INTERNATIONAL MONETARY FUND
AND
THE WORLD BANK

Review of Low-Income Country Debt Sustainability Framework and Implications of the MDRI

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Boxes

ABBREVIATIONS AND ACRONYMS

AfDF	African Development Fund
AfDF-10	Tenth Replenishment of African Development Fund
AsDB	Asian Development Bank
CAFOD	Catholic Agency for Overseas Development
CIS	Commonwealth of Independent States
CPIA	Country Policy and Institutional Assessment
DSA	Debt Sustainability Analysis
DSF	Debt Sustainability Framework
EFF	Extended Fund Facility
GDP	Gross Domestic Product
HIPC	Heavily Indebted Poor Countries
IDA	International Development Association (World Bank)
IDA-14	Fourteenth Replenishment of IDA
LIC	Low-Income Countries
MDB	Multilateral Development Banks
MDG	Millenium Development Goals
MDRI	Multilateral Debt Relief Initiative
NPV	Net Present Value
PRGF	Poverty Reduction and Growth Facility
PSI	Policy Support Instrument
SMP	Staff-Monitored Program
TFP	Total Factor Productivity

EXECUTIVE SUMMARY

Purpose: This paper reviews the experience with the joint IMF-World Bank Debt Sustainability Framework (DSF) for low-income countries, including cooperation between the staffs, and highlights the implications of the Multilateral Debt Relief Initiative (MDRI).

Review of experience: Experience with the DSF has so far been encouraging. The depth and quality of debt sustainability analyses have varied, but there have been improvements over time. The DSF has strengthened Fund surveillance and is beginning to help with program design. On the Bank side, the DSF has fundamentally changed the IDA grant allocation criteria, which now focus exclusively on risk of debt distress. Bank and Fund staffs have generally cooperated well, and, while the resource costs for the preparation of the DSAs have generally been substantial, the additional resource implications of the enhanced collaboration have been small in most cases. One important challenge is to take domestic debt more systematically into account in the framework; despite data difficulties, the paper recommends that future work on the framework focus on the development of a more integrated approach.

Implications of MDRI: The MDRI provides post-HIPCs considerable new breathing space to strengthen their financial position and support their efforts to reach the Millennium Development Goals (MDGs). It is important, however, to avoid a new round of over-indebtedness. Toward this end, we discuss three questions:

- *Should the DSF debt thresholds be lowered?* One option is to lower the indicative thresholds that guide the level of new borrowing a country can undertake. The paper finds that, on balance, it may be better to maintain the current debt thresholds embodied in the DSF. These thresholds reflect a balance between risk of debt distress, opportunities for productive investment, and a realistic assessment of grant resources. Lowering them would reopen questions related to HIPC eligibility and, if applied selectively, would raise issues related to uniformity of treatment.

- *How should debt accumulation be managed in countries that are well below the DSF thresholds?* The paper considers the merits of two polar frameworks: simple across-the-board rules for new borrowing (such as a restriction on changes in the NPV of debt), and a case-by-case examination of the unique situation and needs of each country. On balance, a case-by-case approach appears preferable.

- *What is the role of nonconcessional debt, and how can the "free-rider" problem be dealt with in the DSF?* No fully effective solution to these difficult questions emerges. A common, coordinated approach towards concessionality by all creditors would be ideal. The paper suggests that countries that continue to face debt distress should avoid nonconcessional borrowing completely, while for others, high return projects that can significantly improve creditworthiness could be financed on nonconcessional terms.

Issues for discussion: We seek the Boards' guidance on: (i) refinements to the DSF; (ii) implications of MDRI, especially their views on rules-based or case-by-case approaches to debt reaccumulation; and (iii) ways to deal with the "free-rider" problem.

I. INTRODUCTION[1]

1. **In April 2005, the Executive Boards of the Fund and the Bank endorsed a joint framework for debt sustainability assessments (DSAs) in low-income countries.**[2] When adopting the framework, the Boards asked the staffs to report to them after a six- to twelve-month period. This paper responds to Directors' request.[3]

2. **Since then, IDA, IMF, and the African Development Fund (AfDF) have decided to provide debt relief under the Multilateral Debt Relief Initiative (MDRI).** Debt relief under MDRI will significantly reduce debt ratios in qualifying HIPCs. This paper examines issues posed for the DSF by the substantial space to borrow that the MDRI will provide many countries.[4]

3. **The paper is organized as follows.** Section II reviews the experience with implementing the DSF, including Bank-Fund collaboration, difficulties in its application, and its usefulness to the authorities and donors. Section III reviews the implications of the MDRI for the DSF. Section IV summarizes and concludes with issues for discussion. The paper does not revisit issues raised and decided in previous papers on the DSF, except as suggested by the MDRI or implementation experience to date.

II. REVIEW OF LOW-INCOME COUNTRY DEBT SUSTAINABILITY FRAMEWORK

4. **The DSF seeks to ensure that external financing in support of low-income countries' efforts to achieve the MDGs does not lead to unsustainable debt burdens.**

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[1] This paper was prepared by Sona Varma, Aart Kraay, Dorte Domeland-Narvaez, and Luca Bandiera (World Bank) and Andrew Berg, Patricia Alonso-Gamo, Martine Guerguil, Zuzana Brixiova, Jan Kees Martjin, Laure Redifer, Jan Gottschalk, Carlo Sdralevich, Christian Beddies, Gabriel Di Bella, Bergljot Barkbu, and Tokhir Mirzoev (International Monetary Fund).

[2] See *Public Information Notice: Fund Executive Board Discusses Operational Framework for Debt Sustainability Assessments in Low-Income Countries—Further Considerations*, May 4, 2005. The Bank's Executive Board endorsed the framework on April 12, 2005. For additional information on the LIC DSA framework, see the following joint Fund-World Bank staff papers: *Debt Sustainability in Low-Income Countries—Proposal for an Operational Framework and Policy Implications*, February 3, 2004 , *Debt Sustainability in Low-Income Countries—Further Considerations on an Operational Framework and Policy Implications*, September 10, 2004, and *Operational Framework for Debt Sustainability Assessments in Low-Income Countries—Further Considerations*, March 28, 2005.

[3] In this paper, "DSA" refers to an analysis of debt sustainability in a particular country and "DSF" refers to the new framework for joint DSAs in low-income countries. At times, the DSAs performed under the DSF are referred to as "low-income-country DSAs" or "joint DSAs," in order to differentiate them from the debt sustainability analyses conducted prior to the introduction of the framework.

[4] The Board papers on implementation of the MDRI committed that the DSF review would explore the need to modify the framework in response to debt relief under the MDRI. See *The G-8 Debt Relief Proposal: Assessments of Costs, Implementation Issues, and Financing Options* , September 1, 2005.

Annual joint Bank-Fund DSAs are required for all IDA-only, PRGF-eligible countries.[5] The DSAs are based on a standardized analysis and classification of a country's debt burden (see Box 1). The framework provides a basis for the formulation of a prudent borrowing strategy that limits the risks of debt distress and is consistent with the terms and the amount of financing a country can obtain. The framework was adopted by IDA and the AfDF to determine the allocation of grants under the IDA-14 and AfDF-10 replenishments, respectively. In the IDA-14 framework, IDA-only countries classified at high risk of debt distress receive 100 percent grant financing from IDA, while countries with a moderate risk of debt distress receive 50 percent grant financing.[6] Countries at low risk of debt distress receive 100 percent loan financing on IDA's highly concessional terms.

5. **The DSF also lays out modalities of collaboration between Fund and Bank staffs.** The modalities pertain to the frequency and timing of DSAs, the division of responsibilities between the staffs of the two institutions, procedures for preparing the DSAs, documentation, review, clearance, classification of the risk of debt distress, and resolution of potential differences between the staffs.

A. Experience with the New Joint DSA Framework

6. **Since the endorsement of the DSF in April 2005, the staffs of the Bank and the Fund have produced 23 joint low-income-country DSAs.**[7] Most were conducted in the context of a Fund arrangement (16 out of 23), while two (Djibouti and Guinea) were conducted in the context of staff monitored programs (SMPs). All 23 have been presented to the Fund Board, while five have so far been presented to the Bank Board, and another five are expected to follow by end-June 2006. As had been standard practice, Bank and Fund staff also collaborated, on an informal basis, on most of the Fund-only DSAs presented to the Boards in 2005 and early 2006.[8]

[5] For IDA-blend, PRGF-eligible countries, DSAs need not be prepared jointly.

[6] Grants are provided with a 20 percent volume discount (i.e., US$100 in concessional loans translates into US$80 in grants). The discount on grants is subdivided into an incentives-related portion (11 percent) and a charges-related portion (9 percent). The incentives-related portion is reallocated to IDA-only countries through the use of a performance-based allocation rule, and the same loan grant mix will be applied to the reallocated resources. However, no further volume discount is applied for grant allocation.

[7] The sample is limited to DSAs issued by mid-February 2006. Findings are based on these DSAs and on the interviews of Bank and Fund staff teams using a standardized questionnaire. For the joint DSAs, 25 interviews were conducted on the side of the Fund and 18 on the side of the Bank. A few interviews at the Fund related to joint DSAs that had not yet been issued.

[8] Of the 45 Fund-only DSAs prepared during this period, 24 were presented prior to the introduction of the new DSF, 19 were grandfathered as preparations were already underway, and two related to IDA-blend countries. Twenty eight of these DSAs applied the standard LIC DSA template. A review of these nonjoint DSAs, which are now carried out along the same lines as the joint DSF, yields similar conclusions as for the joint DSAs.

Box 1. The Characteristics of a DSA

1. The objective of a joint Bank-Fund low-income country DSA is to monitor the evolution of a country's debt burden indicators and to guide financing strategies. The DSA consists of:

    - standardized, forward-looking analyses of external and public debt and debt-service indicators under a baseline scenario based on realistic assumptions and standardized shocks;
    - an assessment of external debt sustainability in relation to indicative country-specific debt burden thresholds that depend on the quality of policies and institutions;
    - a risk of debt distress classification that takes into consideration this threshold assessment, as well as other country-specific factors.

2. The low-income country framework uses two separate templates for external debt and for public sector debt. Both templates generate output tables that display debt and debt-service dynamics under the baseline scenario and summarize the results of standardized alternative scenarios and stress tests. Templates are, however, flexible enough to be adapted to country-specific circumstances.

3. The assessment of external debt-burden indicators in relation to policy-dependent thresholds reflects the key empirical finding that a low-income country with better policies and institution can sustain a higher level of external debt. The LIC DSA framework, therefore, classifies countries into one of three policy performance categories (strong, medium, and poor) using the World Bank's Country Policy and Institutional Assessment (CPIA) index. Corresponding to these categories, the framework establishes three indicative thresholds for each debt burden indicator. Thresholds corresponding to strong policy performers are highest.

4. To facilitate consistency in the treatment of low-income countries and cross-country comparability of debt sustainability assessments, and to meet IDA needs in determining a country's eligibility for grants, a joint Fund-Bank DSA includes an assessment of the risk of external debt distress based on the following classification:

    - *Low risk*. All debt indicators are well below relevant country-specific debt-burden thresholds. Stress testing does not result in indicators significantly breaching thresholds.
    - *Moderate risk*. While the baseline scenario does not indicate a breach of thresholds, stress testing shows a significant rise in debt-service ratios over the projection period and/or a breach of debt thresholds.
    - *High risk*. The baseline scenario indicates a breach of debt and/or debt-service thresholds over the projection period. This is exacerbated by stress testing.
    - *In debt distress*. Current debt and debt-service ratios are in significant and/or sustained breach of thresholds.

The descriptions of the risk classes do not fully capture the complexity of the assessment. For example, in cases where the various indicators give different signals, there is still need for careful interpretation and judgment. Furthermore, vulnerabilities related to domestic public debt should also be taken into account. The past record in meeting debt-service obligations may also be a factor in determining the classification, especially for countries at high or moderate risk of debt distress.

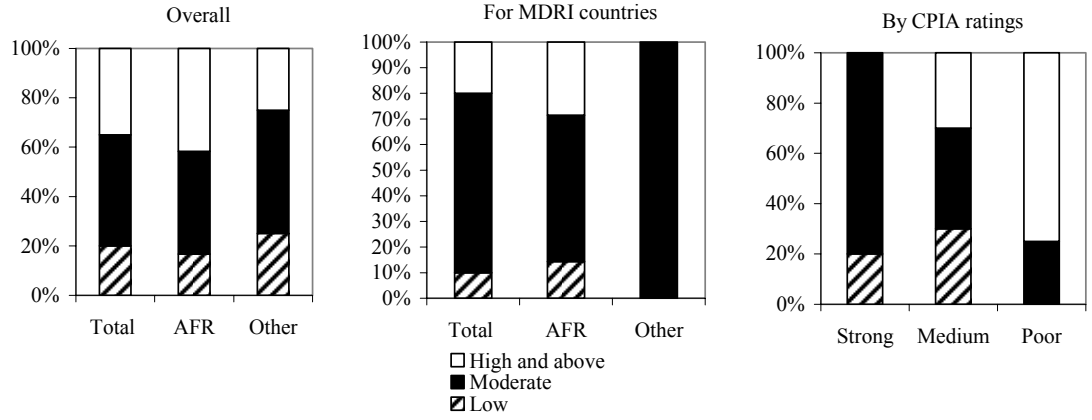
7. **The joint DSAs show relatively high risks of debt distress for countries with a low Country Policy and Institutional Assessment (CPIA) rating or for those that have not reached the HIPC completion point and are thus not yet eligible for MDRI relief (Table 1 and Figure 1).**[9] Of the 23 joint DSAs, 21 presented an explicit debt distress rating—with four low, nine medium, and seven high risk cases, while one country was deemed "in debt distress." Among 10 countries that have reached the HIPC completion point and 11 countries that have benefited from MDRI relief from the Fund, only two exhibited a high level of debt distress (before MDRI relief).[10]

Table 1. Risk Ratings in Joint DSAs—Before MDRI Debt Relief

		HIPC status			MDRI status		CPIA rating 2/		
			of which:						
Risk rating	Total	All HIPCs	Past CP	Non-HIPCs	Eligible 1/	Not eligible	Strong	Medium	Poor
Low	4	2	1	2	1	3	1	3	0
Moderate	9	6	6	3	7	2	4	4	1
High	7	4	2	3	2	5	0	3	4
In distress	1	1	0	0	0	1	0	0	1
Not specified	2	1	1	1	1	1	0	0	0
Total	23	14	10	9	11	12	5	10	6

1/ Including Tajikistan, which is eligible for MDRI relief by the Fund only.
2/ For two countries, CPIA ratings were not reported. Thresholds for levels of debt distress depend on these ratings.
Source: Joint Bank-Fund DSAs.

Figure 1. Risk Ratings in Joint DSAs—Before MDRI Debt Relief



Source: Joint Bank-Fund DSAs.

[9] These results should be interpreted with caution given the small sample size. However, the results of the Fund-only 2005 DSAs broadly confirm this pattern.

[10] In the 10 post-completion point HIPCs, MDRI relief from IDA and AfDF was also simulated.

8. **The gradual introduction of structured DSAs has strengthened Fund surveillance and program design; however, the immediate impact of the current DSF on program design has so far been limited.**

- The DSF has further integrated debt issues into Fund analysis and policy advice, through its annual frequency, the improved quality of the assessments, and comparability across countries. The key findings of the DSAs have been summarized in various staff reports—good examples are Burkina Faso and Uganda (the latter addressing, in particular, the impact of MDRI relief).[11] In most cases with a moderate or higher risk of debt distress, the policy implications are incorporated explicitly in the analysis and recommendations.

- In September 2004, the Fund Board called for efforts to strengthen control over excessive borrowing in the context of Fund programs, through the use of conditionality related to the NPV of external debt and more systematic use of limits on the overall fiscal deficit (including grants) for countries where debt sustainability is a concern.[12] Until the introduction of the DSF, Fund program design for low-income countries had focused on fostering growth and macroeconomic stability, and on overcoming short-term financing constraints, while relying in many cases on expected future debt relief and more highly concessional financing to help ensure long-term sustainability. So far, however, NPV-based conditionality, which, theoretically would be the more attractive measure, has remained scarce—due in part to difficulties in tracking the NPV of debt. Only the PRGF arrangement for Guyana has included an indicative ceiling on the NPV of external public and publicly guaranteed debt, introduced in July 2004. The 2005 arrangement for the Kyrgyz Republic has a separate ceiling on the contracting or guaranteeing of concessional external debt in addition to a zero ceiling on nonconcessional borrowing.[13]

9. **For the Bank, the adoption of the DSF has resulted in a fundamental change in IDA's grant allocation criteria, which now focus exclusively on risks of debt distress.**

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[11] *Burkina Faso—Staff Report for the 2005 Article IV Consultation, Fourth Review Under the Poverty Reduction and Growth Facility, and Request for Waiver of Performance Criterion* , October 30, 2005, and *Uganda—Sixth Review Under the Three-Year Arrangement Under the Poverty Reduction and Growth Facility, Request for Waiver of Performance Criteria, and Request for a Policy Support Instrument* ,February 6, 2006, respectively.

[12] IMF and IDA (2004), *Fund-Supported Programs—Objectives and Outcomes* , November 24, 2004, and *Monetary and Fiscal Policy Design in Low-Income Countries*, September 8, 2005.

[13] Guyana's debt indicators were projected to breach the HIPC thresholds after the country had already benefited from HIPC relief. For the Kyrgyz Republic, irrespective of the terms of prospective debt relief from Paris Club creditors, limits on concessional borrowing were deemed essential to ensure that debt ratios continued to decline: *Kyrgyz Republic—Sixth Review Under the Three-Year Arrangement Under the Poverty Reduction and Growth Facility and Request for New Three-Year PRGF Arrangement* , March 29, 2005.

- Under IDA's fourteenth replenishment, which runs from mid-2005 to mid-2008, IDA Deputies agreed to use debt distress risk as the sole criterion for allocating IDA grants. The development of the DSF played a significant role in facilitating this decision, as it gave Deputies the comfort that they could rely on objective, comparable debt sustainability analyses based on an empirical framework.

- In FY06, a "traffic light" mechanism, resting on policy-dependent indicative debt thresholds of the DSF, determined the risk of debt distress on the basis of the latest available debt-burden indicators. This was necessitated by the fact that DSAs were not available for all low-income countries. However, DSAs where the main determinant of the traffic light for four countries. Thirty-four countries were classified as "red light" (or high risk of debt distress) in FY06, while nine were classified as "yellow light" (or moderate risk of debt distress). Thirty percent of the FY06 total allocation was provided in the form of grants. Proposed revisions to the traffic light mechanism will be discussed by IDA Deputies at the IDA-14 mid-term review at end-2006; it is expected that the revisions will integrate the forward-looking aspects of DSAs more closely with the grant allocation mechanism.

10. **A more finely calibrated set of ratings would enable IDA and others to better tailor their response in terms of grant eligibility, in particular for borderline cases.** The current standardized ranking into four categories (low, moderate, high, and "in distress") may not allow for sufficiently calibrated risk assessments. For example, further refinement of the debt distress classification within the "moderate" risk category could be made, depending on how many of the debt stock indicators breach the indicative thresholds under stress tests and by what margin.

B. Application of the DSF

11. **Bank and Fund staff teams conducting DSAs were interviewed to obtain feedback on the usefulness of the DSF and the modalities for its implementation.** Country teams reported that templates and guidelines are relatively easy to use. Nonetheless, the preparation of DSAs entailed substantial resources; Bank and Fund teams needed on average about three staff weeks to complete a DSA. Resource requirements varied substantially across teams (from half a week to five weeks), depending in particular on whether a DSA had been carried out the previous year. Country teams did not encounter significant technical problems with the templates, but they did suggest areas for improvement and further guidance, in particular on customization to country circumstances.

12. **The depth of analysis varied widely, with gradual improvement over time.** Almost all DSAs contained at least a short description of the underlying macroeconomic assumptions, a discussion of the baseline and stress test scenarios, and an assessment of the risk of debt distress. Many DSAs provided additional background on debt developments, greater transparency of underlying assumptions, and a nuanced debt sustainability assessment. An overview of emerging good practices is presented in Box 2.

Box 2: Good Practices for DSA Design and Presentation

A review of the DSAs that used the low-income country framework suggests several good practices. The relevance of these considerations will vary across countries and should be balanced against the need for conciseness.

Process

- Plan the timing and modalities of Bank-Fund collaboration well in advance.
- Discuss assumptions, findings, and policy implications of DSAs with the authorities (Armenia, Mongolia).
- Incorporate DSAs findings into policy recommendations and/or program design (Guyana, Kyrgyz Republic), especially in countries with moderate or high risk of debt distress.

Analysis

- Integrate the external and fiscal aspects of the DSA (Mongolia), especially in cases where high export-to-GDP ratios are not reflected in high revenue-to-GDP ratios (Mauritania). In countries with weak tax administration, a scenario depicting lower revenue collection is usually warranted (Burkina Faso), while in some countries the impact of a slower reduction in the wage bill was illustrated (Djibouti).
- Incorporate country-specific features through alternative scenarios and stress tests. Where contingent liabilities are significant, include an additional scenario (Dominica, Solomon Islands, Vietnam).
- Rely on judgment rather than mechanical use of the templates. Assess the relative importance of alternative debt indicators (Guyana).

Presentation

- Present DSAs as self-contained documents, with minimal reference to relevant information included elsewhere (examples include Burkina Faso, Cameroon, Cape Verde, Guinea, Mongolia, Lesotho, Guinea, Rwanda, Tajikistan, Uganda).
- Present assumptions and conclusions in a clear and concise manner (Burkina Faso, Burundi, Cameroon, Cape Verde, Guinea, Mongolia, Uganda).
- Explain country-specific circumstances, including a deeper analysis of the evolution and composition of the existing debt stock (Burkina Faso, Cambodia, Malawi, Rwanda, Uganda). For HIPCs, these should include specific references to the evolution of debt ratios since decision/completion points (Guinea, Nicaragua, Uganda). In complex cases, examine debt structure and data availability explicitly (Cameroon).
- State the medium and long term macroeconomic assumptions, as well as the underlying economic factors behind benchmark scenarios (Burkina Faso, Lesotho, Mali, Tajikistan). Explain how specific alternative scenarios and stress tests strengthened the DSA (Dominica, Mongolia, Vietnam).
- Explain risk assessments where the risk of debt distress falls into a gray area (Mongolia, Nicaragua).
- State performance categories based on CPIA ratings and related policy-relevant thresholds explicitly; include the latter in charts (Guinea, Tajikistan among others).

13. **Macroeconomic projections were generally linked to past economic performance.** GDP growth projections commonly relied on trend analyses—which helps ensure consistency with past experience—and a sectoral decomposition to incorporate sector-

specific knowledge. A similar approach was used for other key macroeconomic variables. In addition, teams used macroeconomic accounting and programming frameworks to maintain overall consistency. However, behavioral relationships within the macroeconomic framework—for example, the effect of structural reforms on growth—were often loosely specified. This reflects still limited knowledge on economic linkages, as well as a lack of data to quantify such relationships.[14]

14. **Baseline projections tended to be more favorable than historical averages—reflected in consistently lower debt-burden indicators—and it remains important to guard against excessive optimism.**[15] Improvements in the growth and balance-of-payment outlook reflected mostly the expected impact of structural reforms or emergence from conflict (Solomon Islands, Burundi, and the Central African Republic). For the joint DSAs, the median for projected real GDP growth in 2005-25 was about 5 percent, about 1 percentage point higher than the historical average growth rate over the past ten years. The median for the projected non-interest current account deficit, adjusted for net FDI inflows, was about 1 percent of GDP lower than the historical average, yielding lower financing needs under the baseline. These more favorable projections generally did not make a substantial difference to the debt distress rating. Only in three cases (Burkina Faso, Mali, and Uganda) would substituting the historical scenario for the baseline lead to an adverse change in this rating, because of the effects on the historical scenario of past sharp, but temporary, declines of commodity export volumes and prices.

15. **Most joint DSAs included customized scenarios or stress tests to capture sensitivities to various risks (Table 2).** For example, recent DSAs for MDRI-eligible countries explored the impact of MDRI relief explicitly in an alternative scenario. Staff teams pointed out that in about half of the DSAs the additional scenarios and stress tests were useful or crucial in qualifying the conclusions of the baseline.

16. **There is scope for some technical improvements to the template with respect to stress tests.** Several teams suggested that the standard stress tests could be enhanced by allowing for general equilibrium effects or permanent rather than short-lived shocks. Given the partial nature of the stress tests, teams have instead used alternative scenarios to capture the impact of possible simultaneous shocks of a range of variables that affect debt indicators.

[14] Some teams derived behavioral relationships from a growth-accounting framework that links growth to factor accumulation and changes in total factor productivity (TFP)—although the lack of understanding of the sources of TFP growth imply considerable scope for judgment in quantifying the latter.

[15] Projected debt dynamics were consistently more optimistic than the historical scenario for 11 of the 21 joint DSAs for which the latter scenario was available. Under the historical scenario—a standard element of the DSA—debt dynamics are simulated with key macroeconomic variables, in particular growth and balance-of-payments variables, at their historical average throughout the projection period.

Table 2: Alternative Joint DSA Scenarios and Stress Tests in 2005 and Early 2006

Country	Alternative Scenario or Stress Test (latter only if indicated)
Burkina Faso	Lower projected revenues
Central African Republic	Full traditional debt relief
Djibouti	Reduction in flows of income from foreign military bases (stress test)
Dominica	(i) Financing projected debt of social security by direct transfers from central government; (ii) Adverse changes in interest rates on public debt; (iii) Natural disaster (stress test)
Guinea	(i) MDRI; (ii) No reform scenario
Guyana	(i) MDRI; (ii) Lower revenue-to-GDP ratio
Lesotho	Loss of trade preferences (lower export ratio)
Mali	MDRI
Mauritania	Permanent decline in oil prices
Mongolia	Terms of trade shocks on copper and gold exports in 2008 and lower export growth thereafter
Nicaragua	MDRI
Niger	(i) MDRI, (ii) Grant element of 50 percent
Rwanda	Reduction of the grant component in gross central government financing from 83 to 55 percent
Solomon Islands	Realization of half of contingent liabilities as external debt
Tajikistan	(i) MDRI; (ii) Historical scenario is modified to exclude civil war
Uganda	(i) MDRI; (ii) Financing Bujagali hydropower plant on commercial terms
Vietnam	Two banking sector reforms scenarios
Zambia	(i) MDRI; (ii) Additional borrowing for public sector investment

Source: Bank and Fund staffs.

17. **In determining the risk of debt distress, teams struck a balance between a mechanistic and a judgmental approach.** Under a mechanistic approach, the risk of debt distress rating would be based solely on whether debt-burden indicators in the baseline or stress test scenarios breach the thresholds. In six of the joint DSAs, the debt ratios were either so high or so low that the debt distress rating was obvious. In the remaining cases, staff's conclusions coincided in eight cases with those suggested by the mechanistic approach, compared with six cases where staff came to a more favorable assessment. In the latter cases, staff judged that a mechanistic approach would have implied an unreasonably negative rating, taking into account, in particular, that breaches of thresholds were marginal or that debt ratios improved over the long term or would do so after further debt relief, or that the strong payment record of the authorities made a default unlikely. Nevertheless, in many cases, staff also noted downside risks, including vulnerabilities resulting from a narrow export base, risks to the macroeconomic outlook, the size of domestic debt, and contingent liabilities. In no case did staff judgments produce a less favorable rating.

18. **In several countries, domestic debt issues were essential for a full assessment.**[16] In the sample of 23 joint DSAs, 14 contained a public debt DSA. In seven of the nine remaining cases, domestic debt was negligible; in two, lack of data prevented analysis. Issues related to poor data quality and non-comparability of data across countries continued to plague the analyses. High domestic debt was a factor in the overall risk of debt distress in seven countries (Box 3 provides an example). However, as public debt indicators generally confirmed the assessment based on the external debt burden, this did not actually change the risk rating. In the absence of pre-defined thresholds, public debt DSAs typically focused on trends in public debt ratios, vulnerability to shocks, level of debt service payments, and gross financing requirements.

19. **A further issue has been that domestic obligations are difficult to integrate into a threshold approach that aims to provide signals to donors (including IDA) on the appropriate level of concessionality**. Raising concessionality even partially on the basis of domestic borrowing, which is largely under domestic control, would entail moral hazard problems by creating incentives to overborrow. The resulting tension was most apparent in the assessment of Vietnam (see Box 3). In order to ensure that the distress rating reflects an assessment of all relevant debt, DSAs should specifically flag cases in which the rating would be different on the basis of external debt only. In addition, future work could usefully focus on the development of a more integrated approach toward analyzing domestic and external debt in the sustainability framework.[17]

20. **The survey of country teams suggests that DSAs were useful to the authorities in a number of cases as they raised awareness about debt issues.** [18] The results were usually discussed with the authorities, in particular in countries with a high risk of debt distress or ahead of a debt rescheduling. Some teams shared the templates with government officials; the authorities were involved in the preparation of the DSAs only in a few cases. In 2005, the Bank organized workshops in Africa to train government officials on the framework; further workshops are planned in Latin America and South Asia in 2006. Capacity building efforts continue so that authorities will be in a position to carry out their own DSAs.

[16] The distinction between domestic and foreign debt can of course be blurred. For example, nonresidents can purchase treasury bills issued on the domestic market, and residents can purchase foreign currency-denominated debt. In fact, there is an increasing interest of international investors in domestic debt instruments of low-income countries such as Zambia where creditworthiness has improved, partly as a result of debt relief.

[17] For a further discussion see IMF and IDA (2004), Appendix I.

[18] Because of time constraints, staff did not survey directly the authorities' views on the usefulness of DSAs. This issue will be addressed in future reports, including in the context of Fund Article IV consultations.

Box 3: The 2005 Vietnam DSA

The September 2005 DSA for Vietnam was dominated by uncertainties regarding the balance sheets of the large state-owned commercial banks, as the cost of recapitalizing and reforming these banks would eventually be borne by the government. The public sector DSA was conducted in two stages to incorporate the resulting contingent liability. In the baseline scenario—which abstracted from these liabilities—risks for debt distress seemed low, matching a similar outcome of the external DSA, as external debt burden indicators were well below their indicative thresholds under baseline and stress tests. However, indicative scenarios with alternative assumptions on the level and evolution of the contingent liabilities suggested that there was a small but non-negligible probability that public debt could jump from 40 percent of GDP to 63 percent, above the government's notional ceiling of 50 percent. The external DSA indicated that external debt levels remained well below thresholds, both in the baseline scenario and under stress tests.

As a consequence, it was difficult to establish properly a risk classification that could determine IDA grant allocation, given the importance of differentiating between the level of risk resulting from new external borrowing versus that emanating from the realization of contingent liabilities in the domestic banking system. The DSA classified Vietnam as having a low risk of **external** debt distress. At the same time it highlighted the fact that public debt dynamics could deteriorate over the long terms and recommended a close monitoring of the domestic debt dynamics in future assessments.

C. Usefulness to Other Donors and Creditors

21. **Multilateral Development Banks (MDBs) have found DSAs to be useful for informing their judgments about debt risk in client countries**. Like IDA, the AfDB uses debt sustainability as the sole basis for grant allocation. The two institutions work closely to align their debt distress risk classifications for their 40 common client countries. The Asian Development Bank (AsDB) has indicated that it could adopt the assessments as the basis for future grant allocations. The Inter-American Development Bank uses the framework as an analytical tool to supplement its own assessment of debt/fiscal sustainability. While these MDBs appear to be comfortable with the Bank and Fund preparing the DSAs, they are also keen to be more closely involved in their preparation, particularly for countries where they have large exposures. Other MDBs appear to value clear guidance from the DSAs about the level of concessionality appropriate in particular countries. All MDBs would appreciate prompt publication of DSAs and sharing of templates and other underlying information.

22. **Most bilateral creditors make limited use of DSAs but wanted more information.**[19] Creditors asked for the provision of more information on the framework as well as on the projections (in particular on new borrowing)—which would allow the DSAs to play a more central role in guiding lending decisions. Creditors would also welcome easier access to the DSAs (e.g., as stand-alone documents readily located on the Fund and Bank websites).

[19] Staff surveyed ten selected official and private bilateral creditors in the context of this review. Given time and resource constraints, this survey did not aim at being comprehensive. The creditors were selected based on their involvement in low-income countries and the likelihood that they would use DSAs.

23. **A number of NGOs have taken a critical view of the DSF.**[20] While acknowledging that some features in this framework are improvements relative to DSAs conducted under the HIPC Initiative, they consider that the framework should have been geared to informing debt-relief decisions with the objective of supporting attainment of the MDGs. Some NGOs have also argued that such analyses should be done by an independent body rather than by the Bank and Fund—both large lenders to low-income countries.

D. Bank-Fund Collaboration

24. **According to most Fund and Bank staff, Bank-Fund collaboration has led to some improvement in the quality of DSAs, without large resource implications in most cases.** On average, Fund staff indicated that collaboration required 16 additional staff hours (with additional discussions more than offsetting the time saved on data collection). The division of labor was broadly in line with the established guidelines, with Fund staff taking the lead in developing the macroeconomic projections and Bank staff providing input on long-term growth projections. Bank staff also provided reconciled multilateral debt data, debt-relief simulations and, in many cases, input on financing assumptions.

25. **Interviews with Bank and Fund staff confirmed that the preparation of joint DSAs by Bank and Fund staff has generally been smooth.** Disagreements on assumptions and risk assessments were often minor and, in almost all cases, could be resolved within the teams. However, for a few DSAs a compromise could be reached only after extensive deliberations, although the disputes never had to be elevated to management level. In only one case, the Fund team considered that the compromise led to a change from their initial assessment. With few exceptions, Fund staff considered that collaboration did not result in a significant change in the short-run macroeconomic projections; Bank staff considered that there was effective collaboration among the teams in developing a common baseline scenario. In a few cases, the appropriate scope of the DSA write-up was a source of disagreement, with Fund staff preferring brevity and avoidance of overlap with the accompanying staff report, whereas at the Bank the DSA was to be circulated as a self-standing document in line with the DSF's implementation modalities approved by the two Boards.[21]

26. **The timing of the joint DSAs was often determined by the Fund's needs which in several cases proved problematic for Bank staff.** DSAs are required by the Fund in the context of the Article IV consultations or the request for a new arrangement; by the Bank for a new Country Assistance Strategy or major lending operations. Problems arose with respect to reconciling diverging DSA timing requirements and matching the Bank staffs' work schedules to pressing Fund deadlines. To some degree, such problems should be alleviated in the future as both country teams are expected to agree on a schedule for the preparation of

[20] Because of time and resource constraints, this survey is based on a review of publications by NGOs and not direct interviews. Reviewed publications include Eurodad (2005), Bretton Woods Project (2004), and CAFOD (2004).

[21] See IMF and IDA (2005).

the DSA for each calendar year—a setup that was not always followed in 2005 because the modalities for collaboration were not disseminated until May. Nevertheless, because timetables for country operations remain somewhat unpredictable, some tension will likely remain unavoidable, necessitating flexibility on both sides.

III. The Debt Sustainability Framework in Light of MDRI

27. **Debt relief under the MDRI will reduce recipients' debt ratios significantly.** For the 18 post-completion point HIPCs participating in the MDRI, about 80 percent of the debt outstanding after HIPC debt relief is owed to multilateral creditors; in these countries the average NPV debt/exports ratio would fall from 140 percent after HIPC debt relief to a projected 52 percent.[22] Debt accumulation in MDRI recipients should be on terms and in volumes that will avoid a return to debt distress.

28. **With unchanged assumptions on borrowing and growth of GDP and exports, pre- and post-MDRI debt ratios tend to converge in the longterm.**[23] For example, MDRI debt relief reduces the NPV of debt-to-export ratio on average by about 40 percent over 2006-10, but by 2025 the difference between pre- and post-MDRI debt ratios declines to just over 10 percentage point (Figure 2).[24] In a sub-sample of nine African completion point HIPCs where the medium-term effect of MDRI relief is larger, long-term convergence is similar (Figure 3). In all cases, long-term convergence occurs because of the growing importance with time of accumulated debt from new borrowing.[25]

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[22] See *The G-8 Debt Relief Proposal: Assessments of Costs, Implementation Issues, and Financing Options,* September 1, 2005.

[23] The simulations assume conservatively that the additional resources provided by the MDRI will not generate additional growth beyond the baseline assumption (see the Appendix for a contrary example). The unchanged borrowing assumption reflects the notion that the additional MDRI resources are spent and not used to substitute for new borrowing.

[24] Figure 2 is based on a sample of 12 countries for which MDRI DSAs were available (Burkina Faso, Ethiopia, Guyana, Mali, Mozambique, Niger, Nicaragua, Rwanda, Tajikistan, Tanzania, Uganda, and Zambia). While this figure depicts the simple average for this group, the individual countries display considerable diversity. For example, projected post-MDRI NPV of debt-to-exports ratios for 2025 range from about 30 percent in Nicaragua and Zambia to about 120 percent in Niger.

[25] Long-term convergence follows from the assumption that MDRI debt relief is additional to projected net resource transfers to LICs in support of efforts to reach the MDGs, resulting in constant *gross* borrowing and increased *net* borrowing (because of lower amortization). See the Appendix for a more detailed discussion of the convergence of pre- and post-MDRI scenarios.

Figure 2: NPV of debt-to-exports ratio in MDRI recipients - Before and after MDRI debt relief

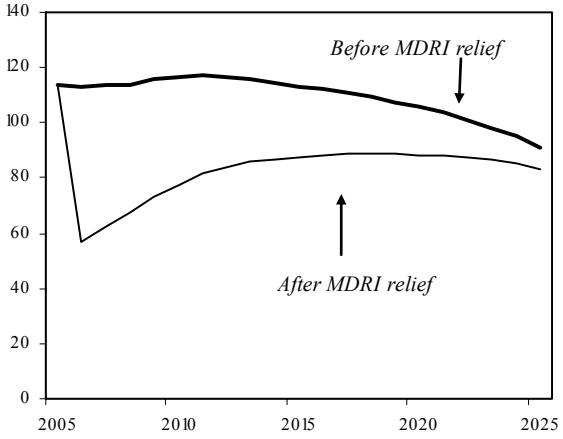
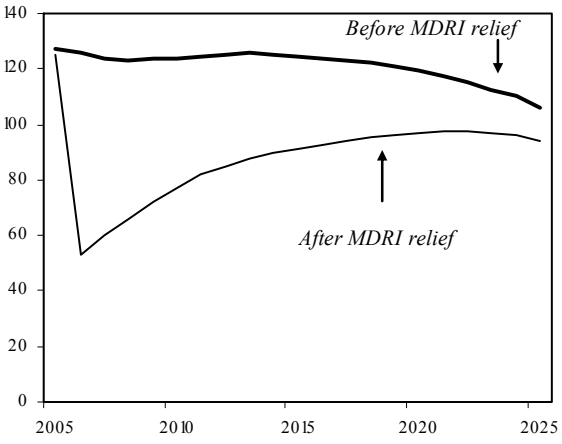


Figure 3: NPV of debt-to-exports ratio in African MDRI recipients - Before and after MDRI debt relief



Source: Joint Bank-Fund DSAs.
Note: Based on a sample of MDRI-recipient countries (see footnote 32).

29. **MDRI countries would still require substantial grant resources to preserve debt sustainability if aid were scaled up substantially to help them meet the MDGs.** Simulations in the Appendix show that small increases in concessional borrowing, say around 1 percent of GDP annually, would tend to have little effect on the debt sustainability outlook, but larger increases in new borrowing on the order of about 5 percent of GDP annually would lead in most countries to a breach of the indicative thresholds under the DSF. Hence, large increases in resource transfers will still have to take the form of grants in order to maintain a low or moderate risk of debt distress in these countries.

30. **To ensure that the DSF remains an effective tool in stemming an excessive buildup of debt in low-income countries while not unnecessarily constraining access to resources for development,** the rest of this section explores three issues:

- Should the indicative DSF debt thresholds be lowered given debt relief under the MDRI?
- How should debt accumulation be managed in countries that are well below thresholds?
- What is the role of new financing (including of nonconcessional debt) and how can the "free-rider" problem be addressed?

A. Indicative Debt Thresholds in Light of the MDRI

31. **One reaction to the additional borrowing space provided by the MDRI could be to lower the indicative debt thresholds under the DSF**. This section examines the costs and benefits of doing this.

32. **The thresholds chosen for the low-income country DSF reflect the risk of debt distress, the potential development opportunities forgone from applying tighter constraints on new borrowing, and a realistic assessment of the resources available for**

development. The Fund and Bank Boards adopted a solution that balanced the preference for cautious thresholds with the desire to economize on scarce grant resources and ensure consistency with the HIPC Initiative.[26]

33. **Further debt relief to HIPCs under the MDRI may signal a reduction in tolerance on the part of the international community for debt in low-income countries.** Lower thresholds would be a reflection of such a shift in the balance embedded in the previous Board decisions on the DSF.

34. **Lowering the DSF debt thresholds would limit the risk that MDRI recipients would reaccumulate excessive debt.** These thresholds are indicative limits, not targets. However, there is a tendency built in to the system for debt levels to converge to the thresholds over time. This is because donors, particularly IDA, tend to provide a higher proportion of loans to countries with debt levels well below the thresholds and provide more grants to countries near or above the thresholds.

35. **However, any adjustments to the thresholds should be undertaken with full recognition of the implications**. To the extent that additional grants are not forthcoming or are inadequate, lowering thresholds could risk depriving countries of financing. This would be inconsistent with one of the goals of the MDRI: to provide additional resources for MDG achievement.[27] Non-MDRI countries in particular would need additional grants to avoid a sharp reduction in aid flows. This would be costly for donors, including IDA, and these countries' access to other loan financing and hence overall financing would risk being curtailed. If, for example, the thresholds relating to the ratio of the net present value of debt-to-exports were to be lowered by 50 percentage points (to 50, 100, and 150 percent for low, medium, and high CPIA countries respectively), then the grant share of IDA would rise from an estimated 30 percent to an estimated 42 percent. There will be additional considerations depending on how the lower thresholds were to be applied:

- **Lowering debt thresholds for *all* countries could reopen the question of HIPC eligibility**. Lower thresholds would imply that the HIPC debt sustainability thresholds were too high, suggesting a need to broaden the HIPC Initiative, and presumably the MDRI as well, which could substantially increase the cost of the HIPC Initiative.

- **Lowering debt thresholds for the MDRI countries *alone* would raise questions of uniformity of treatment**. It would be hard to rationalize treating MDRI recipients differently for reasons not grounded in current and expected future economic circumstances.

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[26] See IMF and IDA (2005) for a discussion of how the agreed-upon thresholds evolved. As indicated in the summing-up for the most recent discussion of the DSF, "Directors noted, moreover, that the preferred option does not require as high a share of grant financing, the availability of which is not assured, as the alternatives considered."

[27] MDRI debt relief was not allocated to the most indebted countries nor to those most vulnerable to debt distress according to the low-income country DSF.

36. **There is reason to believe that the MDRI will not lead to an unwarranted increase in IDA lending, mitigating the need for lower thresholds.** In itself, the reduction in the risk of debt distress as a result of MDRI relief would lead to an increased loan allocation to MDRI countries, but this is partially offset by the likely transition from the current traffic light system to the forward-looking joint DSA assessments, which tend to be somewhat more conservative than the static assessments under the traffic light system. Overall, a large shift in the loan/grant mix for MDRI countries seems unlikely (Box 4) although this will depend on the precise form of modifications to the present IDA allocation system, to be decided later in the year.

37. **On balance, then, the case for lowering thresholds now is not compelling.** Lower thresholds may help limit the risks of a rapid reaccumulation of debt, but, in the absence of a sharp increase in grant availability, they would also impede resource flows, thereby undermining a primary objective of the MDRI, and could reopen the question of HIPC thresholds.

B. Debt Accumulation Below the Thresholds

38. **When a country's debt burden is below the indicative thresholds, a key question is how fast debt should accumulate.** Experience so far with the DSF provides few insights on handling the accumulation of debt from low levels, though some lessons can be drawn from historical episodes of debt accumulation (Box 5). *Theoretically*, this question could be answered by appealing to such variables as the rate of return on investment, absorptive capacity, the terms on available financing, the international environment, and the quality of policies and institutions of the country—in short, virtually the entire range of micro- and macroeconomic factors governing growth and stability. *Practically,* in the absence of perfect information on all the linkages and constraints, the determination of an appropriate debt trajectory could be answered in two ways: a one-size-fits-all rule that restricts new borrowing at a pre-determined rate; or a country-specific case-by-case approach that takes into account the unique circumstances of each country and the prevailing binding constraints to growth. Each has its advantages and disadvantages.

Rules

39. **The advantage of a rule-based approach to constraining the debt trajectory is that it would set clear limits on debt accumulation.** The imposition of rules could help guard against overoptimism regarding the beneficial effects of additional spending, especially in the face of uncertainty about the impact of aid. Recognizing the heterogeneity in country circumstances, the allowable rate of debt accumulation could perhaps depend, for example, on the CPIA or other variables capturing important determinants of the appropriate rate of debt accumulation, thus allowing for some country-specific variation. Exceptions could be allowed in cases where it is possible to justify convincingly that borrowing should be more than the rule would imply.

Box 4: Will MDRI relief lead to an increase in IDA lending?

The reduction in the risk of debt distress as a result of MDRI relief raises the prospect that IDA will switch from grants to loans in MDRI countries, leading to a quick reaccumulation of debt. While the grant-loan mix of IDA financing is ultimately the decision of IDA, this Box uses illustrative simulations to examine whether IDA lending could increase significantly post MDRI.

The IDA grant allocation will be affected in the next few years not only by the MDRI, but also by a transition from the current IDA traffic light system, which is essentially a static assessment based on the latest available debt indicators, to a more dynamic assessment based on the joint DSAs. Box Table 1 simulates potential post-MDRI risk ratings for twelve MDRI countries based on the projected evolution of debt indicators over 2006-25 and compares these with the actual IDA ratings that were assigned during FY06.[1]

The actual IDA ratings for FY06 were based on end-2004 debt data. These were fairly conservative to begin with, in so far as the actual IDA traffic light ratings took the results of available forward-looking DSAs into account, and, in other cases, the actual ratings were based on debt indicators using the HIPC methodology, which tend to lead to higher debt ratios than the LIC DSA methodology.

When compared with risk ratings that could emanate from forward-looking DSAs (as indicated by the simulations), it appears that on balance, dynamic assessments, even incorporating debt relief under the MDRI, would not result in a large increase in IDA grants. The table indicates that while all almost all countries could be rated at high or moderate risks in a pre-MDRI scenario, only four could be rated as low risks in a post-MDRI scenario, thereby qualifying for 100 percent loan financing. Overall, the share of loans in IDA allocations is unlikely to increase significantly simply due to the impact of MDRI relief on recipient countries' debt burdens.

Table 1: Actual IDA risk ratings and simulations based on data projections, pre- and post-MDRI

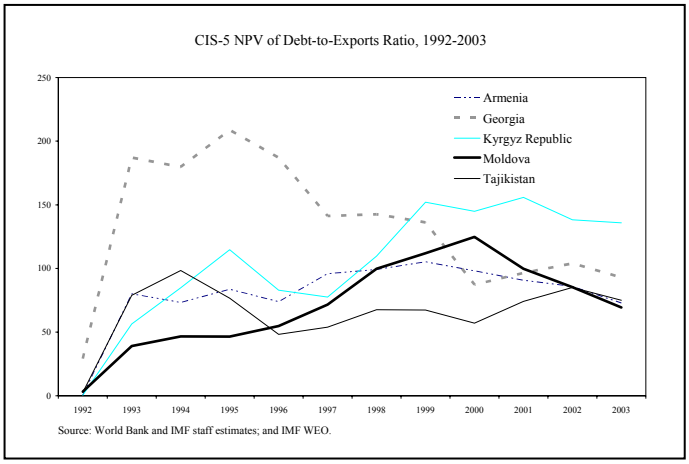
	Actual	Simulations	
	IDA Ratings 1/	Dynamic Risk Ratings 2/	
	FY 2006 (pre-MDRI)	Pre-MDRI	Post-MDRI
Burkina Faso	low	high	moderate
Ethiopia	moderate	moderate	moderate
Guyana	high	high	high
Mali	low	high	moderate
Nicaragua	low	high	moderate
Niger	low	high	moderate
Mozambique	low	low	low
Rwanda	high	high	moderate
Tajikistan	high	moderate	moderate
Tanzania	low	moderate	low
Uganda	moderate	moderate	low
Zambia	moderate	moderate	low

1/ From the IDA traffic light system.
2/ Simulations of dynamic risk of debt distress ratings based on the DSA and projections of debt indicators over 2006-25.

1/ The dynamic simulations rate countries based on whether the CPIA-determined thresholds are breached by stress test and baseline projections (high risk), by stress test projections only (moderate risk), or no breaches occur (low risk).The simulations are entirely mechanical and do not take into account the role of staff judgment in determining the final risk classification in joint DSAs. Examples for the use of judgment in joint DSAs are Burkina Faso, Mali, and Zambia, which are rated in the mechanical simulations as high (Burkina Faso, Mali) and moderate risk (Zambia), whereas the joint DSAs rate them at moderate (Burkina Faso, Mali) and low risk (Zambia) even pre-MDRI, reflecting inter alia staffs' judgment that thresholds breaches are only marginal or temporary. Guyana is rated in the mechanical simulations at high risk on account of a high NPV of debt-to-GDP ratio, whereas the joint DSA comes to a moderate risk assessment (post MDRI), reflecting staffs' judgment that the information content of this indicator is limited as a result of measurement problems.

Box 5: External Debt Sustainability in the CIS-5

The CIS-5 countries experienced a sharp increase in their debts in the early years of transition. The CIS-5 (Armenia, Georgia, Kyrgyz Republic, Moldova, and Tajikistan) had virtually no debt following the breakup of the Soviet Union; yet by 1995, the average NPV of debt-exports ratio had reached 106 percent.[1/] Debt accumulated rapidly in some cases, but the early sharp rise in debt ratios was also due in large part to the three-year consecutive output contraction in 1991-93, with real GDP in the CIS-5 declining by an average 58 percent (this is based on the evolution of nominal debt and cannot be directly compared to the NPV ratios highlighted in footnote 29).



Following the initial surge in debt ratios, performance varied widely within the region. Where output and exports grew faster (Armenia and Tajikistan), debt sustainability was attained. Slow reform in Georgia and Moldova constrained growth and limited access to concessional finance and debt relief (Georgia was nonetheless able to bring its ratios down; Moldova is currently seeking Paris Club treatment). In contrast, weak growth and revenue performance and rapid accumulation of debt in the Kyrgyz Republic took the country above the HIPC fiscal thresholds. Flow relief by the Paris Club (Georgia, in 2001, and the Kyrgyz Republic, in 2002 and 2005) helped stabilize debt indicators but failed to address effectively the mounting solvency problems in the Kyrgyz Republic. Both Armenia (2003) and Tajikistan (2002) sought and received debt treatment from Russia.

What accounts for the cross-country patterns in the change in the NPV of debt-to-GDP ratios between 1993 and 2003? Just under 50 percent of the variation across countries is explained by differences in net debt accumulation (in NPV terms). Differences in real growth explain about 30 percent of variation, with the remainder explained by real exchange rate movements and other factors. Debt relief has (so far) contributed little in reducing debt shares. The CIS-5 countries were generally able to stem and in some cases reduce their debt problems in the framework of Fund arrangements (Moldova and the Kyrgyz Republic since 1993, Armenia since 1994, and Georgia and Tajikistan since 1996).[2/] Early overly optimistic staff projections illustrate the difficulty in forecasting the right mix of adjustment and financing for countries facing large macroeconomic imbalances as well as shocks such as rapid rises in energy prices and the Russia crisis of 1998. The loans used to fill the large financing gaps reflected an expectation of rapid productivity gains, which in the fact did not materialize fast enough (Helbling, Mody, and Sahay 2004). More recent experience in predicting economic performance in the CIS-5 does not show a systematic bias toward overly optimistic growth and exports projections (for example Armenia has far exceeded growth and export expectations in recent years).

1/ See for example IMF and World Bank, *Armenia, Georgia, Kyrgyz Republic, Moldova, and Tajikistan: External Debt and Fiscal Sustainability* February 6, 2001.

2/ Moldova has not had an active Fund arrangement since 2001.

40. **It is difficult, however, to find a rule for the rate of debt accumulation that has any empirical basis.** There are two reasons why the rate of debt accumulation may be an important indicator of the risk of debt distress. First, it may indicate that the country was investing too fast, perhaps exceeding absorptive capacity. Second, it may be difficult to slow down the rate of debt accumulation, so that rapid debt growth now signals high levels of debt down the road. No evidence was found for either proposition, however, using the same regression framework that was used to derive the current debt sustainability thresholds.[28]

41. **As important, there are two reasons why a rules-based approach would provide only a partial guard against overoptimistic assumptions.** First, debt distress is usually the product of disappointing growth outcomes, not only overborrowing. Shocks to growth and exports explain more variance in debt ratios than borrowing.[29] And second, a rule that is not based on strong empirical foundations cannot be defended or justified. This would be particularly detrimental if staff were to be seen to reject projects with strong chances for success because of adherence to an arbitrary rule.[30]

Country-specific case-by-case approach

42. **By taking country-specific information into account, staff and the authorities could tailor new spending and borrowing plans to the country's specific circumstances** without being hampered by an arbitrary rule. This would be particularly helpful in countries where absorptive or debt-servicing capacity is not a binding constraint or can rise rapidly in response to scaling up expenditures. A rule-based approach would prescribe a gradual increase in expenditures and such opportunities would be lost.[31]

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[28] The rate of growth of debt does not predict future debt distress when the level of debt is also in the regression. This suggests that the pace at which a given debt stock has been accumulated is not a powerful indicator in itself of the return to the associated investments. The rate of growth of debt also did not help predict future debt distress when the level of debt is left out of the regression. This suggests that the rate of growth of debt is not a good proxy for the future (or the current) level of debt. Interacting the rate of growth with the CPIA rating—to capture the notion that a fast accumulation of debt is more likely to be a problem in countries with poor quality of policies and institutions—did not help.

[29] A decomposition of changes in debt ratios in post-completion-point HIPCs reveals that unanticipated new borrowing was not a major contributing factor in explaining higher debt ratios, which were largely the result of lower discount rates and exchange rates. This is consistent with results from a broader analysis of developing countries, which points to the dominance of growth over borrowing in explaining changes in debt ratios.

[30] Partly for this reason, the adoption of a rule would not obviate the need for substantial country-specific analysis. Staffs would still need to form a view on absorptive capacity constraints and on linkages between spending plans and macroeconomic variables, in order be able to advise authorities comprehensively and to be in a position to consider exemptions to the rule.

[31] Much cross-country regression-based evidence, with all its faults, is consistent with decreasing returns to aid-financed investments at a given point in time—see for example Clemens and Radelet (2003) and references therein. Many studies find that there is a rate of aid-financed investment beyond which the return to further investment turns negative. Estimates of this rate vary from as low as 25 percent to over 40 percent of GDP. Of course, these results are at best indicative and are not directly usable for policy-making in a particular case. More generally, IMF and IDA (2005) argues that there is little systematic evidence that a "big push" in

(continued)

43. **A case-by-case approach acknowledges the complexities of assessing the appropriate pace of spending and debt accumulation.** A well-founded view would depend on a thorough understanding of individual sectors and a careful assessment of macroeconomic and growth impacts. Key issues include: the rate of return on expenditures; the long-term effect of borrowing and expenditures on fiscal sustainability; the capacity to mobilize domestic revenues with reasonable efficiency; the implications of aid volatility; and the impact of exogenous shocks more generally.

44. **These issues are increasingly analyzed by Bank and Fund staffs in their ongoing country work.** MDRI relief and pursuit of the MDGs raises the prospect of sharp increases in spending and borrowing, which puts a premium on more rigorous analysis, particularly on the implications of scaling up for growth and, more generally, on a closer connection between DSAs and countries' development strategies.[32] The assessment of absorptive capacity and quantifying the linkages between spending plans and key macroeconomic variables (such as growth and the real exchange rate) pose serious challenges. Progress has been made in recent years, but practical guidance is needed to help staff come to informed judgments.[33]

45. **The DSF is a powerful tool to deal with debt sustainability in MDRI countries.** Its forward-looking nature helps capture the risks associated with borrowing after debt relief. In some cases, the DSA could also help to detect unrealistic assumptions in key areas. For example, the general presumption would be that absorptive capacity increases gradually, leading to a smooth path for expenditures and new borrowing. There may be arguments in individual countries for an abrupt scaling up (or eventually down) of expenditures, but the onus would be on the team to make this case. Thus, sharp kinks in productivity growth rates, spending and revenue trajectories, or financing assumptions would need to be justified in ways that can support assessment and monitoring.[34]

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expenditures will yield substantially higher rates of return. On the other hand, some projects may well be "lumpy" in that they may be best undertaken on a large scale. More broadly, the Millennium Project (2005) argues forcefully that substantial opportunities exist to scale up aid-financed spending rapidly and effectively, emphasizing potential synergies among different investments and the risk of poverty traps in disease-ridden countries with very low human and physical capital.

[32]See also the additional borrowing simulations in the Appendix.

[33] Good examples addressing many of these issues are recent studies developing an operational macroeconomic framework for Ethiopia consistent with the large envisaged scaling up of aid to achieve the MDGs (Sundberg and Lofgren 2006, and Mattina 2006). These studies employ an economy-wide model that allows linking sectoral spending plans to growth and real exchange rate movements. Given staff resource constraints, the depth of analysis in the Ethiopia case is likely to remain exceptional for some time.

[34] In general, though, initial movements in the trajectory of the NPV ratios associated with scaling up are unfortunately likely to provide little information as to whether resources are being used effectively. Even those loan-financed projects with a high rate of return will initially induce a deterioration in the NPV of debt-to-GDP and -exports ratios, because the calculation initially capture the present value of the cost (future debt service) but not of the future benefits (the associated growth).

46. **Closer attention to actual outcomes compared with past DSAs should provide additional assurance that rapid and unsustainable accumulation of debt can be identified and corrected.** As a standard component of the DSA exercise, it would be incumbent to review outcomes relative to the projections of previous DSAs to identify where and why deviations emerged. A pattern of over-optimism would imply a need for greater caution in subsequent DSAs and/or adjustments to the financing mix or the fiscal trajectory. Likewise, growth pessimism should also be guarded against. The more specific the assumptions that underlie the DSA, the more useful will be this monitoring. For example, where the growth scenario depends on a sharp increase in agricultural productivity, monitoring could focus on whether expected policy reforms, investments, and productivity improvements in agriculture did indeed materialize as expected.

47. **On balance, a case-by-case approach looks to be preferable to rules.** While a standardized rule for debt accrual could provide a shortcut in the face of the myriad uncertainties in determining an optimal path of debt accumulation, any rule is likely to produce many inappropriate results, given country heterogeneity. Thus it is likely that any rule will impose numerous unjustifiable restrictions or will be honored only in the breach. In the end, there will be no tenable alternative to Bank and Fund staff having an informed view on the appropriate rate of debt accumulation consistent with the sustainability thresholds in particular country circumstances.

48. **Of course, ultimately it is the responsibility of the countries themselves to prevent a renewed build up of unsustainable debt.** Debtor countries will need to continue developing their capacity to evaluate the returns on borrowing, centralize approval and accounting mechanisms, and plan external financing using the budget and PRSP processes. Improving debt management capacity and enhancing transparency in debt management operations will be key aspects in this regard.[35] Similarly, creditors need to coordinate better and make more predictable the provision of external financing.

C. The DSF and the "Free Rider" Problem

49. **The prospect of increased market access for MDRI recipients has raised the issue of "free riding." In the IDA context, this has come to refer to situations in which** "nonconcessional lenders indirectly obtain financial gain from IDA's debt forgiveness, grants and concessional financing activities without paying for it."[36] Sharply lower debt burdens in MDRI countries create the potential for new borrowing from market and other nonconcessional sources. While such borrowing has so far been common mostly in resource-rich low-income countries, this may change with implementation of MDRI given the likely upgrades to sovereign credit risk (Box 6). Where the supply of concessional finance does not

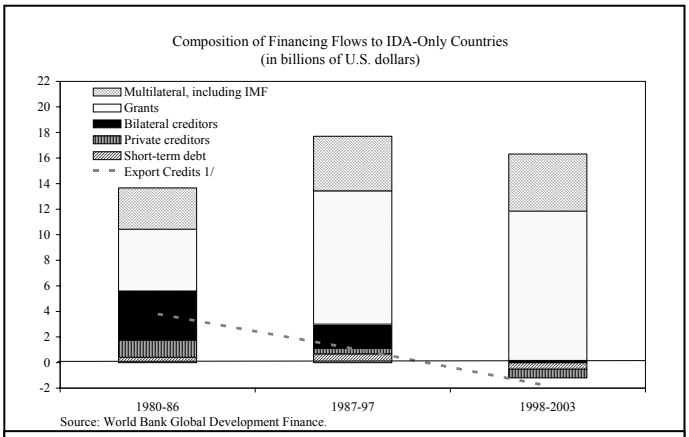
[35] The joint Fund/Bank *Guidelines for Public Debt Management* stress the role of transparency to enhance good governance through greater accountability of central banks, finance ministries, and other public institutions involved in debt management.

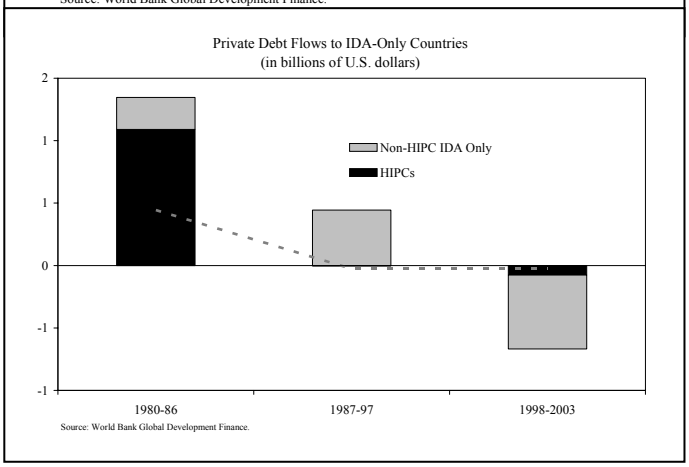
[36] See *IDA Countries and Nonconcessional Debt: Dealing with the"Free Rider" Problem in the Context of IDA14 Grants*, prepared by the Resource Mobilization Department, February 2006.

meet recipient countries' financing needs, nonconcessional borrowing has the potential to allow projects with high rates of return to be financed that might not otherwise be possible. There are potential problems, however. First, an incentive to overborrow may result from IDA's willingness to give increasing quantities of grants to countries with more debt. Second, nonconcessional lenders may be willing to finance even unproductive investments, secure in the knowledge that, with MDRI relief and the prospect of future IDA grants, the country could cover the debt service. The problem is most serious when there is the potential for renewed risk of debt distress. Signaling such risks is a key role of the DSF.

Box 6: Composition of Financing Flows to Low-Income Countries

Following the rapid debt accumulation during 1980-94 creditors recognized that the provision of aid largely in form of loans had led to excessive debt burdens in many low-income (IDA-only) countries. [1/] Grants and multilateral concessional loans have since become the only source of financing for most IDA-only countries. Bilateral support has increasingly taken the form of grants. At the same time, as new multilateral loans became more concessional, leading to a rise in the average grant element, overall multilateral net debt flows declined. The overall decline in official debt flows combined with the decline in total official resource flows (official loans and grants) suggests that past borrowing was leveraging scarce donor resources.[2/]





Private net debt flows to low-income countries have declined from already low levels since the mid-1980s. Private debt flows are to a large degree related to natural resource-based economies; for example at end-2003, 63 percent of Angola's external PPG debt was private. Of the total stock of public and publicly guaranteed debt owed by PRGF-eligible countries to private creditors at end-2003, almost 73 percent was owed by IDA blend countries, 88 percent of which was owed by India. Likewise, export credit flows to low-income countries declined since the mid-1980s and played only a minor role in most HIPCs.

1/ While the literature on the debt overhang was originally developed in the context of middle-income countries, it has been increasingly applied to low-income countries (see *Debt Sustainability in Low-Income Countries—Proposal for an Operational Framework and Policy Implications*. A few prominent examples are: Cohen and Sachs (1986); Krugman (1988); Sachs (1989); Cline (1995); Agenor and Montiel (1996); and Sarel (1997). For a summary of the literature, see Pattillo (2002), as well as Loko and others (2003).

2/ Net IDA flows on average more than doubled from the early 1980s to the post HIPC period. As a result, during 1998-2003, net IDA flows accounted for 77 percent of net multilateral flows (including the IMF) and 70 percent of net concessional flows.

50. **There are a number of ways to deal with the risk of excessive nonconcessional borrowing, but complete protection will be difficult to achieve.**[37] If feasible, a common creditor approach towards concessionality by all creditors, based on a broader acceptance of the DSA, might be most effective. In countries with access to commercial finance, however, a consensus on the appropriate degree of concessionality and lending volumes may be difficult to achieve. A less preferable approach would be if a subset of donors, such as IDA, were to reduce volumes to countries that borrow excessively on commercial terms. But this would not stop countries from making up the difference through commercial borrowing. In any case, critical components of a response should include: improved tracking and analysis of nonconcessional borrowing; strengthened debt management capacity in low-income countries; and transparent indication in the DSF that nonconcessional borrowing is unwise in instances where it imperils the recipient country's debt sustainability.

51. **For low-income countries that face serious public expenditure management or debt distress challenges, avoiding nonconcessional borrowing altogether would likely remain appropriate.** In Fund programs this would translate into a zero limit on nonconcessional borrowing.[38] Exemptions should continue to be possible where a case can be made to support nonconcessional borrowing for a financially viable project that would not otherwise be undertaken (Box 7). Because in practice obtaining an appropriate assessment of a project's expected rate of return is difficult, cases where the lender would share the risk (through, for example, providing some equity-like finance as well as debt) could be presumptively more suitable for exemptions.

52. **It may be worth considering whether uniform application of the zero ceiling on nonconcessional borrowing makes sense in more developed and better-governed countries at low risk of debt distress.** As countries reduce their debt burdens and improve public expenditure and debt management capacity, the case for such strict limits weakens. In these situations, a DSA indicating a low risk of debt distress might imply that there is no critical need for a zero limit on nonconcessional borrowing.

53. **For countries without a Fund arrangement or a PSI, but where debt distress is a serious concern, the Fund would offer advice on appropriate concessionality in the context of Fund surveillance.** Determining the appropriate concessionality level of public borrowing as an input to the assessment of the outlook for macroeconomic stability clearly falls within the Fund's surveillance mandate. However, while surveillance can address inappropriate nonconcessional borrowing from the point of view of overall debt sustainability, it would not be appropriate for the Fund under its surveillance mandate to require members to provide loan-by-loan data with a view to characterizing creditors as "free riders" on concessional debt or grants.

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[37] These are elaborated in World Bank (2006).

[38] The definition of concessionality would be based on a minimum grant element of 35 percent, or higher in exceptional cases, on the basis of currency specific discount rates based on OECD commercial interest reference rates (CIRRs). This is a generally acceptable definition.

Box 7: Nonconcessional Borrowing in the Context of Fund-supported Programs

As of end-February 2006, four out of 29 PRGF and two PSI programs provided for medium and long-term nonconcessional external borrowing. Most programs have defined loans with a grant element of at least 35 percent as concessional, though in few cases the required grant element has been higher (45 percent in Kyrgyz Republic and 50 percent in Niger and Rwanda). Countries where the programs accommodated exemptions to zero constraints on nonconcessional borrowing have typically achieved a degree of macroeconomic stability and sustained growth for several years and are seeking to graduate from the PRGF lending. Most exemptions have not been tied to specific projects. Instead, staff attempts to obtain estimates on total borrowing need for viable projects that could not get concessional financing and sets the overall limit accordingly. Independent assessments of viability are sought, and projects financed by less reputable lenders excluded from the calculation.

Among the PRGF arrangements, those for *Albania* (a PRGF-EFF blend arrangement), *Bangladesh, and Dominica* have a non-zero limit on non-medium- and long-term concessional borrowing. *Uganda*, which currently has PSI, constitutes an exception to the practice that programs do not single out specific projects, as nonconcessional financing of up to US$400 million can be used for building Bujagali (hydropower project). In *Albania*, structural benchmarks on the provision of quarterly reports and feasibility studies for all projects being considered for nonconcessional financing were introduced after it became apparent that a large project proposal had reached an advanced state of preparedness without the Fund's knowledge. For *Georgia*, nonzero limits were recently proposed on the grounds of its level of development and the availability of a substantial grant (from the Millennium Challenge Corporation) that will be used for project co-financing. Past examples of nonconcessional borrowing accommodated under the programs concerned *Azerbaijan, Chad* (accommodating IBRD lending for the Chad-Cameroon pipeline), *Sri Lanka, and Vietnam*.

IV. Conclusions and Issues for Discussion

54. **This paper reviews early experience with the DSF and explores issues regarding the pace of new borrowing by MDRI countries.** Guidance from Executive Directors will inform application of the DSF, particularly with respect to MDRI recipients. It will also help in preparing a proposal for IDA Deputies on operationalizing the forward-looking aspects of the DSF at IDA's mid-term review in late 2006.

A. Refinements to the DSF on the Basis of Experience

55. **Early experience with the joint Bank-Fund low-income country DSF has been broadly encouraging.** The standardized analysis and tests, and the use of indicative debt burden thresholds that depend on the quality of a country's policies and institutions, have enhanced the quality and comparability of assessments. Most DSAs have been customized on the basis of country-specific features and risks, and—as intended—the thresholds have been used as guideposts rather than as rigid ceilings. Generally, projections do not appear overly optimistic when compared to past performance. The development of joint Bank-Fund DSAs has not entailed serious operational problems.

56. **The review provides a basis for a range of further steps to enhance the usefulness of the joint DSAs:**

- **Technical improvements to the template.** For example, there is scope to address the partial nature of the standardized stress tests.

- **DSA ratings.** Additional calibration within the medium risk category could be introduced, to allow a more nuanced response on grant eligibility by creditors, such as IDA.

- **Domestic debt.** Future work should focus on the development of an approach that integrates the analysis of domestic and external debt. In parallel, work could be done to define guidelines for staff on how to advise the authorities on domestic debt issues from the perspective of overall debt sustainability.

- **Public spending and debt sustainability.** Improving our understanding of the relationship between public expenditures and growth remains a serious challenge. Assessing debt risk will involve greater attention to the quantity and quality of public spending, returns to investment, absorptive capacity, and the macroeconomic impact of aid inflows and will thus require close Bank-Fund collaboration.

- **Design of Fund programs**. In countries with a moderate or higher risk of debt distress, there is scope for more use of tailored conditionality on total or external (concessional) government borrowing or on the NPV of external debt.

- **Process and presentation.** Bank and Fund country teams should agree early on the timing and scope of the DSA as well as the division of labor. DSAs will be written as stand-alone documents. Accordingly, they should offer the background and analysis of the risk of debt distress. The usefulness of the DSAs for other creditors and stakeholders could be supported through additional outreach activities, including the dissemination of more detailed information on the debt data and the assumptions underlying the projections.

57. **Do Directors agree that:**

- The DSF framework remains broadly appropriate and that major changes are not warranted for the moment?

- There is scope to provide a more finely calibrated set of ratings and that the staffs should elaborate an approach along the lines discussed in paragraph 10, to be issued to the Boards as a paper for information (and discussion if requested) and for use in preparing a proposal for IDA Deputies on operationalizing the forward-looking aspects of the DSA?

- Staff should work to integrate domestic debt better in the framework and undertake further analytical work on domestic debt, debt management and on the relationship between fiscal expenditures and growth?

- DSA risk assessments should incorporate domestic debt where it is significant but should also specifically flag cases in which the rating would be different on the basis of external debt only, thereby accommodating IDA requirements?

B. Issues to Consider in the Context of MDRI

58. **The MDRI lowers debt burdens and raises borrowing space substantially for many countries.** This creates the potential for substantial scaling up, including through nonconcessional financing. In view of the profound needs these countries face, there will be the temptation to exploit these opportunities to the fullest, even when experience suggests a clear risk of a return to excessive indebtedness and eventually debt distress.

59. **On balance, staff does not recommend lowering the DSF debt thresholds for now.** It would be difficult to justify either applying different thresholds to the MDRI recipients or lowering thresholds for all low income countries. In addition this would reopen the question of the thresholds for HIPC eligibility.

60. **The forward-looking DSF is a powerful tool to deal with debt sustainability in MDRI countries.** More systematic comparisons of actual outcomes against past DSA projections could help evaluate the reasons behind deviations, gauge risks, and set future benchmarks.

61. **Experience to date provides few insights on how the DSF should be applied to the reaccumulation of debt from low levels.** There are two polar approaches: simple rules (such as a restriction on change in the NPV of debt), and country-specific case-by-case application of the DSF. On balance, a case-by-case approach appears preferable, particularly because a rule not based on strong empirical foundations cannot be justified and is a crude instrument in the face of varied country circumstances.

62. **Minimizing the negative impact of "free-riding," and, more broadly, managing access to nonconcessional borrowing will be a challenge, particularly in countries that do not have Fund arrangements.** Enhanced creditor cooperation will help, using the DSA as a vehicle for information and analysis. The Fund's surveillance role will also remain crucial in such instances.

63. **Do Directors agree that:**

- Lowering the DSF threshold in light of the MDRI is not warranted, for now?
- On balance, a case-by-case approach would be appropriate as a basis for further work on providing guidance on debt reaccumulation?
- Nonconcessional borrowing presents great risks as well as opportunities, and that the approach to free-riding taken in the paper is appropriate?

POST-MDRI DEBT SCENARIOS

1. **This appendix analyzes post-MDRI debt trajectories and draws three main conclusions:**

- **Post-MDRI debt ratios tend to converge towards their pre-MDRI levels.** MDRI relief affects mostly the NPV of existing debt, but long-term debt dynamics are dominated by new borrowing, leading to a diminishing role for MDRI relief.

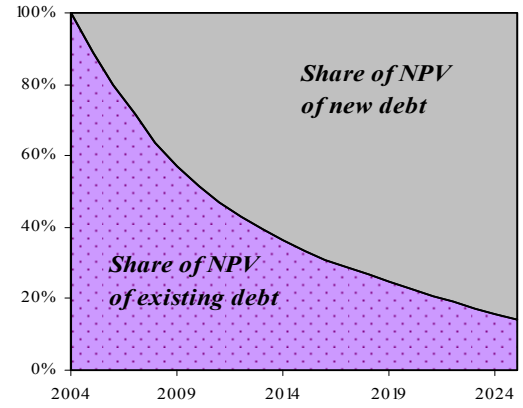
- **Post-MDRI scenarios are sensitive to new borrowing assumptions.** Small increases in additional borrowing have little effect on debt sustainability, but moderate and large increases lead in most cases to breaches of the DSF thresholds.

- **Feedback from MDRI relief to growth has little effect on debt dynamics**. Debt trajectories are insensitive to assumptions about the growth effect of the incremental investment allowed by MDRI relief but are sensitive to assumptions about baseline growth.

Long-run convergence of pre- and post-MDRI debt ratios

2. The projected path of the NPV of external debt can be decomposed into one part reflecting the changes in the NPV of existing external debt as of end-2004 and another part attributable to new external borrowing since end-2004. Figure A1 shows for a sample of twelve countries considered here that the NPV of the stock of existing debt declines relatively rapidly even before the delivery of MDRI relief. Hence, the long-term effect of MDRI relief through a reduction in the NPV of existing debt is bound to be limited.

Figure A1: Composition of NPV of external debt before MDRI



1. MDRI relief could lead to a reduction in new borrowing. However, in the sample considered here it is almost uniformly assumed that MDRI resources are wholly spent and not used to substitute new borrowing.[1] With the path for the NPV of new debt almost identical in the pre- and post-MDRI scenarios, and the NPV of existing debt diminishing, long-run convergence between the two scenarios takes place.

Sensitivity to new borrowing levels

2. This section explores the sensitivity of the debt dynamics to changes in new borrowing assumptions. Figures A2 and A3 explore an increase in annual gross borrowing on

[1] Only Mali and Nicaragua assumed a slightly lower new borrowing path.

Figure A2: NPV of debt-to-exports ratio - Additional borrowing scenarios 2006-25

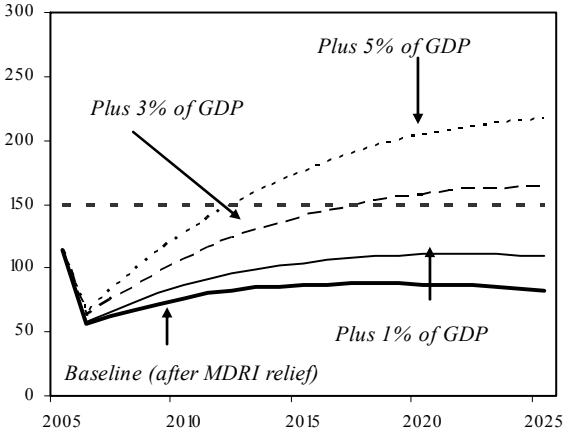
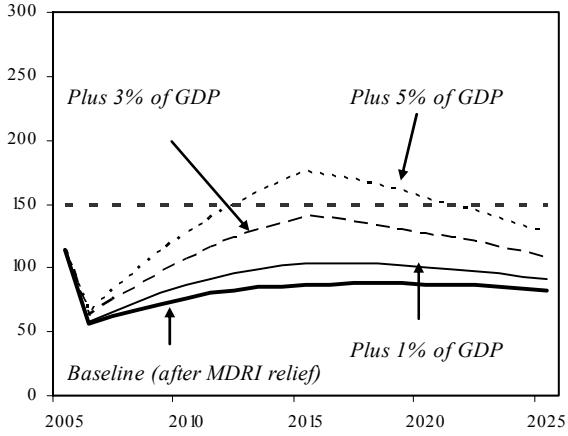


Figure A3: NPV of debt-to-exports ratio - Additional borrowing scenarios 2006-15



IDA terms by 1, 3, and 5 percent of GDP respectively compared to the baseline MDRI scenarios. These could be seen as low, moderate, and high borrowing scenarios.[2] The simulations are done for two different time horizons: (i) over 2006-25, corresponding to a permanent increase; and (ii) over 2006-15 to explore the implications of a temporary increase in new borrowing. Because no feedback to growth is assumed, the results should be seen as marking an upper bound for the debt trajectory.

3. The simulations suggest that almost all MDRI countries could absorb an annual increase in borrowing of 1 percent of GDP over 2006-25 without a breach of the DSF thresholds.[3] In the high borrowing scenario, however, such a breach takes place in 10 out of the 12 countries, placing them at high risk of debt distress.[4] Limiting additional borrowing to 2006-15, as shown in Figure A3, would improve the debt dynamics. However, such a strategy would imply a sharp fall in resource flows in 2015, raising the question of its feasibility or desirability.[5]

Sensitivity to growth effects

4. This section explores the sensitivity of the debt dynamics to various assumptions on MDRI effects on growth. Annual MDRI debt service savings in the period 2006-26 average about 0.4 percent of GDP in the twelve countries considered here, ranging from 0.2 percent

[2] The new borrowing assumptions underlying figures A2-3 have been simulated separately for each country in the sample. The figures display the resulting averages.

[3] Such a breach would occur in only three out of the twelve countries for the low borrowing scenario for the NPV of debt-to-exports and -GDP ratios.

[4] In the moderate borrowing scenario, thresholds for the NPV of debt-to-exports and -GDP ratios are breached in eight out of twelve countries, but these breaches are relatively marginal in two cases.

[5] This strategy has little effect on preventing breaches of thresholds, since these occur often before 2015. However, many of these breaches are now marginal compared to the permanent borrowing scenario.

for Tajikistan to 0.6 percent for Guyana.[6] Assuming that the debt service savings from MDRI are invested, we consider two scenarios based on simulations of a growth model where investment has a fixed rate of return.[7] In the low growth scenario, the assumed internal rate of return is 15 percent, whereas in the high growth scenario, the rate of return is set at 40 percent. Such a large growth response might be justified by increasing returns to scale.[8]

Figure A4: MDRI growth feedback: Level of GDP (normalized to 100 in 2005)

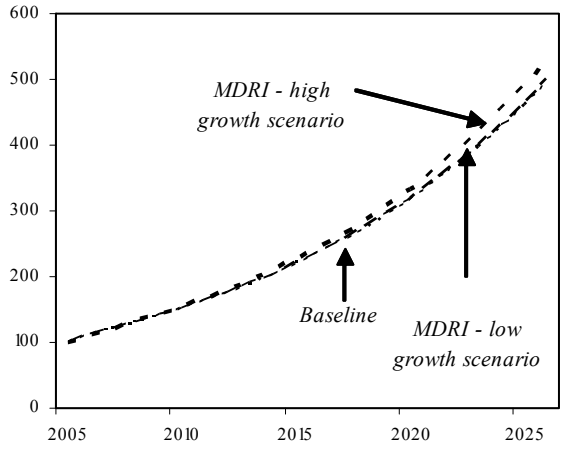
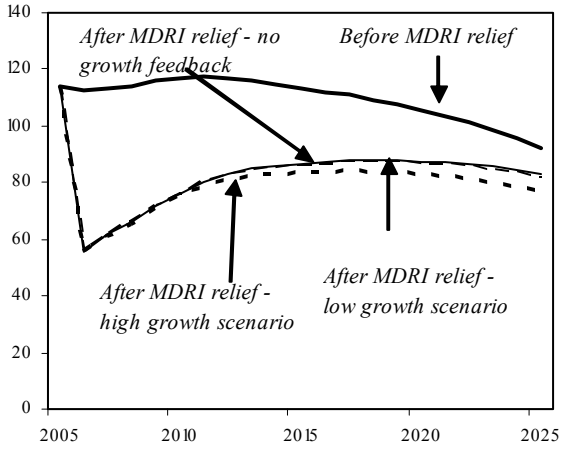


Figure A5: MDRI growth feedback: NPV of debt-to-export ratio



5. Figure A4 illustrates the effect of these growth assumptions on the level of GDP, which has been normalized to 100 in 2005.[9] In the low-growth scenario the effect on the level of GDP relative to the baseline is virtually invisible. For the high-growth scenario, the effect is visible, but small compared to the underlying growth in the baseline. In fact, in the average country, MDRI relief would deliver additional resources of 7 percent of GDP over 2006-25, compared to a total cumulative baseline growth of about 400 percent over the same period. It would therefore be unrealistic to expect a large effect of MDRI relief on GDP and debt indicators (Figure A5).

[6] This is relatively small compared to average annual poverty-reducing expenditure to GDP ratio in HIPC decision and completion point countries over 2000-05, which is estimated at 7.2 percent.

[7] The simulations of the growth effects of MDRI resources draws from a model for scaling-up simulations developed for Zambia, described in *Zambia—Selected Issues and Statistical Appendix*, March 21, 2006.

[8] The export/GDP share is assumed not to vary across scenarios.

[9] The baseline is derived from the projected average growth rate in the sample of twelve countries considered here. In all three scenarios—baseline, low growth and high growth—the simulations are done for each country individually, and then the simple average is computed.

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