primary market can be improved. Such a program, with appropriate staff and a public presence, has proven to be very helpful in assisting countries manage their debt in times of stress, and in conveying messages on the government's economic and financial policies to domestic and foreign creditors. For example, South African authorities operate an investor relations program, whereby debt management officials conduct road shows to meet investors, primary dealers, and other financial institutions and explain developments in the South African market and government finances. Similarly, Japan and Denmark's investor relations programs enable debt managers to maintain regular and close contact with the financial community. This is considered to be an important channel in both countries for building investor understanding of the government's financial situation and debt management operations, and the programs are given high priority in these countries' debt management activities. Market participants in both countries are given an opportunity through regular meetings with debt management officials to discuss the management of the government debt, including the potential need for changes to or the introductions of new financial instruments.

111. In the wake of the debt default by Argentina in 2001, one issue that has emerged is whether government debt instruments should also have renegotiation or collective action clauses covering the coupon and repayment terms, such as majority voting rules, attached to them. Indeed, as indicated in its September 28, 2002 Communique, the IMFC encouraged the official community, the private sector, and sovereign debt issuers to continue work on developing collective action clauses, and to promote their use in international sovereign bond issues. According to the data presented in Table 2, six countries (Brazil, Denmark, Slovenia, Sweden, Poland, and the U.K.) have introduced them for some securities issued in international markets, while none have attached them to their domestic debt. The ability of a country to attach collective action clauses to its international debt issues depends on the practice and laws in the market where the security is issued. For example, Slovenia and Sweden have attached these clauses to debt issued in the eurobond market, which is governed by English law. On the other hand, these clauses are not attached to securities issued in some other markets, such as Germany and the State of New York.

Secondary market

112. Debt managers in many countries actively work with market participants and other stakeholders to improve the functioning of the secondary market for government securities. For example, authorities in Italy, Poland, Portugal, Sweden, and the U.K. have introduced primary dealer systems, and have worked closely with market participants to promote electronic trading of government securities. In addition, debt managers in India and Italy have worked with other interested parties to alleviate distortions caused by the tax treatment of returns on government securities. And those in Japan, New Zealand, South Africa, and the U.K. have worked with market participants to develop ancillary markets, such as futures, repo, and strips markets that help to deepen the government securities market.

113. Given the importance of sound clearing and settlement systems to the functioning of the government securities market, it is not surprising to find that many debt managers have been working with the relevant stakeholders to improve the systems in their countries. For example, in Brazil, Japan and Poland, debt managers helped champion the introduction of real-time gross settlement for government securities transactions. In India, the central bank helped establish a central counterparty for the settlement of outright and repo transactions in government securities, which is expected to lead to significant growth in trading activity in these markets. The Jamaican authorities are working with market participants to dematerialize government securities within the central depository in order to increase the efficiency of secondary market trading.

Implementation considerations

114. Although the preceding discussion suggests that there are a number of steps that governments can take to develop the primary and secondary markets for their securities, the sequencing of reforms and speed of deregulation will depend on country-specific circumstances. Nonetheless, the experience of developing these markets in many countries demonstrates the importance of having a sound macroeconomic and fiscal policy framework in place so that investors are willing to hold government securities without fear that their investment returns will be unexpectedly eroded by inflation or debt sustainability concerns.

115. Countries seeking to develop their domestic markets should also take heed that attempts to develop a market for government securities across the yield curve may entail some short-term costs for governments as debt managers strive to develop an investor base for their securities. For example, the yield curve could be very steep due to weak macroeconomic conditions, and in some situations the effect on debt sustainability of incurring extra debt service costs could be very severe or investors may simply be unwilling to purchase this debt. Thus, debt managers need to decide on a case-by-case basis whether the benefits outweigh the costs. In addition, in order to ensure a well-functioning market, debt should be issued in a predictable fashion using standardized instruments and practices so that the issuer's behavior does not disrupt market activity and investors can become accustomed to the instruments that are traded. Of course, situations may arise where it is costly for the government to honor a commitment or where it might be tempting to seek out short-term cost savings by manipulating the outcome of an auction. However, a demonstrated

commitment to the development of the market should, over time, contribute to increased market liquidity and lower borrowing costs.