IDA14

Debt Sustainability and Financing Terms in IDA14

International Development Association
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SELECTED ABBREVIATIONS AND ACRONYMS

HIPC	Heavily Indebted Poor Countries
IDA	International Development Association
IMF	International Monetary Fund
CPIA	Country Policy and Institutional Assessment
GDP	Gross Domestic Product
NPV	Net Present Value
DSA	Debt Sustainability Analysis
CIRR	Commercial Interest Reference Rate
MDG	Millennium Development Goals
PBA	Performance-Based Allocation
GNI	Gross National Income
IBRD	International Bank for Reconstruction and Development
IFC	International Finance Corporation

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I. A SYSTEMATIC APPROACH TO DEBT SUSTAINABILITY IN IDA

1.   Ensuring long-term debt sustainability is a major concern for low-income countries and donors alike. The HIPC Initiative was an important breakthrough aimed at achieving a one-time reduction in the stock of debt in qualifying poor countries, but was not expected to be a permanent solution to the achievement of long-term debt sustainability. While the impact of the HIPC Initiative has been significant, it has become clear that debt sustainability remains a complex problem, especially as affected countries try to move forward with development programs which require substantial financing, and are subsequently facing increasing debt ratios.

2.   The IDA13 Replenishment Agreement recognized the debt sustainability challenge and introduced it as a criterion for grant eligibility, along with various other eligibility criteria – income, post-conflict, natural disasters, and HIV/AIDS. IDA13 grants were allocated among these categories based on a complex formula where the 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 the overall cap on grants. While the eligibility criteria captured most of the debt-distressed countries, the maximum of 40% grants for any country classified as "debt vulnerable"[1] did not differentiate countries based on their relative risks of debt distress. This meant that every country classified as debt distressed in IDA13 was eligible for the same level of grants irrespective of the relative magnitude of the problem a country faced.

3.   During the IDA13 period, the Bank has been working with the IMF to develop a more systematic basis on which to identify countries at risk of debt distress, and hence where more concessional financing is needed to help manage debt sustainability. A major advance on this work is the recent joint paper entitled "Debt Sustainability in Low-Income Countries—Proposal for an Operational Framework and Policy Implications" (the "Framework Paper"). This Framework Paper was discussed by both Bank and Fund Boards of Executive Directors as well as by the Development Committee which endorsed the broad principles underlying the proposed framework. The Framework Paper moves beyond the approach of a single threshold for all countries adopted in the HIPC Initiative and identifies multiple factors as being important for determining debt sustainability – including debt ratios, country policies, and vulnerability to shocks.[2] In particular, it shows that country policies are closely linked to a country's risk of debt distress.

4.   The international community has indicated a strong interest in debt sustainability as the central criterion for grants in IDA14, as well as in other Multilateral Development Banks where replenishment negotiations are underway (notably the Asian Development Bank and the African Development Bank). As noted in the Chairman's Summary of the first IDA14 meeting: "…the Bank should work closely together with other partners to explore how best to incorporate debt

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[1]   In IDA13 debt vulnerability was measured by country debt ratios and a concentration of exports index.

[2]   These multiple factors were identified in a research paper by Aart Kraay and Vikram Nehru, "When is External Debt Sustainable?" World Bank Policy Research Working Paper 3200, February 2004; and corroborated by Fund staff research as important variables in predicting episodes of debt distress.

vulnerability considerations into the work of IDA."[3] This paper responds to this request by translating those aspects of the Framework Paper that are already being implemented into a practical system to allocate grants that would help countries maintain sustainable debt levels, and help reduce the risk to IDA of future debt problems in poor countries where IDA will naturally and appropriately constitute a large share of new financing going forward.

5.   The approach set out in this paper derives the share of grants in the total of IDA financial support from the systematic classification of countries at risk of debt distress and accordingly, the allocation of grants to a level responsive to need. The level of grants in IDA's financing would therefore be an outcome, and not a pre-specified input. Using the debt sustainability criteria outlined in the Framework Paper could be a more optimal way to allocate grants in IDA than the IDA13 debt vulnerable classification which provided only one possible treatment for any "debt vulnerable" country (up to 40% grants). The proposed approach would differentiate between individual countries with higher or lower levels of debt distress through higher or lower grant allocations. The Framework Paper also provides policy-dependent debt burden thresholds, i.e. better performing countries are able to take on higher levels of debt before being considered debt distressed. Going forward the allocation system presented in this paper can be adapted to reflect further work underway by the Fund and the Bank on elements of the Framework Paper.

6.   This approach is complex, and requires careful complementarity between the debt distress/grant allocation system and the performance-based allocation of IDA resources, which is and will continue to be the bedrock of IDA's support to poor countries. This note discusses the opportunities for IDA in incorporating the debt sustainability framework into credit and grant-making decisions. Section II of the paper shows how IDA management proposes to build on the Framework Paper's approach to identify countries where continued borrowing may lead to unsustainable debt ratios. Section III develops an allocation system to determine the appropriate mix of grants and credits based on the country groups identified in Section II.

7.   While grants would help deal with debt sustainability concerns, they also reduce credit reflows and weaken IDA's capacity for continuing to provide assistance in the future. During IDA13, Deputies reaffirmed their commitment to safeguard the financial strength of IDA and discussed at length various mechanisms to mitigate the impact of grants on IDA's finances. When considering the use of grants in IDA14, Deputies have indicated the importance of taking into consideration how foregone reflows due to grants could be financed effectively. Moreover, there are important linkages between possible models for grant allocation and various methods for grant financing which need to be considered. Section IV discusses various financing mechanisms for IDA14, including their limitations.

8.   Concluding remarks and next steps are presented in Section V, while Section VI summarizes the key issues for discussion. The technical arguments underpinning the findings of Sections II through IV are elaborated on in a series of Annexes.

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[3]   *Chairman's Summary*, IDA14 Replenishment Meeting, Paris, France - February 18-20, 2004; IDA/Sec M2004-0112.

II. A SYSTEMATIC APPROACH FOR DEFINING DEBT DISTRESS

9. This section of the paper builds on the principles outlined in the Framework Paper to develop a more systematic approach for defining countries at risk of debt distress, and hence countries where more concessional financing is needed. The Framework Paper rests on two pillars: (i) indicative thresholds of external debt-burden indicators which take into account countries' policies and institutions as well as their vulnerability to exogenous shocks; and (ii) the actual and projected behavior of debt-burden indicators, both under a baseline and plausible shock scenario. In the present paper, the first pillar is operationalized using existing debt data to develop a systematic debt distress-based ranking system for grant eligibility under IDA14. At the same time, the paper identifies those aspects of the second pillar that can be immediately operationalized, while indicating the areas in which further work will be needed beyond the IDA14 period.

A. Designing a Debt-Distress-Based Country Ranking System

10.   The first pillar of the Framework Paper can be summarized by a matrix of indicative policy-dependent debt burden indicators, reproduced as Table 1 below. Five debt-burden indicators – three "stock" and two "flow" ones – are presented together with three different country groupings in terms of policy performance: (i) strong performers, with a CPIA score greater than or equal to 3.6 (equivalent to the upper quartile of the CPIA ratings); (ii) medium performers, with a CPIA score between 2.9 and 3.6 (encompassing the second and third quartiles); and (iii) low performers, with a CPIA score less than or equal to 2.9 (representing the bottom quartile). [4]

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

| | Assessment of Institutional Strength and Quality of Policies | | |
	Strong CPIA≥3.6	Medium 2.9<CPIA<3.6	Poor CPIA≤2.9
NPV of debt-to-GDP	60	45	30
NPV of debt-to exports	300	200	100
NPV of debt-to-revenues	250	200	150
Debt service-to-exports	35	25	15
Debt service-to-revenues	40	30	20

Source: "Debt Sustainability in Low-Income Countries: Proposal for an Operational Framework
and Policy Implications", SecM2004-0035.

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[4]   These performance rankings are consistent with the approach used in the Framework Paper to define the policy-based thresholds.

11.   The key message of Table 1 is that countries with different levels of policy performance can handle distinct levels of debt burden. In other words, the concept of debt burden becomes policy-dependent. Table A1 (in Annex 1) shows low-income countries' actual debt burden indicators vis-à-vis each of these relevant policy-dependent debt thresholds.[5] Zambia, for example, which is classified as medium performer, has its actual debt burden data compared to the thresholds applicable to the medium-performing category, or the middle column in Table 1.

12.   However, country policy ranking cannot be automatically used to generate a debt-distress-based ranking system for grant eligibility, since the correlation between policies and risk of debt distress, though strong, is not one-to-one. Table A1 in Annex 1 shows, for example, that some medium performers (such as Kenya) have all of their debt-burden indicators well below the relevant thresholds, suggesting that they are at low risk of debt distress. Conversely, several strong performers have at least one of their debt ratios above the relevant threshold. Therefore, the policy-performance-based country ranking implied by Tables 1 and A1 need to be converted into a debt distress-based country ranking system.[6] **This conversion process involves four main steps.**

13.   **The first step involves selecting the appropriate debt burden indicators.** Table 1 provides five possible indicators to measure debt distress for a country ranking system. Weaknesses inherent in the two ratios using revenues in the denominator – including low data availability and potential moral hazard issues associated with domestic revenue effort – discourage its use as an indicator at par with the other two stock indicators. Hence management is proposing to avoid using both the NPV of debt-to-revenues and the debt service to revenues ratios from the ranking system.

14.   Of the remaining indicators, each has its own merits and limitations, and hence a combination of different indicators may best capture debt distressed countries. As shown in Table A1, countries fare differently depending on which debt burden indicators are employed. The approach set out in this paper aims to capture all debt distressed countries at the risk of capturing a few that may not be truly debt distressed.[7]

15.   Among the stock indicators, the NPV of debt-to-exports ratio is the most suited indicator of repayment capacity and thus of a country's long-term solvency. However, as can be seen in Table A1 it is also the stock indicator with fewer instances of countries exceeding the indicative threshold. If used on its own, it would not be consistent with the notion of capturing all the countries. On the other hand if the NPV of debt-to-exports ratio is used in combination with the NPV of debt-to-GDP ratio, more countries would be captured since the data shows that they lead to a greater degree of inclusion. Hence this paper's proposed focus on a composite of these two stock indicators, in which the NPV of debt-to-GDP ratio would moderate the "excluding" tendency of the NPV of debt-to-exports ratio.

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[5]   For recent HIPC completion point countries, the ratios reflect debt relief committed irrevocably, and topping-up where applicable.

[6]   An extensive technical discussion of the policy choices in designing a ranking system can be found in Annex 2.

[7]   The indicative thresholds set out in Table 1 are based on the historical risk of debt distress of about 25% overall and within each of the groups of countries relative to the performance ranking shown.

16.   The inclusion of the debt service-to-exports ratio would not only enable a closer alignment with the notion of adopting multiple debt-burden indicators as advocated in the Framework Paper (Table 1), but would also allow the possibility of incorporating relevant information additional to that provided by stock indicators alone, such as a more direct measure of short-term liquidity constraints. Hence the recommended approach is to use both the composite stock indicator *and* the debt service-to-exports ratio.

17.   **The second step requires a measurement of how countries fare relative to their indicative debt-burden thresholds.** A country being above or below the threshold is not sufficient for a country ranking system. It is important to be able to assess how close each country is, in relative terms, to their indicative thresholds. This is done by measuring the percentage distance from the appropriate threshold for each of the chosen debt-burden indicators (see Table A2 in Annex 1). A large negative number would indicate an instance where a country is significantly over the indicative threshold, while a large positive number would indicate a country that it is comfortably below the threshold.

18.   **The third step requires a decision rule on how to apply the chosen indicators to determine a country's relative debt distress level**. Management proposes to focus on: (i) a *composite* stock indicator of the NPV of debt-to-exports and NPV of debt-to-GDP ratios; and (ii) the debt service-to-exports ratio. When only one of the indicators is above the threshold and the other is below, the one above determines the appropriate country grouping. If both indicators are above the relevant threshold, whichever of the two yields the highest percentage distance from the threshold would determine the appropriate grouping.

19.   **Finally the fourth step involves incorporating this information into a ranking system that could ultimately lead to a decision on the appropriate credit and grant mix for an individual country.** For such a ranking system a set of cutoffs would be needed. Given IDA's greater share in countries' debt burden today than in the past, it seems to be preferable to err on the side of caution in establishing cutoffs since continued borrowing may lead to the threshold being exceeded in short order. Hence management is proposing three distinct groupings that would be tied to a "traffic light system for lending" based on the following cutoffs:

- when a country is more than 10% below the appropriate threshold, a "green light" would indicate that IDA can continue to provide assistance as credits;

- if a country is in a borderline position, defined here as between 10% above and 10% below the threshold, a "yellow light" would indicate a need for caution in new borrowing;

- if a country is more than 10% above the indicative threshold then a "red light" would indicate that the country should not take on new IDA credits but would be eligible for grants instead.

The band of 10% above and 10% below the threshold provides some protection against small changes in country debt ratios that could potentially lead to unwanted fluctuations in country ranking and grant requirements. It also helps to avoid spurious accuracy with respect to the threshold-level itself.

20.   Table A3 in Annex 1 shows how each country fares in the ranking system. It shows the percentage distance from the relevant threshold for each of the individual indicators, the calculation of the composite indicator, and the outcome of the decision rule and the resulting country ranking.

21.   In summary, given a country's performance grouping and the applicable indicative debt-burden thresholds, translating Table 1 into a country ranking system for debt distress involves the following steps (Box 1 below illustrates this system with a concrete country example)**:**

> ➢ Select the debt-burden indicators from Table 1 that will be used in the ranking system (in this case, the NPV of debt-to-exports, NPV of debt-to-GDP, and debt-service to-exports ratios).

> ➢ Calculate the percentage distance of each country's actual debt-burden indicators from the appropriate thresholds (Table A2 in Annex 1).

> ➢ Calculate the composite stock indicator (i.e., the average of the percentage distances from the relevant thresholds yielded by the NPV-of-debt-to-exports and NPV-of-debt-to-GDP ratios) and compare it with the relative distance of the actual debt-service-to-exports ratio from the corresponding threshold (Table A3 in Annex 1).

> ➢ Assign the "traffic light" – green, yellow, or red – as determined by the chosen cutoff as well as by the indicator (the composite stock or the debt-service-to-exports ratio) that yields the highest percentage distance (Table A3, last column).

Box 1. Illustrating the Decision Rule: The Case of Kyrgyz Republic

1. Policy performance – medium performer (CPIA between 2.9 and 3.6)

2. The relevant thresholds for that level of performance are: (i) 45% for the NPV of debt-to-GDP ratio; (ii) 200% for the NPV of debt-to-exports ratio; and (iii) 25% 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 (%) (a)	2002 Figures (%) (b)	Percentage Distance from Threshold (c) = [(a)-(b)]/(a)
NPV of debt-to-GDP ratio	45	81.3	**-80.6**
NPV of debt-to-exports ratio	200	225.7	**-12.8**
Debt-service-to-exports ratio	25	29.4	**-17.6**

Each of 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 cutoff to assign "lights" to Kyrgyz Republic (see discussion in main text):

-   More than 10% below the threshold: green light.

-   Between 10% below and 10% above threshold: yellow light.

-   More than 10% above threshold: red light.

For both the composite stock indicator and the flow indicator, Kyrgyz Republic is well beyond 10% 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 "red light."

B. Forward-Looking Aspects and the Treatment of Exogenous Shocks

22.   The "traffic light system," in itself, would imply that IDA's credit and grant-making decisions would be *primarily* based on actual data rather than projections for the IDA14 period. That is, the "traffic light system" does not directly address the second pillar of the Framework Paper. While country-by-country analysis of debt sustainability, incorporating a number of forward-looking elements, would be the preferred approach to guide a country's debt strategy and hence its discussions with creditors and donors on terms, detailed debt sustainability analyses (DSAs) as outlined in the Framework Paper[8] will become available for all IDA countries only over a considerable time. Once DSAs are systematically available, the proposed ranking system may be revisited, for example by the mid-term review of IDA14, to take into account improvements in classification, along the lines of the forward-looking approach described in the joint Framework Paper.[9]

23.   For the present, however, it is possible to complement the ranking system proposed here with some available joint IMF-Bank DSAs. The DSAs would show the position of debt burden indicators relative to the relevant thresholds, indicating when (or if) a country would migrate from one debt-distress category to another. Joint DSAs are available for many HIPC countries that have started or finished the HIPC process, although not in the form proposed in the Framework Paper (see Box A.1 in Annex 2 for a discussion of the synergies between the new debt sustainability framework and the HIPC Initiative). This would allow for the adoption of preventative measures for countries that are currently classified as a low risk of debt distress but are expected to move to a higher debt-distress-risk category in the near future.

24.   Therefore, a dynamic element can be achieved through proposed periodic reviews and the incorporation of information from existing DSAs for post-completion point countries, and to the extent that they are available, DSAs for "borderline" cases in which countries' debt-burden indicators are close to cautionary levels. Ethiopia is a case at hand: it is classified (see Table A.4 in Annex 1) as a "yellow light" country as its post-completion point HIPC DSA indicates that it will move to a medium-debt-distress category during the IDA14 period (FY06-08). This example shows that once available DSAs are considered part of the process of assigning debt-distress categories to countries, an element of judgment is brought into the exercise, particularly with respect to country reclassification issues resulting from information provided by DSAs on the prospective behavior of debt-burden indicators.

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[8]   The HIPC DSAs differ from the methodology proposed in the Framework Paper in a few key areas. First, the NPV calculations differ in two respects: (i) they would be based on a creditor-by-creditor data as opposed to loan-by-loan data in HIPC documents; and (ii) data on debt service would be collected in the same currency as other balance-of-payment items (typically the US dollar), rather than currency-by-currency. Second, NPVs would then be calculated using a common discount factor. The US-dollar Commercial Interest Reference Rate (CIRR) of 5% has been proposed as a starting point, to be adjusted by a 100 basis points whenever the 6-month CIRR deviates from it by at least this amount for six consecutive months. This departs from the HIPC methodology of using 6-month average CIRR, which is also the discount rate used in the historical database described in Tables A1-A4.

[9]   Much of the critique that the Bank and Fund has received on the HIPC Initiative from many fronts, including the OED and GAO, has been in the use of overly-optimistic projections. This risk would still be present as a forward-looking approach is fully or partially adopted as part of the process of determining grant eligibility.

25.   Closely connected to the forward-looking aspects of the Framework Paper is the issue of exogenous shocks. The recent technical briefing paper entitled "Exogenous Shocks in Low-Income Countries: Policy Issues and the role of the World Bank"[10] describes the impact of shocks on low-income countries, including their disproportionate impact on poorer countries. The paper also describes the current instruments, possible *ex ante* "preventative" and *ex post* "curative" measures, and the difficulties in arriving at a clear definition of a shock. Exogenous shocks are by their nature complex to define; they are easier to define in the case of natural disasters, where the impact of the shock is evident in the short-term, than for terms-of-trade or commodity-price shocks which may evolve over a longer period of time.[11]

26.   Although IDA is not necessarily the most suitable institution to deal with commodity price shocks given the comparative advantages of the IMF and other donors and creditors, it has been actively providing both *ex ante* and *ex post* shocks-related support. IDA's assistance has primarily been through traditional instruments aimed at shock prevention – support to structural adjustment policies with an important commodity-related impact; provision of infrastructure and services that facilitate export-base diversification; and commodity-related technical assistance.

27.   In addition to prevention, IDA has a number of *ex post* mechanisms, which have been primarily accessed for the faster onset shocks such as natural disasters. The Bank has also provided *ex post* assistance for commodity shocks on a more *ad hoc* basis, relying on the built-in flexibility of its lending products.[12] In fact, the timeliness and volume of the financing response (through, for example, mechanisms such as debt service holidays, additional emergency support, etc.) seems to be more important than simply changing terms (i.e., from credits to grants) in the event of a shock. What is key is that *ex post* assistance is provided quickly and counter-cyclically. This has been a difficult challenge for the international community – with several instruments designed to provide such *ex post* assistance failing to be fully effective.

28.   Before IDA12, there was greater flexibility for IDA to respond quickly to shocks and natural disasters as normal lending operations would not typically exhaust the available envelope in each replenishment. This flexibility has been reduced somewhat since countries have displayed greater capacity to use IDA allocations fully for development purposes. This is reflected in the comparatively smaller carryovers of resources from recent replenishments (the small IDA12 carryover resulted solely from exchange rate movements). Indeed, IDA13 is not expected to have any carryover due to the high demand for IDA's country allocations.

29.   In the proposed approach, shocks are partly captured insofar as they affect the macroeconomic variables used to calculate the debt-burden indicators (GDP, exports, NPV of

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[10]   *Exogenous Shocks in Low Income Countries: Policy Issues and the Role of the World Bank* - March 10, 2004; OM2004-0016.

[11]   Natural disaster emergencies are already covered in specific support instruments, as those contemplated in OP 8.50 on "Emergency Recovery Assistance."

[12]   "Exogenous Shocks in Low-Income Countries" *op. cit.,* Annex II contains an overview of the Bank's instruments to address shocks affecting client countries.

debt) [13]. In this respect, the ranking system may provide IDA with an additional tool with which to address shocks on an *ex ante* basis.

III. Allocating Grants Based on Debt Sustainability

30.   The debt-distress-based country grouping system outlined in Section II introduces several challenges, but also represents an opportunity to improve on the complex formula for grants in IDA13. IDA management considered several allocation options for taking full advantage of these opportunities. The allocation approach set out below (the "volume approach") seeks 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 Millennium Development Goals (MDGs).

31.   The volume approach can be described in two initial 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 ("green light"): credits = 100%.
  - Medium risk of debt distress ("yellow light"): grants = 50%, credits = 50%.
  - High risk of debt distress ("red light"): grants = 100%

32.   Three country categories for grant allocation purposes allows some tailoring to country circumstances while keeping the rule simple. Countries that are more than 10% above the indicative debt thresholds (red light) would need to receive 100% of new assistance on grant terms in order to help prevent a further deterioration in these ratios. Where countries are close to the threshold (within 10%), 50% grants would help to slow down the accumulation of debt, assist to prevent a shock in a given year from abruptly changing the country's debt distress grouping, and help avoid spurious accuracy in the interpretation of the threshold. As in IDA13, it is assumed that grants would be limited to IDA-only countries, as blend countries are also receiving IBRD terms and hence it would be a more appropriate strategy to scale back IBRD lending if these countries are at risk of debt distress, rather than to soften the IDA terms. Therefore, blend countries would receive in all cases 100% of their allocations as IDA credits.

33.   As shown in Table A4 in Annex 1, the volume approach would result in grants accounting for about 22% of financing, based on the January 2004 allocation of IDA resources for FY05-07, and assuming that debt distress indicators remain constant during this simulation

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[13]   It should be noted that vulnerability to shocks was held constant at the mean-level in order to arrive at the matrix of indicative thresholds. As pointed out in the Framework Paper: "…in contrast to the policy dimension, a country's susceptibility to shocks – while also of major importance for debt sustainability – will not be captured in the country-specific threshold but rather through stress-tests, by defining a prudent borrowing path that keep debt ratios at sustainable levels also in the event of plausible shocks." (p.24). Both the matrix of indicative thresholds (Table 1) and the classification system that has been derived from this matrix are based on an average level of vulnerability to shocks and do not take into account deviations from that average level.

period.[14] The volume approach represents a simple and transparent allocation system whereby eligibility for grants is based solely on a country's debt distress ranking. The approach would maximize volumes today to reach country MDGs, while addressing debt sustainability issues upfront through the terms of IDA assistance. It is important to note that all countries which, under IDA13 rules, would be eligible for post-conflict grants in FY05-07 are still eligible for some level of grants under this proposed approach.

34. However, the volume approach as described has two main shortcomings. First, it raises inter-country equity issues, whereby countries with similar CPIA ratings, similar income-levels and therefore similar per capita IDA allocations could receive different terms (some such cases are presented in Table 2). Second, by offering increasingly softer terms for poorer-performing countries, without a reduction in volume, the volume approach has been demonstrated to weaken the desired close relationship between policy performance and the present value of resource transfers (see analysis in Annex 4).

35. An upfront charge for grants of up to 20% would help address these two shortcomings. The lower IDA volumes for grant recipients resulting from an upfront charge would reduce inequity. In addition, the higher the upfront charge, the greater the ability of such charges to address the policy impact on allocations. An alternative allocation system that was considered – the Grant Element Approach– discounted volumes by up to 40%, leading to a significantly strengthened policy impact (see Annex 2 for details on this approach), but may be considered too harsh in its reduction of resources needed for development. The implications of the application of upfront charges on the overall grant level in IDA14 are shown in Annex Table A4.

Table 2. Examples of Equity Issues in the Volume Approach

Country	CPIA Quintile	GNI per Capita (US$)	Grant Percentage in the Volume Approach
Zambia	Third quintile	330	100
Kenya		360	0
Kyrgyz Republic	Third quintile	290	100
Malawi		160	50
Mozambique		210	0
Rwanda	Second quintile	230	100
Nepal		230	0
Gambia	Fourth quintile	280	100
Chad		220	0

36. Management, therefore, recommends to proceed with a <u>modified volume approach</u> incorporating a third step – an upfront volume reduction for grant recipients by up to 20% of their allocation provided in grants. This enables the allocation system to:

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[14] The grant percentage obtained with the figures from the FY06-08 IDA14 Lending Projections is about 21%.

- be in accordance with the debt sustainability framework;
- be simple;
- reduce the inequities between grant and credit recipients;
- maintain the policy-focus of the PBA system; and
- provide a mechanism to help finance the cost of grants, as further discussed in the next section.

IV. GRANT FINANCING

37.   The previous two Sections described a classification and an allocation system for grants for IDA14, based on debt sustainability. Any grants in IDA14 will of course have an impact on IDA's finances, as has been extensively discussed in previous papers and debates. During IDA13, Deputies reaffirmed their commitment to safeguard IDA's financial strength and mitigate the impact of grants on IDA's finances. In this spirit, Deputies discussed a proposal for financing IDA13 grants during the IDA14 meetings in February 2004 in Paris.[15] In order to offer choices for grant financing at an early stage during the IDA14 replenishment, this section of the paper describes several options for consideration by Deputies.

38.   Grant financing is required since grants increase the level of concessionality of IDA's assistance and reduce future credit reflows. As credit reflows account for an increasing share of total commitment authority, grants weaken IDA's ability to provide future development assistance and, without financing, would decapitalize IDA over time.

39.   Assuming conservatively that donor contributions were to remain stable in *nominal* terms into the future, IDA's assistance levels could be kept roughly stable in *real* terms, provided that HIPC-related debt forgiveness of IDA will also be funded by donors. Extending 20% of grants from IDA14 and onward, without grant financing, would reduce IDA commitment authority in real terms by about 7% in 20 years, and nearly 20% in 40 years, respectively. Extending 50% of grants would lead to estimated assistance reductions of 17% after 20 years, and 47% after 40 years, respectively.

40.   Higher donor contributions in the future could close these assistance gaps. For example, if donor contributions were to grow by about 6% from each IDA replenishment to the next replenishment (i.e., remaining stable in *real* terms into the future), the above reductions of future commitment authority due to grants could be avoided. However, assuming that donor resources would increase in perpetuity into the future would expose prospective IDA recipients to uncertainty as to whether the additional donor support will become available as expected.

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[15]   *Chairman's Summary, IDA14 Deputies Meeting,* para. 4, Paris, 18-20 February 2004.

A. Options for Grant Financing

41.   There are two basic avenues available for financing grants in IDA14:

   i. <u>Donors could replace foregone reflows due to grants through additional contributions</u>, for example by using the IDA13 grant financing mechanism that was recently agreed by Deputies; or

  ii. <u>Grant financing could be endogenized into the financing terms of IDA</u> by changing the level of concessionality of IDA assistance. This could be achieved through upfront charges on grants for grant recipients or through a hardening of lending terms[16] for credit recipients, or both.

42.   A combination of both mechanisms could be used. To the extent that their application would not generate sufficient financing for grants in IDA14, IDA's future assistance capacity would be reduced. Alternatively, donors might consider setting a ceiling for grants in IDA14 to a volume which could realistically be financed by using these or other financing mechanisms.

43.   <u>Donor contributions</u>. A number of technical papers have been generated on the subject of grant financing, including for the IDA13 Mid-Term Review in November 2003[17] and the IDA14 meetings in Paris in February 2004.[18] In May 2004, management disseminated a paper which describes a compromise formula for IDA13 grant financing.[19] This formula proposes the financing of IDA13 grants in two segments: foregone service and commitment charges reflecting IDA's costs of doing business would be financed by additional donor contributions in IDA14; foregone principal reflows would be financed as they arise over 40 years (i.e., on a pay-as-you-go basis).

44.   Using the IDA13 grant financing formula might obviate the need for extensive further discussions on this issue. However, there are disadvantages to this approach. First, because only foregone *charge income* will be financed upfront, IDA is assuming the risk that the financing of foregone *principal reflows* over 40 years may not occur entirely as intended. This risk is substantial since principal reflows constitute about three quarters of the cost of grants.[20] Second, donors could face considerable operational and financial challenges when managing a system of multiple "add-on" contributions in future replenishments. Also, true "additionality" of future donor resources to replace reflows could not be measured without a specified future contribution "benchmark," which seems unlikely to be feasible.

45.   Moreover, to achieve the desired financing, upfront donor contributions would need to earn a rate of return equal to the discount rate used to calculate the net present value. Providing additional, regular IDA credits would not achieve this objective. As set out in the paper prepared

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[16] Note that even the "harder terms" proposed would still fall within IDA's mandate under its Articles of Agreement of providing financing on terms that "bear less heavily on the balance of payments than conventional loans."

[17] *Compensating IDA for the Cost of IDA13 Grants*, IDA, October 2003.

[18] *Further Options for IDA13 Grant Financing*, IDA, January 2004.

[19] *Modalities of IDA13 Grant Financing*, IDA, May 2004.

[20] Principal reflows account for 74% of the net present value of foregone reflows due to grants. Id., Table 1.

for the February 2004 meetings in Paris, IDA could lend these resources at harder terms to IDA/IBRD blend countries or, in partnership with the IFC, for loan syndications or lending for infrastructure projects.[21] Deputies generally welcomed these proposals during the IDA13 discussions.

46.   Upfront charges on grants would allow IDA to capture at least the expenses for providing grants and restore its cost recovery policy. At present, IDA grants carry no charges; service charges cannot be collected in the absence of an outstanding principal balance, while commitment charges on grants have been set at 0%, subject to agreement on how grants would be financed. Levying no charge for grants is contrary to IDA's long-standing policy of recovering administrative expenses from the beneficiaries of its assistance.

47.   The flat charge on grants could be determined as the present value of foregone charge income: using a 6% discount rate,[22] the upfront fee would be about 9%. Since charges represent about one quarter of total foregone reflows in present value terms, this would cover one-quarter of the total financing required.[23] A higher upfront charge on grants of 20% could finance around half of total foregone reflows due to grants. Resources from upfront charges would need to be invested at a rate equal to the discount rate to achieve the intended grant financing objective.

48.   Hardening lending terms for credit recipients would increase the present value of credit reflows and help offset foregone reflows from grants.[24] Shortening maturities would make reflows available earlier for new lending assistance. Until 1987, IDA lending terms were the same for all borrowers: credits had 50 years maturity and 10 years grace. Since then, different maturities are being used for IDA-only (40 years of maturity) and blend countries (35 years of maturity). In IDA13, "hardened" terms (20 years of maturity) were introduced when per capita income has been above the operational cut-off for more than two consecutive years.[25] All credits include a 10-year grace period.

49.   Reducing the 35-year credit maturity for blend countries by 5 or even 10 years could be regarded as a possibility. Blend terms are nearly as concessional as IDA-only terms, providing very little differentiation between the two categories.[26]

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[21]   *Further Options for IDA13 Grant Financing*, paras 12-19, IDA, January 2004.

[22]   This discount rate represents IDA's long-term return on liquid assets which is currently about 6% for five years ended in FY03. An alternative discount rate to determine the concessionality of IDA's assistance would be the prevailing, variable IBRD lending rate, converted into a 40-year fixed-rate equivalent rate, which also equals about 6% as of May 2004.

[23]   Charges account for 26% of total foregone reflows in net present value terms. See: *Modalities of IDA13 Grant Financing*, Table 1, IDA, March 2004.

[24]   However, it should be noted that hardening the terms for non-debt-distressed IDA borrowers would further weaken the link between policy performance and the present value of resource transfers. See Annex 4 for a more complete discussion of this relationship.

[25]   IDA lending eligibility and repayment terms are summarized in World Bank Operational Policies, OP 3.10 Annex D, available at *http://www1.worldbank.org/operations/wbopcs/Preports/Report_Annex_D.asp*.

[26]   IDA-only credits feature a grant element of about 60% vs. a grant element of 57% for blend credits. Shortening the maturity for blends by 5 years (to 30 years) would result in a grant element of 52%, and by 10 years (to 25 years) in a grant element of 48%, respectively.

50.   Shortening the 40-year maturity for <u>IDA-only countries</u> would be more problematic. In the grant allocation framework introduced in the previous sections, the lending terms of those countries receiving 50% of their allocation as credits might not be available for hardening since countries are already experiencing a medium-level of debt distress. Among the group of IDA-only countries receiving 100% of their allocations as credits, a hardening of lending terms for the poorest countries (most of them in Africa) might also be questionable. That would leave a relatively small group of about 10 better-off IDA-only countries (most of them in Asia) with low-levels of debt distress where a shortening of maturity by 5 years could be considered. Consistent with this reasoning is the fact that the Asian Development Fund provides its concessional credits with 32 years of maturity, including 8 years of grace. By contrast, credits by the African Development Fund are offered with 50 years of maturity, including 10 years of grace.

B. Limits of Grant Financing

51.   <u>Donor contributions</u> for grant financing could replace foregone reflows partially or in their entirety.

52.   If the objective is to endogenize grant financing into IDA's financing terms, the first option of <u>charging upfront fees on grants could finance up to half of foregone reflows due to grants</u>, for any volume of grants in a replenishment. A 9% upfront charge would finance foregone charge income on grants, equivalent to about one quarter of costs; a higher upfront charge of 20% could finance slightly more than half of total costs.

53.   The second option of <u>hardening credit terms could probably finance a grant volume of up to 7% in a replenishment</u>. Shortening *blend* credits by 5 years (by 10 years) would have financed a grant volume of about 3% (of about 5%) in the IDA13 envelope. Shortening *IDA-only* credits by 5 years would theoretically have financed a grant volume of some 5.5% in the IDA13 envelope. However, when using debt distress for allocating grants in IDA14, only a limited number of IDA-only countries could be subjected to this hardening, reducing the grant volume that could be financed to about 2%. Combining shorter lending terms for both blends and IDA-only countries could, therefore, finance about 7% of grants in an IDA envelope.

54.   The <u>preferred mechanism</u> would be for donors to finance most or all of the cost of grants through additional financing contributions. If these contributions were to be provided in the form of upfront financing commitments, without exposing IDA to undue risks, then some or all of the hardening of assistance terms could be avoided for the purposes of grant financing.

55.   However, in reality, donors may not be able to carry the full burden of grant financing. Therefore, a combination of donor contributions and adjustments to IDA's financing terms would probably be required to achieve sufficient grant financing, depending in particular on the volume envelope of grants in IDA14.

56.   For example, given a grant volume of 20% in a replenishment, upfront charges on grants of 20% flat would finance slightly more than half of the cost, or nearly 11% in volume terms. That would leave 9% unfinanced. If an upfront charge on grants of only 9% (i.e., the NPV of IDA administrative charges) is used for grant financing, then only about 5% of the cost could be

covered, therefore leaving 15% unfinanced. In either scenario, the unfinanced balance would have to be covered by donor contributions and/or hardening of IDA credit terms. Furthermore, as illustrated in Chart 1, the unfinanced balance would increase in proportion with the share of grants of in a replenishment.

**Chart 1. Illustrative Limits of Grant Financing
for Different Grant Percentages in a Replenishment**
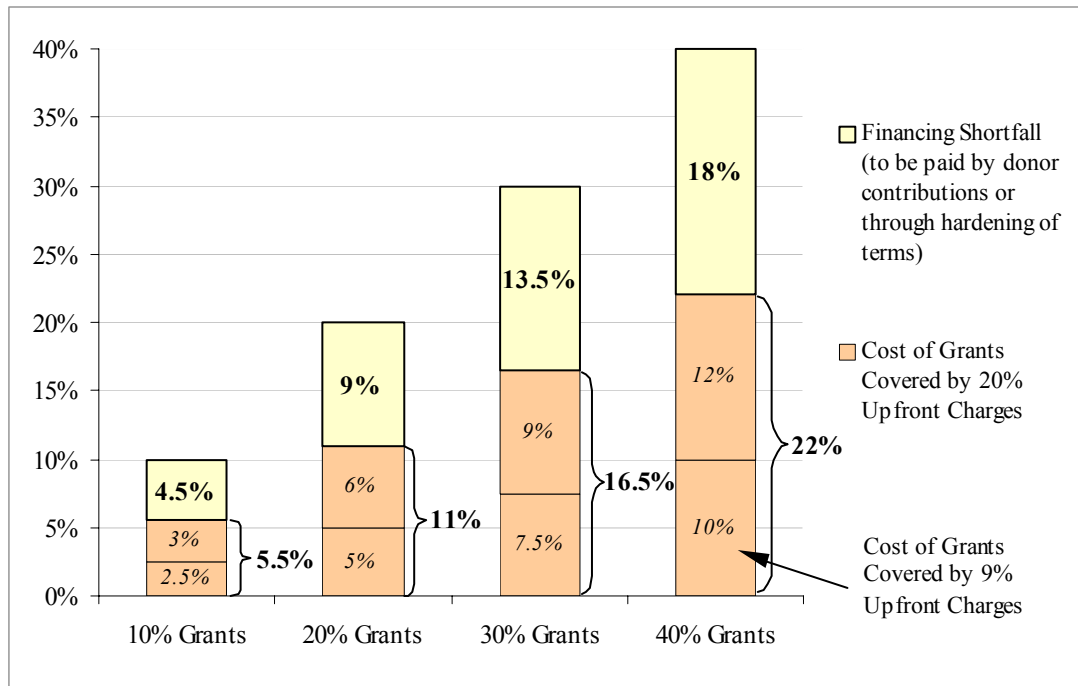
57.   The above analysis demonstrates the opportunities and limitations for grant financing. Deputies would need to decide on the appropriate financing shares between donors, grant recipients, and IDA's current borrowers.

58.   Under the proposed approach of debt sustainability as the basis for allocating grants, a risk for the effectiveness of any grant financing mechanism selected is uncertainty as to the actual volume of grants to be financed in IDA14 (and possibly in successive replenishments). If country eligibility for grants will be updated annually, the precise aggregate volume of grants in IDA14 will not be known at the time of conclusion of the IDA14 Replenishment discussions.

V. CONCLUSIONS AND NEXT STEPS

59.   This paper translates the results of the latest empirical research on the determinants of debt distress in low-income countries into practical mechanisms for the allocation of IDA grants on the basis of those aspects of the Framework Paper that are already being implemented. In this way, grant allocations can be focused on reducing countries' risk of debt distress, as well as the subsequent financial and reputational risks to IDA.

60.   The first step involves grouping low-income countries in accordance with their respective policy-dependent risks of debt distress, and making policy choices as to the most appropriate debt-burden indicators with which to carry out this task. This process is consistent with the two-pillar strategy advocated in the joint Bank-Fund Framework Paper. Maintaining a dynamic element is achieved through proposed periodic reviews and the incorporation of information from existing DSAs for post-completion point countries, and to the extent that they are available, for countries close to the indicative threshold.

61.   The second step entails using this classification system as the basis for grant allocation decisions. While several allocation systems were explored, management is recommending a modified volume approach that incorporates an upfront charge on grants of up to 20% to reduce inequities and help maintain the policy focus of the PBA System. It also provides a mechanism to help finance IDA's costs in providing grants, including the administrative costs of IDA, which by longstanding policy are recovered from IDA's beneficiaries.

62.   The proposed allocation system represents a significant departure from that prevailing under IDA13, where the grant percentage was set *ex ante*. While IDA13 set the stage for allocating grants according to debt vulnerability, the grant percentage in IDA14 under the allocation systems proposed would be a direct result of the debt distress classification system and how countries fare. This introduces additional risks for IDA as changes in country circumstances would result in different grant percentages to be financed.

63.   The risks introduced with this system are both upside and downside ones.

> ➤ A pipeline of countries approaching their completion points under the HIPC Framework would be expected to require less grants after their completion points than prior to reaching this stage.

> ➤ On the other hand, large commodity price shocks could push countries into a higher debt distress classification, with a resulting higher level of grants.

> ➤ In addition, any changes to the threshold-levels as a result of reexamination of the analytical underpinnings in the joint "modalities" paper being prepared for the Annual Meetings could have significant implications on the grant percentages.

64.   The next steps in this process are to operationalize the second pillar of the Framework Paper, whereby the actual and projected behavior of debt-burden indicators over time is duly and consistently incorporated into the allocative mechanism. This would require close coordination with other partners, in determining overall judgments on a country's capacity to take on borrowing, and ensuring that institutions coordinate to help countries maintain prudent debt

management policies. It is expected that this process will take time, and will possibly be an innovation to the system in IDA15. Moving forward, it would be beneficial to place a higher priority on forward-looking DSAs for countries which are close to the threshold and where the additional information could help inform the classification system.

65.   Another important decision to be made is with respect to grant financing in IDA14. Any unfinanced share of grants in IDA14 would reduce IDA's lending capacity and lower future assistance volumes. This would increase the dependence of IDA countries on donors' continued ability to finance development assistance during future generations.

66.   The paper presented a menu of options for financing the cost of grants in IDA14. As shown in the paper, using upfront charges of 20% on grants could finance about 11% of grants in volume terms, leaving 9% unfinanced. Donor contributions and/or hardening of IDA credit terms would be required to cover the unfinanced balance. Higher grant volumes would increase the unfinanced balance. A risk for effective grant financing in IDA14 will be the uncertainty as to the volume of grants to be financed, since – in addition to the level of assistance which is determined annually through the PBA system - country eligibility for grants would also be updated on an annual basis.

VI. ISSUES FOR DISCUSSION

67.   Deputies have expressed their support for the adoption of the concept of debt distress – as it applies to low-income countries - as the basis for determining grant eligibility in the context of IDA14.

 ➢ Does the proposed approach adequately translate the joint IMF-World Bank Framework Paper on debt sustainability in low-income countries into a practical debt distress-based grouping system?

 ➢ Does the modified volume approach strike the right balance with respect to issues of equity, policy performance, and volumes of assistance?

 ➢ Does the use of historical debt data complemented with joint DSAs where available and periodic (likely annual) updates provide a sufficiently dynamic but practical system on which to base credit- and grant-making decisions?

 ➢ Do Deputies broadly endorse a system which would derive the grant percentage of IDA support as an outcome of the debt distress-based ranking and allocation system? Do Deputies consider that after IDA13 specific earmarked grant categories, including HIV/AIDS, should be added to this framework?

68.   Deputies may wish to comment on the options and trade-offs associated with grant financing in IDA14.

 ➢ How should the grant financing burden be shared among donors, grant recipients and credit recipients of IDA?

 ➢ What are the implications for effective grant financing from the greater uncertainty of IDA14 grant volumes when using the allocation system described in this paper?

➢ **Annex 1. Tables**

Table A.1. Policy-Dependent Debt and Debt-Service Thresholds Applied to Low-Income Countries

	NPV/GDP [1/]	NPV/EXP [2/]	DS/EXP [2/]
Strong (CPIA≥3.60)	60	300	35
Cape Verde	42.0	155.3	12.7
Sri Lanka	47.0	125.7	11.7
St. Lucia [3/]	61.3	106.5	6.9
St. Vincent and the Grenadines [3/]	46.9	95.3	7.4
Uganda	21.6	187.8	11.8
Grenada [3/]	71.7	136.9	11.8
Tanzania	18.7	126.7	10.5
Armenia	31.7	133.3	13.2
Maldives	32.8	44.0	4.8
Samoa	64.3	211.2	9.8
Bhutan	58.4	267.0	4.9
Mauritania	58.0	154.8	17.5
Nicaragua	32.3	133.9	15.7
Senegal	33.1	118.0	10.5
Honduras	46.8	124.5	16.0
India [3/]	16.1	119.9	19.0
Vietnam	32.3	64.9	6.8
Pakistan [3/]	43.7	256.8	27.6
Burkina Faso	16.3	163.2	18.6
Ghana	41.0	101.1	5.8
Indonesia [3/]	75.7	199.6	25.9
Madagascar	31.0	293.6	15.3
Yemen, Rep.	34.1	87.0	4.2
Medium (2.90<CPIA<3.60)	45	200	25
Azerbaijan [3/]	18.2	46.5	7.8
Bangladesh	23.2	159.5	10.5
Bolivia [4/]	23.5	122.4	32.3
Nepal	31.2	123.0	7.0
Benin	32.5	159.3	11.5
Mali	39.2	161.3	11.7
Bosnia and Herzegovina [4/]	33.9	135.5	12.0
Rwanda	39.7	540.6	17.3
Serbia and Montenegro [4/]	78.4	448.3	5.5
Albania [4/]	18.5	106.2	7.1
Dominica [3/]	74.6	143.4	8.4
Kenya	37.0	153.4	15.5
Lesotho	59.2	130.7	20.3
Cameroon	53.4	184.0	13.6
Mongolia	56.6	119.8	8.8
Malawi	46.6	175.7	7.3
Zambia	116.3	423.1	30.5
Kyrgyz Republic	81.3	225.7	29.4
Mozambique	22.8	49.3	4.2
Guyana	67.4	71.7	8.0
Ethiopia	25.9	163.2	11.4
Moldova	76.2	169.1	31.3
Georgia	41.5	171.7	16.0
Gambia, The	76.0	104.8	6.8
Niger	20.0	132.0	8.5
Chad	31.6	217.4	10.3
Guinea	45.1	176.2	16.7
Sierra Leone	90.8	771.5	24.8
Cote d'Ivoire	80.4	210.9	18.6
Djibouti	37.0	98.3	5.4
Tonga	36.0	171.7	9.5
Eritrea	52.6	253.0	7.6
Vanuatu	23.4	37.0	1.5
Cambodia	66.7	156.1	1.3
Tajikistan	74.3	120.4	10.6

	NPV/GDP [1]	NPV/EXP [2]	DS/EXP [2]
Poor (CPIA≤2.90)	30	100	15
Congo, D.R.	147.3	818.9	90.3
Congo, Rep.	162.1	201.3	1.0
Burundi	104.4	1324.8	41.1
Papua New Guinea [3]	85.9	108.4	12.5
Lao PDR	85.2	291.1	9.1
Nigeria [3]	72.3	153.3	7.3
Guinea-Bissau	211.3	735.7	23.9
Comoros	75.0	567.0	14.2
Sao Tome and Principe	223.4	681.2	37.0
Uzbekistan [3]	44.8	132.7	22.4
Togo	84.1	263.6	3.0
Sudan	117.4	857.3	1.3
CAR	71.2	704.2	0.8
Haiti	23.3	174.4	5.8
Angola	86.1	131.3	11.6
Zimbabwe [3]	47.1	194.0	2.9
Solomon Islands	54.1	104.3	4.6
Liberia	438.7	1765.7	0.6
Myanmar	0.8	164.9	15.3
Afghanistan	11.3	202.8	0.0

Notes:
.. Not available.
- A highlight in grey indicates a debt ratio above the respective threshold.
1/ In ratios, both the numerator and denominator refer to 2002 data.
2/ In ratios, the numerator refers to 2002 data and the denominator refers to the three-year average of 2000-2002.
3/ Blend-term country.
4/ Hardened-term country.

Table A.2. Percentage Distances from Indicative Thresholds and Rankings Based on Individual Indicators

	Percentage Distances from Indicative Threshold			Ranking of Debt Distress [3/]		
	(1)	(2)	(3)	(1)	(2)	(3)
Strong (CPIA≥3.60)						
Cape Verde	30.0	48.2	63.7	1	1	1
Sri Lanka	21.7	58.1	66.6	1	1	1
St. Lucia [1/]	-2.2	64.5	80.3	2	1	1
St. Vincent and the Grenadines [1/]	21.9	68.2	78.7	1	1	1
Uganda	64.1	37.4	66.4	1	1	1
Grenada [1/]	-19.4	54.4	66.3	3	1	1
Tanzania	68.8	57.8	70.0	1	1	1
Armenia	47.2	55.6	62.3	1	1	1
Maldives	45.4	85.3	86.3	1	1	1
Samoa	-7.1	29.6	72.0	2	1	1
Bhutan	2.7	11.0	85.9	2	1	1
Mauritania	3.3	48.4	50.1	2	1	1
Nicaragua	46.2	55.4	55.1	1	1	1
Senegal	44.8	60.7	70.0	1	1	1
Honduras	22.0	58.5	54.3	1	1	1
India [1/]	73.2	60.0	45.8	1	1	1
Vietnam	46.1	78.4	80.7	1	1	1
Pakistan [1/]	27.1	14.4	21.1	1	1	1
Burkina Faso	72.8	45.6	46.8	1	1	1
Ghana	31.6	66.3	83.4	1	1	1
Indonesia [1/]	-26.1	33.5	26.0	3	1	1
Madagascar	48.4	2.1	56.2	1	2	1
Yemen, Rep.	43.1	71.0	88.0	1	1	1
Medium (2.90<CPIA<3.60)						
Azerbaijan [1/]	59.6	76.8	68.7	1	1	1
Bangladesh	48.5	20.2	58.0	1	1	1
Bolivia [2/]	47.8	38.8	-29.1	1	1	3
Nepal	30.6	38.5	71.9	1	1	1
Benin	27.8	20.4	53.9	1	1	1
Mali	12.9	19.4	53.4	1	1	1
Bosnia and Herzegovina [2/]	24.7	32.3	51.8	1	1	1
Rwanda	11.8	-170.3	30.9	1	3	1
Serbia and Montenegro [2/]	-74.3	-124.2	77.9	3	3	1
Albania [2/]	58.8	46.9	71.5	1	1	1
Dominica [1/]	-65.8	28.3	66.4	3	1	1
Kenya	17.9	23.3	38.1	1	1	1
Lesotho	-31.5	34.7	18.7	3	1	1
Cameroon	-18.7	8.0	45.6	3	2	1
Mongolia	-25.9	40.1	64.9	3	1	1
Malawi	-3.5	12.2	71.0	2	1	1
Zambia	-158.4	-111.5	-21.9	3	3	3
Kyrgyz Republic	-80.6	-12.8	-17.6	3	3	3
Mozambique	49.3	75.3	83.3	1	1	1
Guyana	-49.8	64.1	68.2	3	1	1
Ethiopia	42.5	18.4	54.5	1	1	1
Moldova	-69.3	15.4	-25.2	3	1	3
Georgia	7.9	14.2	35.8	2	1	1
Gambia, The	-68.8	47.6	72.7	3	1	1
Niger	55.6	34.0	66.0	1	1	1
Chad	29.7	-8.7	58.7	1	2	1
Guinea	-0.3	11.9	33.2	2	1	1
Sierra Leone	-101.8	-285.7	1.0	3	3	2
Cote d'Ivoire	-78.7	-5.4	25.6	3	2	1
Djibouti	17.9	50.8	78.4	1	1	1
Tonga	19.9	14.1	62.2	1	1	1
Eritrea	-16.8	-26.5	69.6	3	3	1
Vanuatu	48.0	81.5	94.1	1	1	1
Cambodia	-48.2	22.0	94.7	3	1	1
Tajikistan	-65.2	39.8	57.5	3	1	1

	Percentage Distances from Indicative Threshold			Ranking of Debt Distress [3/]		
	(1)	**(2)**	**(3)**	**(1)**	**(2)**	**(3)**
Poor (CPIA≤2.90)						
Congo, D.R.	-391.0	-718.9	-502.1	3	3	3
Congo, Rep.	-440.4	-101.3	93.4	3	3	1
Burundi	-247.9	-1224.8	-174.2	3	3	3
Papua New Guinea [1/]	-186.3	-8.4	16.4	3	2	1
Lao PDR	-183.9	-191.1	39.5	3	3	1
Nigeria [1/]	-141.1	-53.3	51.6	3	3	1
Guinea-Bissau	-604.4	-635.7	-59.2	3	3	3
Comoros	-150.0	-467.0	5.5	3	3	2
Sao Tome and Principe	-644.6	-581.2	-146.9	3	3	3
Uzbekistan [1/]	-49.2	-32.7	-49.1	3	3	3
Togo	-180.4	-163.6	80.2	3	3	1
Sudan	-291.4	-757.3	91.6	3	3	1
CAR	-137.3	-604.2	94.5	3	3	1
Haiti	22.3	-74.4	61.1	1	3	1
Angola	-187.0	-31.3	22.9	3	3	1
Zimbabwe [1/]	-56.9	-94.0	80.9	3	3	1
Solomon Islands	-80.4	-4.3	69.4	3	2	1
Liberia	-1362.4	-1665.7	95.7	3	3	1
Myanmar	97.4	-64.9	-2.1	1	3	2
Afghanistan	62.5	-102.8	100.0	1	3	1

Notes:

.. not available.

(1) NPV of debt-to-GDP ratio.
(2) NPV of debt-to-exports ratio.
(3) Debt service-to-exports ratio.

1/ Blend-term country.
2/ Hardened-term country.
3/ Based on option 2 of the classification system, whereby "1" indicates green light, "2" yellow light, and "3" red light (see Annex 2.C).

Table A.3. Composite Index for Ranking Countries According to Debt Distress

	Percentage Distances from Indicative Threshold				Debt Distress Country Ranking [3]
	NPV/GDP	NPV/EXP	Average of two stocks (a)	DS/EXP (b)	(a) or (b), according to the decision rule
Strong (CPIA≥3.60)					
Cape Verde	30.0	48.2	39.1	63.7	1
Sri Lanka	21.7	58.1	39.9	66.6	1
St. Lucia [1]	-2.2	64.5	31.1	80.3	1
St. Vincent and the Grenadines [1]	21.9	68.2	45.1	78.7	1
Uganda	64.1	37.4	50.7	66.4	1
Grenada [1]	-19.4	54.4	17.5	66.3	1
Tanzania	68.8	57.8	63.3	70.0	1
Armenia	47.2	55.6	51.4	62.3	1
Maldives	45.4	85.3	65.3	86.3	1
Samoa	-7.1	29.6	11.3	72.0	1
Bhutan	2.7	11.0	6.8	85.9	2
Mauritania	3.3	48.4	25.8	50.1	1
Nicaragua	46.2	55.4	50.8	55.1	1
Senegal	44.8	60.7	52.7	70.0	1
Honduras	22.0	58.5	40.2	54.3	1
India [1]	73.2	60.0	66.6	45.8	1
Vietnam	46.1	78.4	62.2	80.7	1
Pakistan [1]	27.1	14.4	20.8	21.1	1
Burkina Faso	72.8	45.6	59.2	46.8	1
Ghana	31.6	66.3	49.0	83.4	1
Indonesia [1]	-26.1	33.5	3.7	26.0	2
Madagascar	48.4	2.1	25.3	56.2	1
Yemen, Rep.	43.1	71.0	57.0	88.0	1
Medium (2.90<CPIA<3.60)					
Azerbaijan [1]	59.6	76.8	68.2	68.7	1
Bangladesh	48.5	20.2	34.4	58.0	1
Bolivia [2]	47.8	38.8	43.3	-29.1	3
Nepal	30.6	38.5	34.5	71.9	1
Benin	27.8	20.4	24.1	53.9	1
Mali	12.9	19.4	16.1	53.4	1
Bosnia and Herzegovina [2]	24.7	32.3	28.5	51.8	1
Rwanda	11.8	-170.3	-79.2	30.9	3
Serbia and Montenegro [2]	-74.3	-124.2	-99.2	77.9	3
Albania [2]	58.8	46.9	52.8	71.5	1
Dominica [1]	-65.8	28.3	-18.7	66.4	3
Kenya	17.9	23.3	20.6	38.1	1
Lesotho	-31.5	34.7	1.6	18.7	2
Cameroon	-18.7	8.0	-5.4	45.6	2
Mongolia	-25.9	40.1	7.1	64.9	2
Malawi	-3.5	12.2	4.3	71.0	2
Zambia	-158.4	-111.5	-135.0	-21.9	3
Kyrgyz Republic	-80.6	-12.8	-46.7	-17.6	3
Mozambique	49.3	75.3	62.3	83.3	1
Guyana	-49.8	64.1	7.2	68.2	2
Ethiopia	42.5	18.4	30.4	54.5	2
Moldova	-69.3	15.4	-26.9	-25.2	3
Georgia	7.9	14.2	11.0	35.8	1
Gambia, The	-68.8	47.6	-10.6	72.7	3
Niger	55.6	34.0	44.8	66.0	1
Chad	29.7	-8.7	10.5	58.7	1
Guinea	-0.3	11.9	5.8	33.2	2
Sierra Leone	-101.8	-285.7	-193.8	1.0	3
Cote d'Ivoire	-78.7	-5.4	-42.1	25.6	3
Djibouti	17.9	50.8	34.3	78.4	1
Tonga	19.9	14.1	17.0	62.2	1
Eritrea	-16.8	-26.5	-21.7	69.6	3
Vanuatu	48.0	81.5	64.8	94.1	1
Cambodia	-48.2	22.0	-13.1	94.7	3
Tajikistan	-65.2	39.8	-12.7	57.5	3

	Percentage Distances from Indicative Threshold				Debt Distress Country Ranking [3]
	NPV/GDP	NPV/EXP	Average of two stocks (a)	DS/EXP (b)	(a) or (b), according to the decision rule
Poor (CPIA≤2.90)					
Congo, D.R.	-391.0	-718.9	-555.0	-502.1	3
Congo, Rep.	-440.4	-101.3	-270.9	93.4	3
Burundi	-247.9	-1224.8	-736.4	-174.2	3
Papua New Guinea [1]	-186.3	-8.4	-97.4	16.4	3
Lao PDR	-183.9	-191.1	-187.5	39.5	3
Nigeria [1]	-141.1	-53.3	-97.2	51.6	3
Guinea-Bissau	-604.4	-635.7	-620.1	-59.2	3
Comoros	-150.0	-467.0	-308.5	5.5	3
Sao Tome and Principe	-644.6	-581.2	-612.9	-146.9	3
Uzbekistan [1]	-49.2	-32.7	-40.9	-49.1	3
Togo	-180.4	-163.6	-172.0	80.2	3
Sudan	-291.4	-757.3	-524.4	91.6	3
CAR	-137.3	-604.2	-370.7	94.5	3
Haiti	22.3	-74.4	-26.0	61.1	3
Angola	-187.0	-31.3	-109.1	22.9	3
Zimbabwe [1]	-56.9	-94.0	-75.4	80.9	3
Solomon Islands	-80.4	-4.3	-42.3	69.4	3
Liberia	-1362.4	-1665.7	-1514.0	95.7	3
Myanmar	97.4	-64.9	16.2	-2.1	2
Afghanistan	62.5	-102.8	-20.2	100.0	3

Notes:
1/ Blend-term country.
2/ Hardened-term country.
3/ Based on option 2 of the classification system, whereby "1" indicates green light, "2" yellow light, and "3" red light (see Annex 2.C).

Table A.4. Debt Distress Rankings and Grant Allocations by Country, Using the Volume Approach [*]

Country	Income per Capita (2002)	Debt Distress Country Ranking (2002)	Grants as a Share of IDA Allocation (percent)	Grant Classification in IDA 13 [6/]
Strong (CPIA≥3.60)				
Cape Verde	1,290	1	0	
Sri Lanka	840	1	0	Post-conflict
St. Lucia [1/]	3,840	1	0	
St. Vincent and the Grenadines [1/]	2,820	1	0	
Uganda	240	1	0	Debt vulnerable
Grenada [1/]	3,500	1	0	
Tanzania	280	1	0	Income per capita ≤ $360
Armenia	790	1	0	
Maldives	2,090	1	0	
Samoa	1,420	1	0	
Bhutan	590	2	50	
Mauritania	340	1	0	Income per capita ≤ $360
Nicaragua	437	1	0	
Senegal	470	1	0	
Honduras	920	1	0	
India [1/]	480	1	0	
Vietnam	430	1	0	
Pakistan [1/]	410	1	0	
Burkina Faso	220	1	0	Debt vulnerable
Ghana	270	1	0	Income per capita ≤ $360
Indonesia [1/]	710	2	0	
Madagascar	240	1	0	Income per capita ≤ $360
Yemen, Rep.	490	1	0	
Medium (2.90<CPIA<3.60)				
Azerbaijan [1/]	710	1	0	
Bangladesh	360	1	0	Income per capita ≤ $360
Bolivia [2/]	900	3	0	
Nepal	230	1	0	Income per capita ≤ $360
Benin	240	1	0	Debt vulnerable
Mali	380	1	0	Income per capita ≤ $360
Bosnia and Herzegovina [2/]	1,270	1	0	
Rwanda	230	3	100	Debt vulnerable
Serbia and Montenegro [2/]	1,400	3	0	
Albania [2/]	1,380	1	0	
Dominica [1/]	3,180	3	0	
Kenya	360	1	0	Income per capita ≤ $360
Lesotho	470	2	50	
Cameroon	560	2	50	
Mongolia	440	2	50	
Malawi	160	2	50	Debt vulnerable
Zambia	330	3	100	Debt vulnerable
Kyrgyz Republic	290	3	100	Debt vulnerable
Mozambique	210	1	0	Debt vulnerable
Guyana	840	2	50	
Ethiopia [5/]	100	2	50	Debt vulnerable
Moldova	460	3	100	
Georgia	720	1	0	
Gambia, The	280	3	100	Debt vulnerable
Niger	170	1	0	Debt vulnerable
Chad	220	1	0	Income per capita ≤ $360
Kiribati [3/]	810	NA	0	
Guinea	410	2	50	
Sierra Leone	140	3	100	Post-conflict
Cote d'Ivoire	610	3	100	Post-conflict
Djibouti	900	1	0	
Tonga	1,410	1	0	
Eritrea	160	3	100	Post-conflict
Vanuatu	1,080	1	0	
Cambodia	280	3	100	Income per capita ≤ $360
Tajikistan	180	3	100	Debt vulnerable

Country	Income per Capita (2002)	Debt Distress Country Ranking (2002)	Grants as a Share of IDA Allocation (percent)	Grant Classification in IDA 13 [6]
Poor (CPIA≤2.90)				
Congo, D.R.	90	3	100	Post-conflict
Congo, Rep.	700	3	100	Post-conflict
Burundi	100	3	100	Post-conflict
Papua New Guinea [1]	530	3	0	
Lao PDR	310	3	100	Debt vulnerable
Nigeria [1]	290	3	0	
Guinea-Bissau	150	3	100	Debt vulnerable
Comoros	390	3	100	
Sao Tome and Principe	290	3	100	Debt vulnerable
Uzbekistan [1]	460	3	-	
Togo	270	3	100	Income per capita ≤ $360
Sudan	350	3	100	
CAR	260	3	100	Income per capita ≤ $360
Haiti	440	3	100	
Angola	660	3	100	Post-conflict
Zimbabwe [1]	484	3	0	
Solomon Islands	570	3	100	
Liberia	150	3	100	
Myanmar	322	2	-	
Somalia	150	NA	-	
Timor-l'Este [3]	430	NA	0	Post-conflict
Afghanistan	278	3	100	Post-conflict
Kosovo [4]	1,290	NA	100	Post-conflict
Total grants in IDA as a share of IDA resources (percent)			22.1	

Notes:

* As in IDA 13, it is assumed that blend and hardened-term countries would be excluded from grant eligibility.

1/ Blend-term country (100% credits).

2/ Hardened-term country (100% credits).

3/ No data on debt available. 100% credits assumed.

4/ Part of Serbia and Montenegro under UN administration. 100% grants assumed.

5/ As per discussion in Box A.1 in Annex 2, Ethiopia is classified as a yellow light country insofar as its post-completion point HIPC DSA indicates that it will move to a medium debt distress category within the IDA 14 period (FY06-08).

6/ Grant share by classification in IDA 13 is the following:
- Debt vulnerable and post conflict: 29% in FY03 and 34% in FY04,
- Poor (per capita income<=$360): 17% in FY03 and 20% in FY04.

Annex 2. Debt-Distress-Based Country Grouping System: Technical Aspects

1.   As pointed out in the main text, this paper proposes a "traffic light system" for grant allocations based on a country ranking with respect to debt distress risk. This classification system, as it stands, is open-ended in the sense that different closures – with markedly distinct impacts on how countries are grouped under each debt-distress level – can be adopted, depending on four key policy choices: (i) minimizing "errors of inclusion" or "errors of exclusion"; (ii) selecting the appropriate debt burden indicators; (iii) deciding on the appropriate cutoffs when assigning "lights" to countries; (iv) relying solely on historical data or using a forward-looking approach to the extent possible. This annex presents in detail the policy choices proposed with respect to all four dimensions.

A. Minimizing "Errors of Exclusion"

2.   The first choice is between minimizing "errors of inclusion" (classifying a country as debt-distressed when it is actually not) or "errors of exclusion" (failing to classify a country as debt-distressed when it indeed is). This terminology is borrowed from the literature on poverty-targeted social safety net programs, where "means tests" are used to determine eligibility for assistance.[27] The classification system intends to generate a mechanism for targeting grant assistance to those countries in greater risk of debt distress, in which the "means test" is based on a country's policy-dependent debt-burden indicators. Clearly, this "means test" is also subject to imperfections, so that actions geared towards minimizing "leakages" (grant allocations) to non-debt-distressed countries may inadvertently leave truly debt-distressed countries out. There is a clear trade-off in that *both sets of errors cannot be simultaneously minimized*.

3.   The indicative thresholds set out in Table 1 are based on the historical risk of debt distress of about 25% overall and within each of the groups of countries relative to the performance ranking shown. In order to improve on this – particularly given IDA's greater share of debt burden today than in the past – it would be preferable to err on the side of caution and raise a "caution light" even before a country reaches this threshold as continued borrowing may lead to the threshold being exceeded in short order. This interpretation – designed to capture all debt distressed countries – would help *minimize errors of exclusion*.

B. Selecting the Appropriate Debt Burden Indicators

4.   The second choice is on the appropriate debt burden indicators. Countries fare differently in the classification system depending upon which debt burden indicator(s) is employed. Each debt burden indicator will have distinct implications in terms of increasing or reducing the risk of errors of exclusion, and each will have distinct properties that will make them more or less desirable. Three factors need to be taken into consideration when choosing the appropriate indicator: (i) this choice needs to be consistent with the first policy decision discussed above,

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[27]   The main point of social safety net targeting is to clearly distinguish between the poor and the non-poor. "Means tests" try to accomplish this by comparing household or individual income with some income cutoff level. Since "means tests" are imperfect, actions geared towards curtailing leakages to the non-poor may inadvertently leave some of the poor out, leading to "errors of exclusion." In the case of targeting grant assistance to debt-distressed countries, the "means test" compares actual country-specific debt-burden levels with the appropriate policy-dependent debt-burden thresholds.

namely, it should aim to minimize errors of exclusion; (ii) since each indicator has its own merits and limitations, the Framework Paper recommends to use them in combination to the extent possible; and (iii) such combination should minimize data- and incentive-related distortions that could be introduced by the indicators themselves. In what follows, the properties of each debt burden indicator are briefly discussed, first for stock indicators, then for debt-service indicators.

B.1. *Debt Stock Indicators*:

5. *NPV of Debt-to-Exports Ratio.* The dynamics of the NPV of debt-to-exports ratio are mostly driven by the magnitude of the *external* financing gap (adjusted by the level of concessionality of the debt stock, or "multiplier")[28] and by the difference between the relevant average effective interest rate and the rate of growth in exports. External debt is usually foreign currency denominated, and exports are the typical vehicle through which a low-income country can relieve its foreign exchange constraint. Therefore, the debt-to-exports ratio is probably the best indicator of a country's future ability to service debt, or to put it differently, its capacity to pay,[29] particularly if it is foreign exchange constrained. Thus, this indicator is most responsive to changes in export performance. In this paper, three-year moving averages for exports are used to help smooth out some of the excessive single-year variance due to volatility or shocks. However, from Chart A.1 below, the debt-to-exports ratio is the debt burden indicator that leads to least number of red and yellow lights. Therefore, *taken in isolation*, the debt-to-exports ratio tends to maximize the risk of errors of exclusion (and increase the risk of future episodes of debt distress).

6. *NPV of Debt-to-Revenues Ratio.* In contrast, the dynamics of the NPV of debt-to-revenues ratio are primarily driven by the size of the *fiscal* financing gap (also mediated by the "multiplier") and by the difference between the interest rate and the growth rate of domestic fiscal revenues.[30] Thus, this indicator is responsive to changes in revenue performance. Looking at Chart A.1, the NPV of debt-to-revenue ratio is the debt-burden indicator with the greatest number of red and yellow "traffic lights" combined. Thus, at first sight, it would be ideally placed to minimize errors of exclusion. Extra caution, however, needs to be exercised with this particular debt-burden indicator. First, as most low-income countries collect fiscal revenues in domestic currency, the debt-to-revenues ratio is a less reliable indicator of a country's ability to service foreign-exchange-denominated external debt as compared to the debt-to-exports ratio. Second, even as an indicator of a country's fiscal constraint, fiscal revenues are also subject to faulty statistical information, different budgetary accounting standards across countries, under-

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[28] The "multiplier" is the coefficient on the (external or fiscal) financing gap on a debt-dynamics equation. It can be shown that the "multiplier" is lower the greater is the level of concessionality of financing, as measured by the grant element (which in turn is defined as the difference between the face value of debt and its NPV, expressed as a fraction of the face value of debt). See IMF (2003a), *op. cit.*

[29] For countries that borrow substantially to finance long-gestation-period investments, a high or even rising debt-to-exports ratio may not necessarily imply long-term sustainability problems. If such investments generate exportable goods, the debt-to-exports ratio may start declining at some point in the future, becoming sustainable from an inter-temporal point of view. See IMF (2003b), *op. cit.*

[30] Strictly speaking, the appropriate concept of debt stock here is public (external and internal) debt, rather than external debt. This means that exchange rate movements also have an impact on debt dynamics, as do changes in the composition of debt between debt held in domestic vis-à-vis foreign currency.

reporting,[31] and in many cases they are simply not available. Finally, there is one important moral hazard consideration: A high debt-to-revenues ratio may also indicate a low revenue collection effort. Its adoption as a debt-burden indicator may lead to a "free rider" problem in which international grant financing would be mobilized to correct a fiscal weakness - which would be more appropriately dealt with by expanding the tax base or improving revenue administration.[32]

7.   *NPV of Debt-to-GDP Ratio.* The debt-to-GDP ratio is the "classic" burden indicator in the conventional literature on debt dynamics. The dynamics of its NPV version also vary in accordance with the external financing gap (also mediated by the degree of concessionality of financing), but the relevant comparison is between the interest rate and the real GDP growth rate. Therefore, the NPV of debt-to-GDP ratio is responsive to changes in overall economic performance. Indeed, this indicator proxies for the domestic economic effort that would need to be carried out each year in order to preserve a country's ability to service a certain level of debt. It also indicates a country's potential to shift the composition of its aggregate output by increasing the share of exportables in GDP, thereby increasing repayment capacity. Although it is subject to statistical measurement errors, given the fragility of national accounts systems in most low-income countries as well as distortions associated with real-exchange-rate under- or overvaluations (see IMF (2003b), *op. cit.*), the debt-to-GDP is not as vulnerable to the moral hazard that affects the debt-to-revenues ratio. However, it also behaves similarly to the latter in terms of the composition of "red-" and "yellow-light" countries.

Chart A.1. The "Traffic Light System" Under Each Debt-Burden Indicator
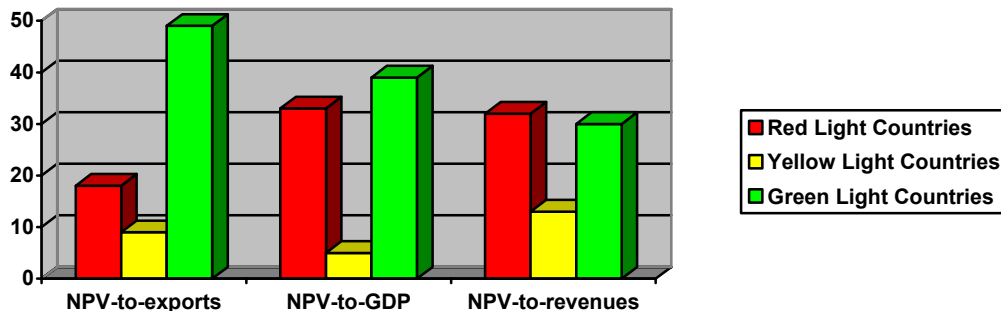
8.   The discussion in the preceding paragraphs weakens the case for using the debt-to-revenues ratio as a debt-burden indicator in the grant allocation process. The revenues denominator is subject to data gaps, potential measurement and moral hazard concerns, and from

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[31]   The existence of international initiatives such as the Extractive Industries Transparency Initiative (EITI) and the Publish What You Pay (PWYP) Campaign shows that this problem is particularly pervasive in oil-rich economies.

[32]   This problem was dealt with in the HIPC context through carefully defining the eligibility criteria under this indicator – a country needed to be an export-oriented economy with exports as a percentage of GDP above a given level, and revenues needed to exceed a minimum level compared with GDP. See IMF and World Bank . *Cap Paper for the Preliminary HIPC Initiative Documents for Bolivia, Burkina Faso, Côte d'Ivoire, and Uganda* - April 2, 1997; IDA/Sec M97-104.

the point of view of country rankings, it generates results which are close to those of the debt-to-GDP ratio. Therefore, its value-added seems to be rather limited.

9.   It seems appropriate therefore that a *composite* of the debt-to-exports and the debt-to-GDP ratios be adopted, as a way to capture the desirable properties of those two stock indicators. The proposed form that this composite would assume is a simple unweighted average of the relative distances of those two stock measures from their respective thresholds. While the presence of debt-to-exports ratio in this composite index would ensure that the "capacity-to-pay" aspect would be taken into consideration, the debt-to-GDP ratio would moderate the "tendency to exclude" observed with respect to the former.

10.   However, in line with the recommendations of the Framework Paper, as well as with the goal of minimizing "errors of exclusion." an exclusive focus on stock indicators may be unwarranted. Thus it will be useful to briefly examine some of the key properties of debt service indicators as well.

  B.2. *Debt Service Indicators*:

11.   Debt-stock and debt-service indicators have quite distinct properties. While the former are particularly relevant to assess a country's solvency and ability to maintain or expand its repayment capacity, the latter also sheds light on the trade-offs involved in the use of available resources – imports or public spending as opposed to servicing external obligations. Debt-service indicators have the added feature that they are to a large extent a measure of liquidity constraints.[33] As such, they are also instrumental to signal the onset of fiscal or current-account crises.

12.   It should also be noted that a high debt service ratio would be typically reflected in a high debt stock ratio for an IDA country. For our IDA countries, the co-variance between the debt service ratios and the debt stock ratio is about 50%, but when the debt service ratio is above the indicative threshold, the NPV of debt-to-exports ratio is always above its threshold.[34] Debt-service ratios can be deceptively low over the short-to medium-term in low-income countries that borrow on concessional terms, as a result of long maturity and grace periods.[35] As debt service is pushed into the future because of repayment terms, debt-stock indicators may provide a truer picture of a country's solvency over the medium-term. Hence it could be argued the debt service ratios do not add much value to the composite stock indicator proposed above.

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[33]   The IMF's External Debt Statistics guide treats the debt-service-to-exports ratio as a "hybrid indicator of solvency and liquidity concerns." IMF (2003b). External Debt Statistics: Guide for Compilers and Users. Washington, D.C: International Monetary Fund, p. 174.

[34]   See tables 2-4. For this sample this holds. In theory it is possible that this is not the case if there is a large "hump" in debt service payments due to a historical rescheduling, such as the Rights Accumulation Program of the IMF, that led to a high debt service figure for Zambia post-HIPC assistance.

[35]   While this shortcoming could potentially be remedied by substantially increasing the projection periods for such indicators, this would lead to greater uncertainty both with respect to new borrowing and the behavior of the denominators. See IMF (2003a). "Debt Sustainability in Low-Income Countries – Towards a Forward-Looking Strategy."

13.   However, an *a priori* outright rejection of debt-service indicators seems risky as it would eliminate the possibility of benefiting from any additional informational gain from using them. The inclusion of a debt service indicator would also enable a closer alignment with the operational matrix proposed in the Framework Paper (Table 1 in the main text). In that regard, the ideal debt service indicator to be brought into the analysis is the *debt service-to-exports ratio*, since the same concerns raised with respect to the NPV of debt-to-revenues ratio would apply to the debt service-to-revenues ratio as well.

14.   Therefore, for the purposes of closing the classification system, this paper proposes to use, for each country, the composite stock indicator with the debt service-to-exports ratio.

B.3. *The Decision Rule: Combining Stock and Flow Indicators*

15.   The decision rule proposed in this paper helps minimize errors of exclusion and takes into account the information furnished by both the stock and flow indicators, while at the same time avoiding the potential data- and incentive-related distortions introduced by the NPV of debt-to-revenues and debt-service-to-revenues ratios.

16.   Let X be a country's exports, Y its Gross Domestic Product, NPV the net present value of its debt, DS its total debt service in any given year, d the percentage point distance from the relevant threshold for each indicator, and c be the composite of the NPV of debt-to-exports ratio and the NPV of the debt-to-GDP ratio. Variables with a (*) superscript represent threshold values. In analytical terms, the following definitions and relations apply:

$$\text{Stock Indicators}: d_t^X = -\frac{\left(\frac{NPV}{X}\right)_t - \left(\frac{NPV}{X}\right)^*}{\left(\frac{NPV}{X}\right)^*}, \quad d_t^{GDP} = -\frac{\left(\frac{NPV}{GDP}\right)_t - \left(\frac{NPV}{GDP}\right)^*}{\left(\frac{NPV}{GDP}\right)^*}$$

$$\text{Composite Indicator}: c_t = \frac{d_t^X + d_t^{GDP}}{2}$$

$$\text{Debt Service Indicator}: d_{st}^X = -\frac{\left(\frac{DS}{X}\right)_t - \left(\frac{DS}{X}\right)^*}{\left(\frac{DS}{X}\right)^*}$$

17.   <u>Decision Rule</u>: (i) When only one of the indicators is above the threshold and the other is below, the one above determines the appropriate country grouping; <u>or</u> (ii) if both indicators are above the relevant threshold, choose yields the highest percentage distance from the threshold.

C. Choosing the Appropriate Cutoffs for the "Traffic Light System"

18.   The third choice is on the establishment of the appropriate cutoffs when assigning "lights" to different countries. Chart A.2 looks at three options for assigning appropriate cutoffs. The more "liberal" cutoffs is shown in Option 1 – whereby countries are allowed to exceed the indicative threshold by 25% before a caution light is deemed necessary. The most conservative approach is Option 3 – where as soon as a country hits the threshold, it should only receive grants and where countries are between the threshold and 25% below, caution should be exercised in lending decisions. This is an approach that would improve on the 25% risk of debt distress. Option 2 is between the two approaches in that it seeks to adhere to the threshold as the level at which grants are probably necessary, but at the same time avoid spurious accuracy in sticking too rigidly to the exact threshold-level given country variability around that threshold.

19.   This paper proposes to adopt Option 2, allowing for a buffer zone of 10% around the threshold where countries would be classified as yellow light countries or category 2 – caution needed in new borrowing. A buffer zone before a country reaches the indicative threshold avoids spurious accuracy with respect to the threshold-level, and also helps to protect against small changes in countries debt ratios that could otherwise translate into a very different debt ranking and grant requirement.

20.   The obvious implication of a more "liberal" cutoff is that the number of cautionary lights would be substantially reduced, thereby reducing the number of potentially grant-eligible countries. Inversely, the obvious implication of a more "conservative" cutoff is that the number of yellow and red lights would be increased, hence increasing the need for grants.[36]

Chart A.2. Alternative Cutoffs of the Classification System: Impact on Countries

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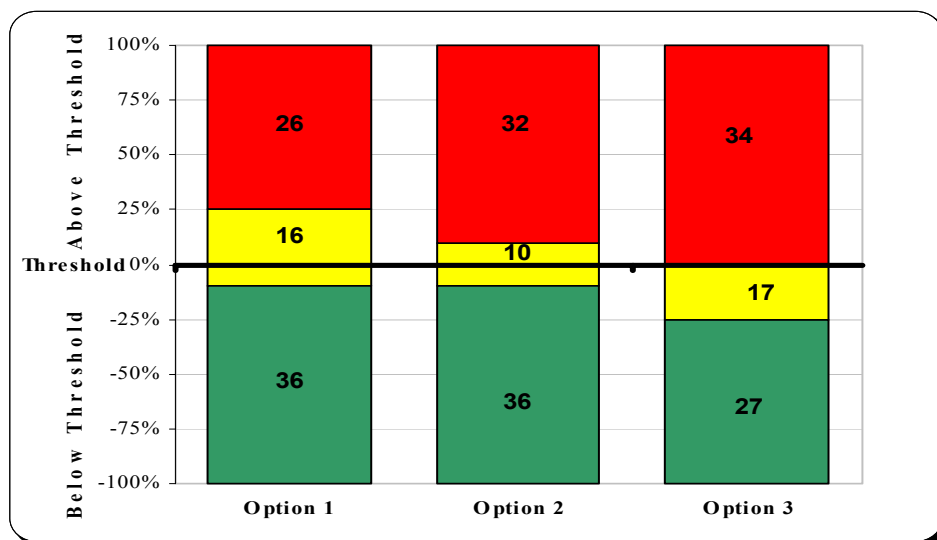
[36]   It should be noted that the total amount of grants allocated under each option depend not only on the number of countries under each category, but also on the size of the IDA pipeline for each country within different categories.

D. Historical Data vs. Forward-Looking Approach

21.   It should be kept in mind that basing IDA's current lending and grant-making decisions on the level of judgment described in the joint Framework Paper will introduce many opportunities for debate on the appropriate classification of countries. A classification system based on forward-looking projections would tie concessionality (and possibly assistance levels) to these projections, while in most cases, the use of historical data would introduce a more conservative bias in lending decisions. Modifications to take into account the detailed debt sustainability analyses (DSAs) would raise issues regarding the coordination of the debt sustainability analyses described in the joint paper, including the questions of who would take the lead in undertaking the analysis and how would the other major lenders participate in this analysis. Such an approach would require detailed DSAs to be undertaken systematically and frequently if it is to lend itself to adjusting the grant and lending levels in response to changes in a country's circumstances (see Box A.1 for a discussion of the synergies between the approach adopted here and the HIPC Initiative). There would also need to be a central vetting process to ensure consistency in the approach to projections across countries that would ultimately influence the debt distress rating.

22.   Another significant issue that will need to be addressed going forward is how to coordinate IDA actions to manage debt sustainability issues with those of other creditors. The Bank and Fund staff have begun discussions on a follow-up Board "modalities" paper that will recommend options for operationalizing the debt sustainability framework. The paper will re-examine the analytical underpinnings of the framework (including the feasibility of the debt thresholds), as well as lay out modalities for implementing DSAs, and donor coordination at the country-level. The paper also proposes to include a section on institution-specific issues which will elaborate on how IDA would operationalize this framework.

23.   In discussions with partners, there seems to be a strong momentum towards using debt sustainability factors in other Multilateral Development Banks to allocate grants. Clearly, efforts will be needed to coordinate how these factors are incorporated into the work of each institution, with a focus on ensuring that similar approaches are adopted. This would help reduce potential adverse incentives to mismanage debt-levels, and avoid some of the potential "free rider" issues.

**Box A.1. Debt Distress Classification and Allocation System for Grants:
Synergies with the HIPC Initiative**

The Enhanced HIPC Framework provided a one-time debt relief mechanism to bring country debt ratios down to a benchmark level – 150% NPV of debt to exports or 250% NPV of debt to government revenues – to give countries a greater chance of achieving long-term debt sustainability. This approach ensured equity across countries by bringing each to the same debt ratio. The HIPC Initiative is still the only program that requires coordinated debt relief from all creditors. Thus far 27countries have reached their decision points, and 13 countries have reached their completion points, the most recent countries being Ethiopia, Senegal and Niger. The Enhanced HIPC Initiative was meant to be a time-bound framework and hence contains a sunset clause. However, a number of countries with severe debt burdens are not yet eligible for debt relief under the framework, including several post-conflict countries, and options are being considered on how to deal with their debt overhangs.

The joint Framework Paper for Debt Sustainability outlines a forward looking approach that is a complement to the HIPC Initiative in that it builds on what has been achieved by HIPC, and is expected to further help countries maintain sustainable debt-levels. The Framework Paper is a departure from the HIPC Initiative as it factors in performance in assessing indicative debt burden thresholds. Moving forward with the operational framework after HIPC relief, lending and grant-making decisions would need to be determined in light of the relevant policy-dependent debt and debt-service thresholds for an individual country, rather than the 150% HIPC benchmark ratio of NPV of debt-to-exports.

In order to use these relevant policy-dependent debt and debt-service thresholds for HIPCs, it is important to consider what stage of the HIPC process they are at. Once countries reach their completion points their assumed debt-levels post-completion point assistance would be used to determine their debt classification in the IDA14 grant allocation system. For countries which have not yet reached their HIPC completion points, we cannot assume completion point relief, since the completion point timing and its actual achievement cannot be assured. Also if completion point assistance was factored into debt ratios prior to the actual completion point, this could enable higher levels of continued borrowing from IDA, which in turn could lead to increased need for eventual topping up. Hence, for countries that have preliminary HIPC documents, or have reached decision points, the actual debt data would be used (after interim relief, where applicable).

For post-completion point countries the DSAs can also be a planning tool to supplement the actual debt data. For instance, in the case of Ethiopia, the DSAs indicate a large pipeline of undisbursed commitments and new borrowing. Where these are known to contribute to a change in debt classification during the IDA14 period, it could be argued that this information provides an early-warning of rapidly rising debt ratios and would warrant a change in debt distress classification even before the new debt ratios are realized.

Annex 3. The "Grant Element" Approach

1.   This annex discusses an alternative allocation mechanism, the "grant element" approach, which generates some distinct outcomes from those obtained with the volume approach recommended by management.

2.   The grant element approach can be described in three main steps.[37]

- Step 1: Allocate the grant element of the IDA envelope through the PBA system.[38]

- Step 2: Scale up part of the allocation to IDA credits, depending upon a countries' debt distress grouping**:**

  1. Low risk of debt distress ("green light"): 100% scaled up.
  2. Medium risk of debt distress ("yellow light"): 50% scaled up.
  3. High risk of debt distress ("red light"): 0% scaled up.

- Step 3: Redistribute the unallocated IDA envelope to countries with GNI per capita equal to or below $360 in the form of grants, on a *pro-rata* basis to provide a cushion for vulnerability to shocks.

3.   The grant element approach is estimated to result in 22% grants in IDA14, equivalent to the grant percentage under the volume approach. With the introduction of an income criterion, the grant element approach accomplishes two additional results. First, the income criterion redistributes volumes in the form of grants towards a set of medium and strong performing countries.[39] Country coverage is increased under the grant element approach with 51 countries having access to grants. This includes the same 40 countries which receive grants under the volume approach, and adds 13 countries with GNI per capita below $360.

4.   Second, the income criterion would deal with shocks on an *ex-ante* basis, to the extent that shocks hit the poorest disproportionately. Given the vulnerability that some of the post-HIPC countries faced to shocks in the past, this cushion could be potentially helpful in reducing budget rigidities especially in countries where grants on the basis of policy-dependent debt thresholds alone are no longer necessary. However, it is not clear that this is a valuable use of IDA resources or that IDA has the comparative advantage to deal with shocks in this way relative to other institutions.

5.   It should also be noted that the grant element approach could also be compatible with an *ex-post* response to shocks, if step 3 is discarded and the difference between the total PBA volume and the overall grant element is set aside for a contingency fund. The potential drawback

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[37]   Table A5 illustrates the grant element approach by means of a detailed numerical example.

[38]   Traditionally the PBA has not distinguished between the actual terms that countries received, but only allocated volumes. However, until IDA13 introduced hardened terms and grants, IDA terms were relatively uniform varying only in maturity (35 vs. 50 years) between a blend and an IDA-only country.

[39]   While the volume approach distributes terms (i.e., credits and/or grants) without redistributing volumes, the grant element approach distributes terms and redistributes volumes – both approaches use the original PBA volumes as the starting point.

is that the contingency fund would be limited to that amount, currently estimated at US$ 1.7 billion, and that this amount would then be set aside and hence could not be used for IDA's traditional development assistance role.

6.   The grant element approach has greater continuity with IDA13 relative to the volume approach as most countries that received grants in IDA13 would get some level of grants in IDA14. Indeed, the 13 medium-to-strong performers that would not get any grants under the volume approach were all grant-eligible in IDA13, and would continue to be under the grant element approach.

7.   The grant element approach deals with incentive and equity issues through overall volume reductions to countries which are debt distressed**.** Table A6 shows the range of volume changes resulting from the grant element approach.

8.   The grant element approach entails greater complexity than the volume approach. It deals with three steps rather than steps and requires an understanding of the concept of grant element embedded in concessional lending. This concept in itself makes the grant element approach more vulnerable to the measurement of concessionality – including assumptions on discount rates and disbursement rates.

9.   The greatest drawback of the grant element is that these fairly substantial volume reductions may be seen to be inconsistent with the need to maximize resources available to countries to reach the MDGs. The grant element approach redistributes these volume reductions to the poorest countries, including the 13 medium to strong performers who would otherwise not receive any grants.[40]

Table A.5. Volume Changes with the Grant Element Approach

Change	Specification of countries		Number of countries	Country
	Light	Income per Capita (IPC)		
17% increase	Green	IPC≤$360	13	Bangladesh, Burkina Faso, Chad, Ghana, Kenya, Madagascar, Mali, Mauritania, Mozambique, Nepal, Niger, Tanzania, Uganda
3% reduction	Yellow	IPC≤$360	2	Ethiopia, Malawi
20% reduction	Yellow	IPC>$360	6	Bhutan, Cameroon, Guinea, Guyana, Lesotho, Mongolia
23% reduction	Red	IPC≤$360	18	Afghanistan, Burundi, Cambodia, Central African Rep., Congo DR, Eritrea, The Gambia, Guinea-Bissau, Kyrgyz Republic, Lao PDR, Liberia, Rwanda, Sao Tome & Principe, Sierra Leone, Sudan, Tajikistan, Togo, Zambia
40% reduction	Red	IPC>$360	8	Angola, Comoros, Congo, Republic of, Cote d'Ivoire, Haiti, Kosovo, Moldova, Solomon Islands

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[40]   A few of these countries actually have problems even with current financing-levels in sterilizing the incoming foreign exchange.

Table A.6. Theoretical Application of the Grant Element Approach

| Debt Distress Classification	Low		Medium		High	
Step						
1 Derive Grant Element(GE)						
a) Country allocation derived from PBA system	100		100		100	
b) GE of LSR (60% of LSR resources) [1]	60		60		60	
2 Allocate GE to either grants or credits	100% credits		50% credits; 50% grants		100% grants	
a) Grants	0		30		60	
b) Credits	60		30		0	
3 Scale up credits						
a) Scale-up credits (2.b/60%)	100		50		0	
b) Resource volume (2.b+3.a)	100		80		60	
c) Unallocated resource volume (1.a-3.b)	0		20		40	
	Above	Below	Above	Below	Above	Below
4 Distribute unallocated resources to countries with GNI per capita ≤$360 (above or below)						
Allocation of additional grants (20%*1.a) [2]	0	20	0	20	0	20
Resource volume allocated (3.b+4)						
a) Total volume allocated	100	120	80	100	60	80
b) Change in volume relative to LSR resources (5.a - 1.a)	0	20	-20	0	-40	-20

Notes:

1/ 60% is a country's grant element equivalent based on its PBA allocation.

2/ 20% is the ratio of sum of unallocated LSR-to-sum of LSR resources.

Annex 4. **How Does Policy Performance Affect Resource Transfers?**

Directing resources to countries with good policies is the mainstay of IDA's Performance-Based Allocation (PBA) System. Charts A.3. (a)-(d) plot the present value of IDA resource transfers per capita against the IDA performance rating, for four different scenarios.[41] Chart (a) shows the per capita present value of the current IDA13 total agreed allocation before any grants, for each country.[42] This is the baseline scenario. Charts (b), (c), and (d) compare this baseline case with the impact of the IDA performance rating on the present value of the resource transfer, respectively, under a "pure" volume approach with no charges on grants, the modified volume approach incorporating a 20% upfront charge on grants, and the grant element approach described in Annex 3. The strength of this relationship can be gauged by the slope of the regression line for each scenario. A steeper slope implies a more policy-elastic resource transfer.

Charts A. 3 (a) – (d). Resource Transfers and Policy Performance
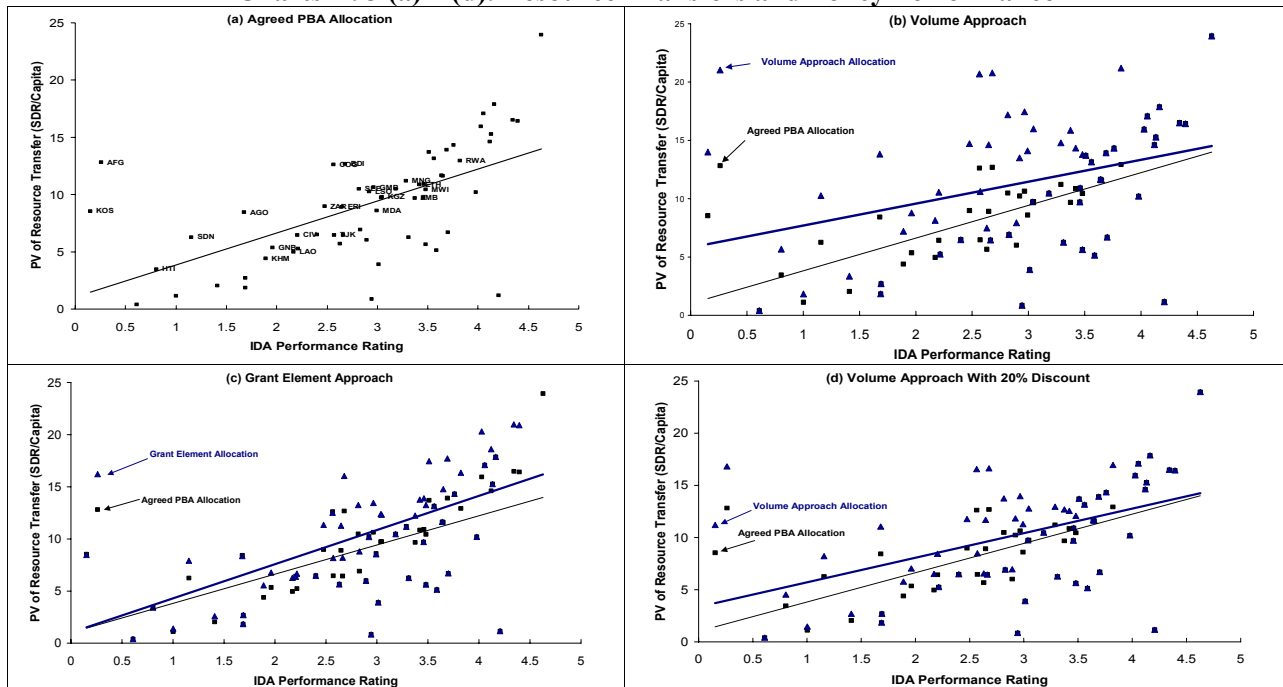
The present value of the resource transfers is the least policy-elastic under the "pure" volume approach (Chart (b)), for which the regression line is the flattest, and is the most policy-elastic under the grant-element approach (Chart (c)), the scenario with the steepest regression line. In other words, while the impact of policy performance on resource transfer is enhanced (vis-à-vis the baseline scenario) with the grant element approach, it is substantially weakened under a "pure" volume approach. The adverse incentive effect of the "pure" volume approach can be considerably mitigated by the adoption of an upfront 20% charge on grants – the method advocated in this paper. In this scenario (Chart (d)), the slope of the regression line is steeper

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[41] Shown as the fitted lines of the respective regression equations.

[42] The grant elements are calculated using a 6% discount rate, taking into account differences in terms of borrowing for regular IDA, hardened terms, and blend borrowers. IDA borrowers with populations less than one million, which typically receive quite large IDA allocations in per capita terms, are not shown on the graph.

than in the "pure" volume approach, but not to the same extent as in the original PBA allocation or under the grant element approach. Therefore, the "modified" volume approach partially restores the responsiveness of resource transfer to policy performance as propounded by the PBA.

In contrast, by reducing the grant element of credits for mostly good performers, hardening terms for non-debt-distressed IDA borrowers would reduce the policy-elasticity of the present value of resource transfers.