

Issue Paper on Debt Sustainability No. 2

Providing New Financing to Low-Income Countries with High Levels of Debt: Some Considerations

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Center for Global Development
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I. Introduction

Low-income countries with high levels of debt face a dilemma when considering new financing. Additional funding is needed to meet key development objectives, but too much new financing in the form of debt can exacerbate debt problems. Countries that borrow too much – even on concessional IDA terms – can quickly find themselves facing rapidly rising debt ratios that could threaten debt sustainability in the future. However, a policy that constrains new borrowing can undermine the country's ability to achieve its development goals, especially if debt is contracted on concessional terms to finance activities with relatively high rates of return. New financing in the form of grants can ease this tension, but the total volume of grants available is constrained, so this option is limited.

The World Bank and IMF currently assess future trends in a country's debt sustainability based on long term projections for several variables, including economic growth, export growth, and new borrowing. These projections are important inputs for evaluating the magnitude of new financing that will be made available to a country. But in many cases the projections have turned out to differ significantly from actual outcomes, especially more than one or two years out in the future. The projections tend to be overly optimistic, which has led to more debt financing than would be consistent with lower growth rates.

This note briefly examines these issues, with a view towards exploring alternatives to economic growth and export projections in considering new financing, including both debt and grants. The note is focussed on new financing following debt relief, and not on the issue of the appropriate amount of debt relief itself. Thus the note does not discuss alternative definitions, levels or concepts of debt sustainability, since that topic alone would require a separate full-length analysis. Similarly, it does not provide critical evaluation of papers that either conclude that the current level of debt relief is too small

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(e.g., Sachs 2002) or that it is unnecessarily large (Cline, 2003).³ Rather, its starting point is the recognition that (1) the international community has determined that some developing countries have a debt burden that it considers "too high"; and (2) that as a result it has provided debt relief to these countries to levels that it believes are more sustainable (either through standard Paris Club mechanisms, HIPC or other processes). It then proceeds to examine issues surrounding new financing and avoiding dynamics through which countries would again have debt levels above the accepted threshold. Thus, the analysis is compatible with the current HIPC threshold definition of NPV debt/exports of 150%, but the main points of the paper are easily transferable to other debt thresholds and alternative definitions of sustainability.

The next section of the paper analyzes projections versus outcomes in the first 8 countries to reach their completion point under the enhanced HIPC program. The third examines ways in which several structural characteristics of low-income countries can provide guidance for both the overall envelope of new financing and the allocation of that new financing between loans and grants.

II. Projections and Reality

We begin by examining the experiences of the eight countries that have reached their completion points under the enhanced HIPC program: Benin, Bolivia, Burkina Faso, Mali, Mauritania, Mozambique, Tanzania, and Uganda. Of course, these countries are only a subset of HIPC countries, and are only a smaller subset of all low-income countries that have received debt reduction. They are examined in detail because they are the only countries in which sufficient data are publicly available to carry out this analysis. Unfortunately, complete data are not available to allow an assessment of the experiences of HIPC countries that have only reached their decision points or the large number of other low-income countries that have received debt reduction treatment outside of HIPC since the early 1990s. Despite the limited sample, these countries provide some insights on how quickly projections can prove to be far different from reality.

For these eight countries, Table 1 shows comparisons of projected and actual values of various indicators of economic performance and debt sustainability. These projections were made by World Bank and IMF staff immediately prior to the countries' enhanced decision points in 2000. For most countries, the table shows the projections made at the 2000 decision point for 2001 compared to the 2001 actual outcomes. For Bolivia and Mozambique, which reached their decision points early in 2000, certain estimates from the IMF and World Bank are only available for 2000, so the table shows projections for 2000 compared with actual outcomes. Thus in each case the comparisons provide some indication of whether debt sustainability projections can be reasonably accurate even in the very short run.

³ See Jeffrey Sachs, "Resolving the Debt Crisis of Low-Income Countries," [Brookings Papers on Economic Activity](#) 2002:1, and William Cline "HIPC Debt Sustainability and Post-Relief Lending Policy," Center for Global Development, July 2003.

We begin by examining the projections for exports and economic growth. With respect to exports, the projections were mixed: four were too optimistic, and four were too pessimistic. However, several of the export projections were off by large margins. Mali's and Mozambique's export growth rates were underestimated by 16 and 22 percentage points, respectively, and Uganda's was overestimated by 18 percentage points. These are large errors for a one-year time horizon. Turning to economic growth rates, the projections were too optimistic in all but one of the 8 countries. The projections for Mali and Mozambique proved to be especially optimistic, curiously just the opposite of the overly pessimistic export projections in these two countries.

The middle section of the table shows that despite the over-optimistic growth projections, for most of these 8 countries the NPV debt/export ratio did not seriously deteriorate relative to projected ratios in the year following the decision point. Indeed, for five of the eight countries, the actual debt ratio was *below* the projected level. The notable exception was Uganda, for which the actual debt-to-exports ratio in fiscal year 2001 substantially exceeded the projection made in the previous year.

These generally sanguine debt sustainability outcomes must be interpreted with great caution, however, and in some cases these aggregate figures are misleading, for two main reasons. First, we emphasize again that the data in Table 1 only show outcomes through 2001. Complete data are not yet available for 2002 for these countries, but preliminary indications suggest deterioration in several cases, a point that we return to below.

Second, and more importantly, as shown in the bottom of Table 1, the aggregate favorable movements in the countries' debt ratios mask several factors that had conflicting and often large effects on these ratios, even within the span of one year. To illustrate, we decompose the projection errors in the aggregate NPV debt/export ratio into five broad factors that contributed to differences between actual and projected debt ratios.

- *Export growth.* As mentioned previously, projected export growth rates were too optimistic in four of the countries and too pessimistic in four others. These projections directly affected the denominator of the NPV debt/export ratio. The export projection error was most pronounced in Uganda, where exports were expected to increase by 15.1% in fiscal year 2001 but actually *contracted* by more than 3%. The error in Uganda's projections of coffee exports alone, driven by an unanticipated collapse in coffee prices, increased the debt-to-exports ratio by 24.2 percentage points, explaining more than half of the total error in the debt ratio projection. In Burkina Faso, lower than expected export growth added 21.2 percentage points to the debt ratio. Weaker export outcomes also led to increases in the NPV debt/export ratios in Benin and Mauritania.

By contrast, in Mali, Mozambique, and Tanzania the export projections were too pessimistic, and unanticipated acceleration in export growth exerted a downward effect of 8 to 17 percentage points on the debt-to-exports ratio. Only in Bolivia was projected export growth relatively close to the actual value.

- *Topping up.* One country, Burkina Faso, received a second round of debt reduction at its completion point following an unexpected drop in cotton and gold exports. This so-called “topping up” process directly reduced the numerator of the NPV debt/export ratio. Without this assistance, the ratio would have been 192%, more than 42 percentage points higher than the actual 2001 outcome of 150%.
- *Additional bilateral reduction.* The original debt projections did not account for additional bilateral relief offered by some Paris Club creditors beyond the amount required under the enhanced HIPC program. Several major bilateral creditors forgave 100% of the obligations owed to them, rather than the 90% obligated in the HIPC agreement. For most of the completion-point countries, this one-time boon improved the debt-to-exports ratio by a sizable magnitude, and it cushioned some countries, such as Benin and Mauritania, from significant deterioration in their debt ratios. The extra forgiveness reduced NPV debt/export ratios by more than 20 percentage points in Bolivia, Mauritania, Mozambique, and Tanzania.
- *Exchange rate and interest rate movements.* Since the NPV of debt is expressed in dollar terms, it responds to movements in exchange rates between the U.S. dollar and the currencies in which a country’s debt is denominated. It is also affected by changes in the OECD export-credit lending rates used as discount factors in calculating net present value.

For the eight countries in Table 1, debt projections made at the decision point used exchange rates and interest rates prevailing in December 1998 or June 1999 and assumed such parameters to remain constant in subsequent years. In actuality, the dollar appreciated 12% against the SDR between December 1998 and December 2001 and appreciated by an even greater amount against the euro, pound sterling, and yen. Therefore, the value of non-dollar denominated debt fell in dollar terms by 12% or more. Table 1 shows the estimated impact of exchange rate and interest rate changes on the NPV debt/export ratios. In most cases these figures are World Bank/IMF staff estimates; the one exception is Burkina Faso, where we estimated the impact ourselves.

According to Bank/Fund estimates, these countries’ NPV debt/export ratio improved dramatically because of the appreciation of the dollar: for 7 of the 8 countries, the ratio dropped 15 percentage points or more due to revaluation. We note that the magnitudes of the estimated improvement in the debt ratios seem to be very large in some cases relative to the movements in the exchange rates, and we do not derive such a large improvement from our direct calculations for Burkina Faso. Nevertheless, we may reasonably conclude that the debt-to-exports ratio for each country would have been considerably worse in the absence of the strengthening of the dollar in 1999 and 2000. Moreover, since the end of 2001 (and therefore not included in the calculations in Table 1), this change has been fully reversed, with exchange rates between the U.S. dollar and major currencies now back at 1998 levels. Consequently, the benefit that debtor countries experienced from favorable exchange rate movements before 2001 have now been negated. If we had data on mid-2003

NPV debt/export ratios, they would show a substantial deterioration since 2001 as a result of these exchange rate reversals.

- *Unanticipated new borrowing and errors and omissions.* After accounting for export projection errors, topping up, additional bilateral relief, and exchange rate movements, the remaining difference between projected and actual outcomes can be attributed to a combination of *unanticipated* new borrowing (that is, new borrowing that was not included in the original projections), and errors and omissions (E & O). Unfortunately, the Bank/Fund data on which this analysis is based does not provide the decomposition between unanticipated new borrowing and E & O. Since the information necessary to calculate the NPV of new borrowing is not publicly available, we cannot separate it from E & O, and so this category is the residual after accounting for the other four factors listed above. In the country documents in which World Bank and IMF staff calculate similar decompositions, they label this residual as “unanticipated new borrowing” even though it also includes E & O.⁴

Table 1 shows that unanticipated borrowing and E & O had a substantial impact on the debt ratios of these countries: in four of the eight countries, the NPV debt/export ratios rose by *more than 30 percentage points* as a result of higher-than-projected levels of new borrowing and E & O. It is especially surprising that such a large divergence occurred *only one year* after the projections were made. In a fifth country (Mali), the increase in the NPV debt/export ratio from unanticipated new borrowing and E & O in the first year was 15 percentage points. The calculations reported here, while based on residuals as calculated by Bank and IMF staff, mirror the actual patterns for new borrowing in these countries. For example, in the case of Benin, the balance-of-payments projections at the time of the decision point predicted that Benin would obtain \$54.1 million in medium-term and long-term disbursements in 2001; in actuality, these disbursements amounted to \$108.1 million, fully double the anticipated value. This pattern seems to have continued beyond 2001: the decision point documents projected new borrowing of \$59 million in 2002; the most recent estimate for that year is \$99 million, adding another \$40 million to the debt stock.

For the countries in which new borrowing immediately exceeded expected borrowing after debt relief, it would be useful to probe more deeply into the reasons behind the additional borrowing. Several explanations are plausible, including a deterioration in the terms of trade or other external shocks, a fall in service receipts or net income, lower-than-anticipated grant receipts, or simply creditors increasing their loans by more than the HIPC documents projected. Presumably most new lending comes from the multilateral development banks (since most bilateral donors primarily provide grants and there is little private sector lending), and we do not know how tight the link is between the HIPC projections made by staff and the subsequent decisions on new lending. A more detailed analysis of these important questions is beyond the scope of this short note, as it would require detailed knowledge of the country cases that is not available to us.

⁴ See, for example, Table 12 of Benin’s enhanced completion point document.

In sum, then, the relatively sanguine outcomes for the 8 countries one year after their decision points are attributable to extra debt relief and favorable exchange rate movements. The latter effect has been fully reversed since the end of 2001. Perhaps the most important point is the following: *in the absence of extra debt relief and favorable exchange rate movements, the NPV debt/export ratio would have increased in 7 of the 8 countries (all except Tanzania)*. In some cases the increases would have been large: Uganda's NPV debt/export ratio would have been 195%, Benin's 194%, and Mozambique's 180%. Export projections were mixed, but were generally on the optimistic side, so actual export outcomes tended to push the debt ratios higher. The largest factor contributing to higher debt ratios was unanticipated new borrowing and errors and omissions.

We cannot say whether this pattern for these eight countries will be repeated for other HIPCs or whether it was the case for other episodes of debt relief through the Paris Club that pre-dated HIPC. The conclusions here only hold for the first 8 HIPCs to reach completion point.

Even with this limited sample, the main lesson to take away from this analysis is the vulnerability of HIPCs to very rapid changes in their NPV debt/export ratio. It seems very likely that under current practices several HIPCs quickly will return to NPV debt/export ratios well above 150%. Of the five factors listed above, two with clear favorable impacts currently are not on the table to be repeated: additional bilateral relief and more topping up (although some further topping up is possible). Exchange rate movements are likely to fluctuate over time, but are unlikely to have a large systematic effect in the long run. Export growth, as we have seen, is particularly difficult to predict accurately, especially in the short run. Of particular interest to policymakers, then, is the impact of unanticipated new borrowing on the debt ratios, which is the issue to which we now turn.

III. Considerations for New Financing

At a broad level, the proliferation of debt reduction agreements during the 1990s, culminating in the HIPC program is the clearest indication that many developing countries took on far too much debt. Donors and recipients alike overestimated the potential for policy reforms to be translated into sustained growth, and for growth to lead to debt sustainability. There is real concern that this pattern could be repeated going forward. Even countries with strong growth records can continue to face high debt burdens: after several years of rapid growth Uganda's NPV debt/export ratio (excluding HIPC assistance) was over 300% in 1999, and Mozambique's exceeded 500%.

Additional Grants

In thinking about new financing, the most important point to stress is the need for larger amounts of grant financing. If one accepts the current HIPC thresholds as a broad indicator of debt sustainability, it is clear that the international community over the years

has provided too much of its funding in the form of loans and not enough in the form of grants. Loans were provided on the assumption that export growth and economic growth rates would be sufficient to provide the basis for repaying loans. The fact that so many countries have become mired in long-term debt sustainability problems -- as defined by current HIPC debt threshold levels -- is the strongest evidence that too much financing was provided as loans.⁵ For many countries mired in low rates of economic growth and extreme poverty, it makes little sense to take on new debt, even on highly concessional IDA terms. The costs – financial and otherwise – to both creditors and debtors of the cycle of high debts followed by exercises like HIPC that turn these debts into grants are simply too high to be repeated again.

Although the amount of grant financing worldwide diminished during the 1990s, there are signs of revival. The IDA-13 replenishment process resulted in a larger share of World Bank money being made available as grants, the new Global Fund to Fight AIDS, Tuberculosis and Malaria plans to make large amounts of grants available to fight the three diseases, and some of the major bilateral donors (led by the U.S.) have proposed new grant programs. These trends should be encouraged and continued, especially towards making a greater share of World Bank funding available to low income countries as grants.

In our view, the bulk of this grant financing should be committed to the lowest income countries, which (by definition) have not been able to achieve sustained economic growth over a period of decades (and even centuries). The international community should supply these countries with grant financing until they demonstrate a record of sustained economic growth, implying the beginnings of the ability to repay loans. In particular, the World Bank and its shareholders should consider opening a third window for World Bank financing consisting exclusively of grants and made available to countries with per capita incomes below, say, \$400. As countries achieved sufficient growth that they moved above this income level, they would become eligible for IDA loans. At a later stage, as (hopefully) their growth continued, they would graduate from IDA and rely on IBRD financing. This note does not elaborate this proposal in detail. However, the reasoning behind it provides part of the conceptual basis necessary to explore the issue of providing new financing for low-income countries.

Proposing a higher level of grants, while ultimately part of the long-term solution, is not particularly helpful to those that must operate within today's budget constraints. The operational question is: within a given envelope of loan and grant resources, how best to allocate both loans and grants to IDA countries to help finance development needs while not exacerbating debt problems?

Structural Characteristics

⁵ For those that conclude that current HIPC threshold levels are too low and that low-income countries can absorb additional debt, such as Cline (2003), the need for substantially greater grant financing is less evident.

A myriad of structural characteristics conceivably could influence a developing country's ability to utilize new loans and grants effectively. There are four that seem particularly relevant:

- Need. All else being equal, poorer countries should receive more financing, and more of it as grants, than relatively richer countries. There are several possible indicators that could be used individually or corporately to assess a country's need, including income per capita, average income of the poor, life expectancy, infant mortality rate, or literacy rates. As an initial proxy, we use income per capita. This is consistent with the current IDA allocation system that is partially based on income per capita.
- Prospects for Growth. All else being equal, countries with greater prospects for growth should receive more financing (since presumably they can use aid more effectively) and should receive a larger share of it as loans (since faster growth should translate into greater capacity to repay loans). Other than making specific quantitative projections for economic growth and export growth, there are two key indicators that can be used to assess the prospects for growth.

The first is the actual history of growth during the last three to five years. While policymakers and donors alike hope that growth rates will accelerate from past trends following debt relief and associated reforms, that outcome has not always transpired. In the absence of significant shocks (discussed below), historical growth rates should be a reasonable guide to a lower-range estimate of future growth in the context of economic reforms and debt relief. While other aspects of a country's program could incorporate an anticipated acceleration of economic growth following reforms, *ceilings for new borrowing could be based on the more conservative historical growth rates rather than growth projections*. Additional funding should be provided as grants as needed.

The second is a country's CPIA score. The CPIA is meant to gauge a government's record of implementing sound policies and strengthening institutions. In theory, all else being equal, a higher CPIA score should be associated with higher subsequent growth. In practice, the CPIA is a work in progress with several important weaknesses (such as its subjectivity). As a result, its relationship to growth generally is weak.⁶ Either or both of these indicators could be used to assess prospects for growth. For simplicity, we focus on the CPIA score, but the analysis could easily be extended to incorporate recent economic growth as well.

In this framework, a country with a higher CPIA score should receive more funding, with a larger share as loans. At first, providing a larger share of financing as loans to countries with higher CPIA scores may seem counterintuitive. It is of course less than satisfactory to penalize countries with higher CPIA scores by giving them proportionally more loans and less grants, and there is room for different views on this point. Ideally, as argued earlier, sufficient grant financing would be made

⁶ For example, the simple correlation between the 1999 CPIA and the 1998-2000 growth rate for 73 IDA countries with available data was 0.331.

available so such tradeoffs would be unnecessary. But as long as grant financing is more constrained than loans, this allocation rule may be necessary.

To illustrate, consider two countries identical in every way except their CPIA score: same income level, terms of trade risk, existing debt levels, etc. Assume that the international community has a fixed level of both loan and grant financing available for these two countries. The country with the higher CPIA score clearly should receive a greater amount of total financing. The trickier question is the split between loans and grants. The country with the lower CPIA score is less likely to be able to repay loans than the country with the higher score. Thus, to the extent that this country receives financing, a larger share of it should be in the form of grants. Note that this may receive fewer grants in terms of total value than the country with the higher CPIA score, but a larger share of the financing it receives should be in the form of grants. While there is some element of theoretical moral hazard in this arrangement, it none-the-less is the correct overall pattern.

- Risk. Developing countries face myriad shocks, the effects of which sometimes can endure for several years. Volatile world prices for exports or imports, poor weather, natural disasters, political instability, disease outbreaks, and movements in exchange rates and interest rates all can affect a country's ability to sustain growth and service its debts. We use the standard deviation of the growth rate of export value as our base measure of risk, but obviously other measures could be incorporated as well. All else being equal, a country facing greater risks in the future (based on its history) should receive a somewhat larger amount of funding (in effect to help build up reserves), with a larger share as grants.
- Capacity to borrow. Countries with low levels of debt can take on additional borrowing without threatening sustainability, assuming the debt finances projects with a strong rate of return. By contrast, countries with high levels of debt should be more cautious about new borrowing. Whereas the initial level of debt should not necessarily affect the overall level of funding, countries with higher debt should receive a larger share of their finance as grants. For the purposes of this note, we adopt the NPV debt/export ratio as the key indicator of debt sustainability, but other debt indicators could be incorporated into the analysis as well.

Table 2 summarizes these four characteristics, the main indicators, and the proposed impact on overall financing and grant financing.

Levels and Composition of Financing

A country's relative ranking on these four characteristics can help determine both the amount of total financing it could receive and the proportion of that financing made available as grants. To illustrate, we categorize each IDA country as "high" or "low" on each of the four characteristics depending on whether it is above or below the median. This categorization leads to 16 groups of countries. This crude categorization easily could be refined by dividing countries into more than two groups for each characteristic,

but the main points would still apply. For example, countries with "high" or "low" debt could be divided by debt ratios above or below a critical level, rather than above or below the median. This change obviously would move some countries across categories, but would not change the overall conceptual framework.

The 16 groups of countries can be organized into four main clusters according to the first two characteristics (need and growth prospects): (1) greater need and greater prospects, (2) greater need and weaker prospects, (3) less need and greater prospects, and (4) less need and weaker prospects. We believe that these two characteristics should carry the most weight and should be the main drivers determining both the amounts of new financing and the proportion provided as grants. Within each of the four clusters, further refinements can be made according to the degree of risk a country faces and its level of debt. We label these sub-groups as follows: (a) less risk and less debt, (b) less risk and greater debt, (c) greater risk and less debt, and (d) greater risk and greater debt. Table 3 shows 69 IDA eligible countries classified into these 16 categories.

Figure 1 illustrates in broad terms how financing amounts and composition might depend on these characteristics.

- Cluster #1: Countries with greater need and greater growth prospects. Greater need would suggest both higher levels of financing and a larger portion of that financing in the form of grants. Greater growth prospects would point towards a somewhat lower portion of grants for the reasons described earlier. Thus, this group of countries is placed in the figure on the right side of the horizontal axis (corresponding to higher levels of financing) and in the middle of the vertical axis (indicating that a moderate portion of the funding would come as grants).

Within this cluster, countries with less risk and a lower debt stock would receive less of its financing as grants, so group 1a is placed at the top of the cluster. Group 1b is identical, except that it starts with a higher debt stock. This group of countries probably would receive roughly the same amount of total funding, but would receive a larger portion of it as grants. Thus group 1b is placed directly below group 1a.

The third group (1c) is identical to the first, except that it faces higher risks. As a result, these countries should receive slightly more funding than group 1a, and a slightly larger share of it should be grants. Finally, the fourth group faces higher risks and has a higher debt stock, so it probably should receive a slightly higher portion of its funding as grants.

- Cluster #2: Countries with greater need and weaker prospects. Whereas greater need would suggest larger financing with more of it as grants, weaker prospects (as indicated by a lower CPIA score) would suggest allocating less aid to these countries. Thus, moving left to right along the financing continuum, based on their lower CPIA scores these countries are placed just to the left of the middle. With respect to grants, donors that provide aid to these countries should be willing to provide a higher proportion of it as grants (although probably a smaller total amount of grants), since

these countries have weaker prospects to generate the growth necessary to repay loans, as discussed earlier. Thus, this cluster of countries is placed near the bottom center of the figure, indicating a modest amount of total financing, with the bulk of it provided as grants. Within this cluster, the four sub-groups of countries follow the same pattern as in cluster #1. Note that the placement of cluster #2 towards the bottom of the grant continuum indicates these countries should receive a larger share of their funding as grants relative to Cluster #1, not necessarily a larger total value of grants.

- Cluster #3: Countries with less need and greater prospects. Since the countries in this cluster have less need, generally speaking they will require less overall financing. Their greater growth prospects imply that they can use aid effectively (suggesting a somewhat higher ceiling for overall financing) and that they require less of their financing in the form of grants. These considerations lead to placing this cluster of countries near the top of the figure (implying a smaller portion of grants) with a moderate level of overall financing.
- Cluster #4: Countries with less need and weaker prospects. Since these countries have less need, they will require less overall financing. Their weaker growth prospects (i.e., lower CPIA score) suggest that even less financing should be allocated towards them, since they are less likely to be able to use it effectively. However, to the extent that these countries receive financing, a moderately large share of it should be in the form of grants, since their weaker prospects indicate a limited capacity to service debts in the future. These considerations place this cluster of countries along the left side of the figure (indicating less aggregate financing), about half way down the grant continuum.

To interpret these figures correctly, note that a horizontal movement changes the *total amount* of financing available, while a vertical movement adjusts the *share* that is available as grants (rather than the dollar amount of grants). In this way, countries in different clusters are directly comparable. For example, Benin is in cluster 1d, with greater need and stronger prospects, while Burundi is in cluster 2d, with greater need and weaker prospects. The key characteristic distinguishing these two countries is that Benin has a higher CPIA score than Burundi. Thus, Benin should receive a larger total amount of financing than Burundi, placing it to the right side of the figure. In our view, as discussed earlier, Burundi should receive a higher portion of its financing as grants since it has weaker prospects to be able to repay loans, placing it lower than Benin on the vertical scale. Benin in fact may receive both a larger amount of total financing and a larger amount of grant financing than Burundi, but the share of Benin's grant financing would be lower than Burundi's.

Conclusions

The decomposition of factors contributing to changes in the NPV debt/export ratio highlights the vulnerability of low-income countries to returning to high debt ratios following debt relief. In the eight HIPC countries that were the first to reach their

completion points, economic growth projections were consistently optimistic, and export projections varied widely from actual outcomes just one year later.

In these 8 countries, the NPV debt/export ratios one year after decision points benefited substantially from extra debt relief and favorable exchange rate movements. In the absence of these changes (neither of which can be repeated continuously over time), debt ratios would have deteriorated in 7 of the 8 countries examined, in some cases by large margins. In most cases, the single largest and most consistent factor contributing to the rise in debt ratios was unanticipated new borrowing and errors and omissions.

Going forward, this analysis points to the need for more substantial grant financing for low-income countries mired in low growth and high levels of debt. Without significant new grant financing, several low-income countries will face the dilemma of choosing between borrowing less money (which could slow their progress towards achieving development goals) and facing the need for a fresh round of debt relief, an outcome the international community clearly would like to avoid.

In the absence of new grant money, donors must choose a judicious allocation of both their loan and grant funds among recipient countries. As a starting point, four key characteristics of recipient countries (other than debt and growth projections) seem most important in guiding these decisions: a country's needs, its prospects for growth, the risks it faces, and its capacity to absorb new concessional debt. This preliminary framework can easily be expanded to incorporate additional characteristics or be made more sophisticated in its rankings, but even in its simple form it provides some guideposts that can be used to allocate loan and grant funds.

Table 1. Projections versus Actuals, and Decomposition of the Difference

	Benin	Bolivia	Burkina Faso	Mali	Mauritania	Mozambique	Tanzania	Uganda
Reference Year ^{1/}	2001	2000	2001	2001	2001	2000	FY 2001	FY 2001
Enhanced Decision Point Year	2000	2000	2000	2000	2000	2000	FY 2000	FY 2000
EXPORTS AND INCOME								
Projected Exports, 3-yr moving avg (mill US \$)	392.2	1342.0	305.0	662.0	431.0	548.0	1188.3	801.3
Actual Exports, 3-yr moving avg (mill US \$)	364.6	1373.0	261.8	723.4	381.3	621.0	1280.0	671.0
Error (Actual - Projected) (mill US \$)	-27.6	31.0	-43.2	61.4	-49.7	73.0	91.7	-130.3
Projected Nominal Export Growth (%)	12.5	10.2	15.8	13.2	3.8	-1.4	8.6	15.1
Actual Nominal Export Growth (%)	7.5	10.9	10.9	29.2	1.8	20.3	17.1	-3.1
Error (Actual - Projected) (percentage points)	-5.0	0.7	-4.9	16.0	-2.0	21.7	8.5	-18.2
Average Annual GDP Growth, 1997-1999 (%)	5.0	3.5	5.8	5.4	3.6	10.4	3.6	6.0
Projected GDP Growth in Reference Year (%)	5.7	4.0	6.6	5.6	4.9	5.0	5.6	7.0
Actual GDP Growth in Reference Year (%)	5.0	2.4	5.6	1.4	4.6	1.6	5.7 6/	5.6
Error (Actual - Projected) (percentage points)	-0.7	-1.6	-1.0	-4.2	-0.3	-3.4	0.1	-1.4
DEBT RATIOS								
Projected NPV of Debt (% of exports) ^{2/}	147.9	159.5	185.5	150.2	140.6	163.5	171.9	127.9
Actual NPV of Debt (% of exports) ^{2/}	155.4	116.8	150.0	133.4	143.5	127.5	104.9	170.9
Error (Actual - Projected) (percentage points)	7.6	-42.7	-35.6	-16.8	3.0	-36.0	-67.0	43.0
IMPACT OF UNANTICIPATED FACTORS ON DEBT-TO-EXPORT RATIO (percentage points)								
Factors Affecting Denominator of Ratio								
Error in Projections of Exports	10.9	-2.7	21.2	-12.4	16.6	-17.0	-8.1	27.8
Of Which: Main-Product Export Projection Error ^{5/}	8.8	-0.9	10.1					24.2
Factors Affecting Numerator of Ratio								
Topping Up	0.0	0.0	-42.2	0.0	0.0	0.0	0.0	0.0
Additional Bilateral Relief Beyond Enhanced HIPC Assistance	-16.8	-26.8	-7.2	-1.3	-26.6	-25.2	-34.2	0.0
Movements in Nominal Exchange Rates and Discount Rates ^{3/}	-21.5	-19.1	-8.2 4/	-18.3	-19.6	-27.4	-14.9	-24.0
Residual: Unanticipated New Borrowing	35.0	5.8	0.7	15.2	32.6	33.6	-9.8	39.2
Total Impact of Unanticipated Factors	7.6	-42.7	-35.6	-16.8	3.0	-36.0	-67.0	43.0

**Table 1. Projections versus Actuals, and Decomposition of the Difference
(Continued)**

Notes:

- 1/ The reference year denotes the year for which data is shown.
 - 2/ Debt ratios hypothetically assume that all HIPC assistance and additional bilateral relief have already been delivered.
 - 3/ Values shown in this row are derived from World Bank/IMF estimates of the hypothetical NPV of debt in the reference year under exchange rates and discount rates prevailing immediately before the decision point.
 - 4/ World Bank/IMF estimates of the impact of exchange rate and discount rate movements on Burkina Faso's debt were not available. The displayed value represents the authors' calculations of the effect of movements in the exchange rate during the period Dec. 1998 - Dec. 2001 between the US Dollar and the following currencies: SDR, CFA Franc, Euro, French Franc, Spanish Peseta, Chinese Yuan, Kuwaiti Dinar, Libyan Dinar, and Taiwanese New Dollar.
- The value does not account for changes in discount rates.
- 5/ Main products are the following: Benin -- Cotton; Bolivia -- Natural Gas; Burkina Faso -- Cotton and Gold; Uganda -- Coffee.
 - 6/ Value pertains to the calendar year, not the fiscal year.

Sources: Decision point and completion point documents (www.worldbank.org/hipc); IMF and World Bank, *The Enhanced HIPC Initiative and the Achievement of Long-Term External Debt Sustainability*; IMF, *International Financial Statistics*; World Bank online country profiles; authors' calculations.

Table 2: Country Characteristics and Illustrative Impact on Financing

Characteristic	Indicator(s)		Impact on	
	Primary	Secondary	Total financing	Share as Grants
Need	Per capita income	Poverty Life expectancy Infant mortality Literacy	Increase	Increase
Growth prospects	CPIA score	Recent actual growth	Increase	Decrease
Risks	Variation in export growth	Terms of trade Political instability Weather Exchange rates Interest rates Disease outbreaks	Slight Increase	Increase
Capacity to borrow	NPV debt/exports	NPV debt/GDP Debt service/exports Debt service/revenue	No change	Increase

Table 3. Selected Structural Characteristics of IDA-Eligible Countries

I. Cluster 1 -- Greater Need and Greater Prospects

1a. Less Risk and Less Debt

Bangladesh, India, Mozambique

1b. Less Risk and Greater Debt

Ghana, Madagascar, Malawi, Nicaragua, Tanzania, Zambia

1c. Greater Risk and Less Debt

Eritrea, Mongolia, Uganda, Vietnam, Yemen

1d. Greater Risk and Greater Debt

Benin, Burkina Faso, Ethiopia, Rwanda

II. Cluster 2 -- Greater Need and Weaker Prospects

2a. Less Risk and Less Debt

The Gambia, Tajikistan

2b. Less Risk and Greater Debt

Central African Republic, Kenya, Mali, Sierra Leone

2c. Greater Risk and Less Debt

Cambodia, Haiti, Nepal, Nigeria

2d. Greater Risk and Greater Debt

Burundi, Chad, Comoros, Guinea-Bissau, Niger, São Tomé and Príncipe, Sudan, Togo

III. Cluster 3 -- Less Need and Greater Prospects

3a. Less Risk and Less Debt

Bhutan, Grenada, Honduras, Lesotho, Maldives, Sri Lanka, St. Lucia, St. Vincent and the Grenadines

3b. Less Risk and Greater Debt

Bolivia, Côte d'Ivoire, Mauritania, Pakistan, Senegal

3c. Greater Risk and Less Debt

Albania, Armenia, Cape Verde, Georgia

3d. Greater Risk and Greater Debt

Kyrgyz Republic, Samoa

**Table 3. Selected Structural Characteristics of IDA-Eligible Countries
(Continued)**

IV. Cluster 4 -- Less Need and Weaker Prospects

4a. Less Risk and Less Debt

Djibouti, Dominica, Vanuatu

4b. Less Risk and Greater Debt

Cameroon, Guinea, Indonesia, Zimbabwe

4c. Greater Risk and Less Debt

Angola, Azerbaijan, Moldova, Papua New Guinea, Tonga, Uzbekistan

4d. Greater Risk and Greater Debt

Republic of Congo

Missing Data: Afghanistan, Bosnia and Herzegovina, Dem. Rep. of Congo, Guyana, Kiribati, Lao PDR, Liberia, Myanmar, Solomon Islands, Somalia, Yugoslavia.

Figure 1. Levels and Composition of Financing By Structural Characteristics

