INTERNATIONAL MONETARY FUND
AND
INTERNATIONAL DEVELOPMENT ASSOCIATION

Debt Sustainability in Low-Income Countries: Further Considerations on an Operational Framework and Policy Implications

Prepared by the Staffs of the IMF and World Bank

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EXECUTIVE SUMMARY

This paper presents further operational considerations for the proposed debt sustainability framework in low-income countries. The proposed framework was discussed by the Boards of the Fund and the Bank in February and March 2004 respectively. Directors broadly supported its key elements, but requested further consideration of several operational issues: (i) the robustness of the indicative thresholds; (ii) modalities for implementing DSAs; and (iii) operational implications for the Fund, Bank, and other international financial institutions and creditors. This paper seeks to address these queries.

Empirical evidence strongly supports the idea that indicative thresholds for debt burden indicators should be informed by the quality of policies and institutions. Notwithstanding their limitations, empirical thresholds can help inform decisions on debt sustainability, and consequently, the financing mix for low-income countries. They must, however, be treated as indicative guideposts, rather than as rigid ceilings, and allow room for judgment based on specific country circumstances. Given the strong empirical evidence that a country's policy performance is a significant determinant of debt distress, it is proposed that debt sustainability assessments be influenced by the thresholds outlined in the original framework paper. These thresholds and the underlying analysis will be reviewed periodically in the light of experience and new information, and revised, if necessary. The staffs further recommend using the CPIA as the primary measure of policy and institutional performance given its role in the empirical analysis and the elaborate review process it goes through at the Bank. Concerns about the CPIA could partly be alleviated by a prospective move toward disclosure.

These thresholds may reveal some differences with the ongoing HIPC Framework, but they are not incompatible with it. The purpose of the HIPC Initiative is to address an existing debt overhang through fully coordinated action by creditors, while the new framework is intended to provide forward-looking guidance on new borrowing and lending decisions, that allows adequate room for judgment. Moreover, under the Enhanced Initiative, the HIPC thresholds were set at a uniform lower level below the original range with the explicit intention of simplifying implementation while providing a safety cushion and allowing an increase in poverty-reducing expenditures. In view of the differing objectives of the HIPC Initiative and the debt sustainability framework, and the fact that the empirical analysis supports a significant variation in debt carrying capacity based on policy performance, it is proposed that the framework preserve the variation in debt thresholds between weak and strong performance.

The analysis of debt sustainability should include an assessment of domestic debt, given its growing importance in low-income countries. The framework provides the opportunity to incorporate domestic debt in the analysis, but integrating it into the framework would be problematic at this stage in light of the difficulties in collecting reliable and consistent data , and the paper proposes to adopt an approach to domestic debt that is more closely tailored to country-specific circumstances.

Bank and Fund staff would collaborate closely in the preparation of DSAs and agree on a common risk classification for each country, but each institution will report independently to its respective Board. Close collaboration is essential for many reasons, including: (i) the implications of the DSAs for aggregate financing and donor coordination in low-income countries, which necessitate a consistent Bank-Fund assessment of a country's debt sustainability that can form the basis for dialogue with country authorities, donors, and creditors; and (ii) the Bank and Fund's relative expertise on different aspects of macroeconomic policy, which together would strengthen the analysis. It will be important to put in place a framework for effective collaboration, with detailed guidelines for cooperation, resolution of differences on the DSAs and for seeking agreement on risk assessments. To preserve the Bank and Fund's accountability to their respective Boards, as well as to minimize the resource costs, it is proposed that each institution be responsible for its own assessment, with transparent reporting of views of the other institution.

Finally, the framework would form the basis for operational changes in IDA and PRGF operations. For IDA, debt sustainability would form the basis for grant allocation in IDA-14. This proposal is well-advanced given the timeline for the IDA-14 negotiations. IDA Deputies recently indicated broad support for allocating grants to debt distressed countries, and Bank staff are finalizing a rules-based allocation framework that currently uses the indicative thresholds in the framework, but would gradually incorporate results of DSAs as they become available. For the Fund, the framework would form the basis for incorporating debt sustainability considerations more explicitly in Fund conditionality. It is proposed that the framework be used to develop indicative targets on the NPV of external debt and on the overall fiscal deficit (including grants as a revenue item). The objective of these indicative targets would be to signal to creditors and borrowers the point beyond which additional resources would need to be provided on more concessional terms to avoid a significant increase in a country's risk of debt distress.

I. INTRODUCTION

1. This paper presents further operational considerations related to the framework for debt sustainability analysis (DSA) in low-income countries discussed by the Boards of the Fund and the Bank earlier this year.[1] Low-income countries have large financing needs in support of their efforts to meet their Millennium Development Goals (MDGs), which need to be provided on terms that will not lead to an unsustainable build-up of debt. The proposed framework is designed to minimize the possibility of such an outcome by signaling to low-income borrowers and creditors the appropriate financing terms that will keep debt indicators at manageable levels.

2. **On the occasion of the earlier discussion of the DSA framework, Directors supported its key elements, which include**:

- a standardized forward-looking analysis of the debt and debt service dynamics under a baseline scenario and in the face of plausible shocks;

- assessment of debt sustainability in relation to indicative country-specific debt-burden thresholds taking into account the quality of policies and institutions; and

- an advisable borrowing (and lending) strategy that limits the risk of debt distress.

3. **At the same time, Directors identified a number of issues requiring further consideration before the framework could become operational**.[2] In particular:

- Directors called for striking an appropriate balance between rules and discretion, provided that care is taken to ensure that the indicative debt-burden thresholds are used as a guide and not rigid ceilings, and cautioned against an overly mechanical application to borrowing and lending decisions.

- Directors noted the need for further consideration on several operational issues, including: (i) specification of indicative thresholds; (ii) modalities for implementing DSAs; and (iii) operational implications for the Fund, Bank, and other international financial institutions and creditors.

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[1] The Executive Boards of the Fund and Bank discussed the framework proposed in *Debt-Sustainability in Low-Income Countries—Proposal for an Operational Framework and Policy Implications* (SM/04/27 and IDA-SecM2004-0035, 2/3/04) and its broad policy implications on February 23 and March 4, 2004, respectively.

[2] Summing Up of the IMF Board Discussion, BUFF/04/66.

- Directors saw a need for further consideration of the modalities for the Bank and Fund to reach consistent assessments, drawing fully on the special expertise with a suitable division of labor within well-defined roles for each institution. They also considered it important for the two institutions to coordinate their work closely in applying the framework to lending decisions and program conditionality, and to also involve multilateral development banks in their work.

4. **This paper elaborates on the operational features of the proposed framework, guided by the Boards' reactions.** In particular, it outlines several important considerations in the application of the framework:

- The debt sustainability thresholds that are based on the quality of policies and institutions, while based on strong empirical grounds, have a number of shortcomings. For example, they risk misclassifying countries where factors other than policies and institutions may affect the ability to service debt and changes in classifying countries could alter significantly the risk of assessment. ***Thus, in operational work, the identified thresholds should be seen as signals of the need for a country to begin to address a potential debt sustainability problem, by adapting appropriately its debt management policies as well as undertaking macroeconomic and structural reforms***.

- The debate on methodological issues—such as the appropriate discount rate for calculating the net present value of debt (and perhaps of exports, GDP or revenues) as well as the different roles of debt stock and debt service indicators—have not been fully resolved and perhaps cannot be resolved without building on experience using the framework. Thus, further refinements of the framework are to be expected in response to future empirical work as well as issues that are likely to arise in the course of putting the framework into practice. ***This bolsters the case for using the DSA framework to help inform, rather than make, a judgment about a country's susceptibility to debt distress***.

- ***In the Bank, IDA's use of the framework to determine the grant-loan mix of IDA assistance highlights the importance of incorporating debt sustainability in IDA operations***. IDA would use the framework to determine grant eligibility among its borrowers, with countries at a high risk of debt distress receiving primarily grant financing from IDA. An objective, rules-based grant allocation system has been proposed to complement the existing Performance-Based Allocation (PBA) system for assistance volumes, and is envisaged to be operational with the IDA-14 cycle, which commences in 2005. The allocation system will be informed by DSAs as they become available.

- ***No major changes in Fund policy advice are proposed at this stage. However, greater emphasis would be placed on signaling to the member country and donors of a need to shift to grant financing when there is a strong likelihood of debt***

distress. In the context of Fund supported programs, this would be achieved via *indicative targets*: on the NPV of external debt to link the DSA framework with program conditionality and on the overall fiscal deficit *including* grants as a revenue item. The combined effect will be to introduce an explicit focus on debt sustainability into Fund program design and surveillance. As is customary, the targets for these variables would be formulated and applied taking into account appropriate country specific considerations.

5. This paper is structured as follows. Section II re-examines the analytical framework used to undertake DSAs. Section III proposes modalities for collaboration between the Bank and Fund, as well as with countries and other creditors. Section IV summarizes the proposed implications for IDA lending and conditionality under PRGF arrangements.[3] Conclusions and next steps, and issues for discussion are set out in Sections V and VI, respectively.

II. THE ANALYTICAL FRAMEWORK

6. **Both Boards broadly endorsed the basic thrust of the analytical DSA framework as a country-specific approach, informed by indicative policy-dependent thresholds and a forward-looking analysis of debt dynamics.** At the same time, Directors raised concerns about certain aspects of the framework that warrant further examination and refinement before making it fully operational. The following attempts to address many of these concerns while limiting the discussion of other elements of the framework to that needed to provide context.[4]

A. Threshold Analysis

7. **Incorporating country-specific debt-burden thresholds into the analytical framework is not straightforward and must be done cautiously.** The earlier "Framework Paper" identified some shortcomings of the empirical threshold analysis; in particular:

- Debt sustainability thresholds grounded only in the quality of policies and institutions risk misclassifying countries where other factors may affect the ability to service debt.

- Policy-dependent thresholds involve trade-offs. Lower thresholds for countries with poor policies could risk a sharp reduction in their overall financial resources (if grants

[3] The implications for Fund program design are taken up in more detail in the companion paper, *Operational Framework for Debt Sustainability in Low-Income Countries: Implications for Fund Program Design* (SM/04/--).

[4] For a more elaborate description of the proposals and their rationale, see the initial "Framework Paper," IDA (2004) and IMF (2004).

of an equivalent amount are not forthcoming) or weaken incentives to improve policies (if distressed countries receive grants instead of loans).

- Using the Bank's Country Policy and Institutional Assessment (CPIA) as a basis for assessing the quality of policies and institutions under the framework is problematic because the CPIA is not subject to public disclosure.

- The sensitivity of NPV of debt ratios to the discount rate raises questions about their interpretation, relative to the thresholds, when market interest rates change. Moreover, with debt distress (in the form of arrears or reschedulings) effectively triggered by excessive debt service, the relevance of high debt stocks (when they coincide with low debt-service ratios—as in many graduating HIPCs) needs careful consideration.

- The thresholds in the debt sustainability framework can produce assessments that appear inconsistent with thresholds used to calculate debt relief under the HIPC Initiative.

8. **Notwithstanding their limitations, empirical thresholds can help inform decisions on the financing mix and program design in LICs, provided they are treated primarily—in line with the Boards' directions—as informative guideposts**. The alternative of abandoning the threshold approach altogether would be inferior, as it would leave LICs and their (mainly official) creditors without guidance as to when debt levels may become of serious concern.

9. **There are reasonably strong empirical grounds for determining thresholds on the basis of policies and institutions** (Table 1).[5]

- Both the Bank and Fund analyses found that debt burdens, policies, and shocks are highly significant and robust variables in regressions explaining episodes of debt distress.[6] A number of additional variables—including per capita income,[7] history of

[5] The NPV of debt-to-revenue thresholds were recalculated on the basis of revenues, excluding grants, which is a theoretically more compelling concept to assess a country's debt-servicing capacity, as grants are often earmarked for specific projects.

[6] In the Bank analysis, these variables predicted in out-of-sample predictive tests, 70 percent or more of the distress episodes correctly and misclassified, in the most successful specifications, only 13 percent of the non-distressed episodes. The Fund analysis found for the debt-stock variables similar results for the successful prediction of distress events, but misclassification rates of non-distressed episodes were higher. The latter finding, in particular, emphasizes that having a debt ratio above the threshold would not necessarily imply a debt crisis.

default, regional differences, terms of trade changes, and foreign exchange reserves—were also tested for their predictive power, but were found to be considerably less robust.[8]

- In particular, the mixed empirical evidence on the role of per capita income[9] was not a sufficiently robust basis to give it a more explicit role in the framework. Moreover, discriminating in parallel between different policies and income levels would significantly widen threshold ranges, while barely reducing misclassification errors.[10] Thus, including income into the threshold specification would add to the complexity of the analysis and also run the risk of "false precision."

- Nevertheless, depending on specific country circumstances, the staffs will need to use judgment on a case-by-case basis to determine whether these or other variables need to be considered when assessing a country's debt sustainability outlook.[11]

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[7] Fund Directors had argued—consistent with the views of nongovernmental organizations—that poorer countries tend to have more limited absorptive capacity, smaller cushions against shocks, and less scope to redirect resources toward debt service.

[8] In the threshold analysis, staffs looked at a wide variety of functional specifications, including lagged observations and varied instruments; extensive examination of the efficacy of different measures of income per capita rather than the CPIA as a primary indicator; and experimentation with different measures of the explanatory variables.

[9] The Fund staff's empirical analysis, presented in the "Framework Paper," confirmed a significant impact of per capita income on the risk of debt distress, but this was not corroborated by the Bank's work (Kraay and Nehru, 2004).

[10] The threshold for the NPV of debt-to-exports ratio, for example, would range from 35-325 percent, compared with 100-300 under the original framework, while the "type I" and "type II" errors (i.e., the incidents in which countries either avoided problems at ratios above the thresholds or, conversely, experienced difficulties at ratios below) would fall by 1 and 4 percentage points, respectively. This compares with a reduction of about 10 and 15 percentage points, due to the discrimination by policies.

[11] The inclusion of additional variables in the debt sustainability analysis, or a more nuanced policy assessment, could lead to choices of thresholds that differ from the three threshold categories shown in Table 1. The CPIA rankings underlying the classification into 'poor,' 'medium,' and 'good' performers can be found under http://siteresources.worldbank.org/IDA/Resources/DebtSustainability_June2004.pdf. A more nuanced policy assessment could benefit from CPIA rankings in quintiles (http://siteresources.worldbank.org/IDA/Resources/Quintiles2003CPIA.pdf).

10. **These thresholds, and the underlying empirical analysis, will be reviewed periodically in light of experience, and as new data and information becomes available.**[12] This is important because, while the stock/flow indicators, such as the NPV debt/exports, have been empirically significant predictors of debt distress in many studies, including the ones that this framework is based on, from a theoretical perspective, a better measure of solvency is the ratio of the NPV of debt and the NPV of future debt repayment capacity, proxied for example by net exports or fiscal surpluses. But the latter has generally not been used owing to the practical problems it creates, including the fact that calculating the NPV of future exports or revenue involves making long-term projections which are fraught with error. Work thus needs to continue to enhance the theoretical robustness of the framework. Based on the findings of periodic reviews, the thresholds may need to be revised, and Bank and Fund Boards will be apprised accordingly, as with changes to any other important aspects of the framework.

Table 1. Indicative Policy-Dependent Debt and Debt-Service Thresholds (in percent)

	Assessment of Institutional Strength and Quality of Policies		
	Poor	Medium	Strong
NPV of debt-to-GDP	30	45	60
NPV of debt-to-exports	100	200	300
NPV of debt-to-revenue, excl. grants 1/	200	275	350
Debt service-to-exports	15	25	35
Debt service-to-revenue, excl. grants	20	30	40

1/ Due to exclusion of grants, these differ from earlier thresholds in *Debt Sustainability in LICs -- Proposal for an Operational Framework and Policy Implications* (SM 2/3/04)

Source: Staff calculations.

11. **Even though debt thresholds are delineated only on the basis of the quality of policies and institutions, it is important to consider other factors in determining overall aid allocations, with the view to maintaining appropriate incentives**. The framework will be one input among others in decisions regarding future levels of new lending and borrowing consistent with a country's debt carrying capacity. However, other considerations also play a

[12] The thresholds shown in Table 1 were derived based on cross-country studies of the determinants of debt distress episodes in developing countries (see SM/04/27, Appendix I), but one could also derive thresholds based on the effect of debt on growth. For example, an analysis of the nonlinear effect of debt on growth by Patella, et al. (2002) finds that the marginal impact of debt on growth becomes negative at lower levels than the debt sustainability thresholds.

role. For example, the possibility of increased concessionality of new financing for poor-policy countries with debt problems could weaken incentives for reforms. It is important, therefore, that donors and creditors continue to allocate resources on the basis of good policy performance as well as an assessment of the needs to meet the MDGs. In adopting this framework, IDA, for example has tried to ensure that its overall allocation of resources continues to reward good policies, while remaining sensitive to the need for resources to meet the MDGs in poor countries. This is further elaborated in Section IV.A.

Assessing Policies and Institutions

12. **An assessment of policies and institutions is an integral part of the suggested threshold approach, but potentially controversial in its implementation.** Empirical analysis suggests that countries with strong policies can sustain higher debt ratios. This holds for other measures of policies, but the CPIA has proven to be a particularly powerful indicator.[13] While the CPIA is already a determinant for IDA allocations, its subjectivity and limited disclosure raises concerns about its use for the debt-sustainability framework.[14]

13. **Concerns about the CPIA would be alleviated by a prospective move toward disclosure.** While disclosure of the CPIA is an internal Bank decision based on broader considerations, opening it to outside scrutiny would be an advantage for its use in the framework. This would not in itself eliminate the subjective nature of the exercise, but could increase accountability for possible deviations of assessment from other indicators measuring similar qualities. But, even now, CPIA ratings are already subject to considerable scrutiny within the Bank, which may help alleviate concerns (Box 1).

14. **For applying the DSA framework, it is important to establish straightforward operational rules that ensure consistency across countries.** Given the CPIA's role in the empirical analysis, it would be appropriate to give it a central role in applying the framework. Alternative external indicators would not necessarily eliminate problems of subjectivity or guarantee more accurate assessments, and would require some form of weighting scheme that could also involve arbitrary decisions. Staff therefore recommend policy assessments rely on

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[13] See the analysis in Appendix I of *Debt Sustainability in LICs—Proposal for an Operational Framework and Policy Implications (SM 2/3/04).*

[14] The CPIA index groups 20 indicators into 4 broad categories: economic management, structural policies, policies for social inclusion and equity, and public sector management and institutions. Countries are rated on their current status in each of these performance criteria, with scores from 1 (lowest) to 6 (highest). The index is updated annually. The country-specific ratings (in quintiles) for both the aggregate indicators and its main components are available at http://siteresources.worldbank.org/IDA/Resources/Quintiles2002CPIA.pdf.

the CPIA as a guide, while on occasion country teams might refine their assessments on a case-by-case basis reflecting more recent developments.

Box 1. The CPIA Review Process

The Bank process that determines CPIA ratings aims to enhance the robustness of the ratings by subjecting them to rigorous internal checks and balances. CPIA ratings are initially prepared by country teams and then subjected to an institutional review, first within each Region and then by the Network anchors[1] and central departments, to secure accuracy and consistency within and across Regions.

The process of determining and finalizing the ratings involves two phases. The first, benchmarking phase, aims to ensure that the ratings are comparable within and across Regions, and to guide staff in the second phase of the exercise when non-benchmark countries are rated. In 2003, 19 countries representing all Regions of the Bank were included in the first phase of the exercise. For each benchmark country, country teams submit rating proposals for each criterion, with written justifications. These are initially vetted by the respective Regional Chief Economist, and then are reviewed by the Networks and central departments. Final ratings are determined at a two-day meeting in which representatives from the Regions, Networks, and central departments review the proposed ratings for all the criteria and all benchmark countries. This discussion is informed by country team submissions and comments from Networks and central departments, as well as external indicators and other relevant supporting documentation (which may include analysis developed outside the Bank). Using the CPIA criteria as the anchor, this information guides the discussion of the ratings at the benchmarking meeting and helps ensure that the ratings are pitched at the right level and are consistent across Regions. At the conclusion of the benchmarking phase, these ratings are "frozen" and the second phase begins.

The second phase uses the benchmark ratings as a guide to determine ratings for the remaining countries. Given that more than 100 countries are reviewed in the second phase, virtual communication replaces a physical meeting to finalize the ratings. Over the years, as more external indicators have become available, Networks increasingly make use of them to flag outliers (low and high) as they review Regional rating proposals. As the external indicators usually do not cover exactly the same dimensions as the comparable CPIA criterion, their use is limited to identifying extreme cases where deeper examination is warranted.

Due to the importance of CPIA in allocating IDA resources, there is considerable interest in it, and growing sentiment in favor of greater disclosure. In preparing to broaden disclosure, the Bank assembled a panel of external experts to review the CPIA in February 2004 and its final report was submitted in April 2004. Bank management found the report and recommendations highly valuable, and initiated a process of revising CPIA methodology. These recommendations, together with follow-up actions, were discussed with Bank Executive Directors at an informal Board meeting on June 29, 2004.[2] A formal Board meeting is scheduled in September 2004 to approve management recommendations including public disclosure of numerical CPIA ratings for IDA-eligible countries starting with the results of the 2005 CPIA exercise.

[1/] The Networks involved in CPIA process are: Poverty Reduction and Economic Management, Human Development, Financial Sector, Environmentally and Socially Sustainable Development, Infrastructure, Private Sector Development, and Operational Policy and Country Services.

[2/] *Country Policy and Institutional Assessments: An External Panel Review—Panel Recommendations and Management Follow-up*, (SecM2004-0304), June 15, 2004.

Interpreting Movements in Discount Rates

15. **Interpreting changes in the present value of debt as a result of variations in the discount rate has been a topic of much debate.** While this issue plays an important role in topping-up discussions under the HIPC Initiative, its relevance for the analytical framework relates primarily to whether or not debt-burden thresholds should be adjusted in response to movements in world interest rates (i.e., the discount factors used to derive the NPV of debt). This will depend on whether shifts in world interest rates signal changes in LICs' risk of debt distress that are captured in corresponding adjustments in the NPV of debt. If so, thresholds should be invariant. If not, thresholds would need to be adjusted to neutralize the impact of discount rate movements on the risk assessment.

16. **The staffs have argued that long-term world interest rates contain information relevant for debt sustainability.** To the extent that long-term interest rates in advanced economies capture inflationary expectations, and that the prices of LICs' exports are positively correlated with inflation in the major economies, low (high) interest rates would signal the prospect of weaker (stronger) export earnings.[15] Thus, a higher NPV ratio due to lower interest rates would appropriately signal increased risk of debt distress, as a given nominal debt-service stream is expected to absorb a larger share of prospective export earnings. Attempts to test this empirically on a country-by-country basis have produced mixed results, which is not surprising—any link between interest rates and future export earnings is overshadowed by other supply and demand factors influencing prices in individual sectors and countries.[16] In the aggregate, these factors are less pronounced, and since 1980 there has been a positive correlation between long-term U.S. interest rates and future changes in the non-fuel commodity price index (see Figure 1, left panel).[17] Thus, there is some empirical support for the link between interest rates and export earnings that argues for invariant thresholds. It is important to recognize, however, that the above argument implicitly assumes that interest rates—which have fallen sharply since the early 1980s—

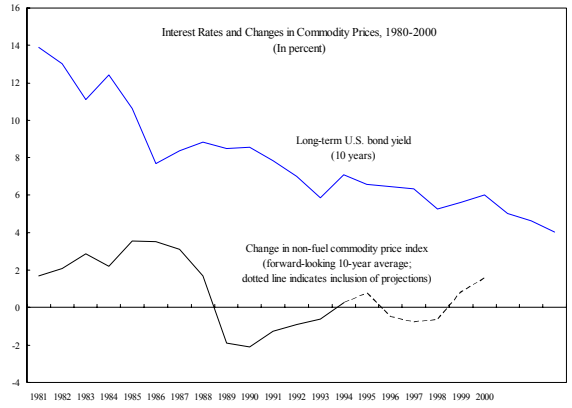
[15] A similar argument could be made if interest rate movements reflect changes in the marginal rate of return on capital (as opposed to inflationary expectations). In this case, low world interest rates would signal a weaker growth outlook in advanced economies, with similar effects on expected export earnings of low-income borrowers.

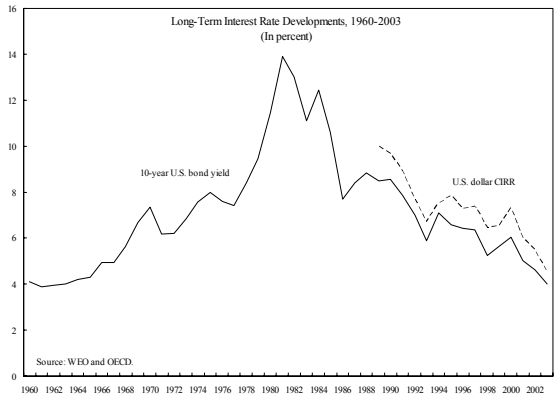
[16] See, for example, the note prepared by the IMF's Research Department on *HIPC Topping-Up—The Informational Content of the CIRR Discount Rate*, FO/DIS/04/25.

[17] The correlation coefficient of about 0.5 is derived from actual observations only, implying that the latest interest rate observation is for 1994—which is correlated with the 1994-2003 average increase in the commodity price index. Including WEO price projections (dotted line) continues the trend. Commodity prices for the current basket are available since 1980.

remain permanently at their current level (see Figure 1, right panel). Temporary interest-rate fluctuations should ideally be filtered out, but there is no reliable method to distinguish them from persisting trends. The staffs have proposed a pragmatic rule for the use of discount rates in the operational framework, which is elaborated in Section II.B.

Figure 1. Movements in Discount Rates





The Different Roles of Debt and Debt-Service Indicators

17. **Both debt and debt-service indicators play an important role in assessing sustainability and the appropriate policy response.** Debt-service indicators measure the immediate burden that debt imposes on a country in a given year, by crowding out alternative uses of scarce resources. The NPV of debt, in contrast, is a solvency indicator that provides a short-hand measure of the *entire* stream of obligations. Commensurate with the different information contained in the two indicators, sustainability analyses should focus, in the first instance, on the NPV of debt (relative to various indicators of repayment capacity) to assess a country's capacity to take on new debt, while relying on debt-service indicators to gauge the likelihood and timing of liquidity problems that are the ultimate trigger of distress.[18]

18. **Applying this general principle is not always straightforward and needs careful consideration.** There is less of an issue when high debt-service ratios coincide with low debt stocks. In the absence of a stock problem, a country's liquidity needs can be met through additional financing. The assessment is more difficult if the situation is reversed such that

[18] See Section III. A of the "Framework Paper" for a more detailed discussion of the pros and cons of using the two indicators to assess debt sustainability.

debt stocks indicate high risks, while debt-service ratios are expected to remain low.[19] In these circumstances, strict reliance on NPV of debt ratios may provide an overly conservative signal for a country's capacity to borrow, as possible distress—in terms of debt-servicing difficulties—appears a distant concern. On the other hand, long grace and maturity periods mean that a large part of payments on existing debt is not captured in 20-year projections, while debt-service ratios reflect uncertain, and possibly optimistic, assumptions. Thus, projected debt-service ratios alone may understate the risks (Box 2).

19. **Incorporating these considerations into operational guidance would suggest that high initial debt stocks may be considered an acceptable risk only if the following conditions hold:**

- The baseline shows both low debt-service ratio and declining NPV of debt ratios to levels significantly below indicative thresholds. This would signal that the envisaged borrowing path generates a robust exit from permanent reliance on highly concessional financing. A borrowing strategy in which the debt ratio remains high throughout the projection period, in contrast, would not be considered sustainable, notwithstanding low debt-service ratios in the interim, as it would leave the country excessively dependent on very favorable borrowing terms.

- The declining trend in the debt ratios below the indicative thresholds is robust to standardized stress tests and alternative scenarios. This would protect the assessment from excessive optimism and strike a balance between the baseline assumptions in the debt-service ratios and the implicit discount-rate driven assumptions captured in the NPV measure. If the stress tests show deteriorating or sustained high-debt indicators, the temporary low baseline debt-service ratios do not provide sufficient comfort.

20. **The proposed role for the existing NPV ratios as the primary solvency indicators appears reasonable, but not in isolation.** A meaningful sustainability assessment must include a forward-looking analysis of debt and debt-service indicators and appropriate stress tests. If the outlook is favorable and robust to plausible alternative assumptions and shocks, temporarily high NPV ratios may well be acceptable in balancing the cost and benefits of new borrowing, when low debt-service ratios provide valuable breathing space.

Interaction With the HIPC Initiative

21. The purpose of the HIPC Initiative is to address an *existing* debt overhang, while the new framework is intended to provide *forward-looking* guidance on new borrowing and

[19] Such a combination is not uncommon in graduated HIPCs that have benefited from a comprehensive rescheduling of existing obligations and have begun (or are projected) to borrow significant amounts after their completion points.

lending decisions. Because the HIPC Initiative requires a fully coordinated approach to provide debt relief on an equitable basis across creditors and recipients, it needs to be applied

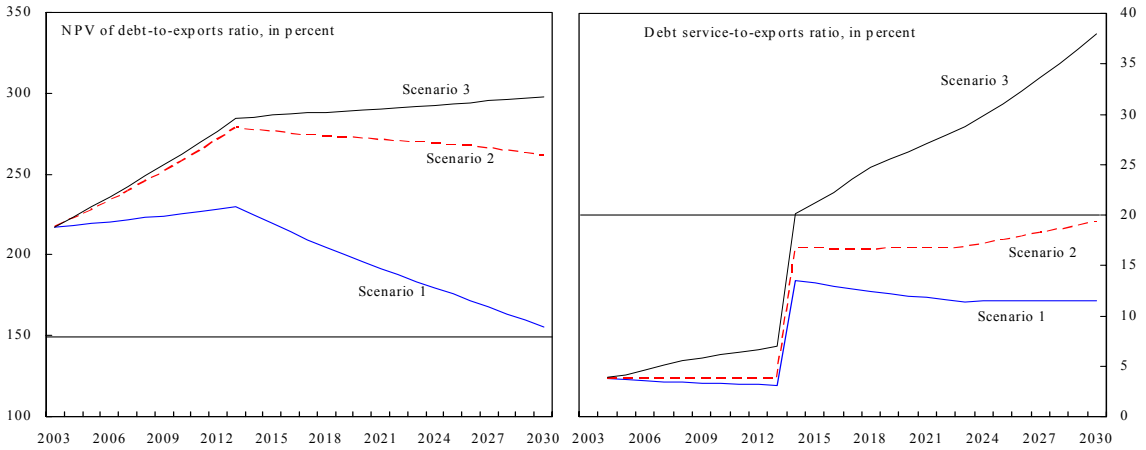
Box 2. Link Between Debt and Debt-Service Projections

Simple simulations can help illustrate the link between stock indicators and debt-service projections, shedding light on the potential risks. For this purpose, we analyze three scenarios for a country with average policies and indicative NPV of debt and debt-service thresholds of 150 percent and 20 percent of exports, respectively:

- **Scenario 1** is a stylized debt and debt-service profile for a typical post-HIPC country. The NPV of debt-to-exports ratio hovers around 225 percent for a 10-year period (i.e., clearly above the threshold), but declines gradually to the threshold of 150 percent by the end of the projection period. Debt-service ratios average around 12 percent of exports (even lower in the earlier years, when much new debt is still in the grace period). The discount rate is assumed to be 5 percent and export growth is also 5 percent—in line with historical trends. All new borrowing is on IDA terms.

- **Scenario 2** indicates a first risk factor, by assuming that export growth is 2 percentage points lower. While this affects the two indicators proportionately, it does imply that the same initial debt stock and borrowing path translate into considerably higher debt-service ratios, approaching the indicative threshold of 20 percent by the end of the projection period. But is it realistic to assume that export growth is lower than in the past? Arguably yes, to reflect a discount rate that is below its historical average by a similar magnitude.

- **Scenario 3** goes one step further by assuming that in addition to slower export growth, a growing share of new debt (starting at 10 percent in 2004 and rising to 40 percent by 2030) is contracted at less favorable terms (an interest rate of 5 percent and a maturity of 5 years). As a result, the entire portfolio's concessionality is still very high at the beginning, but declines gradually over time. Under this scenario, the NPV of debt rises somewhat above that in Scenario 2, but debt-service ratios increase dramatically to nearly 40 percent at the end of the projection period. While such financing terms may be unlikely for most LICs, the scenario highlights the need to prepare for an eventual exit from highly concessional financing by bringing debt ratios down long before debt-service ratios signal problems.



under very rigid rules and consistently across countries. This is the reason for its uniform thresholds to determine debt relief, which inevitably imply that some countries will be left with a significant risk of debt distress, while others could sustain considerably higher debt levels. The empirical analysis underlying the proposed framework has confirmed that, for countries with average quality policies and institutions, the HIPC threshold of 150 percent of exports provides a considerable cushion—fully consistent with the motivation that led to a reduction of the threshold under the enhanced Initiative, relative to its original level of 200-250 percent (Table 2).

22. **While establishing country-specific thresholds may reveal some limitations of the HIPC approach, this does not provide a basis for disregarding the empirical evidence in guiding post-HIPC borrowing and lending decisions**. The new framework provides adequate room for judgment and country-specific considerations that would be incompatible with HIPC framework requirements, but is appropriate for a forward-looking approach.[20] Whether the midpoints of the proposed threshold ranges are considered appropriate, however, is ultimately a policy decision about the tolerable risk of distress.[21] In balancing the risk of debt distress with the need for new financing, it is conceivable to apply higher (or lower) threshold ranges, corresponding to higher (or lower) distress probabilities than the historical probabilities underlying the current proposal.

[20] For HIPCs, the calculations at the completion point would have to continue to be made using the HIPC methodology, which is backward looking and may result in a different assessment from that using the methodology proposed in this paper. For HIPC countries during the interim period, appropriate transitional arrangements would have to be put in place.

[21] The proposed threshold levels were derived on the basis of historical experience, which implied a distress probability of 20-25 percent (see "Framework Paper").

Table 2. NPV-Based Debt Indicators for PRGF-Eligible Countries, 2002 1/
(In percent, unless otherwise indicated)

	HIPC Initiative status	CPIA rating (in quintiles) 2/	NPV of debt to exports		NPV of debt to GDP	NPV of debt to revenues (estimate) 3/	Revenue, excl. grants in percent of GDP
			current-year exports	3-year backward looking average exports			
Benin (2003)	Post-completion point	second	162.2	196.0	22.7	134.3	16.9
Bolivia (2003)	Post-completion point	second	157.4	176.0	33.8	198.8	17.0
Burkina Faso (2003)	Post-completion point	second	170.6	199.0	15.8	135.9	11.6
Ethiopia (2004)	Post-completion point	third	167.6	178.6	26.6	132.4	20.1
Ghana (2004)	Post-completion point	second	85.0	84.0	29.4	130.2	18.0
Guyana (2003)	Post-completion point	fourth	83.3	84.5	80.9	243.0	32.4
Mali (2003)	Post-completion point	second	120.4	134.0	32.1	211.9	15.1
Mauritania (2003)	Post-completion point	first	212.0	208.3	71.4	256.0	37.2
Mozambique (2003)	Post-completion point	third	112.7	130.0	31.3	221.1	14.2
Nicaragua (2003)	Post completion point	second	157.7	164.0	59.4	253.8	23.4
Niger (2003)	Post completion point	fourth	125.2	182.0	21.1	198.8	10.6
Senegal (2003)	Post-completion point	first	104.2	120.6	29.5	154.0	18.9
Tanzania (2003)	Post-completion point	first	126.2	140.0	22.5	195.6	11.5
Uganda (2003)	Post-completion point	first	225.7	258.0	28.8	233.6	12.3
Cameroon	Interim period 4/	fourth	103.6	98.7	26.6	140.4	18.9
Chad	Interim period 4/	fourth	295.4	295.2	36.2	257.8	14.0
Congo, Dem. Republic of (2005)	Interim period 4/	fifth	112.2	123.9	28.6	360.6	7.9
Gambia, The (2004)	Interim period 4/	fourth	142.4	168.9	82.4	504.9	16.3
Guinea (2004)	Interim period 4/	fourth	141.6	155.3	38.0	315.5	12.0
Guinea-Bissau (2004)	Interim period 4/	fifth	175.5	188.4	46.5	304.8	15.3
Honduras (2004)	Interim period 4/	first	91.5	98.1	36.3	198.2	18.3
Madagascar	Interim period 4/	third	190.6	129.1	30.5	381.5	8.0
Malawi	Interim period 4/	third	223.2	227.3	56.0	312.2	17.9
Rwanda	Interim period 4/	second	312.6	283.2	23.9	195.3	12.3
Sao Tomé and Principe (2004)	Interim period 4/	fifth	147.6	164.3	57.6	248.8	23.1
Sierra Leone (2004)	Interim period 4/	fourth	117.9	139.1	30.6	210.7	14.5
Zambia	Interim period 4/	second	166.8	179.7	47.7	266.7	17.9
Burundi	Pre-decision point	fifth	1929.7	1605.7	119.5	589.7	20.3
Central African Republic	Pre-decision point	fifth	476.7	455.3	73.0	678.0	10.8
Comoros	Pre-decision point	fifth	455.0	533.7	79.7	599.6	13.3
Congo, Republic of	Pre-decision point	fourth	200.8	202.2	162.0	595.7	27.2
Côte d'Ivoire	Pre-decision point	third	168.2	199.3	80.4	458.5	17.5
Lao, P.D.R.	Pre-decision point	fifth	274.8	277.4	78.7	684.3	11.5
Myanmar	Pre-decision point	…	134.4	140.1	44.7	…	…
Sudan	Pre-decision point	fifth	793.9	848.7	104.2	789.1	13.2
Togo	Pre-decision point	fifth	232.8	267.4	78.6	648.0	12.1
Albania		second	95.1	106.1	18.0	81.1	22.2
Angola		fifth	114.1	125.0	87.4	…	…
Armenia		second	107.0	133.9	31.7	205.8	15.4
Azerbaijan		third	41.6	47.1	17.5	62.8	27.8
Bangladesh		second	154.9	157.2	22.1	215.0	10.3
Bhutan		first	223.7	257.2	61.3	…	…
Cambodia		fourth	112.7	126.1	61.4	558.6	11.0
Cape Verde		first	136.7	156.8	41.2	182.8	22.5
Djibouti		fourth	81.0	85.1	37.3	158.5	23.5
Dominica		third	151.5	146.0	74.9	…	…
Eritrea		third	164.6	213.1	47.5	…	…
Georgia		fourth	134.3	133.7	40.6	262.1	15.5
Grenada		first	147.9	139.2	71.7	…	…
Haiti		fifth	195.5	182.8	23.6	294.5	8.0
India		first	111.5	123.3	16.8	…	…
Kenya		third	136.8	149.7	36.4	172.7	21.1
Kyrgyz Republic		third	216.8	228.5	82.3	…	…
Lesotho		third	98.2	124.6	54.6	139.2	39.3
Maldives		first	43.6	43.8	31.7	…	…
Moldova		third	141.9	164.8	74.3	508.8	14.6
Mongolia		third	117.2	113.6	65.5	…	…
Nepal		second	122.1	115.0	29.6	238.6	12.4
Nigeria		fifth	167.7	147.1	68.3	…	…
Pakistan		second	220.5	243.5	41.6	…	…
Papua New Guinea		fourth	125.2	110.4	86.4	…	…
Samoa		first	204.5	217.6	63.4	…	…
Solomon Islands		fifth	93.8	99.3	40.4	…	…
Sri Lanka		first	128.9	123.9	46.5	281.8	16.5
St. Lucia		first	115.3	110.6	59.8	…	…
St. Vincent and the Grenadines		first	98.5	96.3	46.9	…	…
Tajikistan		fifth	116.5	115.4	74.4	…	…
Tonga		fourth	142.4	168.8	36.0	…	…
Uzbekistan		fifth	145.4	136.2	45.0	…	…
Vanuatu		fourth	39.2	37.8	24.1	…	…
Vietnam		first	57.8	62.3	33.3	147.9	22.5
Yemen, Republic of		third	91.7	93.7	35.5	111.0	32.0

Sources: World Bank, Global Development Finance, HIPC Initiative documents; IMF country reports; and World Economic Outlook.

1/ Excludes Afghanistan, Kiribati, Liberia, Somalia, and Timor Leste, for which reliable data is not available. Data refer to 2002, unless otherwise indicated.
2/ First quintile corresponds to strongest and fifth quintile to weakest performance.
3/ Derived by dividing NPV of debt-to-GDP ratio by revenue-to-GDP ratio for 2002. For Guyana, Ghana, Mauritania and Senegal, ratios are consistent with latest available HIPC estimates.
4/ For countries in the interim period the NPVs are estimated after HIPC relief and additional bilateral assistance but before possible topping up.

B. Analysis of Debt Dynamics

23. **Consistent analysis of the debt dynamics of LICs is a key feature of the proposed framework.** For this purpose, standardized templates have been developed, complementing those applied in the Fund to countries with significant financial market access.[22] The two templates—for public and external debt—are tailored to the specific circumstances of low-income borrowers, by (i) deriving debt stocks in present value terms (to account for their concessional nature); (ii) expressing debt and debt-service ratios relative to alternative measures of repayment capacity (to acknowledge the varying constraints); and (iii) extending the projection horizon to 20 years (to account for long grace and maturity periods).[23]

24. **Directors generally endorsed the proposed approach, but requested clarification and possible refinements in three key areas:** (i) the coverage of debt and, in particular, the role of domestic debt in sustainability analyses; (ii) the operational rules for discount and exchange rate assumptions; and (iii) the practical application of the framework.

Coverage of Debt

25. **The two templates analyze total external and total public and publicly guaranteed debt, respectively.** Including private external debt in the external template and domestic debt in the public sector template is required for a thorough analysis of debt sustainability, and is consistent with the approach adopted in the Fund for "market-access countries." However, using debt concepts in the templates that are broader than the concept underlying the empirical threshold analysis (public and publicly guaranteed external debt), raises the important issue of how to interpret the resulting debt-burden indicators.

26. **Directors agreed that private external debt is potentially less troublesome and unlikely to pose a problem in most LICs.** Increasing levels of private sector external debt from a low base are generally a positive sign of growing business activity. Monitoring private debt, however, is important, as there may be instances in which the private sector takes on excessive risks, typically in the context of explicit or implicit government guarantees, including on the level of the exchange rate.[24] However, the assessment of whether private

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[22] The approach applied in the Fund for "market-access countries" was developed in "Assessing Sustainability" (IMF (2002)) and further refined in "Sustainability Assessments—Review of Applications and Methodological Refinements" (IMF 2003).

[23] A 20-year projection period reflects a balance between realism in the forecast horizon and the desire to capture a significant part of the debt-servicing implications of existing debt.

[24] The concern is one of contingent public sector liabilities—including for bank bailouts—and of sharp currency depreciations, which would directly affect the domestic-currency value of the government's external debt and could have severe macroeconomic consequences.

debt is excessive and how to respond, requires an approach that is tailored to the specific circumstances and origins of the problem.

27. **Domestic debt of the public sector, on the other hand, is already a serious issue in a number of LICs, but its integration into the sustainability framework is complicated**. From the perspective of sustainability, public sector domestic debt is as important as external debt, since the impact of debt service on the budget—and envelope for other expenditures—is independent of whether payments are due on external or domestic obligations. However, besides difficulties of collecting reliable and consistent data, a symmetric treatment of domestic and external obligations based on comprehensive public debt thresholds would also risk giving misleading signals, by not accounting for important differences between these two categories of debt in LICs. As elaborated in Appendix I, these differences, as well as those across countries, warrant a separation of the two components under the framework, and an approach to domestic debt that is more closely tailored to country-specific circumstances.[25]

Clarification of Discount and Exchange Rate Rules

28. **The template derives the NPV of debt based on a single discount rate.** As argued earlier, the operational discount rate rule needs to strike a balance between the advantages of using the most current information and the desire to limit fluctuations in NPVs in response to temporary interest rate movements. Currently currency-specific commercial interest reference rates (CIRRs) are used as discount factors for calculating both NPV under the HIPC Initiative and concessionality of new borrowing under Fund-supported programs.[26] The former applies backward-looking six-month averages, while the latter moves to ten-year averages, when the respective loan has a maturity of 15 years or more. For the forward-looking framework, the staffs proposed a different method to reduce the month-to-month volatility of the HIPC method, but without reliance on outdated historical information.[27]

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[25] Appendix I also illustrates how such an approach has been applied in practice in the context of Fund-supported programs.

[26] CIRRs correspond to secondary market yields on government bonds with maturity of more than 5 years (and more than 8½ years for the major currencies).

[27] The discount rate is set initially at 5 percent (close to the U.S. dollar CIRR) and adjusted by a full percentage point, whenever the U.S. dollar CIRR (six-months average) deviates from the prevailing discount rate by at least this amount for a consecutive period of six months. See Box 2 in the "Framework Paper" for a discussion of the underlying rationale. This rule, however, will be reviewed periodically to ensure that it is the most appropriate way to calculate the present value of debt stocks. In the meantime, stress tests may be used to determine debt stocks under alternate discount rate scenarios, including the current discount rate.

29. **Directors broadly endorsed this operational discount rate proposal, but requested more explicit and uniform rules for the corresponding exchange rate projections.** The simplified rule of applying a single discount rate, linked to the U.S. dollar CIRR, necessitates exchange rate projections.[28] From an operational perspective, the easiest rule for converting debt-service payments on different-currency loans into U.S. dollars, would be to use World Economic Outlook (WEO) exchange rate assumptions for the available years, and constant rates thereafter. These assumptions are rules—based, assuming constant real exchange rates across the advanced economies, with inflation projections informed by market forecasts.[29] While various alternatives are feasible, including the use of forward rates or of the exchange rates implied in CIRR differentials for the corresponding (e.g., 10-year) periods, these are operationally more complex without necessarily generating more accurate results. Using WEO assumptions would implicitly acknowledge that exchange rates between major currencies are nearly impossible to project beyond a relatively short horizon. Moreover, since WEO assumptions already form the basis of Fund staffs' country-specific medium-term projections, using them to convert debt service would provide internal consistency.[30]

Assessing Debt Sustainability in Practice—The Case of Uganda

30. **The case of Uganda provides a useful practical illustration of the suggested approach for assessing external debt sustainability.**[31] As elaborated in Appendix II, such an assessment involves four steps: (i) determining the indicative thresholds for the relevant debt-burden indicators, based on a country's assessed quality of policies and institutions; (ii) analyzing debt dynamics under the baseline scenario in relation to the thresholds; (iii) interpreting stress test results; and (iv) assessing the appropriateness of the borrowing path and associated risk of debt distress.

31. **In the case of Uganda, various considerations combine to suggest a moderate risk of debt distress under current borrowing plans:**

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[28] This contrasts with the use of currency-specific discount rates, which effectively extends the exchange rate assumptions implicit in interest differentials over the lifetime of a loan.

[29] For the generally small share of debt contracted in currencies of other developing countries, a constant exchange rate vis-à-vis the dollar could be assumed.

[30] In countries using debt management software that does not allow for different exchange rates for debt-service projections, it is suggested to use exchange rates *at the end* of the five-year WEO projection period to convert all future debt-service payments into U.S. dollars.

[31] A parallel analysis would be expected to be conducted for public sector debt.

- All Uganda's debt-burden indicators under the baseline projections remain below the indicative thresholds, with a particularly large margin for the debt-service ratio.

- The baseline projections embody conservative assumptions relative to the country's historical trend (over the past 10 years).

- Under the simulated export shock, Uganda's NPV of debt-to-exports ratio would rise above the indicative threshold by 60 percentage points over a ten-year period, but would return below the threshold by the end of the projection period.

- The debt-to-GDP and the debt service-to-exports ratio remain clearly below the thresholds under all stress tests.

Thus, although the export shock signals significant vulnerabilities, the robustness of the debt-to-GDP and debt-service ratios within a conservative baseline, suggest only a moderate overall risk of debt distress.

III. Modalities for Collaboration

A. Preparing Debt Sustainability Analyses

32. **Given the desirability of reaching a consistent Bank-Fund assessment of debt sustainability, a high degree of collaboration between the two institutions in preparing DSAs will be essential**. To minimize the resource and workload implications, it would be desirable to incorporate DSA preparation into the existing operational practices of both institutions. The modalities for applying the DSA framework should allow the staffs to benefit from each institution's expertise, and be consistent with the uses of DSAs by each institution. Close collaboration would prompt a consistent approach to debt sustainability and provide a coherent view to low-income countries and the donor and creditor community. At the same time, each institution's accountability should be preserved in line with their separate mandates. Modalities include the frequency of preparation, the need for dialogue with country authorities and other creditors, the need for close collaboration between staffs, and mechanisms for resolving differences.

Frequency of DSAs

33. **Ideally, a DSA for each LIC should be prepared on a regular basis, which is relevant to both IDA-members at the Bank, as well as borrowing and surveillance-only members at the Fund**. For the Fund, in light of the underlying importance of the macroeconomic framework, the DSA would typically be prepared in the annual Article IV

consultation cycle.[32] The DSA would typically be presented to the Fund Board as an annex or supplement to the Article IV staff report. For the Bank, the DSA would be needed for the CAS or other relevant economic reports and the primary vehicle for presenting the DSA would be as an annex to the Country Assistance Strategy (CAS) or other relevant economic reports.[33] In principle, most Bank and Fund documents that propose new, or review existing, financial assistance could also append the latest DSA.[34]

34. **Given the long-term nature of DSAs, there ought to be little need for updates outside a regular cycle.** Stress tests would provide for an assessment based on a wide range of variations in the debt outlook, limiting the need for off-cycle DSAs. However, there could be circumstances where an institution may need to update the DSA more frequently. DSA revisions would be most likely in cases where a country is in, or at high risk of, debt distress.

- Where a new *lending decision* is being presented to either Board with some lag since the last DSA, but ahead of the annual cycle (say, 10 months), the analysis may need to be updated to provide useful input to that lending decision.

- A significant *shock* resulting in a substantial shift in the baseline (which may be difficult to predict ex ante) may warrant a re-evaluation of both institutions' policy advice and/or lending.

Whenever the Bank or Fund update a DSA, the institution conducting the update would consult early in its production and the other institution would collaborate on the analysis.

Dialogue with Country Authorities and Other Creditors

35. **In the preparation of DSAs, it will be essential for Bank and Fund staffs to work closely with country authorities**.[35] During missions, the staffs would—as is already the practice—discuss with country authorities key assumptions for the baseline analysis such as

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[32] For a country that is fairly stable, a DSA could be prepared every other cycle, as is the practice for middle-income countries. Program countries on a 24-month cycle could have DSAs prepared in another context (e.g., PRGF review).

[33] These could include Public Expenditure Reviews, Development Policy Reviews, or special-topic reports focusing on debt or fiscal management.

[34] As DSAs would need to be presented to the Bank Board more frequently than CASs (which have a 3-4 year cycle), they could also be appended to CAS updates, PRSCs, PERs, DPRs, etc. For the Fund, DSAs could inform PRGF requests, and ex post assessments.

[35] Bank and Fund staff would also follow established guidelines in the sharing of confidential information.

the medium-term outlook and new borrowing projections. It would also be helpful to seek the authorities' input on the key risk factors that could inform the choice of alternative scenarios. By increasing familiarity with the DSA framework, this dialogue should also reinforce efforts to develop countries' debt management capacities. Bank-Fund TA operations on debt issues could play a role in disseminating this framework at the country level.

36. **It would also be crucial to collaborate with key creditors when preparing a DSA.** Missions would also provide an opportunity to meet other creditors and reconfirm the details of their prospective lending. To facilitate a broader appreciation of a country's debt sustainability, sharing DSAs with all creditors soon after presentation to the Boards could be helpful inputs into their own thinking and lending policies.

Need for Bank-Fund Collaboration in Preparing DSAs

37. **Given the implications of DSAs for aggregate financing and donor coordination in LICs, it is important that they are prepared in a transparent, collaborative manner.** Under the Bank-Fund Concordat on collaboration,[36] the Fund is responsible for the macroeconomic framework.[37] At the same time, given the long-term nature of the parameters underpinning the DSA, the Bank's focus and expertise on medium-term outcomes are important.

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[36] Guidelines for collaboration between the two institutions have been in place since 1966, and were clarified in the 1989 Concordat, *Bank-Fund Collaboration in Assisting Member Countries* (SM/89/54, Revision 1 and R89-45, 3/31/89). Subsequently, several papers and guidance notes have been issued to reflect the growing coverage of work and strengthen particular aspects of collaboration; e.g., *Report of the Managing Director and the President on Bank-Fund Collaboration* (SM/98/226, Revision 1, 9/25/98) and *Strengthening IMF-World Bank Collaboration on Country Programs and Conditionality* (SecM2001-0461/1, 8/24/01, and SM/01/219, 8/23/01).

[37] As indicated in the Bank-Fund Concordat: "The Fund has among its purposes the promotion of economic conditions conducive to growth, price stability, and balance of payments sustainability and is required to exercise surveillance on a continual basis over the performance of its members as defined by Article IV. The Fund is empowered to provide temporary balance of payments financing to members to enable them to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity. Thus, the Fund has focused on the aggregate aspects of macroeconomic policies and their related instruments—including public sector spending and revenues, aggregate wage and price policies, money and credit, interest rates and the exchange rate. The Fund has to discharge responsibilities with respect to surveillance, exchange rate matters, balance of payments, growth-oriented stabilization policies and their related instruments. These are the areas in which the Fund has a mandate, primary responsibility, and a record of expertise and experience."

38. **It will be important, therefore, to put in place an effective framework for collaboration based on the following principles:** coordination of work programs in advance, upstream engagement and consultation on the substance of the work, allowing time for genuine differences to be resolved, and transparent recording of final outcomes including the views of the other institution.

39. **Several specific areas of collaboration are also envisaged:**

- First, in line with existing practice, the two staffs should have a common understanding of the country's expected volumes and terms of borrowing as the basis for debt stock and debt-service projections. In addition to the Bank's medium-term lending scenarios, other key creditors would also be consulted as to their lending plans.

- Second, Fund and Bank staffs would be expected to reach understandings on elements of the macroeconomic framework, in line with each institution's responsibilities under the existing procedures for Bank-Fund collaboration. The Bank would focus on determining medium-term real GDP and export growth, but could provide inputs on other aspects, on a case-by-case basis, where the Bank country team has expertise or a body of work relevant to the analysis underlying the base case scenario (e.g., public expenditure management, the investment environment, or current transfers (including remittances)). The Fund would focus on aggregate aspects of macroeconomic policy (i.e., the fiscal deficit, revenues, expenditures, monetary and exchange rate policies, and the balance of payments).

- Third, Bank and Fund staff would work closely to analyze the debt dynamics. The use of a single template would ensure common stress-testing. However, country-specific alternative scenarios (and exceptional adjustments to the stress tests[38]) could be used to reflect special concerns of one of the two institutions.

- Finally, DSAs would include a concluding paragraph presenting an assessment of the level of debt risk where the Bank and Fund staff would seek to reach agreement. The assessment could be anchored around four broad classifications of debt risk (e.g., low, moderate, high, and in distress). The nature and role of these risk classifications are discussed in Box 3.

While the DSAs and the risk classification would be undertaken collaboratively, each institution would be responsible for its own assessment and for reporting on its views to

[38] For example, where narrow or particularly volatile data sets would result in the questionable relevance of the standardized stress tests. However, any exceptions would need to be described clearly and transparently.

its respective Board. Such an approach would: (i) make the Fund and the Bank clearly accountable to their respective Boards for the formulation of DSAs; and (ii) be less resource-intensive than a HIPC-like exercise, while avoiding the risk that one institution's clearance of the DSA could delay the other institution's operations. It is likely that a coherent position of the Fund and the Bank vis-à-vis countries and other creditors would be achieved in nearly all cases, given the need to seek agreement on a common risk classification. However, in the few remaining cases, the differences would be transparently presented to the Fund and Bank Boards for discussion, affording the other institution the opportunity to present and explain any dissenting assessment in its own words, and thus enabling the Boards to make an informed decision in reaching a common assessment of sustainability.

Mechanism for Resolving Differences Between Bank and Fund Staff

40. **There may be instances where Bank and Fund staff do not agree on appropriate assumptions underpinning the DSA,** including volume or concessionality of lending or the choice of alternative scenarios. As fundamental differences are expected to be few, a separate resolution mechanism is not needed.

- In most cases, differences of view could be accommodated through stress tests that demonstrate different outcomes using different assumptions.

- Beyond this, Bank and Fund country teams would generally resolve differences through existing procedures, including discussions between Directors of regional/area departments.[39]

- These procedures are expected to narrow differences in all but a few cases.

[39] For example, see *Operationalizing Bank-Fund Collaboration in Country Programs and Conditionality Staff Guidance Note,* April 2002. The role and terms of reference of the Joint Implementation Committee are still under discussion.

Box 3. Proposed Low-Income Country Debt Distress Classifications

The DSA framework would allow the staffs to classify a country's risk of debt distress. This would facilitate the consistency of treatment among members and cross-country comparability of assessments. A broad classification system could also help enhance the quality and conclusiveness of the analysis, without being unduly precise. The goal is to raise awareness of the need for possible policy response and to provide a framework for such responses.

The staffs propose that the baseline scenario be based empirically on debt indicators. Broader issues related to debt sustainability, namely the quality of policies and vulnerability to exogenous shocks, would be brought to bear in assessing the overall level of risk via stress tests and alternative scenario(s). A strict debt-related assessment would help minimize misinterpretation as a broader policy rating.

For countries that are at moderate risk of debt distress or above, their past record in meeting debt service obligations would also be a factor in determining the classification, given the empirical evidence on this issue. Four suggested categories and related criteria are outlined below:

- **Low risk**: All debt indicators are well below the relevant policy based thresholds. Alternative scenarios and stress tests do not result in indicators breaching thresholds in any significant way. The country is currently meeting debt service obligations.

- **Moderate risk**: While the baseline scenario does not indicate a breach of thresholds, alternative scenarios and stress tests show a substantial rise in the debt-service ratio over the projection period nearing the thresholds and/or a breach of debt-stock ratios. The country is currently servicing its debt but has, on occasion, run sporadic arrears to individual creditors.

- **High risk**. The baseline scenario indicates a breach of debt stock and/or service ratios over the projection period. This is exacerbated by the alternative scenarios/stress tests. The country is running sporadic arrears and/or has a history of default.

- **In debt distress**: Current debt stock and service ratios are in significant and/or sustained breach of thresholds. The country is running arrears to multiple creditors and/or poses a significant risk of defaulting on its debt-service obligations in the absence of major debt reduction/restructuring.

B. Addressing or Averting a Debt Sustainability Problem

41. **DSAs based on the latest information and projections—the macroeconomic framework, and the amount and terms of borrowing—would not prescribe an optimal or maximum path of NPV, but would serve a diagnostic role**. However, when a DSA signals a risk of debt distress, the Bank and Fund would need to tailor their policy advice and operations to help mitigate the country's debt problems. It could also have implications for the lending plans of other creditors.

Underlying Principles and Choices

42. **Depending on a country's circumstances, the response could range from domestic policy adjustments to changing the terms of planned borrowing.** For a country breaching prudent debt thresholds, the priority would be to bring these indicators down to a more acceptable path that will allow it to achieve sustainability over the medium term. This could happen with an acceleration in exports, growth, and revenues, making the debt burden more sustainable. In the absence of accelerated growth, there are essentially two options available to the country and its development partners: (i) increase the degree of concessionality so as to maintain (or increase) available financing; and/or (ii) fiscal adjustment (with a corresponding reduction in borrowing at existing terms).

43. **Given LICs' pressing development needs, priority needs to be given to efforts to increase the concessionality of financial flows**, particularly to those LICs most at risk of debt distress. Individual countries will ultimately be responsible for determining the composition of their borrowing. Two basic principles should underpin a prudent medium-term financing strategy: (i) new lending should be geared to a country's capacity to carry debt. This, in turn, depends on the country's ability to use these resources effectively for development and growth, and on its vulnerability to shocks; and (ii) where resources, beyond a country's capacity to carry debt, are needed and may be employed productively to generate growth and achieve the MDGs, these resources should be provided in the form of grants rather than loans (or even more concessional loans).

Responding to a Sustainability Problem

44. **For some countries, DSAs will demonstrate tensions between financing requirements in pursuit of the MDGs and debt sustainability considerations, and hence the need for more favorable financing terms**. The severity of the debt problem and creditors' abilities to respond would determine the appropriate response. In cases where grants cannot be augmented, this might entail tough choices about the timeframe for implementing specific measures in support of the MDGs. The alternative implies that countries continue to borrow, and creditors continue to lend, into unsustainable situations, which could cover immediate financing needs but pose longer term problems for the viability of creditors' lending and the country's development objectives. Ultimately, dealing with unsustainable debt will require either excessive adjustment that would risk derailing any progress already made toward the MDGs or provision of grants ex post and in a nontransparent fashion through future debt relief.

45. **Tailoring country-specific advice will require close coordination between Fund and Bank country teams, in consultation with other creditors**. Be it through more favorable terms or fiscal adjustment, it is not feasible for a country's NPV ratios to improve dramatically in the short term. For example, it would be unreasonable to expect a country with an NPV of debt-to-revenue of 300 percent to very quickly reduce that ratio to below a threshold of, say, 250 percent. Consequently, there is a case for providing countries with

breathing space to allow for a medium-term response. There is, however, no prescription for the extent to which adjustment—in financing terms or policies—could be back loaded. Bank and Fund teams will need to weigh sustainability concerns against the impact of a substantive reduction in the nominal amount of resource flows on achieving the country's development needs.

46. **The policy advice and lending decisions of the Fund and Bank should respond to a debt problem**. The implications for IDA operations and Fund program design are taken up in the subsequent section, with the following discussion focusing on the process of policy choice.

47. While countries in debt distress might typically have a Poverty Reduction and Growth Facility (PRGF) arrangement, **a DSA prepared for either surveillance only or PRGF borrowing countries should play an equal role in informing creditors' lending decisions**.

- In an Article IV consultation, Fund staff should assess the impact of the expected course of policies and borrowing (volume and terms) on the risk of debt distress. In addition to the baseline, the DSA could indicate what sort of increase in concessionality of lending or, absent that, fiscal adjustment would be needed to achieve an *illustrative* improvement in the NPV path.

- A DSA undertaken in the context of a request for or review under a PRGF arrangement will require a more iterative process. Fund lending into a potentially unsustainable or high risk case should be conditioned on an appropriate response.

    - Given already committed financial support and creditors' lending procedures, it would be unreasonable to assume an immediate increase in concessionality. Therefore, to avoid a disruptive suspension of a Fund-supported programs pending this response, a stronger medium-term fiscal adjustment might be needed to help restore debt sustainability.

    - The adjustment scenario would form the baseline for the Fund-supported program, with implications for the DSA.[40] This is not to say that there should be an immediate adjustment—depending on a country's circumstances, the fiscal adjustment could be backloaded in the hope that the concessionality of financial assistance could be increased before any domestic adjustment became necessary.

    - The program could also provide guidance to the country and creditors about the scope for flexibility in subsequent reviews should higher concessional financing

[40] It would also be helpful for the DSA to present a pre-adjustment scenario, signaling the degree of debt distress, as the justification for the adjustment scenario.

be available.[41] The DSA could indicate an alternative fiscal path that could achieve an NPV path similar to the baseline *provided* more concessional financing were available.[42]

48. **The Bank's primary response to debt distress would involve increasing concessionality, including by the provision of grants where feasible**. This is being explored, with the proposal to IDA Deputies that debt sustainability be the sole basis for grant allocations in IDA-14 (as elaborated in Section IV.A). In addition, it is expected that CASs would highlight debt sustainability considerations and lending programs would factor in a country's risk of debt distress, especially where adequate grants may not be forthcoming.

49. **The Bank could also assume responsibility for a coordinated response by donors and creditors, for example, through existing mechanisms for collaboration, including consultative group (CG) meetings**. An effective solution to countries' debt sustainability concerns will require close engagement with other creditors. For countries identified as at risk of debt distress, the Bank could convene a special CG meeting where options to address the problem, including provision of additional grants, could be discussed. Typically the DSA would be distributed prior to the CG meeting. As noted previously, it would be based on each creditor's baseline plan for new disbursements and provide some indication of the "concessionality gap" as the basis for considering modified lending terms based on the overall assessment of sustainability. In most cases, CG meetings will provide an appropriate forum to examine the findings of the DSA and consider the necessary response. However, this would not preclude consideration of these issues in other donor groupings—such as a PRSP-related event.

IV. Implications for World Bank and IMF Operations

A. Implications for IDA

50. **The debt sustainability framework is being considered to form the basis for allocating concessionality in IDA-14.** The international community has indicated broad support for debt sustainability as the central criterion for determining the provision of grants vs. loans in IDA-14, as well as in other multilateral development banks where replenishment negotiations are underway (notably the Asian Development Bank and the African Development Bank). It was noted in the Chairman's Summary of the first meeting on the 14th Replenishment of IDA resources, "the Bank should work closely together with other partners

[41] An overall deficit limit excluding grants would provide some automatic flexibility.

[42] The alternative fiscal path scenario would effectively present the gap of unidentified financing with a specified average grant element and, if needed, the "concessionality gap" showing the required increase in average concessionality.

to explore how best to incorporate debt vulnerability considerations into the work of IDA."[43] IDA responded by adopting features of the proposed framework to determine countries at risk of debt distress and proposing a grant allocation rule based on this classification. This was presented to IDA Deputies in Hanoi in July, 2004.[44] Given the timeline for the IDA-14 negotiations, IDA's proposal for grant allocation is fairly advanced, though there will be scope for modifying the proposal once the debt sustainability framework is finalized.[45]

51. **Grants were introduced in IDA operations in the IDA-13 Replenishment Agreement, but debt sustainability was one of several criteria used to determine grant eligibility.** IDA-13 used debt sustainability as a criterion for grant eligibility, along with various other eligibility criteria—income, post-conflict, natural disasters, and HIV/AIDS. IDA-13 grants were allocated among these categories based on a compromised formula where the overall grant percentage was set ex-ante and the level of grants for each of the various eligibility criteria was derived on an ad hoc basis to accommodate this overall cap on grants. While the eligibility criteria captured most of the debt-distressed countries, the maximum of 40 percent grants for any country classified as "debt vulnerable"[46] could not differentiate countries based on their relative risks of debt distress. This meant that every country classified as debt distressed in IDA-13 was eligible for the same level of grants irrespective of the relative magnitude of the problem a country faced. Hence the allocation system was not optimal in dealing with the debt problem. This would change significantly with the adoption of the new debt sustainability framework as the sole platform for grant eligibility.

52. **It is important to note that this modification will not impact IDA's Performance Based Allocations (PBAs),[47] but, will rather impact the terms of those allocations**. The current practice is to use the PBA, a simple allocation rule, to determine a three-year allocation for each IDA borrower in each IDA replenishment period. The PBA is based on needs as well as performance, and uses a country's GDP per capita, population, an index of

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[43] *Chairman's Summary*, IDA Deputies Meeting, Paris, France: February 18-20, 2004.

[44] See "Debt Sustainability and Financing Terms in IDA-14," IDA, May 2004.

[45] During the second IDA-14 meeting, Deputies asked staff to test further hypotheses and options with respect to country classification, grant allocation mechanisms and thresholds, and financing of grants. *Chairman's Summary,* IDA Deputies Meeting, Hanoi, Vietnam: July 9-11, 2004.

[46] In IDA-13, debt vulnerability was measured by country debt ratios and a concentration of exports index.

[47] Except in that grant recipients will likely be subject to a volume discount on their grant allocations.

project and program management performance (ARPP[48]) as well as its latest CPIA to determine its IDA allocation.[49] This step of the allocation process would not be impacted by the debt sustainability framework. Rather the framework would form the basis on which IDA would decide the terms that each IDA borrower would receive.

53. **Using the debt sustainability framework, the level of grants in IDA's financing would be an outcome, and not a pre-specified input, as was the case in IDA-13.** The approach set out in IDA's proposal derives the grant component of IDA support from the systematic classification of countries at risk of debt distress and accordingly, the allocation of grants to a level responsive to need. Using the debt sustainability criteria outlined in the framework paper is a more useful way to allocate grants in IDA than the IDA-13 debt vulnerable classification, as it would allow moderating the level of grants in an individual country to differentiate between countries with a medium level of debt distress and those that are highly debt distressed.

54. **The current IDA proposal is based on the first pillar of the Framework Paper, which establishes policy-dependent indicative thresholds for external debt burden indicators.** In the proposal, the first pillar is operationalized using existing debt data to develop a debt distress-based ranking system for grant eligibility under IDA-14. This ranking system involves a 4-step process: (i) selection of debt burden indicators; (ii) measuring how countries fare according to those indicators; (iii) establishing a decision rule on how to classify countries based on their relative debt distress level; and (iv) incorporating this information into a ranking system that determines the appropriate loan and grant mix for an individual country. Box 4 illustrates the application of this system to the Kyrgyz Republic. It

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[48] The Bank's Annual Report on Portfolio Performance index.

[49] The IDA Country Performance Rating is calculated as follows. First, for each country, a weighted average of the CPIA (80%) and the ARPP (20%) is calculated. Second, this number is multiplied by a "governance factor," which in turn is derived from six governance-related items of the CPIA plus the procurement practices criterion of the ARPP. IDA allocations in per capita terms are then determined as follows:

$$\text{Per Capita Allocation} = f(PR^{2.0}, GNIPC^{-0.125}),$$

Where PR is the IDA Country Performance Rating and GNIPC is per capita gross national income. See IDA (2003). *Allocating IDA Funds Based on Performance. Fourth Annual Report on IDA's Country Assessment and Allocation Process,* Washington, D.C., March 2003.

is expected that the current ranking system will eventually be replaced by using the risk classifications that emerge from the DSAs.[50]

Box 4. Illustrating the Decision Rule: The Case of Kyrgyz Republic

1. Policy performance—medium performer (CPIA between 25th and 75th percentile)

2. The relevant thresholds for that level of performance are: (i) 45 percent for the NPV of debt-to-GDP ratio; (ii) 200 percent for the NPV of debt-to-exports ratio; and (iii) 25 percent for the debt-service-to-exports ratio. The table below shows how percentage distances from each relevant threshold are computed:

Debt Burden Indicators	Relevant Debt-Burden Thresholds (percent) (a)	2002 Figures (percent) (b)	Percentage Distance from Threshold (c) = [(a)-(b)]/(a)
NPV of debt-to-GDP ratio	45	81	**-81**
NPV of debt-to-exports ratio	200	226	**-13**
Debt-service-to-exports ratio	25	29	**-18**

In all three individual cases, the actual debt burden indicators for Kyrgyz Republic exceed their respective thresholds. The composite stock indicator averages the percentage distances for both stock indicators, yielding a joint percentage distance of –46.7. To allow for a comparison with the flow indicator's percentage distance from threshold, we use the following cut-off to assign risk ratings to Kyrgyz Republic (see discussion in main text):

- More than 10 percent below the threshold: low risk of debt distress.

- Between 10 percent below and 10 percent above threshold: medium risk of debt distress.

- More than 10 percent above threshold: high risk of debt distress.

For both the composite stock indicator and the flow indicator, Kyrgyz Republic is well beyond 10 percent above the appropriate thresholds (although, in this case, the composite indicator dominates the flow indicator, as it yields a much higher percentage distance). Therefore, the data indicates that Kyrgyz Republic is unequivocally a high-debt-distress country, which warrants assigning it a "high risk" ranking. Under the modified volume approach, Kyrgyz Republic would get 100 percent of its IDA support in the form of grants, but it would also be subject to a 20 percent volume discount relative to its allocation emerging from the PBA system.

[50] In the interim, available HIPC DSAs could be used to add a forward looking dimension to the assessment of debt distress. This was done for Ethiopia, which was initially given a "low risk" rating on the basis of current data.

55. **IDA management considered several allocation options to respond to concerns regarding debt sustainability.** A basic prerequisite for an acceptable approach to grant allocation is to strike an appropriate balance between: a) the need to maintain a strong policy performance and broad inter-country equity in IDA resource allocation, and b) the need to maximize resources available to help countries meet the MDGs. Two approaches were analyzed in depth: a "volume" approach, and a "grant element" approach.

56. **A "pure" version of the volume approach can be described in two main steps:**

- Step 1: Allocate volumes based on the Performance Based Allocation system, as is currently the practice.

- Step 2: Assign grant and credit shares for each country's volumes, as follows:

    - Low risk of debt distress: credits = 100 percent.

    - Medium risk of debt distress: grants = 50 percent, credits = 50 percent.

    - High risk of debt distress: grants = 100 percent

This approach would maximize volumes today to reach country MDG goals, while addressing debt-sustainability issues up-front through the terms of IDA assistance. However, it has two main shortcomings. First, it raises issues of inter-country equity, whereby countries with similar CPIA ratings, income levels, and per capita IDA allocations could receive strikingly different terms. This could reduce incentives for countries to adopt prudent debt management strategies. Second, by offering increasingly softer terms for poorer-performing countries, without a reduction in volume, the volume approach would weaken somewhat the very strong relationship maintained by IDA between policy performance and the value of resource transfers.

57. **The grant element approach can be described in three steps, of which the first two are exactly the same as in the "pure" volume approach. The third step is as follows:**

- Step 3: Adjust volumes for each term category:

    - 100 percent credit recipients: no volume discount.

    - 100 percent grant recipients: 40 percent volume discount. They receive only the equivalent of the grant element (60 percent) of their PBA volumes.

    - Recipients of 50 percent grants, 50 percent credits: 40 percent discount on the grants portion, no discount on credits, totaling 20 percent overall discount.

The resulting unallocated envelope could be redistributed, e.g., as grants on the basis of an income criterion, on a *pro rata* basis. The grant element approach avoids the equity and

incentive concerns resulting from the "pure" volume approach. However, its severe volume reductions (up to 40 percent) to a number of grant recipients may be disruptive to their development programs.

58. **To address the shortcomings of the above approaches—namely undesirable incentive effects and unacceptable volume reductions—IDA has proposed a "modified volume approach" which introduces an upfront 20 percent volume reduction on grants.** The lower IDA volumes for grant recipients resulting from the upfront volume discount helps reduce the inequity and the disincentive to prudent debt management associated with the "pure" volume approach. In fact, the "modified" version of the volume approach restores much of the policy-responsiveness of the present value of IDA resource transfers lost with the "pure" volume approach. At the same time, it avoids the potentially negative development impact stemming from the more drastic volume reductions implied by the grant element approach.

59. **The IDA proposal was discussed during the second IDA-14 meeting in Hanoi, Vietnam, from July 9-11, 2004, and was generally well received by IDA Deputies**. Deputies agreed that the use of grants in IDA should be anchored in the assessment of countries' debt sustainability and that the proposal presented by staff provided a basis for developing this approach. They asked for work to test further hypotheses and options with respect to country classification, grant allocation mechanisms and thresholds, and financing of grants. They also encouraged IDA to engage with the Fund and other multilateral development banks in finalizing its allocation mechanism.

B. Implications for Fund-Supported Programs and Surveillance

60. **As noted above, the debt sustainability framework seeks to ensure that the resources being transferred to low-income countries to help them achieve the MDGs are made available on terms that do not threaten their medium-term viability**. In this context, the critical operational issues are which economic aggregates Fund-supported programs should target and, relatedly, the appropriate form of conditionality. This section considers these issues.

61. **While debt sustainability concerns are an important feature of program design and surveillance, *conditionality* in Fund-supported programs does not directly focus on debt sustainability**. Typically, programs include a performance criterion (PC) limiting the amount of nonconcessional government and government guaranteed debt that a country can borrow. The degree of concessionality is measured by the grant element of the loan—with financing usually defined as concessional if its grant element is at least 35 percent. And subject to this concessionality requirement being met, a country can generally borrow unlimited amounts from abroad. The exception to this are those programs that have limits in the form of PCs on the overall fiscal deficit—though, even in these cases, programs tend to accommodate concessional borrowing for specific categories (such as project loans). This construct, however, has some shortcomings. First, for most countries, there is no ceiling on

medium- and long-term external concessional borrowing and, therefore, on overall debt. Second, conditionality does not take into account a country's ability to pay and does not respond to signs of debt distress. Third, even concessional borrowing when used to finance projects with low rates of return or returns that may not generate income that can be captured by the government can lead to an unsustainable build-up of debt, as witnessed in the past.

62. **Supplementing the current limits on concessional borrowing with *indicative targets* on the NPV of external debt would allow a better focus on debt sustainability**. Targets on the maximum NPV of external debt would allow for a more direct link to a country's ability to service its debt. This would, however, need to be supplemented by targets on the overall fiscal deficit as the ceiling on NPV of external debt would not provide sufficient guidance for fiscal policy. This is particularly likely to be the case when there are substantial differences between disbursement of loans and the associated spending. Retaining the performance criterion limiting the contraction of nonconcessional borrowing has the benefit of making sure that the room for borrowing is not crowded-out by nonconcessional lenders.

63. **Practical considerations suggest that the limits on both the NPV of external debt and the overall fiscal deficit should be in the form of *indicative targets* unless country specific circumstances warrant otherwise**. NPV limits pose a number of practical difficulties, including the fact that this measure of debt is not fully under the control of the authorities (for example, the measure is subject to change because of shifts in the discount rate). Moreover, given the fact that the intention is to use the policy dependent debt thresholds as markers, having a PC on the NPV of debt runs the risk, for example, of disbursements under a PRGF arrangement being interrupted because of a failure to adhere to the target. The same measurement issues do not arise in the case of the overall fiscal deficit and there is more experience with such limits in PRGF-supported programs. Accordingly, there is greater latitude to have conditionality in the form of a PC on the overall fiscal deficit. But where country circumstances do not allow this, an indicative target on the aggregate should be considered. Again, this has the benefit of helping guide overall borrowing and thus fiscal policy over a given period without the risk of disbursements under an arrangement being automatically interrupted in the event this limit is not observed.

64. **There are several benefits to placing the indicative target on the basis of the overall fiscal deficit including grants as a revenue item**. Most significantly, this measure accommodates higher expenditures that are financed by grants. This measure of the fiscal deficit is also more directly related to the public sector borrowing requirement which is the aggregate that matters for debt sustainability. To the extent programs need to protect certain expenditure in the face of shortfalls in grants, this could be accommodated through adjustors that would allow additional borrowing up to a threshold where the government can no longer borrow without crowding out the private sector or triggering debt sustainability concerns.

65. **As is customary, the targets for the NPV of external debt as well as the overall balance would be formulated and applied taking into account appropriate country**

specific considerations regarding macroeconomic conditions and prospects. And the overall effect of having these limits in Fund-supported programs would be to clearly signal to creditors and borrowers that resources beyond the indicative targets that have been established to the extent possible in the form of grants in order to avoid an unsustainable build-up of debt.

66. **A case can also be made for further tailoring the required concessionality thresholds and permitted volume of nonconcessional borrowing depending on each country's degree of debt distress and prospects of a graduation from IDA and PRGF lending**.[51] To reduce the arbitrariness, the staff proposes that the required grant element could vary from a 35 percent norm to reflect the degree of debt distress, per capita income, and the availability of financing. Also, on a case-by-case basis, program design could accommodate nonzero ceilings for loans designated for specific high-return projects, which fall outside the concessionality ceilings.[52]

67. While domestic debt does not translate directly into the indicative debt thresholds, PRGF program design should continue to respond, as it has done, in countries where domestic debt is a major macroeconomic issue (Appendix I). For countries where domestic debt has become a serious issue, a ceiling on total net domestic financing and minimal use of adjusters would effectively limit the stock of domestic debt. Mirroring the adjustment of the overall deficit target, the net domestic financing ceiling would not be increased to compensate fully for shortfalls in external program financing.

V. Conclusions and Next Steps

68. **This paper elaborates on and provides further guidance for implementing a framework for assessing debt sustainability in LICs**. It seeks to address issues raised by Directors on various aspects of the analytical framework as set out in the earlier paper, as well as outlining modalities for implementing DSAs between the Bank and Fund. The intention is to provide Bank and Fund staff with an operational tool to assess debt sustainability in LICs on a systematic basis using a framework with strong analytical underpinnings.

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[51] The concessionality threshold is calculated on the basis of currency-specific discount rates based on the OECD Commercial Interest Reference Rates (CIRRs) (Decision No. 6230-(79/140), as amended by Decisions Nos. 11096-(96/100) and 12274-(00/85)). While it might be desirable to synchronize the discount rates with those in the DSA, the staff proposes to continue using the CIRR to maintain consistency with the OECD, but keep the issue under consideration.

[52] Access level to PRGF resources will continue to be determined on the basis of the balance of payments need and the capacity to repay, among other factors.

69. **The framework should facilitate cross country comparison and consistency of treatment among members, while providing scope for some customization to country-specific circumstances**. While the DSA is first and foremost a diagnostic tool that can underpin Fund and Bank policy advice, the framework can also strengthen the basis for both institutions' operational decisions. For example, it can provide an analytical basis for allocation of IDA grants in the Bank and conditionality in PRGF-supported programs in the Fund. In this regard, the paper also indicates current thinking on using the framework for IDA's operations and proposes how the framework could better inform the choice of conditionality to reflect a country's risk of debt distress.

70. **Once the framework is endorsed by Directors, the next steps would involve preparing DSAs using the templates and guidelines set out in the two papers**.

71. **The framework is by no means final. It will continue to benefit from, and be enhanced by, ongoing analytical work and the lessons that emerge in implementation.** These lessons will be drawn primarily from the experiences of Fund and Bank country teams, as well as country authorities and other development partners.

VI. Issues for Discussion

72. Directors may wish to focus on the following issues:

For Bank and Fund Directors:

- Do Directors agree that the debt burden thresholds should remain broadly unchanged, given their strong analytical underpinnings?
- Do Directors support the proposal for linking the assessment of policies to the CPIA initially?
- Do Directors endorse the staffs' suggested approach to domestic debt, as an issue to be best addressed outside the threshold approach?
- Directors may wish to comment on the proposals for applying the debt sustainability framework as illustrated with the case of Uganda?

For Bank Directors:

- Directors may wish to comment on preliminary plans to make operational the framework at the Bank.

For Fund Directors:

- Do Directors endorse the staff's suggestion to include indicative targets on the NPV of external debt for countries at a high risk of debt distress?

- Do Directors endorse more systematic use of limits on the overall fiscal deficit, thus limiting the amount of concessional borrowing a country can undertake, understanding that these limits will be used more sparingly the smaller the possibility of debt distress?

- Do Directors support the staff's proposal to introduce more flexibility with respect to the concessionality threshold?

DEALING WITH DOMESTIC DEBT

1. Domestic debt of the public sector is a serious issue in a number of low-income countries (LICs), but its integration into the sustainability framework is complicated. From a sustainability perspective, public sector domestic debt is just as important as external debt, given its impact on budgetary debt service—and the envelope for other expenditures—is independent of its external or domestic origins.

2. Several LICs have recently experienced problems with rapidly rising and costly domestic debt stocks, to some extent reflecting that raising funds domestically proved to be "easy" as not linked to conditionality as most of the multilaterals' disbursements (Box 1). With domestic debt being on unfavorable terms (at double-digit real interest rates in some countries), this could result in a large increase in the NPV of total public debt and could jeopardize a country's capacity to service its obligations. Moreover, by crowding out private sector lending, it could also undermine the medium-term macroeconomic objectives as the private sector is expected to become the engine of growth in many countries.

3. So why is domestic debt not combined with external debt in the sustainability assessment based on the empirical thresholds? There are essentially three reasons for the different treatment of domestic and external debt, linked to empirical considerations: the different characteristics of external and domestic debt, in general, as well as domestic debt across countries; and the specific purpose of the framework.

A. Limitations of Comprehensive Threshold Approach

4. **First, there is a strong empirical reason for excluding domestic debt from indicative debt-burden thresholds.** A comprehensive historical data series on domestic debt in LICs is not available. As a result, the actual level of *total* debt and debt service governments were able to sustain may have been considerably higher than suggested by the indicative thresholds, to the extent that they were also servicing domestic debt.[1] From this perspective, the empirical thresholds could be interpreted as lower bounds for overall debt sustainability, but this would ignore other reasons that argue against a simple aggregation.

5. **Second, and more fundamentally, domestic debt has very different characteristics from external debt and, also, is not easily comparable across countries.** Three factors, in particular, distinguish domestic from external obligations in LICs: the underlying terms; the nature of the "rollover" risk; and the economic implications.

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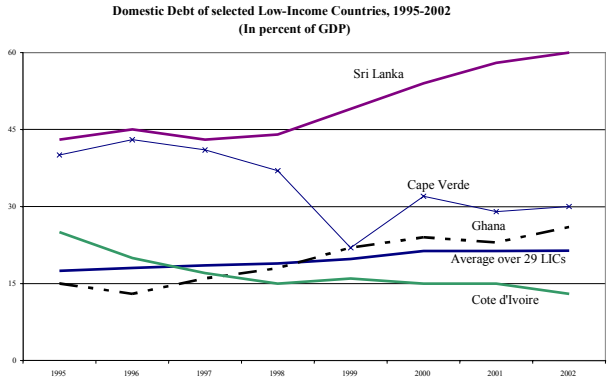
[1] As shown in Box 4 of the "Framework Paper," in the year 2000, the average level of domestic debt in a group of 22 LICs for which data were available was about 26 percent of GDP, with interest payments alone accounting for 9 percent of government revenues.

Box 1. Trends in Domestic Debt in Low-Income Countries during 1995-2002

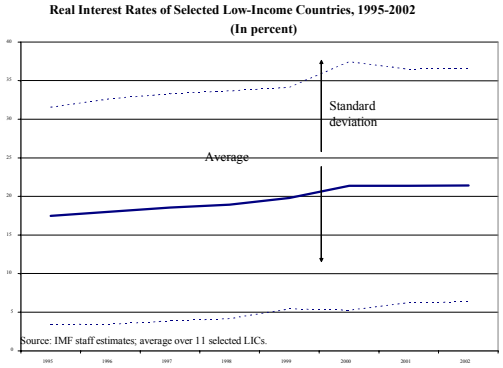
Low-income countries have had a varied experience with domestic debt.

In the past decade, domestic debt has become a serious problem for some low-income countries. An average over 29 low-income countries indicates a moderate increase in the debt-to-GDP of about 5 percent during 1995-2002. However, this masks largely diverging trends—while some countries managed to reduce their debt burden (e.g., Cape Verde or Cote d'Ivoire), domestic debt in some countries has been increasing considerably (e.g., Ghana and Sri Lanka).



Source: IMF staff estimates; average over 29 selected LICs.

The interest bill on domestic debt shows similar trends. On average, the interest bill remained broadly stable at around 2 percent of GDP during 1995-2002. However, there are large dispersions with some countries facing an interest bill of more than 5 percent of GDP in 2002 (e.g., Sri Lanka and India).



While nominal interest rates declined in almost all countries (reflecting a reduction in inflation), real interest rates have been rising. In particular, the dispersion of real rates among countries is large with some countries showing double-digit rates at end-2002 (e.g., Gambia and Georgia) and others having negative real rates (e.g., Papua New Guinea and Yemen).

- ***While external debt is primarily from official sources and provided on concessional terms, domestic debt is typically a costlier way of financing a deficit.*** NPVs capture the concessionality of external debt, but are difficult to derive for domestic debt—not only because of flexible interest rates and uncertain debt-servicing profiles, but also because the choice of discount rate is far from trivial when debt is contracted in domestic currency.[2] Thus, an aggregate measure of external and domestic debt is not easy to interpret.

[2] For these reason, domestic debt is generally valued on a nominal rather than NPV basis.

- ***The official nature of most external debt also implies very different rollover constraints and different factors that cause distress***. To obtain official financing, government's generally need to commit to certain actions and projects, whereas domestic debt is free of such conditions, but instead subject to market risks. It is, therefore, problematic to apply the same thresholds based on the same criteria to two different concepts.

- ***Domestic debt has very different economic implications.*** This relates both to its potential benefits in developing financial markets, as well as its adverse effects on domestic interest rates and investment, or the more drastic repercussions of default.

- ***Related to this, domestic debt is a highly heterogeneous concept across countries.*** Besides differences in coverage,[3] countries also deviate in the potential benefits and costs domestic debt entails for the government and the economy as a whole. Factors that play a role in this respect are, for example, the currency denomination of domestic debt, and the size and maturity of the domestic financial market.

6. **A third reason for dealing with domestic and external debt separately relates to the specific purpose of the framework, to guide official creditor's lending decisions.** This can be illustrated on the basis of three examples that are all characterized by high levels of *total* public debt and debt service:

- ***External public debt is already in excess of the thresholds, while domestic debt is low.*** In this case, domestic debt itself does not raise an issue for the sustainability assessment. The strategy would be to gradually reduce external debt, without creating a domestic debt problem.

- ***The external component of debt is comfortably below the thresholds***. In this case, there is scope and potential merit in reducing domestic debt through growing reliance on external borrowing. Such a shift would lower the NPV of total debt, to the extent that concessional external financing replaces nonconcessional domestic obligations.[4]

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[3] Different coverage reflects diverse concepts used for the public sector (i.e., inclusive or exclusive of local governments and state-owned enterprises) and, for example, whether central bank or pension liabilities are included in the debt statistics or not.

[4] Whether this is warranted, and to what extent, depends on wider considerations, including the role of domestic debt in promoting the development of domestic financial markets, which sector of the government holds the debt, and to what extent it poses a current or prospective burden on the budget.

- ***External debt exceeds the thresholds, and domestic debt is also high.*** In this case, there is less room for additional external borrowing. However, if domestic debt is deemed excessive, it may be warranted to apply the indicative external debt thresholds more generously, to permit a reduction in the more expensive domestic obligations. These considerations would have to be part of an overall strategy encompassing an appropriate fiscal deficit path and the mobilization of grants to move debt back on a sustainable track.

Although the above scenarios were all characterized by high *total* debt, the first called for a reduction in external debt, the second for an increase, and the third for a temporary increase in the context of a longer-term strategy to reduce both external and domestic obligations. In two out of the three cases, official creditors would have received the wrong signal by focusing on total debt, concluding that their lending may need to be constrained. Thus, domestic and external debt in LICs often warrant different, and indeed opposite, responses from official creditors. This asymmetric policy response—related to the concessionality of external financing—is an important argument against using thresholds on *total* debt to guide official lending decisions.

7. **Dealing with domestic debt within the framework, therefore, requires careful judgment and an approach that is tailored to individual countries' circumstances.** This is best achieved through a consistent macroeconomic policy response and focused conditionality, in the context of Fund-supported programs. Such a tailored approach allows an explicit consideration of the trade-offs in reducing public debt, and of other country-specific factors that require a differentiated approach, including quasi-fiscal activities of state-owned enterprises, contingent liabilities, the presence of directed lending, and the size and maturity of domestic financial markets. In sum, the assessment of, and response to, domestic debt in LICs, while critical, does not lend itself to a threshold approach.

B. Dealing With Domestic Debt in Fund-Supported Programs

8. **In countries where domestic debt is a major macroeconomic issue, Fund programs have been responsive in their analyses and design**. Three case studies—Bolivia, Ghana, and Nicaragua—were undertaken to establish the extent and means by which domestic debt considerations are incorporated in the macroeconomic assessment and program design for each country. In recent years, domestic debt stocks in Bolivia, Ghana, and Nicaragua have all increased rapidly (see detailed case studies below). In Bolivia and Ghana, the build up of domestic debt reflected mostly loose fiscal policies, whereas Nicaragua's debt reflected mostly liabilities incurred during the Sandinista regime of the 1980s and bank restructuring costs. The case studies show that Fund analysis was not limited to assessing external debt sustainability, but focused on domestic debt when this became an issue. All programs were tailored to the country's specific circumstances, taking into account domestic securities markets and addressing the roots of the domestic debt problem.

9. The case studies identified several **lessons for PRGF-supported programs**:

- **When domestic debt is high or on the rise, it is not sufficient to focus on external debt sustainability.** All staff reports emphasized that reducing domestic debt was key to establishing macroeconomic stability and boosting medium-term growth by freeing resources for the private sector.

- **Programs should limit the growth of domestic debt or target a reduction in the debt stock tailored to the development of capital markets and the government's financing needs.**

  - The *Bolivia* program allows some net domestic financing of the deficit to cover the still large financing needs of the government despite a sizable adjustment. The targets take into account that private pension funds would absorb the bulk of government securities owing to an underdeveloped capital market.

  - With banks being the main holders of government paper, the *Ghana and Nicaragua* programs both target a substantial reduction in the domestic debt stock, financed by large concessional external inflows.

- **When quasi-fiscal costs are the reason for large financing needs, the program should include structural measures to monitor and cut those costs**. In Ghana, SOEs added to the fiscal burden by sizable quasi-fiscal losses. The program addressed this through structural reforms, including the introduction of an automatic price-adjustment formula of SOEs in the petroleum, electricity, and water sectors. Moreover, to control the borrowing of SOEs, the program included a PC on the net domestic credit to a large oil refinery in addition to the standard PC on the net domestic financing of the government.

C. Case Studies

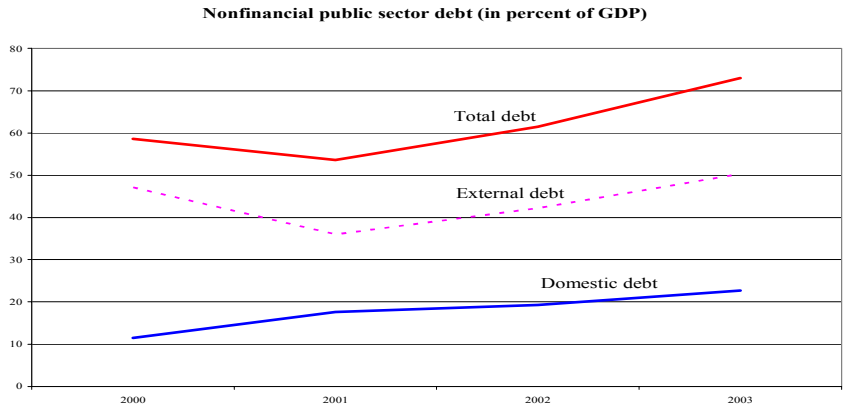
10. **Country case studies are useful to understand how domestic public debt problems impact the assessment of debt sustainability, and how Fund-supported programs have dealt with this issue.** The experience of three LICs—Bolivia, Ghana, and Nicaragua—is used to demonstrate the differences in the policy responses that may be required to tackle domestic public debt problems. In all three countries, Fund programs pursued a strategy aimed at reducing domestic debt and the debt service burden. Quantitative performance criteria were complemented, on a case-by-case basis, by structural conditionality in order to improve public debt management, minimize quasi-fiscal losses arising from state-owned enterprises, and address financial sector vulnerabilities.

Bolivia[1]

Background

11. **Soon after reaching the completion point, the authorities began to loosen the fiscal stance ahead of the 2002 Presidential elections.** Since then, it has proved difficult to rein in the fiscal expansion, with the deficit more than doubling since 2000 to up to 9 percent of GDP in 2002 and a large build-up of new external and domestic debt. Numerous factors contributed to the expansion. In particular, capital spending at the local level—an area where governance concerns have been raised—increased substantially.[2] However, the fiscal situation was further exacerbated by the rising wage bill and pension costs, and revenue shortfalls. The higher deficits were financed to a large part by nonconcessional external financing, but also from domestic sources, with annual domestic financing between 3 and 4 percent of GDP.

In the course of events, the nominal debt of the nonfinancial public sector increased by almost 15 percent of GDP in 3 years, reflecting mainly an increase in domestic debt by about 12 percent of GDP. At the same time, while net external debt increased by only 3 percent of GDP, this masked a large gross increase taking into account the debt relief of about 11 percent of GDP in 2001.[3]



12. **Given the large share of nonconcessional financing, the NPV of the external public sector at end-2003 was about 10 percent of GDP higher than projected at the time of the completion point.** Similarly, the ratios to exports and revenue deteriorated

[1] Bolivia reached the completion point under the enhanced HIPC Initiative in May 2001.

[2] Structural reforms in the past decade have resulted in the transfer of a substantial amount of resources to municipalities, some of which do not have implementation capacity for high-quality spending.

[3] Part of the increase in external debt is due to the 2003 depreciation of the U.S. dollar.

sharply (see text table). Taking into account that Bolivia's domestic debt is almost all denominated in U.S. dollars, total non-Peso denominated debt as a ratio of exports was well above 200 percent.

Bolivia: Net Present Value of External Debt Indicators—Completion Point and Actual

	2001	2002	2003
NPV of external public sector debt-to-GDP ratio			
Completion Point	19.0	19.5	19.7
Actual	17.9	23.1	29.3
NPV of external public sector debt-to-exports ratio			
Completion Point	114.3	110.8	107.2
Actual	100.2	118.9	140.2
NPV of external public sector debt-to-revenue			
Completion Point	82.8	84.8	85.0
Actual	72.6	97.5	121.4
NPV of external public sector debt service-to-exports ratio			
Completion Point	16.1	12.1	11.5
Actual	18.1	12.4	15.3
NPV of external public sector debt service-to-revenue ratio			
Completion Point	12.6	10.2	10.2
Actual	13.9	10.5	15.0

Sources: Bolivian Authorities and Bank-Fund staff estimates and projections.

How did the Fund-supported program address the domestic debt issue?

13. **After reaching the completion point under the enhanced HIPC Initiative, Bolivia did not have a Fund-supported program until April 2003.** Following a period of serious civil unrest in February 2003 and a sizable withdrawal of U.S. dollar deposits from the banking system, the authorities requested a (nonconcessional) Stand-by Arrangement (SBA). This was to help the authorities refocus their efforts on restoring economic and social stability, and provide breathing space for developing a broader set of medium-term structural reforms, which could then be supported under a PRGF.

14. **Concerned about the rapid increase in domestic debt, the SBA-supported program focused on overall (and not only external) debt sustainability as the main driving factor behind fiscal policies.** The staff reports[4] emphasize the need for substantial

[4] All staff reports (EBS/03/37, EBS/03/90, EBS/03/134, EBS/04/73) include appendices with analyses of external and fiscal debt sustainability.

medium-term fiscal adjustment and moving away from nonconcessional (both domestic and external) to concessional financing. Thus, the program design implicitly limits the NPV of overall debt through PCs on the overall consolidated fiscal deficit (including grants) of the nonfinancial public sector, total net domestic financing, and net domestic financing from the central bank. Given the still large financing needs under a gradual adjustment path, net domestic financing for 2004 is projected at about 1½ percent of GDP; shortfalls in external concessional financing would be accommodated by higher domestic financing with a cap of 0.8 percent of GDP. With private pension fund absorbing a large part of government papers, this target is expected to free up sufficient room for private sector credit from the banking system to enhance Bolivia's growth prospects in the medium term.

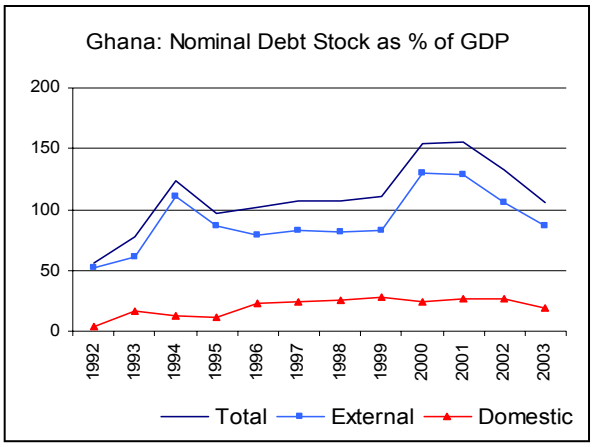
Ghana[5]

Background

15. **The central and local governments ran large deficits in the last decade (averaging about 7½ percent of GDP in 1992-2003).** With relatively large and rigid expenditure obligations, expenditure side adjustment proved difficult. Instead, new pressures emerged from spiraling debt service costs and electoral cycles. At the same time, weakened fiscal management and control led to the accumulation of substantial domestic arrears. Delays in implementing revenue measures and terms of trade shocks further exacerbated the fiscal stance.

[5] Ghana reached its completion point under the enhanced HIPC Initiative in July 2004, bringing down its external debt ratios substantially.

16. **State-owned enterprises (SOEs) added to this burden by sizable quasi-fiscal losses.** In 1999-2001, the consolidated overall deficit of the five noncommercial SOEs expanded to an average of about 9¼ percent of GDP. This largely reflected the gap that arose when administered prices, providing costly subsidies to consumers,[6] were not adjusted in line with rising world oil prices and the depreciation of the currency ahead of the 2000 elections.[7]



17. **The loose fiscal stance led to a rapidly growing domestic debt, which has not only been crowding out the private sector, but also entailed large fiscal costs.** Despite realizing almost 12½ percent of GDP in privatization receipts and real GDP growth exceeding real interest rates over the period 1992-2002, the official domestic debt of the central government increased by about 2 percent of GDP on average each year to reach 26 percent of GDP at end-2002 from about 4 percent of GDP at end-1992.[8] The government was able to place the debt with domestic banks, as they preferred the high returns offered on government paper over their normal lending activities. In the end, over half of their resources were absorbed by lending to the government. Domestic debt service has been costly; for instance, interest on domestic debt was almost 20 percent of total revenues (or 15 percent of tax revenues) in 1999-2001, while the interest cost of external debt accounted for about 10 percent of total revenues during the same period.

How did Fund programs address the domestic debt issue?

18. **Ghana's two PRGF-supported programs (from 1999 onward) recognized that reducing domestic debt was key to increase real growth.** With domestic debt at end-1998 already at 18½ percent of GDP, all staff reports emphasized that a reduction in domestic debt

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[6] The staff estimate that the cost of the price subsidies on petroleum products and utilities peaked at 9 percent of GDP in 2000.

[7] Ghana is wholly reliant on imports for its crude oil supplies, and is also a net importer of refined products.

[8] This includes the securitization of some off-budget claims (such as that of Tema Oil Refinery), but not the debt of the SOEs accumulated in 1999-2001.

was necessary for Ghana to move to a higher growth trajectory. The programs also addressed the large quasi-fiscal costs through structural reforms, including the introduction of an automatic price-adjustment formula for SOEs in the petroleum, electricity, and water sectors and improvements in expenditure management. Indeed, starting in 2002, increases in utility tariffs and petroleum prices and the stabilization of the cedi have helped to improve the finances of the public sectors. To control the borrowing of SOEs, the program (in the context of the first review in December 2003 of the second PRGF-supported program) was amended to include a PC on the net domestic credit to the Tema Oil Refinery from the banking system in addition to the standard PC on the net domestic financing of the government.

19. **While the first PRGF-supported program was plagued by fiscal slippages, the turning point came with Ghana's PRSP (February 2003)**. Fiscal performance under the first PRGF-supported program was disappointing and overruns were mostly financed from domestic sources. However, underscoring macroeconomic stability as a necessary condition for accelerated economic growth, reducing domestic debt was a major objective of the new PRSP; it targets a halving of the domestic debt-to-GDP ratio by end-2005 from its 2002 level of about 26 percent of GDP. Accordingly, the fiscal program envisaged zero net domestic financing for 2003 and repayments of domestic debt from 2004 onward.

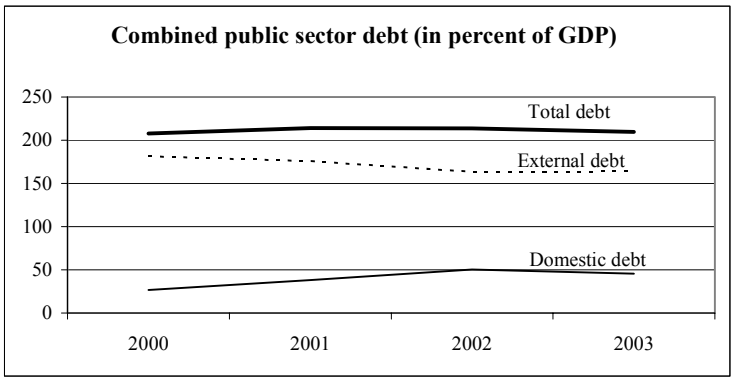
20. Since then, the fiscal program has been successful in reducing the stock of domestic debt and a "fiscal dividend" has begun to emerge. The domestic debt stock fell to less than 20 percent of GDP in 2003. As a result, since mid-2003, policy-controlled and short-term interest rates have declined significantly.[9] Domestic debt service is projected to decline from about 5 percent of GDP in 2003 to 3 percent of GDP in 2004.

[9] The yield on 91-day treasury bills declined to 18 percent in May 2004, from 36 percent in mid-2003, while the Bank of Ghana's prime rate was reduced to 18.5 percent from 27.5 percent over the same period.

Nicaragua[10]

Background

21. **A result of political compromises and institutional weaknesses, Nicaragua's domestic debt is large.** At end-2003, the combined public sector domestic debt amounted to 46 percent of GDP, reflecting only to some extent expansionary fiscal policies. In fact, the bulk of the debt stemmed from liabilities incurred during the Sandinista regime of the 1980s and the restructuring costs of the banking system. Compensating the owners of properties confiscated during the Sandinista regime amounted to about 19 percent of GDP, as ill-defined land rights and vested interests prevented alternative solutions.[11] Moreover, debt amounting to about 10 percent of GDP was issued as part of the resolution of the banking crisis of 2000-01 when the central bank issued securities to mop up the liquidity created in supporting public sector banks in financial difficulties and to cover the difference between performing assets and liabilities of insolvent private banks.[12]



[10] Nicaragua reached the completion point under the enhanced HIPC Initiative in January 2004.

[11] This debt started maturing in 2004 with maturities becoming significant after 2007.

[12] The domestic debt stock does not include the implicit liabilities of the pay-as-you-go pension system. As part of a pension reform, the government plans to issue recognition bonds for accrued pension rights for those retirees who opt for the new system. Payment of these bonds is estimated to peak in 2025 at about 2 percent of GDP.

22. **The domestic debt not only poses a large burden on the budget, but also implies a major source of vulnerability to various shocks.** Servicing domestic debt has become costly—for instance, in 2002, it took up over 50 percent of revenue or 12 percent of GDP. Because of its characteristics—large stock, short maturities, indexation to the US dollar, and high interest rates—it represents significant exchange rate, interest rate, and rollover risks.

How did the Fund program address the domestic debt issue?

23. **Quantitative and structural conditionality support the program's objective to make a dent into domestic debt.**[13] To monitor the large repayments of domestic debt projected over the medium term, the program has PCs on net domestic financing of the combined public sector and savings of the nonfinancial public sector (defined as difference between current revenue and current spending, including the operating balance of central bank). The deficit covers not only the central government, but also the social security institute, the municipality of Managua, and two public sector enterprises (the electricity, and water, and sewerage companies). The quantitative PCs are complemented by structural conditionality, inter alia, to improve public debt management and address financial sector weaknesses by strengthening the prudential and regulatory framework to avoid a repeat of the 2000-01 banking crisis.[14]

24. **The authorities complemented this by pursuing a two-pronged strategy, aimed at a sizable and swift reduction in domestic debt**. First, it tapped exceptional resources such as privatization receipts, asset recoveries, and balance of payments support loans to reduce the debt. Second, to alleviate the debt service burden, it sought to refinance the bulk of amortization payments. In fact, an agreement with the main holder of bank resolution bonds in 2003 refinanced large repayments due in September 2004, over 10 years and at an average annual interest rate of 8.4 percent (compared with original rates of 11-21 percent).

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[13] Nicaragua had two PRGF-supported arrangements since 1998. When the first PRGF-supported program went off track in 2001 due to fiscal slippages, the Fund stayed engaged through a Staff Monitored Program (presented to the Board in September 2001). All Fund programs emphasized external and fiscal sustainability as key to medium-term growth.

[14] For instance, a performance criterion on concluding the implementation of an assets recovery plan for assets received from intervened banks (December 2002) or benchmarks on the approval by the assembly of a law on domestic and external public indebtedness (December 2003), a law on fiscal responsibility (December 2004), or on the submission to the assembly of amendments to financial sector laws (May 2004).

ASSESSING DEBT SUSTAINABILITY IN PRACTICE—THE CASE OF UGANDA

1. **The debt dynamics analysis based on the external debt template is illustrated for the case of Uganda.**[1] Uganda was the first country to qualify for debt relief under the Heavily Indebted Poor Countries (HIPC) Initiative. It reached completion point in April 1998 under the original HIPC framework, and in May 2000 under the enhanced HIPC framework, receiving total debt relief equivalent to US$656 million in net present value (NPV) terms. As a result, the ratio of the NPV of Uganda's external debt to exports was reduced to 150 percent at end-June 1999, but has subsequently deteriorated to almost 260 percent of exports (30 percent of GDP) at end 2003, primarily due to a sharp decrease in the international price of robusta coffee, Uganda's principal export, lower-than-projected growth of services exports, and a decline in the discount rate.

2. **In a first step, appropriate indicative policy-dependent thresholds are determined for the NPV of external debt, in percent of GDP and exports, and the debt service-to-exports ratio.** Uganda is a strong performer (as indicated by a CPIA in the first quintile). Indicative ratios of **60 percent of GDP** and **300 percent of exports** are therefore appropriate upper benchmarks for the NPV of PPG external debt, with a corresponding PPG debt-service threshold of about **35 percent of exports**.

3. **In a second step, debt dynamics are analyzed under the baseline scenario (Table 1).** Starting from the evolution of total (nominal) external debt, as a share of GDP, and the breakdown of the factors that determine the debt dynamics (namely, the non-interest current account, non-debt creating capital inflows (FDI), and the endogenous debt dynamics), Table 1 derives the NPV of external debt and its public and publicly guaranteed (PPG) component. Virtually all of Uganda's external debt is PPG debt, and the private sector is not expected to gain significant access to international capital markets during the projection period. The NPV of PPG external debt at end-2003, at 31 percent of GDP, is well below the indicative threshold, while the exports-based ratio at 261 percent is closer to the indicative threshold. Thus, exports would, at present, constitute the more binding denominator constraint. The debt ratios are projected to remain fairly stable over the medium term, before declining to 25 percent of GDP and 187 percent of exports, respectively, by the end of the 20-year projection period. While the current account deficit is projected to remain large with import demand significantly exceeding exports over the medium term, PPG debt ratios are expected to improve due to steady FDI inflows, strong economic growth and new borrowing at largely concessional terms (implying favorable endogenous debt dynamics). The debt-service ratio would hover around 7-12 percent of exports throughout the projection period—clearly below the relevant indicative threshold.

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[1] A parallel analysis would be expected to be conducted for public sector debt. In Uganda's case, public debt would also include domestic obligations which stood at close to 9 percent of GDP at end-2003.

4. **The third step of the analysis consists of an interpretation of the stress-test results.** The stress tests are conducted for the NPV of PPG external debt and distinguish between "alternative scenarios," which are designed as permanent modifications of key baseline assumptions, and "bound tests," representing temporary deviations—though some with permanent level effects. The alternative scenarios include a "historical scenario" in which the main parameters that determine the debt dynamics are assumed to remain at their historical averages, derived over a ten-year period. The second alternative scenario is a "financing scenario" in which new borrowing is assumed to be on less favorable terms (a 2 percentage point higher interest rate) throughout the projection period. The bound tests include isolated two-period one-standard deviation shocks to the key variables, a combined shock of half the size, and a one-time 30 percent depreciation. The size of the shocks has been chosen to present, on average, a 25 percent probability of occurring over a 10-year period. The implications for the key debt-burden indicators, presented in Table 2—and illustrated in Figure 1 for the baseline, the historical scenario, and the most extreme bound test—suggest the following:

- The simulation of the long-term debt dynamics under historical trends (scenario A1) produces a sharp improvement over time in both debt and debt-service indicators, due to historically more favorable export performance and higher economic growth. This suggests that the debt path under the baseline reflects conservative assumptions compared with Uganda's historical trend. Less favorable financing terms (scenario A2) also does not significantly impact on the debt dynamics with the debt-to-exports increasing slightly over the baseline projections. The debt-service ratios would still remain below 20 percent of exports throughout.

- The worst scenario among the bound tests is a one-time shock to export growth (scenario B2), which results in an NPV of debt-to-exports of about 336 percent after 10 years—some 36 percentage points above the indicative threshold. A combined half standard deviation shock (scenario B5), would move the NPV of debt-to-exports ratio close to the indicative threshold, while the NPV of debt-to-GDP ratio would remain clearly below its threshold under all stress scenarios.

- Reflecting the concessional nature of financing, debt-service ratios would remain below 20 percent under all scenarios—and far below the indicative threshold level of 35 percent.

Table 1. Country: External Debt Sustainability Framework, Baseline Scenario, 2001-2024 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical Average 6/	Standard Deviation 6/	Estimate	Projections					
	2001	2002	2003			2004	2005	2006	2007	2008	2009	2003-08 Average
External debt (nominal) 1/	**59.8**	**65.3**	**62.1**			**59.9**	**59.0**	**59.2**	**59.3**	**58.6**	**55.9**	
o/w public and publicly guaranteed (PPG)	59.8	65.3	62.1			59.9	59.0	59.2	59.3	58.6	55.9	
Change in external debt	-0.8	5.5	-3.2			-2.2	-0.9	0.2	0.1	-0.7	-2.6	
Identified net debt-creating flows	6.6	2.9	-0.3			-4.3	0.2	0.7	1.5	1.8	2.8	
Non-interest current account deficit	**5.3**	**6.4**	**6.1**	**4.6**	**2.2**	**1.0**	**5.6**	**5.9**	**6.9**	**7.0**	**9.0**	
Deficit in balance of goods and services	12.0	14.9	14.9			15.2	14.5	14.2	14.7	14.7	14.3	
Exports	12.3	11.7	11.5			11.6	12.1	12.8	13.4	13.8	13.7	
Imports	24.3	26.5	26.4			26.8	26.6	27.0	28.1	28.5	28.0	
Net current transfers (negative = inflow)	-8.6	-10.0	-9.9	-8.9	2.6	-14.9	-11.8	-11.1	-10.9	-10.6	-9.8	
Other current account flows (negative = net inflow)	2.0	1.5	1.0			0.7	2.9	2.7	3.1	2.9	4.5	
Net FDI (negative = inflow)	**-1.9**	**-2.2**	**-2.3**	**-1.1**	**1.0**	**-2.3**	**-2.3**	**-2.3**	**-2.3**	**-2.3**	**-2.4**	
Endogenous debt dynamics 2/	**3.2**	**-1.3**	**-4.1**			**-3.0**	**-3.1**	**-2.9**	**-3.0**	**-2.8**	**-3.9**	
Contribution from nominal interest rate	0.6	0.5	0.5			0.3	0.3	0.3	0.3	0.3	0.3	
Contribution from real GDP growth	-3.1	-4.0	-2.9			-3.3	-3.3	-3.1	-3.3	-3.1	-4.2	
Contribution from price and exchange rate changes	5.8	2.1	-1.7			…	…	…	…	…	…	
Residual (3-4) 3/	**-7.4**	**2.7**	**-2.9**			**2.1**	**-1.0**	**-0.5**	**-1.5**	**-2.6**	**-5.4**	
o/w exceptional financing	-0.6	-0.4	-0.3			-0.1	0.0	0.1	0.2	0.0	0.0	
NPV of external debt 4/	...	...	30.8			30.2	30.3	31.0	31.8	31.9	31.1	
In percent of exports	...	...	269.2			261.0	250.7	242.2	236.5	230.7	226.8	
NPV of PPG external debt	**...**	**...**	**30.8**			**30.2**	**30.3**	**31.0**	**31.8**	**31.9**	**31.1**	
In percent of exports	...	...	269.2			261.0	250.7	242.2	236.5	230.7	226.8	
Debt service-to-exports ratio (in percent)	13.2	11.3	10.8			10.7	10.7	10.5	9.4	8.8	8.2	
PPG debt service-to-exports ratio (in percent)	13.2	11.3	10.8			10.7	10.7	10.5	9.4	8.8	8.2	
Total gross financing need (billions of U.S. dollars)	285.9	321.4	313.4			-3.0	327.6	366.5	453.6	480.5	694.1	
Non-interest current account deficit that stabilizes debt ratio	6.1	0.9	9.2			3.2	6.4	5.7	6.8	7.7	11.7	
Key macroeconomic assumptions												
Real GDP growth (in percent)	4.9	6.8	4.7	6.7	2.3	5.7	5.9	5.5	5.8	5.5	7.8	6.1
GDP deflator in US dollar terms (change in percent)	-8.7	-3.5	2.6	1.0	12.9	2.0	0.6	-1.8	-1.9	-0.2	0.9	-0.1
Effective interest rate (percent) 5/	0.9	0.9	0.8	1.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Growth of exports of G&S (US dollar terms, in percent)	2.7	-1.8	5.6	14.9	22.5	9.0	11.2	9.7	9.0	8.4	8.0	9.2
Growth of imports of G&S (US dollar terms, in percent)	0.8	12.8	7.0	11.0	22.3	9.6	5.5	5.5	7.9	6.8	7.1	7.1
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	52.4	52.5	52.5	52.5	52.5	52.5	52.5
Memorandym item:												
Nominal GDP (billions of US dollars)	5681.2	5859.8	6298.5			6792.2	7237.1	7498.1	7785.4	8194.9	8918.2	

Source: Staff simulations.

1/ Includes both public and private sector external debt.
2/ Derived as [r - g - ρ(1+g)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and ρ = growth rate of GDP deflator in U.S. dollar terms.
3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes.
4/ Assumes that NPV of private sector debt is equivalent to its face value.
5/ Current-year interest payments devided by previous period debt stock.
6/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

- In conclusion, Uganda's debt outlook suggests that the current borrowing strategy is consistent with containing the risk of debt distress to a moderate level. Uganda's projected debt and debt-service ratios under the baseline remain clearly below the indicative thresholds and are also fairly robust to most shocks. The exception is the export shock, which would bring the NPV of debt-to-exports ratio some 36 percentage points above the indicative threshold, reflecting the country's historical record of high export volatility in the face of large terms-of-trade shocks. However, in light of the low debt-to-GDP and debt-service ratios, the conservative nature of the projections relative to historical trends, and the return of the debt-to-exports ratio below the threshold by the end of the projection period even under the worst shock, the risk of debt distress currently appears moderate. However, the analysis of debt sustainability would need to be complemented by a review of the public debt dynamics, which may alter the overall assessment.

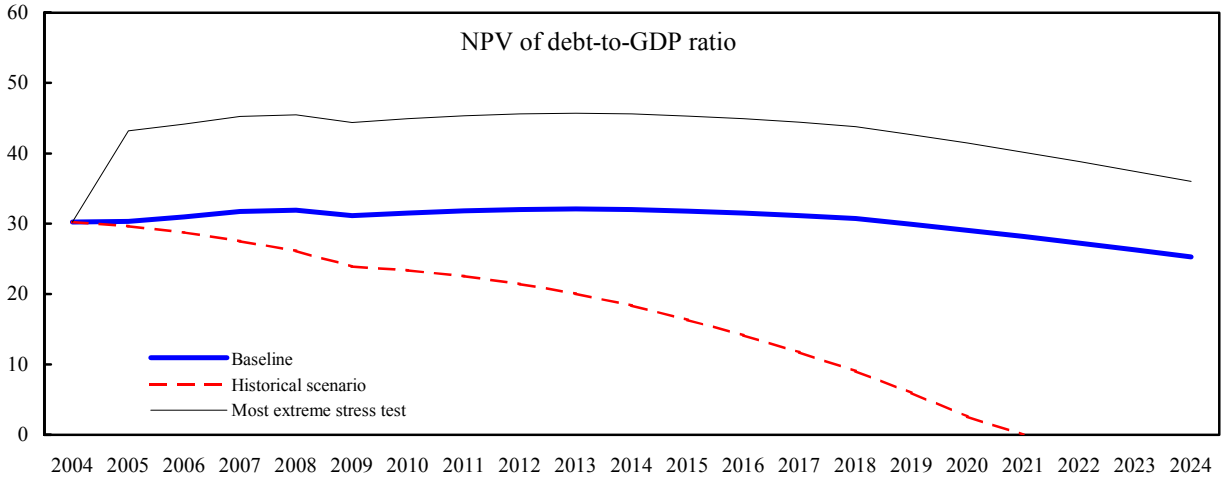
Table 2. Uganda: Sensitivity Analyses for Key Indicators of Public and Publicly Guaranteed External Debt, 2003-23
(In percent)

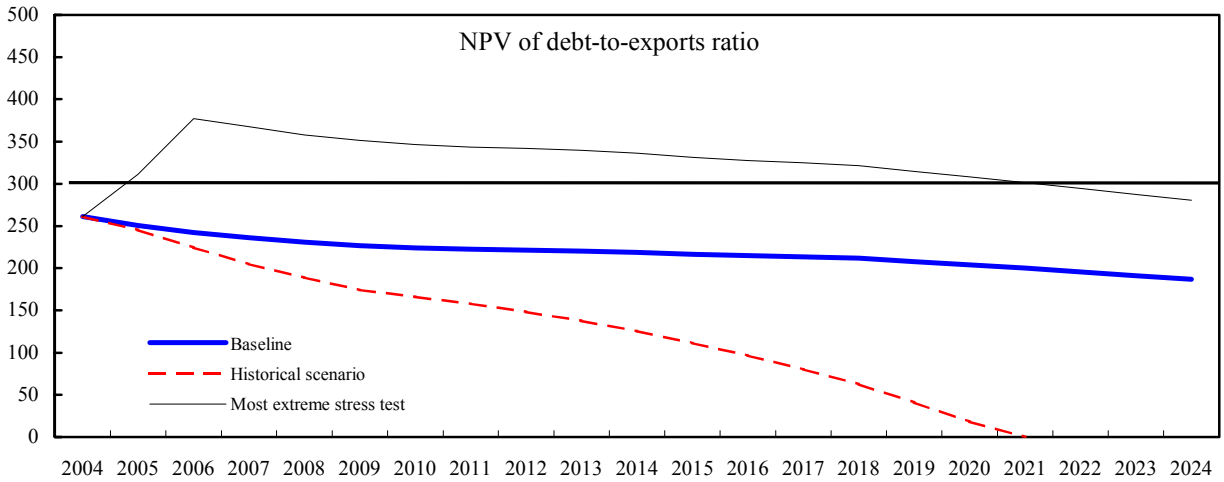
	Estimate			Projections					
	2003	2004	2005	2006	2007	2008	2009	2014	2024
NPV of debt-to-GDP ratio									
Baseline	31	30	30	31	32	32	31	**32**	25
A. Alternative Scenarios									
A1. Key variables at their historical averages in 2004-23 1/	31	30	30	29	28	26	24	**18**	-13
A2. New public sector loans on less favorable terms in 2004-23 2/	31	30	31	33	35	36	36	**37**	31
A3. Higher public sector grants in 2004-23 2/	31	30	30	31	32	32	31	33	29
B. Bound Tests									
B1. Real GDP growth at historical average minus one standard deviation in 2004-05	31	30	31	32	33	33	32	**33**	26
B2. Export value growth at historical average minus one standard deviation in 2004-05 3/	31	30	31	34	35	35	34	**35**	27
B3. US dollar GDP deflator at historical average minus one standard deviation in 2004-05	31	30	35	39	40	41	40	**41**	32
B4. Net non-debt creating flows at historical average minus one standard deviation in 2004-05 4/	31	30	33	37	37	37	36	**37**	28
B5. Combination of B1-B4 using one-half standard deviation shocks	31	30	35	40	41	41	40	**41**	31
B6. One-time 30 percent nominal depreciation relative to the baseline in 2004 5/	31	30	43	44	45	45	44	**46**	36
NPV of debt-to-exports ratio									
Baseline	269	261	251	242	236	231	227	**219**	187
A. Alternative Scenarios									
A1. Key variables at their historical averages in 2004-23 1/	269	261	245	225	205	189	174	**125**	-98
A2. Higher public sector borrowing in 2004-23 2/	269	261	260	258	258	260	259	**254**	227
A3. Higher public sector grants in 2004-23 2/	269	261	251	243	236	233	227	**227**	212
B. Bound Tests									
B1. Real GDP growth at historical average minus one standard deviation in 2004-05	269	261	251	242	236	231	227	**219**	187
B2. Export value growth at historical average minus one standard deviation in 2004-05 3/	269	261	311	377	368	358	351	**336**	280
B3. US dollar GDP deflator at historical average minus one standard deviation in 2004-05	269	261	251	242	236	231	227	**219**	187
B4. Net non-debt creating flows at historical average minus one standard deviation in 2004-05 4/	269	261	275	286	278	270	265	**252**	205
B5. Combination of B1-B4 using one-half standard deviation shocks	269	261	293	323	314	306	300	**285**	233
Debt service ratio									
Baseline	11	11	11	10	9	9	8	**8**	12
A. Alternative Scenarios									
A1. Key variables at their historical averages in 2004-23 1/	11	11	11	10	9	8	7	**6**	3
A2. New public sector loans on less favorable terms in 2004-23 2/	11	11	11	10	9	9	8	**8**	13
A3. Higher public sector grants in 2004-23 2/	11	11	11	10	9	9	8	**8**	12
B. Bound Tests									
B1. Real GDP growth at historical average minus one standard deviation in 2004-05	11	11	11	10	9	9	8	**8**	12
B2. Export value growth at historical average minus one standard deviation in 2004-05 3/	11	11	13	15	14	13	12	**12**	18
B3. US dollar GDP deflator at historical average minus one standard deviation in 2004-05	11	11	11	10	9	9	8	**8**	12
B4. Net non-debt creating flows at historical average minus one standard deviation in 2004-05 4/	11	11	11	11	10	9	9	**9**	13
B5. Combination of B1-B4 using one-half standard deviation shocks	11	11	11	12	11	11	10	**10**	15
Memorandum item:									
Grant element assumed on residual financing (i.e., financing required above baseline) 6/		52	52	52	52	52	52	**52**	52

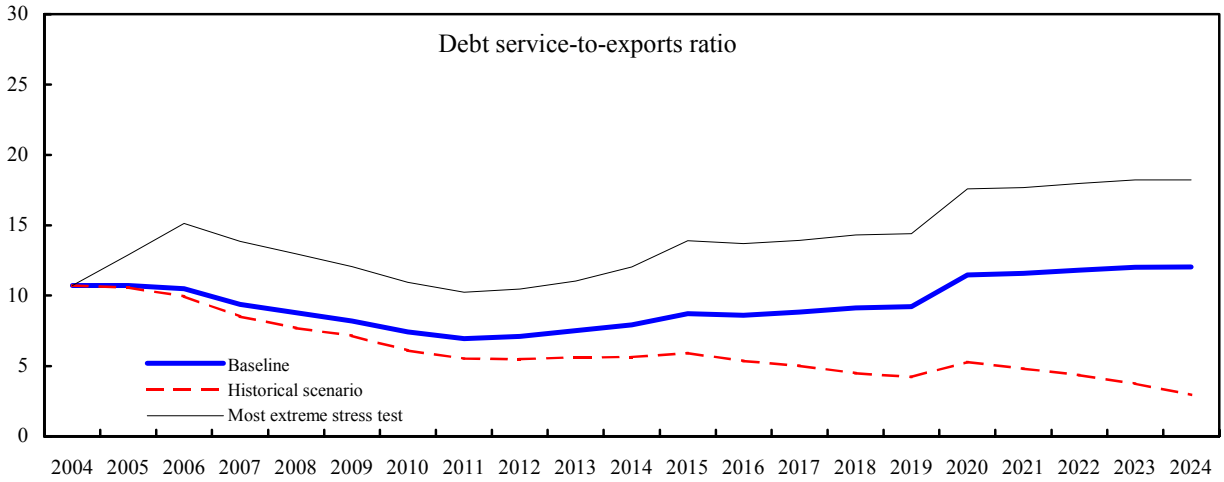
Source: Staff projections and simulations.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.
2/ Assumes new borrowing to finance MDG's is higher than in the baseline., while grace and maturity periods are the same as in the baseline.
3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).
4/ Includes official and private transfers and FDI.

Figure 1. Uganda: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2003-2023
(In percent)







Source: Staff projections and simulations.