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External Debt and the Millennium Development Goals: A New Sustainable Framework

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Introduction

In 2005, the UN Secretary-General called for debt sustainability in developing countries to be redefined, to make it compatible with these countries' efforts to achieve the Millennium Development Goals (MDGs) by 2015.

This raises a number of important questions, which any proposed solution would need to address. Many developing countries clearly have insufficient resources to meet their MDG targets by 2015, yet are also paying substantial sums to finance external debt. The first question is therefore: what, if any, level of debt servicing is 'sustainable' for countries that cannot hope to realistically finance their estimated MDG expenditures in the foreseeable future? Second, other countries may be able to finance a large proportion of their MDG needs, but not the full amount needed, yet they too may be paying sizeable annual sums to service external debt: again, what level of debt servicing is 'sustainable' in MDG terms for these countries? Thirdly, when we talk about a country's debt burden, does this only refer to external debt, or should domestic debt also be incorporated?

Taking the last question first, there is a strong case to make that the total debt burden should include both external and domestic debt. However, it is also the case that the issues raised by both forms of debt are different in some important respects. In particular, the currency mismatch issues inherent in foreign-denominated external debt do not apply to domestic debt. Domestic debt is therefore more 'sustainable' in broad terms, since it is unaffected by exchange rate shocks and does not require foreign exchange to be generated in order to be serviced. Consequently, without wishing to minimise the importance of the domestic debt issue – particularly given its increasing importance to many middle-income countries – this paper will largely focus on external debt. Despite this, the analysis presented below could be readily applied to combined external and domestic debt, which would raise important issues of burden sharing between foreign and domestic creditors, but which would also allow the issue for debt sustainability to be addressed in a more holistic sense.[2]

Focusing on external debt, there are a number of possible ways of answering the remaining questions. Official development assistance (ODA) could be sharply increased to allow MDG expenditure needs to be met and full debt service costs to continue to be paid. However, this is largely to avoid the issue, since it does not alter the definition of debt sustainability to take account of the MDGs in any way. Realistically, proposals that attempt to do this need to link debt payments – in some way – to a country's ability to pay *and* their ability to fund the MDGs. This would certainly require some form of bond conversion or swap, since today's outstanding stock of developing country bonds are not structured in this way. Again, there are a number of ways that this could be done.

First, recent research by the UN's Department for Economic and Social Affairs (DESA)[3] makes a convincing case for the development of an international market for GDP-linked bonds. The logic is compelling: by linking the coupon on developing countries' debt to rates of GDP growth, such bonds ensure that interest payments only rise when the country can afford to pay more (i.e. when GDP growth is high and rising), but fall when the country's ability to service debt falls (i.e. when GDP growth is low). For the issuers, the attractions are clear, but for the holders of such bonds there are also clear advantages. First, directly linking payments to ability to pay significantly reduces the risk of default and, second, by linking payments to GDP growth, investors have the possibility of higher payments if economic performance exceeds expectations.

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[2] The input of Yilmaz Akyuz is gratefully acknowledged for raising the important issue of domestic debt in his comments on an earlier draft of this paper.

[3] See Griffith-Jones and Sharma (2006)

One way of making debt more sustainable with efforts to meet the MDGs would therefore be to convert existing debt to GDP-linked bonds. A country with low rates of growth would see debt payments fall freeing up resources to spend on the MDGs. However, it is also the case that, although a country's ability to finance the MDGs rises proportionally with the rate of GDP growth, this advantage could be largely offset by the higher debt service payments that this higher growth would trigger in the GDP-linked bonds. Furthermore, it is entirely possible that a country may experience high rates of GDP growth – making debt interest payments expensive – but still have insufficient funds to finance their MDG expenditures. Given these issues it is therefore difficult to see how GDP-linked bonds would be 'MDG-sustainable' in the manner proposed by Kofi Annan, though they are a very attractive financial instrument more generally for developing and middle-income countries, and could have a stabilising affect on the international financial system more generally.

However, to be genuinely 'MDG-sustainable', the payments on debt must be *directly* linked to a country's ability to meet the MDGs in some way. The aim of this paper is therefore to describe one framework through which this could be achieved, though there will of course be a variety of ways that the same ends could be reached.

The structure proposed here envisages a dynamic two-stage process. In the first stage, countries can qualify for up to 100% debt relief, with the criteria being the ratio of required MDG expenditure to available government revenue. Debt relief proceeds until this ratio is sustainable, which for most low-income countries will require 100% of debts to be written off. Stage 2 of the process sees remaining external debt – of mainly middle-income countries, but also some lower-income countries which had only qualified for partial debt relief – converted into 'MDG Bonds', where both interest and principle payments move in direct proportion to the ratio of scheduled debt service payments to 'surplus' government revenue. 'Surplus' revenue is defined as available government revenue minus that needed to meet MDG expenditure. In terms of debt service payments, the maximum a country would pay after the MDG bond conversion would be the prevailing market rate, while the minimum would be zero, with actual payments moving between these two bounds in direct proportion to the changing ratio of scheduled payments to government revenue.

To ensure the process is dynamic and that non-MDG-sustainable debt does not simply build up again, subsequent debt issued by countries that have converted to MDG-bonds would need to have the same features as described above: to be MDG sustainable. The same would of course be true for countries that had qualified for 100% debt relief in stage 1, but wished to resume borrowing internationally thereafter. Having said this, it is also essential – and feasible – for countries to significantly increase government tax revenues[4] over the period, thus increasing the domestic resources for MDG expenditure and reducing the need for additional external borrowing for these purposes. It is therefore envisaged that the framework proposed here should be accompanied by a focused and concerted effort to significantly increase domestic resources in developing countries.

It should be stressed that, for many middle-income countries, payment schedules in this dynamic framework would be no different to that which exists today. However, for poorer middle-income countries, particularly those with high levels of debt and high MDG expenditure needs, this will not be the case, particularly at the start of the period.

In many ways the proposal is to invert the status quo: rather than human development expenditure being based on whatever is left over after debt obligations have been met, it is argued that debts should be restructured so that payments correspond to what countries can afford *after* their vital MDG expenditures have been met.

[4] See Culpeper and Kappagoda (2006) for a good overview of how this might be achieved.

The framework has a number of merits: first, debt relief is directly related to a country's ability to meet the MDGs relative to government income; second, all countries' ongoing payments are directly proportional to their ability to fund MDG expenditure, so that countries pay nothing until they can afford to – the proposal is therefore *inherently* MDG sustainable; third, as an interesting by-product, the development of a secondary market in the new MDG-Bonds – in a similar way as occurred in Latin America following the introduction of Brady Bonds – would focus market attention on MDG progress, as the interest payable on traded bonds would be directly linked to this; and, fifth, the mechanism is simple, transparent and potentially much quicker and more effective than the HIPC process in terms of both write-offs, future interest payments and amortisation costs.

The remainder of the paper is structured as follows. Section 1 provides some context for the ensuing discussion. Section 2 examines current definitions of debt sustainability and concludes that these are not compatible with meeting the MDGs, before proposing a two-stage process of debt relief and debt conversion that, by definition, would be. Section 3 details the methodology used, the sources of data employed, the case studies chosen and the assumptions made. Section 4 examines the first-stage of the proposed framework in the context of four low-income countries, before extrapolating from these case studies to the global level. Section 5 explains the second-stage of the framework, detailing how remaining external debt would be converted into MDG Bonds, with debt service payments directly linked to MDG progress. Again, the results from the country case studies are extrapolated to the global level with estimates provided of the impact on total debt service payments from all middle-income countries. Section 6 considers logistical issues of data collection and monitoring, as well as some market implications of the proposal. Section 7 considers next steps and concludes.

1. Context

In late 2000 the United Nations published the Millennium Declaration. The document, which was ratified by 189 heads of state, expressed a commitment on behalf of its signatories to address critical global problems of poverty, disease and underdevelopment in a way compatible with environmental sustainability. To achieve this, eight Millennium Development Goals (MDGs) were formulated, with explicit indicators established for each and a deadline of 2015 set for the achievement of all eight goals.

However, by the middle of the current decade, it had become clear that progress towards meeting the goals was very patchy. This was the case for both the individual goals themselves and the disparate geographical progress in meeting them, particularly in sub-Saharan Africa.

In the summer of 2005, Kofi Annan made these concerns explicit in the UN's progress report on the MDGs:

> *"If current trends persist, there is a risk that many of the poorest countries will not be able to meet many of them [MDGs]. Considering how far we have come, such a failure would mark a tragically missed opportunity…As I said in my March report: 'Let us be clear about the costs of missing this opportunity: millions of lives that could have been saved will be lost; many freedoms that could have been secured will be denied; and we shall inhabit a more dangerous and unstable world.'"* [5]

As a response to this situation, a comprehensive report on progress on the MDGs was published by the UN's Millennium Project (UNMP) in 2005 [6], which contained detailed costings for the resources required at the national and global levels if the goals are to be met

[5] UN (2005a)
[6] Millennium Development Project (2005)

by 2015. It should be stressed that reference to the costing work of the UNMP that appears throughout this paper should be not be taken to imply that the methodology and final costing estimates produced are uniformly accepted. There have been a number of different approaches taken to estimating MDG expenditure needs, both in individual countries and at the global level. As with all such methodologies, each has its strengths and its weaknesses, and this is as true for the UNMP approach as it is for the alternatives. However, the purpose of this paper is not to examine the merits of different methodological approaches to costing the MDGs, but to illustrate how the proposed framework might work in practice. Consequently, and bearing the caveats given above in mind, this paper uses a number of the UNMP's estimates and assumptions.

Regardless of the costing methodology used, however, all estimates produced are of a magnitude well beyond the ability of virtually all low-income countries to meet from their own resources, and while some middle-income countries would be able to meet the MDGs in full from their own domestic resources, others would need external support to do so. In this respect, the UNMP estimates given of the official development assistance (ODA) needed to meet this funding shortfall, were far in excess of committed ODA in 2005, and remain so despite the additional funding pledged by the G8 at Gleneagles in 2006.

The UNMP estimates the annual cost of achieving the MDGs in low-income countries at US$253 bn in 2006, rising to US$348 bn. in 2010 and US$529 bn. in 2015. It is assumed that roughly three quarters of the figure will be met through the mobilisation of domestic resources, leaving an annual shortfall of US$73 bn. in 2006, rising to US$135 bn. by 2015. Furthermore, it is estimated that meeting the MDGs in middle-income countries will require an additional US$10 bn per year, and that funding international components of the goals will require a further US$15 bn. in 2006, rising to an annual US$31 bn. by 2015. In total, therefore, the UNMP estimates that additional external annual financing of US$121 bn. in 2006, US$143 bn. in 2010, and US$189 bn. in 2015 will be required if the MDGs are to be met in all countries.

The assumption of a rising contribution of domestic resources to MDG expenditure has been questioned in some quarters as overly optimistic. The UNMP (2005) suggests that the average domestic contribution for the least developed countries would be 5% of GDP in 2006, rising to 9% by 2015 (for low income countries the corresponding figures are 7% and 11%). However, given that government revenues in low-income countries have averaged between 12% and 14% of GDP since 1990 (Culpeper and Kappagoda, 2006), these estimates would appear perfectly reasonable, if not a little pessimistic. A corollary to this, however, is the scope to further increase the domestic tax take in developing countries. It is well known that tax revenues as a proportion of GDP are strongly related to a country's level of development, so that low-income countries have a significantly lower level of tax revenues as a proportion of GDP than do high-income countries. While there are good reasons for this – the size of the informal sector, the prevalence of subsistence farmers and high incidence of poverty, and the inefficient nature of tax authorities collection activities – there is also grounds to believe that the problem can be reduced. As Culpeper and Kappagoda (Ibid) point out, the government of Tanzania was able to increase tax revenues by almost a half between 1998 and 2003, following the implementation of a successful tax reform strategy. Not all countries will be able to achieve such results, though all should be able to raise the domestic tax take to some degree through the effective implementation of appropriately structured international best practice measures.

The important of domestic resource mobilisation cannot be overstated. The more a country can fund its activities – including but not restricted to MDG expenditure needs – through domestic resources, the more autonomy the country has, the lower its needed external and internal borrowing and thus the more sustainable its debt. Despite the importance of this issue, however, it can do little to help in the immediate future – the fruits of tax reform

policies may take many years to materialise, but the MDGs need to be funded sufficiently today. Consequently, while domestic resource mobilisation must be an increasingly important part of the long-term solution, it cannot be the whole solution. We must address the situation as we find it today, not as we hope it could be in some years' time.

An important part of this story relates to the continuing burden of external debt in many countries. In 2006, for example, US$446 bn. in debt-related payments were made by all developing countries, with US$40.8 bn. of this being paid by low-income countries, and the remaining US$405 bn. coming from middle-income countries. To many this is a perverse situation: low-income countries that require external support of US$135bn. in 2006 if they are to be on track to meet the MDGs, are paying almost 30% of this figure to creditors as interest or amortisation on their external debt.

To date, debt sustainability has been conceived of in terms of variables such as the ratio of debt service payments to export earnings or GDP, which can be criticised for being both arbitrary and overly optimistic in terms of the future path of these variables. However, as well as these shortcomings, these calculations take no account of estimated spending requirements to meet the MDGs, which has led many to argue that the concept of debt sustainability must be redefined to make it compatible with this vital goal.

In 2005, the UN Secretary-General put the argument as follows:

Debt sustainability should be redefined as the level of debt that allows a country to achieve the MDGs and to reach 2015 without an increase in debt ratios. [7]

The remainder of this paper sketches out a framework through which this could be achieved.

2. Debt sustainability and the Millennium Development Goals

2.1. The evolution of concepts of debt sustainability

As a result of the debt crisis of the 1980s, the IMF and others began to establish indicators for debt sustainability, the first time this had been done. The main indicators developed at this time were:

- The ratio of debt service or debt service due to exports, to GDP, and to reserves.
- The ratio of amortisation to debt.
- The ratio of debt to exports, and/or to GDP.

In an attempt to move towards greater sustainability, creditors initially encouraged debtor countries to introduce externally designed adjustment programmes, with the aim of restoring high rates of economic growth and generating current account surpluses and therefore the ability to meet debt obligations. However, while these policies did generate current account surpluses, this was at the cost of domestic economic stagnation and the compression of imports in many instances. The resulting numerous defaults by Latin American countries fundamentally changed the nature of negotiations on debt.

The Brady Plan, which was introduced in the early 1990s, was a recognition that the debt accrued could not be repaid through the generation of current-account surpluses. Creditors were encouraged to write-down debt by exchanging old debts for new instruments: Brady bonds. Creditors accepted this option, which sets an interesting precedent, and the issuance of Brady bonds ultimately enabled Latin American countries to return to the international capital markets, not least through the creation of a secondary market in Brady bond debt.

[7] Redefinition of debt sustainability proposed by UN Secretary General, Kofi Annan: UN (2005b)

However, this process was largely focused on middle-income countries, with the result that throughout the early 1990s levels of indebtedness of low-income countries in particular, and the total debt burden in general, continued to grow. Ultimately, however, the eventual decline in the total debt burden was driven by both the Brady plan for middle-income countries, and by the Heavily-Indebted-Poor Country (HIPC) initiative for low-income countries.

The HIPC initiative differed from what had gone before in that it involved multilateral creditors – the IMF and World Bank – for the first time. Embedded in a framework of poverty reduction, the HIPC process is lengthy, requiring countries to demonstrate their ability to meet the targets set-out in Poverty Reduction Strategy Papers (PRSPs) over a three-year period. The 'decision-point' at the end of this process assesses the sustainability of debt levels against the following criteria:

- A Net Present Value (NPV) of public (or publicly guaranteed) debt/exports ratio > 150%
- A Net Present Value (NPV) of public (or publicly guaranteed) debt/revenue ratio > 250%

If outstanding debt remains unsustainable on these terms, creditors commit to debt relief sufficient to ensure sustainability. This is delivered at the 'floating completion point', which is reached when the country has implemented the policies deemed necessary at the earlier decision-point.

The HIPC process has been criticised on a number of grounds. First, as illustrated above, it is a lengthy, somewhat tortuous process, even at the end of which many very poor countries are left with relatively high levels of debt. Second, by basing the criteria for debt relief on debt/exports or debt/revenue ratios, the process largely ignores human development needs in the countries concerned. Third, the stringent conditionality attached to debt relief in HIPC is anathema to many, particularly as countries can be classed as 'off-track' on the basis of economic rather than human development indicators, and that the IMF is now the sole judge of a country's progress in this respect.

Regardless of the merits of these arguments, however, it is clear that debt relief/restructuring efforts to date have been entirely unconnected with progress – or the lack of it – towards meeting the MDGs. In what follows, a framework is proposed to rectify this

2.2. Towards a new framework for sustainability

For a genuinely MDG-compatible framework of debt sustainability to be successfully implemented, the primary criteria for determining appropriate levels of debt service costs in developing countries can only be the impact this has on a country's ability to meet the MDGs. Clearly, there must be some minimum governance threshold that countries should meet to qualify for the process, and in this we support the position taken by the Millennium Project (2005).[8] However, once this threshold is passed, debt relief and restructuring must be based on progress towards the MDGs alone.

In many ways this turns the traditional approach on its head. In the past, it has been assumed that a country's obligations to its creditors take precedence over other objectives. Thus, the funds available for human development purposes, for example, is whatever is left after debt obligations have been met. Here we argue, in contrast, that the money available for meeting

[8] That is, that countries should be required to meet the minimum governance requirements set out in the Monterrey Consensus of 2002.

debt obligations should be whatever is left over after needed MDG expenditures have been met. What would this mean in practice, however?

In the framework proposed here, we therefore define 'sustainability' in terms of the surplus government revenue left over after the MDG spending commitments have been met, with debt service (& principle) changing in proportion to the size of this 'surplus'. In practice this would require a two-stage process. In stage 1, countries are assessed in terms of the ratio between MDG expenditure required and available government revenues. If this ratio exceeds a certain level, debt relief is automatic and continues until the sustainable level is reached, on the basis of equal burden sharing between public and private creditors. In the second stage, all remaining debts are repackaged as 'MDG Bonds' with the interest and principle being directly related to the proportion of this surplus accounted for by debt service obligations. For the poorest countries, this would effectively mean 100% write-off, and for other countries both interest and principle would rise proportionally in relation to this ratio. At the other end of the spectrum, many middle-income countries would see debt service payments at full market rates from the start.

Before explaining each of these two stages in more detail, the next section outlines the sources of data, the case studies chosen, the methodology used and the assumptions made.

3. Data, Case-Studies, Methodology and Assumptions

When seeking to estimate what this framework would mean in practice, certain data inputs are required. Most importantly, it is essential to have clear and robust estimates of the costs of meeting the MDGs in individual countries. A number of bodies – particularly the UNDP, World Bank and Millennium Project[9] - have developed different approaches to producing estimates in this respect, and each has its advantages and disadvantages. However, for the purposes of this paper, we broadly follow the approach developed in the Millennium Project (2005), while always bearing in mind that this approach also has its shortcomings and that the estimates given here are illustrative rather than precise. Therefore, we take as our low-income case studies the same countries analysed in the UNMP report: Bangladesh, Cambodia, Ghana and Uganda.[10]

Unsurprisingly, most MDG costing estimates have been produced for low-income countries, which restricts the middle-income countries that can be used here as case studies. However, estimates are available for Peru and the Philippines, which allows a reasonably broad coverage of both income levels and geographical distribution. Consequently, these countries have been chosen as case-studies for the second-stage of the proposed framework – in addition to Ghana, which appears in both stages and provides a bridge between the two.

For data sources, government finance estimates – particularly the pattern of government expenditure – are from the IMF's *Government Finance Statistics* (GFS) 2005, and the World Bank's World Development Indicators (WDI) 2006. Macroeconomic data is from the IMF's *World Economic Outlook* databases and debt service data from the World Bank's *Global Development Finance* (GDF) database. Population figures are from the UN's Department of Economic and Social Affairs' population database. Estimates of available domestic resources for the MDGs are from the Millennium Project (2005), as are estimates of growth rates to 2015 for each region. Throughout, prices have been converted to 2003 US dollars in line with the approach taken by the Millennium Project.

[9] See Heuty (2003) for a good overview of the different approaches that have been taken to estimating MDG expenditures at the national and global levels.

[10] Although the UNMP also produced estimates for Tanzania, IMF Government Finance Statistics are currently not produced for the country. These are needed for the calculations used in this paper and therefore Tanzania is not used as a case study here.

Turning to assumptions, one key issue that needs to be explained is that the data has been adjusted to remove external donor support (i.e. ODA) from the calculations. This is intended to support a genuinely sustainable outcome, where – as far as is possible – MDG needs are met with a country's own resources. Once these have been fully employed, ODA is then used to meet any shortfall: there is no logic in providing ODA to countries so that they can pay their unsustainable – in MDG terms – debts. Furthermore, given the historical volatility of ODA flows, particularly dispersals, sustainability cannot be maximised if it largely depends on the whims of donors, which have every possibility of changing. Given the largely uncoordinated nature of bilateral ODA in particular, we have seen that certain countries that are popular with donors receive large ODA flows, while others with less popularity but the same developmental needs do not.

The framework proposed here therefore aims to maximise national autonomy, which is seen as an essential component of genuine sustainability, and move from an essentially ad hoc patchwork of debt relief and restructuring to a framework that is transparent, fair and predictable. A key part of this, as argued above, is that there should be a redoubling of efforts to raise the proportion of GDP that developing countries are able to raise as tax revenue. There are difficulties in this respect that should not be underestimated, but there is also considerable scope for meaningful improvements. For national autonomy to be maximised, a country's reliance (or dependence) on external financing – be it in the form of ODA or private flows – must be reduced. The only way this can be done is to increase the financial resources that can be mobilised domestically. This is certainly important with regard to financing the MDGs, but it is also of the utmost importance for long-term economic success and national self-determination.

The next section explains in detail how the first stage of the proposed framework would function in practice.

4. Stage 1: Addressing 'MDG-Unsustainable' Debt

As described above, the HIPC process judges debt sustainability according to the ratio of debt to exports or debt to government revenues. However, as we have seen, this takes no account of government expenditure on the MDGs. Consequently, a country may not qualify for debt relief under HIPC on the basis of these ratios – and therefore be required to make ongoing debt service payments – but simultaneously require large external ODA support to have any chance of achieving the MDGs. This is surely a perverse way to proceed.

The alternative framework described here instead determines eligibility for debt relief on the basis of the ratio of government revenue (ex. ODA) to estimated MDG-required expenditure. Given that the individual circumstances of each country will clearly vary significantly, this must of course be calculated individually on a country-by-country basis.

4.1. Country analysis

As detailed in section 3, the low-income countries chosen as illustrative case studies for this section of the paper are Bangladesh, Cambodia, Ghana and Uganda. In terms of GDP per capita, the figures for 2006 are as follows:

Bangladesh: US$411
Cambodia: US$377
Ghana: US$457

Uganda: US$288

On this basis, Ghana is classified as a low-income country (LIC), while Bangladesh, Cambodia and Uganda are classified as least developed countries (LDCs). Of the four countries, Ghana and Uganda have already received debt relief through HIPC. Bangladesh and Cambodia, in contrast, have not been part of the HIPC process to date. Table 1 below provides a summary of the key variables for each of these countries that have formed the basis of the calculations presented here.

Table 1. Key variables for selected case-studies (US$ billions, unless otherwise stated) [11]

Country	*GDP, 2006*	*Population, 2006 (millions)*	*Total debt service, 2006*	*Total MDG expenditure required, 2006**	*Total Government Revenue (ex grants)***
Bangladesh	59.4	144.5	1.04	10.7	5.9
Cambodia	5.4	14.35	0.075	1.02	0.58
Ghana	10.3	22.5	0.32	1.8	2.45
Uganda	8.6	29.8	0.13	2.24	1.04

Sources: WEO; DESA; GDF; WDI.
* Estimates derived from UNMP (2005) & author's calculations
** Estimates derived from 2004 GFS, extrapolated to subsequent years.

From the perspective of stage 1 of the proposed framework, the most relevant data in table 1 is contained in the last two columns. To reiterate, we define sustainability as the ratio of total MDG expenditure required to total government revenue (ex grants). Chart 1 below depicts the average ratios for 2006-2015.

In some ways, the obvious cut-off point in terms of MDG-consistent sustainability is 100%. That is, if required MDG expenditure is larger than total government revenues the situation is clearly unsustainable. However, this assumes that the entirety of government revenue is spent on achieving the MDGs, which is patently unrealistic.

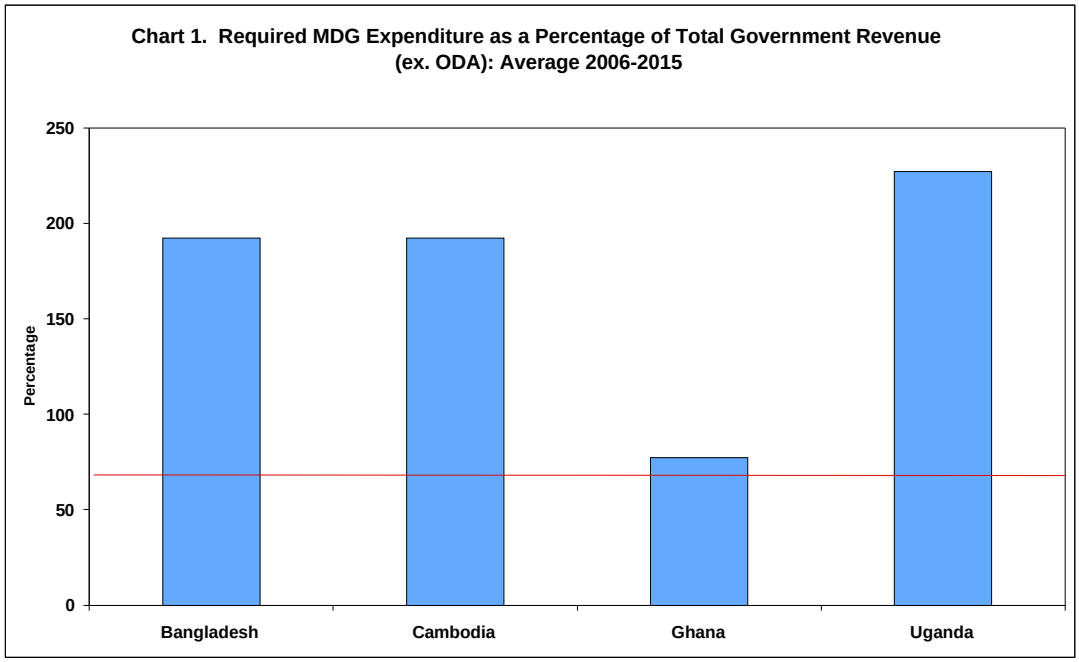
Following the UNMP (2005) we assume that a maximum of 70% of total revenue can feasibly be spent on the MDGs, and that revenues rise by four percentage points from 2006 to 2015 – though as argued above, it is possible that domestic revenues could be increased at a faster pace than this, if effective tax reform strategies were put in place. However, as it is difficult to accurately predict the outcomes of these reforms – which of course will differ from country to country – we retain the UNMP figures here as a baseline level of domestic resource mobilisation from 2006 to 2015.

The 70% MDG threshold is depicted by the red line in chart 1. While we assume 70% of revenues can be spent on the MDGs, this will certainly not hold universally and may be too high even in the aggregate. Alternatives – which are explored further below – would be 50% or 60%. Although, as is clear from chart 1, this would not make a fundamental difference in the case of each of our case studies, it would make a significant difference across all low-income and lower middle-income countries: the proportion of total external debt being written-off in stage 1 obviously rises if we assume that countries can spend less than 70% of their total revenues on the MDGs.

For illustrative purposes, the first stage of the framework therefore sees debt relief in all countries where required MDG expenditure is greater than 70% of total government revenues, with the debt relief being of a magnitude sufficient to reduce this ratio to 70%. For three of our case studies, this has straightforward implications: Bangladesh, Cambodia and Uganda

[11] All the figures presented in this table are as of September 2006, and drawn from the publicly available sources given above.

qualify for 100% debt relief, which would still leave the ratio well above 70% - these countries would therefore clearly need substantial ODA flows to fill the funding gap for achieving the MDGs. Ghana, in contrast, has a ratio of 77.4%, which suggests that partial debt relief would be sufficient to reduce this to below 70%.



Sources: UNMP (2005), GFS (2005) and author's calculations.

Table 2 gives estimates of the impact of differing levels of debt relief in this respect.

Table 2. Impact on Ghana's ratio of total MDG expenditure to total government revenue

Proportion of debt written-off	*Impact on revenue/MDG ratio*
100%	67.47
50%	72.42
75%	69.95

Sources: GFS (2005) and author's calculations

These impacts are calculated by subtracting the written-off debt from required MDG expenditure, which of course assumes that all funds no longer needed for debt servicing are entirely spent on the MDGs. As can be seen from the tables to the left, debt relief of 75% for Ghana would bring the ratio in line with this threshold figure. As has been pointed out, however, it may well be that, in reality, the country is only able to spend a lower proportion of total revenues on the MDGs – 60% for example. In this case, as is clear from table 2, Ghana would qualify for 100% debt relief in stage 1.

Under the assumption that 70% of revenue can be spent on the MDGs, in stage 1 of the proposed framework, Bangladesh, Cambodia and Uganda would therefore see 100% of their debt written-off and require significant ODA flows to fill the MDG funding gap. Ghana, in turn, would see 75% of its debts written off, with the remaining 25% being restructured as part of stage 2.

In the absence of debt relief, Bangladesh, Cambodia and Uganda would make total debt service payments of US$9.7 bn, US$8.1bn, and US$1.12 bn over the period. To put this into perspective, this figure equates to 7.3% of Bangladesh's total MDG investment needs from 2006 to 2014, 11.7% of Cambodia's, and 6% of Uganda's.

Consequently, while debt relief would clearly not of itself be sufficient to enable these three countries to meet their MDG expenditure needs from domestic resources alone, the funds

saved would make a significant contribution, particularly in the light of the potential increase in domestic resource mobilisation described above and discussed in Culpeper and Kappago da (2006). Furthermore, it is perfectly clear that in the absence of this debt relief, the only means of achieving the MDGs would be for donor countries to increase ODA to enable debts to be serviced as, even if successful, tax reform strategies to increas e domestic resource mobilisation would take some years to come to fruition. As was stressed above, there seems no sense at all in rich countries providing poor countries with the finance needed to pay their debts to the rich countries, in addition to the external ODA flows required to fund MDG expenditures in these same countries.

4.2. Global analysis

Table 3 below extrapolates this approach to low-income developing countries as a group.

Table 3. Average low-income sustainability estimates for all low-income developing countries (US$ bn.)

Total GDP	1,391
Total govt. revenue (average = 13% GDP)	180.87
Total annual MDG investment needs*	253
Proportion of total low-income govt. revenue required to finance MDG investments needed in LICs	139.87%

Sources: WDI & GDF.
* Estimate from Millennium Project (2005)

As is clear from the table, the proposed formula – regardless of whether we assume 70%, 60% or 50% of revenues can be spent on the MDGs – implies substantial debt relief for low-income countries as a group, as MDG costs are larger than total revenues by around 40 percentage points. In 2006, debt service payments from this country group was a little over US$40bn. 100% debt write-off would therefore immediately generate 16% of the total funds needed to stay on track towards meeting the MDGs by 2015.

As we have seen, however, some low-income countries will not qualify for 100% debt relief in stage 1. As in the cases of Ghana (23.7%), for example, some countries have government revenues (as a share of GDP) at a much higher level than the average for all low-income countries (13%).

Similarly, whilst estimates for achieving the MDGs have shown some consistency in different studies using different methodologies, it is also the case that variables that i mpact upon the cost of achieving the MDGs in different countries – the prevalence of HIV/Aids, for example – will differ significantly. Robust MDG costing estimates using a uniform methodology are thus likely to reveal substantial differences in expenditur e requirements between different countries. Consequently, the annual cost of achieving the MDGs will be much lower than the average in a number of cases, with the result that these countries may also not qualify for stage 1 debt relief.

Unfortunately, until we have robust MDG costings for every country it is not possible to say with precision which countries these would be. However, a ranking of low-income countries in relation to government revenue as a percentage of GDP, would provide some guidance in this respect.

The average figure for all low-income countries is 13%. Consequently, countries that have a considerably higher figure than this will, other things being equal, see less debt relief than those where government revenue as a proportion of GDP is lower than this average. Given the aggregate picture that we see in table 3, however it is reasonable to assume that the majority of low-income countries will qualify for 100% debt relief on MDG sustainability grounds.

In the next section, we detail the second stage of the proposed framework, which will focus on how debt service payments will be determined.

5. Stage 2: Sustainable Debt & 'MDG-Bonds'

5.1. Country analysis

As we have seen, the majority of low-income countries are likely to see 100% debt relief as part of stage 1 of the framework, which would enable the increased domestic resources resulting from tax reform strategies to be targeted on meeting the MDGs. However, others, such as Ghana in our illustrative example, will see their debt partially written-off. As a result, the remaining stock of debt for these countries will enter stage 2 of the process, as will the outstanding stock of debt of middle-income countries.

At present, the interest payable on developing country debt is a function of market perceptions of the risk inherent in the bonds. Primarily, this is default risk, where investors are compensated – through higher rates of interest, yield or spread – for the risk that the issuer may default on their obligations. In principle, there should therefore be a direct link between the economic fundamentals of the issuers – admittedly conceived in broad terms – and the yield on their publicly traded debt.

This theoretical story has been questioned, however, by a number of studies. Eichengreen and Mody (1998), for example, find that although credit quality is strongly positively related to both the probability of issuance and to initial spreads; suggesting that the market is able to differentiate between borrowers of different risk. However, the same study also finds that, once issued, *changes* in sovereign spread are explained more by changes in market sentiment vis-à-vis emerging and developing markets, than by changes in the economic fundamentals of the countries concerned. That is, factors beyond the economic fundamentals of the country concerned exert a strong influence on sovereign debt spreads.

Despite these concerns, however, a market determined price for publicly traded bonds is the most unbiased estimate available, though greater efforts to link more clearly prices to fundamentals in this regard would be of great benefit to both issuers and investors.

When considering the parameters of stage 2, we therefore take the market price of developing country debt as the indicative 'ceiling' of the framework. That is to say, if a country is able to meet its MDG expenditure targets using domestic resources, the amortisation and interest payments on their debt would simply correspond to the prevailing market rate.

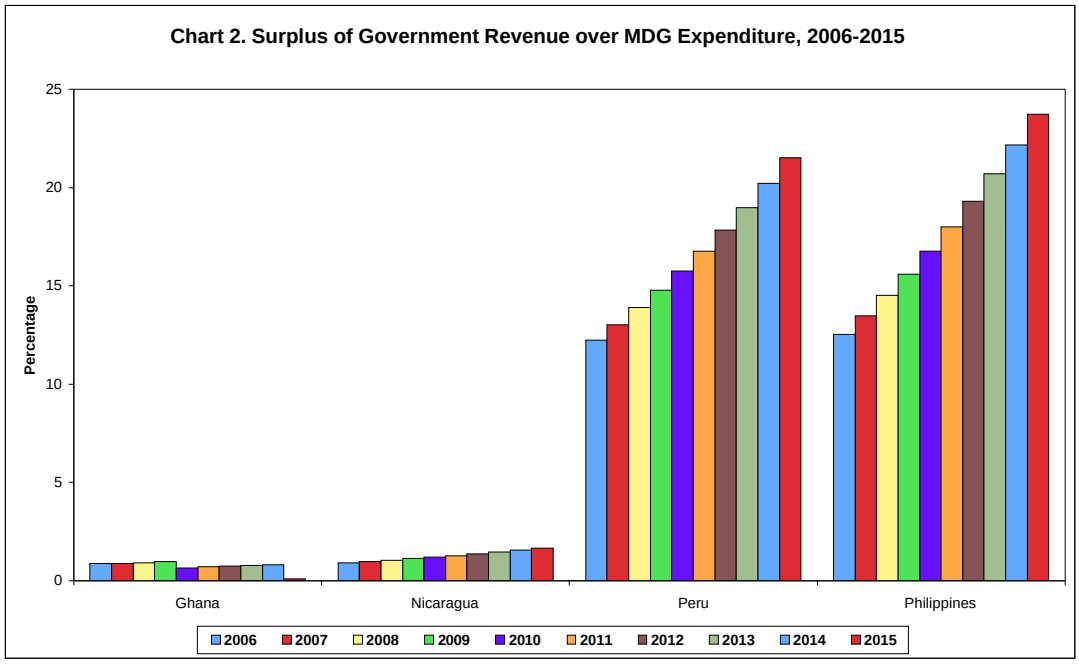
At the other extreme, the 'floor' in terms of debt service payments would be zero. If a country cannot meet its MDG expenditure targets using domestic resources – and would therefore require significant ODA to enable it to do so – interest and amortisation costs would be set at zero, and only rise as the country's ability to meet its MDG expenditures improved.

Having set our upper and lower bounds, the question arises as to how the countries that fall between these two extremes would be affected.

As described above, data on MDG costings in middle-income countries is currently sparse. Furthermore, the studies that have been done have used a variety of methodologies and approaches. Therefore, although the country estimates given in this section are inevitably more illustrative than precise, the emphasis is placed firmly on the conceptual framework described. The *exact* impact of stage 2 for each country cannot be known in the absence of authoritative, internationally comparable MDG costings. However, in what follows we aim to give a broadly realistic picture of how stage 2 of the proposed framework would function in practice, and what the impacts would be globally and nationally.

In the second stage of the framework - as in stage 1 - the focus is on ensuring debt service payments are compatible with each country's efforts to achieve the MDGs by 2015. Again, we propose to effectively invert the traditional approach: rather than a situation where a country's available resources to invest in human development are whatever is left over once its obligations to creditors have been met, the proposition is that financial flows to creditors should be a direct function of the surplus domestic revenue left after the necessary MDG expenditure has been made.

In addition to Ghana, the middle-income countries for which MDG costings estimates are available are Nicaragua, Peru and the Philippines [12]. Although, these estimates are not directly comparable, being based on quite different methodologies, they can still usefully be employed to illustrate how stage 2 of the framework would operate in practice.



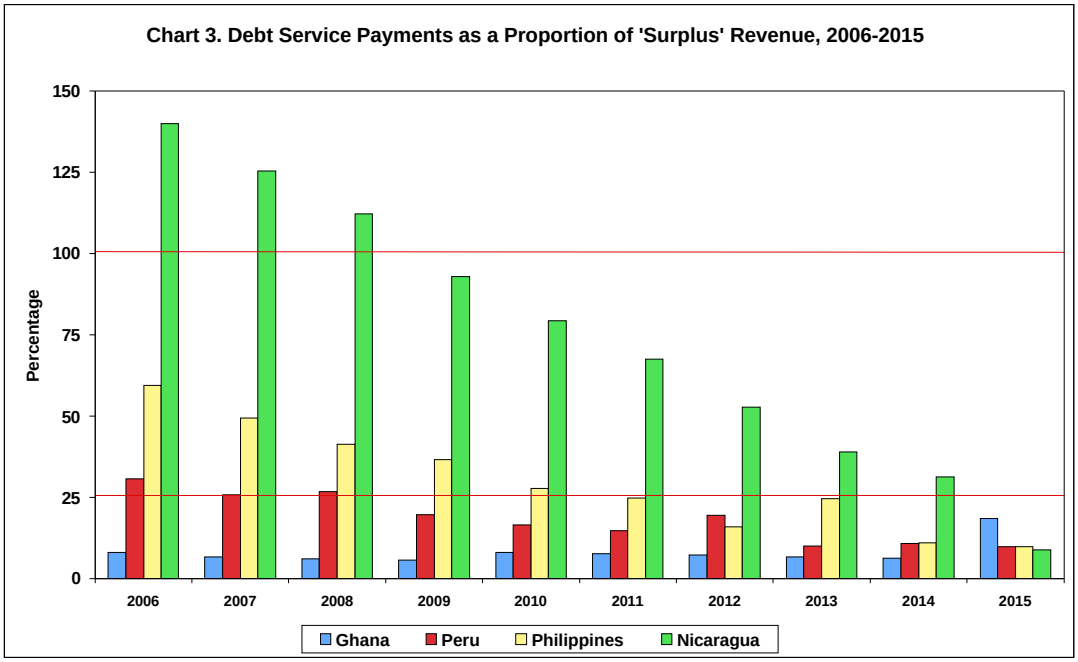
Source: Millennium Project (2005), GFS (2005), GDF (2006) and author's calculations

The first, task in this respect is to calculate the 'surplus' of domestic resources available after MDG expenditures have been met over anticipated debt service payments. As with low-income countries, we assume that a maximum of 70% of domestic revenues can feasibly be devoted to MDG expenditure. Chart 2 above therefore depicts the size of these surpluses for the case studies chosen from 2006 to 2015. The first observation to make is that while all countries exhibit a positive 'surplus' the available resources are clearly far larger for Peru and the Philippines than is the case for Ghana and Nicaragua – although we do not see this situation here, under stage 2 of the framework, a 'negative surplus' would feed back into the calculation be reducing the surplus of government revenue and thereby reducing interest payments.

For Nicaragua, the Philippines and Peru, the size of the surplus grows year on year to 2015. For Ghana, in contrast, the relatively heavier costs of meeting the MDGs, which increase steadily in real terms throughout the period, means that the surplus is flat before falling at the end of the period.

[12] These country case studies were kindly made available by the UNDP for the purposes of this paper.

Above we set the ceiling for debt service payments at 100%. That is, as long as debt service payments are 100% or more of surplus government revenue after MDG expenditures have been met, total debt service payments are zero. Chart 3 below depicts changes in this ratio for our case studies to 2015. As a floor, we propose the figure of 25% - if debt service costs are 25% or less of surplus revenues, payments correspond to the market rate. Clearly, the calibration of what level this 'floor' should be set at will have a strong impact upon actual debt service payments, and it is therefore an important variable in the context of the proposed framework. The figure of 25% is proposed here on the basis of what seems reasonable and practicable. Some may argue that the floor should be set lower, whilst others might argue the opposite. This is a matter for future debate, and the 25% figure is proposed here in the hope of initiating this process. The 25% floor and the 100% 'ceiling' are shown as red lines in chart 3.



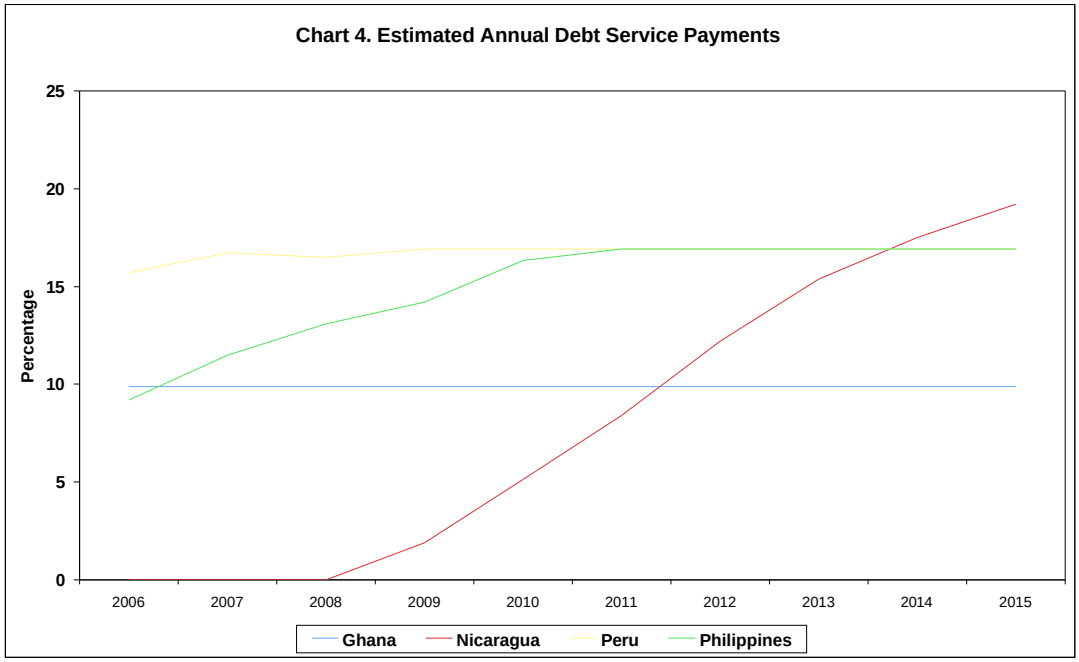
Source: UNMP (2005), GFS (2005), GDF (2006) and author's calculations

In 2005, total debt service payments represented an average of 16.96% for middle-income countries, 19.2% for lower middle-income, and 9.9% for low-income countries.[13] For illustrative purposes, we place Peru and the Philippines in the middle-income category, Nicaragua in the lower middle-income and Ghana in the low-income group, and assume these rates remain constant throughout the period. Therefore, in the context of these groups, our floor in terms of debt service payments is 0%, and our ceilings are 16.96%, 19.2% and 9.9% respectively.

As can be seen from chart 3, Ghana (after 75% debt relief in stage 1) sees debt payments as a proportion of available government revenue well below the 25% floor throughout the period. Consequently, as shown in chart 4 below, Ghana's debt service payments would correspond to the market rate from 2006 to 2015, which we assume for convenience to be constant at 9.9%. At the other extreme, Nicaragua's relatively large external debt sees payments remaining in excess of available government revenues – i.e. well above the 100% 'ceiling' given above – until 2009. Under stage 2, therefore, Nicaragua's debt service (and principle) remain set at zero until this point, when the ratio falls below the 100% threshold, payments become positive and begin to move towards the market rate, reaching it in 2015.

[13] See the World Bank's *Global Development Finance* indicators.

Both Peru and the Philippines start the period with a ratio above 25%, but below 100%, and see the ratio fall to below the 25% floor around the halfway point. Consequently, we see both countries debt service costs being below the market rate at the outset, and progressively move towards this rate, reaching it around the middle of the period, after which point the market rate applies.



Source: Millennium Project (2005), GFS (2005), GDF (2006) and author's calculations.

Chart 4 above illustrates this pattern of debt payments to 2015. Clearly, the market rate for each country's debt will vary throughout the period, as is the case today. We take the average income group rates merely to illustrate how stage 2 would work: debt service payments fluctuate between zero and the market rate, in direct proportion to the proportion of available government revenue accounted for by debt service costs.

As has been discussed, it is perfectly possible that countries may not be able to spend fully 70% of total government revenues on the MDGs. Clearly this would have a significant impact on debt payments under stage 2 of the proposed framework. However, in practice, the impact of these changes would be seen most clearly in stage 1. That is to say, if only 50% of government revenue could feasibly be spent on the MDGs, then the debt write-off in stage 1 would be significantly deeper. As we saw in the previous section, for Ghana, if the ratio fell to either 60% or 50% we would see 100% debt relief. For other countries, however, this would not be the case.

In general terms, the lower the proportion of government revenue that can be MDG dedicated, the deeper the debt relief. In consequence, the lower resultant level of debt means that, in stage 2, debt service payments become 'MDG-sustainable' earlier than would be the case if 70% of revenues were spent on the MDGs.

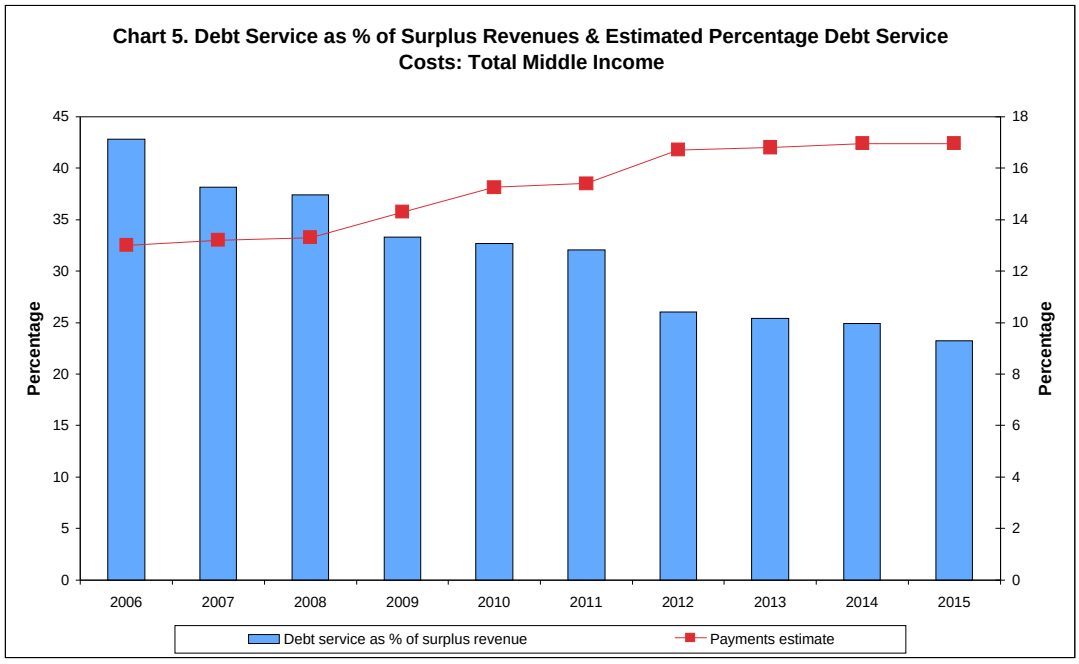
On the other hand, as countries' efforts to boost government tax revenues bear fruit, the 'surplus' government revenue available for debt servicing would increase, thus moving interest payments closer to the market rate over time.

Having examined the impact of stage 2's MDG bond conversion on individual countries, we now turn to the impact on middle-income countries as a global group.

5.2. Global analysis

In the absence of detailed country-level MDG costings for each middle-income country it is not possible to estimate the global impact of the MDG Bond conversion with any accuracy. However, an examination of the aggregated figures for this country-group may provide some indications in this respect. At the outset, what needs to be borne in mind is that in middle-income countries where MDG costs are relatively high, and available government is relatively low, some countries will have seen partial debt relief as part of stage 1. This process continues until the cost of meeting the MDGs is no more than 70% of total government revenues, though we have also made clear that this estimate may be too high – if only 50% or 60% of total revenues can be spent on the MDGs the level of debt relief in stage 1 will obviously be greater, and debt service costs in stage 2 correspondingly lower.

External debt is therefore written off to the extent that this figure is reached, be it 70%, 60% or 50%. In most low-income countries, as we have seen, this will equate to 100% debt relief, which will still leave MDG costs greater than that which can be generated from domestic resources: ODA flows will therefore be required to make up this shortfall, and tax reform strategies implemented to raise domestic resource mobilisation. At the other extreme, many middle-income countries will have sufficient domestic resources to both meet their required MDG costs and service their external debt at the prevailing market rate for the whole period: for these countries, everything will proceed as if there had been no MDG-bond conversion. We have also seen that some lower middle-income countries in our case studies will require partial debt relief, however, and it is likely this will also be true for a limited number of middle-income countries. For the majority, however, the stock of external debt will remain as was – i.e. the countries will not qualify for stage 1 debt relief – but future debt service payments may be reduced depending on the proportion of 'surplus' government revenue accounted for by MDG costs.

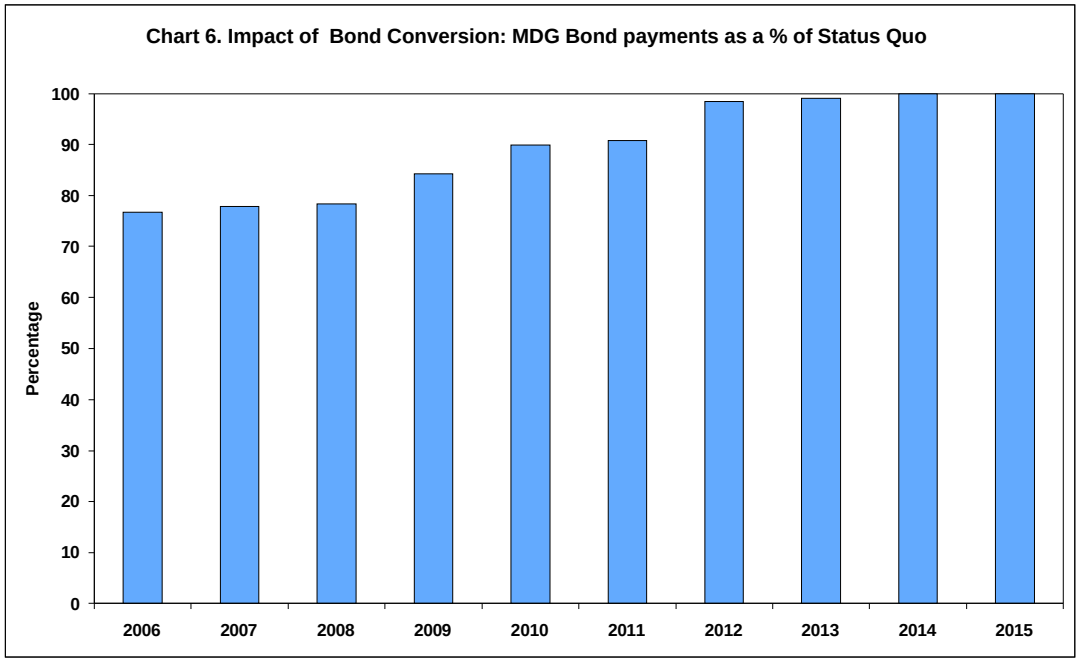


Sources: Millennium Project (2005), WEO (2006), GDF (2006) and author's calculations.

Chart 5 above depicts the proportion of 'surplus' middle-income country government revenue – i.e. that not dedicated to MDG expenditure – that is accounted for by scheduled debt service payments. These annual ratios are illustrated with the blue bars. Taking our 25% 'floor' as the

point below which market interest rates apply, we can see that although by 2015 middle-income countries as a group are below this level, for the bulk of the period they are not. We have seen that, in 2005, the proportion of total outstanding debt stocks accounted for by debt interest and principle repayments was 16.96% for middle-income countries. As with our middle-income case studies, this is therefore the 'ceiling' for estimating interest and principle repayments required.

As shown with the red line in chart 5, the 16.96% rate only becomes operational in the last two years of the period, after GDP growth and rising government revenues raise the government surplus so that debt payments fall below 25% of the figure.



Source: Millennium Project (2005), WEO (2006), GDF (2006) and author's calculations.

Chart 6 shows the impact this would have on scheduled debt service payments to 2015, if we assume that the debt write-off in stage 1 is based upon governments being able to dedicate 70% of their resources to meeting the MDGs and take the UNMP's estimates for domestic resource mobilisation. To reiterate, if this figure is less than 70%, then more middle-income countries will see more debt relief in stage 1, and the estimated middle-income debt payments to 2015 will be correspondingly less. In contrast, if domestic resource mobilisation is higher than expected, debt relief in stage 1 would be lower, and payments under stage 2 higher.

Staying with both assumptions, however, would see payments fall by a little over 20% at the outset, following the conversion to MDG Bonds. However, as the size of the government surplus grows – assuming 7% GDP growth per year and government revenue as a proportion of GDP at 20% in 2006, rising to 24% by 2015 – debt service costs move back towards the market rate of 16.96%. Clearly, increased domestic resource mobilisation would result in the market rate being reached earlier than 2013.

By 2013, the payment schedule on the MDG bonds is identical to that at which would have been the case in the absence of the bond conversion. Clearly, these illustrative figures are based on assumptions that may prove to be incorrect. For example, assuming 7% average growth rates may be overly optimistic. If we instead assume growth of 5%, then we do not reach the market rate of debt service costs until 2014, whereas a 9% growth rate would see the figure reached by 2012.

Clearly, as our case studies have shown, the impact on individual countries with differing levels of income, debt and MDG expenditure needs will be far from uniform, and will depend strongly on how key variables move in practice. Furthermore, as has been pointed out, it is not possible to predict with any degree of accuracy what the outcome will be without robust country-level MDG costing studies for all countries. However, the broad-brush aggregate picture given in chart 5 – where we assume that debt relief in stage 1 is calibrated on the assumption that 70% of total government revenues can be spent on the MDGs – suggests that the global impact would be a reduction in total debt service payments from middle-income countries of ten percentage points over the period, which equates to a little over US$420 billion.

6. Logistical and Market Issues

6.1. Logistical and data issues

This paper has set out a broad framework through which developing countries' external debt could be made compatible with the achievement of the Millennium Development Goals by 2015. As we have seen, this necessarily implies broad and deep debt relief for most low-income developing countries in stage 1, with subsequent debt service payments on MDG Bonds being proportional to the ratio of scheduled debt service payments – after MDG expenditures have been made – to surplus government revenue. For the richer middle-income countries, payments in stage 2 would correspond to the market rate, but these payments would fall proportionally – ultimately to zero – as the surplus resources available to service external debt falls.

The aim is to provide a simple, transparent, predictable mechanism that ensures genuine MDG-compatible debt sustainability, but also, in combination with reforms to increase domestic resource mobilisation, maximises national autonomy. In this regard, external ODA flows only enter the equation once domestic resource mobilisation has been maximised, and stages 1 and 2 completed. That is, the ability of countries to meet their external debt obligations is assessed in the first instance in terms of domestic resource mobilisation, and payments schedules are constructed on that basis. For most low-income countries, domestic resources will be insufficient to enable them to meet their needed MDG expenditures, though over time could move towards this target: here we see up to 100% debt relief as stage 1 of the process, with external ODA then being allocated to make up the MDG funding gap and concerted efforts made to increase domestic resource mobilisation. For some middle-income countries, domestic resources will be sufficient to meet both their MDG funding requirements and their debt obligations: here the outcome is that debt service payments simply equate with the market rate. For countries between these two extremes, however, we may see partial debt relief in stage 1, followed by a bond conversion, where the new MDG Bonds have interest and principle payments as a positive function of available government revenues after MDG expenditures have been made. Again, these calculations are made on the basis of domestic resource mobilisation, with external ODA then being allocated to make up any funding shortfall where needed.

From the institutional perspective, an important question is whether existing bodies such as the Paris Club of official creditors and the London Club of private creditors could be used as fora for the negotiations of stages 1 and 2. Given that proposed framework would cover both public and private debt, there would seem the need for a new body that merged these two existing fora, as well as incorporating other major creditors not currently represented on either body. If we were to include domestic debt, the fora would necessarily have to include domestic creditors from the countries concerned, though this would have to be on a rolling basis – i.e. domestic Indonesian creditors sit when Indonesian debt is being discussed but not otherwise – to avoid the body becoming too large and unwieldy.

What is also clear is that the availability of independent, objective national-level statistics will be fundamental to making this framework function in practice. At present, as we have seen, detailed country level MDG costings are sparse, and largely focused on low-income countries. Although this situation is slowly improving, making a reality of the proposed framework would require a step-change in these efforts.

For stage 1, the data requirements are as follows:

i) Robust data for annual government revenues
ii) Robust data for annual MDG investments needed to 2015.

The first of these requirements already exists and is reported annually by the IMF as *Government Financial Statistics.* The second, in contrast, exists for some countries but not others. Furthermore, many of the available costing studies use quite different methodological approaches, limiting the international comparability of the studies.

For the approach to work it is essential that one body collects and disseminates MDG costing estimates for all countries, using the same approach in each case. In this regard, although work of the UN Millennium Project (UNMP) is perhaps the most advanced, the body itself is to be disbanded and incorporated into the UNDP, and is therefore not a candidate for this role. It is therefore likely that a dedicated, fully resourced body would have to be established to perform this function. Without precluding any option in this respect it would be logical to build upon the work done within the different branches of the UN on MDG costings, and the mooted establishment of a joint statistical body by the UNDP and UNDESA would appear to be the ideal institutional base from which to develop such an agency. However, in order to boost market confidence, it is also suggested that the work also involves inputs from a private ratings agency with strong experience in developing countries.

For stage 2, the data requirements are as follows:

i) Robust data on the total level of annual government revenues, and the proportion that can feasibly be spent on the MDGs.
ii) Robust data on scheduled debt service payments
iii) Robust data on the market-determined spread on each country's external sovereign debt.

Here, both ii) and iii) are readily available, but this is not necessarily so for i). In the Millennium Project (2005), and in this paper, we assume that around two thirds of government revenue can be devoted to the MDGs, whilst always making clear that this may not be the case, and providing some sensitivity analysis of the impact if this assumption were to be relaxed. However, while this broad assumption may be acceptable in the context of an concept paper such as this, which aims to outline the broad features of a new framework, it would clearly be necessary to produce detailed, country-level estimates when calibrating each country's payments on their MDG Bonds.

Given that these bonds would be publicly traded, it is imperative that the production of this data is independent, objective and transparent, and also that the same process is used in each country. Again, as in stage 1, the UNDP/UNDESA joint statistical project would seem to be the ideal body to host this function – again combined with inputs from the private ratings agency sector.

In combination, therefore, the UNDP/DESA – or another dedicated UN agency – would be mandated to produce, in partnership with a private sector ratings agency:

- Progress reports on the MDGs for all developing countries.

- Annually revised MDG costings in the light of this progress and changes to other conditions at the national level.
- Annual assessments of the proportion of government revenues that could be spent on the MDGs.
- Annual assessments of the 'surplus' government revenue left over once these expenditures have been met.

This data would then be fed into the calculation of the annual coupon (and principle) repayable on each country's MDG Bonds, providing a clear and transparent mechanism.

6.2. Market and incentive issues

As mentioned above, the fact that MDG Bonds would be publicly traded means that it is vital that investors have confidence in the process through which this data is produced. In the first instance, the bond conversion of stage 2 will entail a combination of public and private creditors. In this respect, the experience gained from the Brady Bond process would be invaluable, and sets a useful precedent.

It is widely accepted that the introduction of Brady Bonds ultimately enabled many Latin American countries to regain access to the international capital markets. It is likely that a similar effect would be seen with MDG Bonds. In general terms, markets thrive when there is the possibility of market participants being able to gain an informational advantage over their competitors. When determining the annual principle and interest payments due on each country's MDG Bonds, the key variable will be the country's progress towards meeting the MDGs, and the impact this has on required annual expenditure. This provides considerable scope for market participants to conduct independent research in this area, which would have the interesting side-effect of focusing international financial market attention on country-level progress towards meeting the MDGs – it is fair to say that, to date, this has not been an overwhelming concern of the market.

Furthermore, once the initial 'haircut' of debt relief and bond conversion has been absorbed by the market, the greatly enhanced economic sustainability that the process would produce would make many countries far more attractive investment propositions than is currently the case. It is often rightly said that markets hate uncertainty, and the patchwork and ad hoc arrangements with regard to debt relief and restructuring that we have seen to date would seem to be a clear example of high levels of uncertainty. Leaving the process to the whims of donors requires market participants to second-guess their intentions, which is often an impossible task. Given this uncertainty, much of the mainstream market has tended to avoid investing in (particularly low-income) developing country assets where the terms of the investment can radically change in a largely unpredictable manner.

Despite this, it is of course likely that bondholders will not wish to accept a conversion that reduces their income, even if only in the short-run. Where the Brady Bond conversion was attractive was that it offered investors an improvement on their situation. A similar argument can be made for GDP-linked bonds, where in exchange for accepting lower payments in times of low growth, investors are compensated by higher payments when GDP growth is strong. It has been argued that the benefits of the MDG bond conversion proposed here would be attractive to investors because of indirect benefits, but it is certainly true that this may not be seen to be the case. One way of overcoming this problem would therefore be to build a potential 'upside' into the conversion framework. Clearly, this would only be possible once the MDGs either could be fully funded from domestic resources, or had been met. In these circumstances the bonds would revert to the market rate, but it would be possible to apply a premium to this rate so as to compensate investors for lower payments in earlier periods. An alternative to a fixed premium of this form would be one based on GDP growth, thus

retaining the 'upside' for investors, while setting a floor for payments at the market rate and ensuring affordability on the part of the debtor.

It should be noted that, although the framework proposed here may see the creditworthiness – and thus the access to the capital markets – of some developing countries improve, market conditions in 2006 are such that many middle-income countries are enjoying easier access to the international capital markets than has been the case for many years. However, it should also be stressed that for many middle-income countries – particularly the richer ones that have good access to finance today – there would be no impact of the MDG bond conversion. That is, the terms of their bonds would remain just as today, governed by the prevailing market rate.

Having said that, it should also be borne in mind that the purpose of this paper is to establish a framework for debt sustainability that is compatible with countries' ability to meet the MDGs by 2015. Although emerging market spreads are at historic lows, this will not last forever. Indeed, the fact that spreads were at similarly low levels at points in the past is often associated with countries taking on more debt than is prudent – i.e. taking advantage of benign market conditions – and then encountering problems when market conditions take a turn for the worse. MDG sustainability does not enter this equation in any way at present. However, by linking both debt relief and subsequent debt service payments directly to countries' ability to finance their MDG expenditures domestically, the proposed framework would ensure that this is no longer the case.

As we saw on page 3, much of the focus on this area has been in response to the UN Secretary-General's call in 2005 for:

Debt sustainability should be redefined as the level of debt that allows a country to achieve the MDGs and to reach 2015 without an increase in debt ratios

By linking debt interest and principle costs directly to the MDG process, the framework proposed here ensures that both clauses in this sentence are achieved. That is, that the *level* of debt (i.e. that left after stage 1) is consistent with meeting the MDGs, and that the debt *ratios* (i.e. the payments required relative to other key variables of 'affordability') that result by 2015 do not show an increase with respect to today.

In this respect, an important issue that needs to be addressed is one of debt maturity. In the discussion above, we have implicitly taken the MDG 'deadline' of 2015 as the end of the process. Clearly, however, each country's stock of outstanding debt will be of varying maturities - some maturing before 2015, and some maturing at a later date. Similarly, progress on increasing domestic resource mobilisation and meeting the MDGs will also vary considerably. Both the bond conversion of stage 2, and indeed what follows it, will need to take these differences fully into account.

The best means of doing so would be to convert existing bonds into MDG Bonds using their existing maturities. The process would therefore extend beyond 2015 in many instances. However, the (understandable) emphasis placed on the 2015 deadline is designed to focus minds and prevent procrastination. In reality, the process of poverty elimination is an ongoing process that may, or may not, be reached by 2015. For example, despite best efforts, it is perfectly possible that some countries will not have reached their MDG targets by 2015, whereas others may achieve their targets before this time. However, for the first group, this does not mean that the MDG Bond conversion should be simply unwound at 2015, forcing them back to a schedule of unsustainable debt service payments. Rather, it must surely be that the mechanism described above continues for each country until the 25% 'floor' of stage 2 is reached, regardless of when this is. For the second group – i.e. those able to finance the MDGs from higher domestic resources or have met the MDGs in full – this point would come

before 2015. In both instances, the market rate would then apply, possibly with a premium linked to GDP growth, to compensate investors for lower payments at the start of the period.

An important issue concerns the accrual of further external debt. Above it has been argued that external ODA support for the MDGs should be calculated and allocated *after* debt sustainability has been assessed on the basis of domestic resource mobilisation. This implies that either a) further external support required is in the form of grants rather than loans, so that genuine MDG-sustainability is maintained throughout the process, or b) that additional debt issued is also of the MDG-bond form. The second of these options ensures that the process is dynamic, and that external debt costs for all countries – by definition – remain compatible with meeting the MDGs throughout the period.

A final issue to consider is one of incentives. An inherent problem in structures based on need is that they can raise issues of moral hazard. For example, if I receive government revenues due to my very low income, I have an incentive not to allow this income to increase. Similarly, in the structure proposed above, it is arguably the case that governments could have an incentive not to increase domestic resource mobilisation, as this would reduce the debt relief they were entitled to and/or raise the servicing cost of their external debt. These issues are certainly valid, but the same argument can be made of all structures based on need, including the HIPC initiative.

To address this potential problem, the assessment of government revenues described in section 6.1 above, could also include an assessment of progress in raising these revenues – benchmarked against international best practice – with adjustment made to the final figures if required. However, in reality this is unlikely to be a problem. The strongest counter argument is simply one of national interest: the benefits that would be obtained from significantly raising government revenues as a share of GDP would greatly outweigh the slightly higher debt servicing this would imply. Furthermore, the boost in government revenue would also make these costs far easier to meet.

7. Next Steps and Concluding Remarks

There is no doubt that making the proposed framework operational would require the development of an internationally legitimate forum for negotiations. It has been proposed that a new body, combing the London and Paris Clubs should be established for this purpose. The framework would also require an independent and authoritative statistical body. In this regard, the UNDP/DESA joint statistical project has been proposed as the most appropriate institution. This would certainly require significant investment in upgrading capacity, but this investment would be relatively small in the context of the overall cost of achieving the MDGs in every country.

If this investment is made, however, and stages 1 and 2 of the framework implemented, then the resulting pattern of external debt in developing countries would, *by definition*, be compatible with achieving the MDGs. Furthermore, the global framework would effectively replace the HIPC initiative, achieving broad and deep debt relief as a prerequisite to genuine MDG-compatible debt sustainability, whilst simultaneously not restricting the ability of middle-income countries to access the capital markets as they do today.

In this paper the focus has been on external debt, but there is a case that domestic debt should also been included. Some of the issues that this would raise have been flagged in this paper, but this is certainly an area for future research.

Whether or not domestic debt is included, however, the exact parameters of the framework will of course be a matter for debate. The broad outline proposed here is suggested as a possible starting point for this debate. Time is short, however. 2015 is less than a decade

away, and it is hoped that those in a position to drive this process forward seize the opportunity to do so: the Millennium Development Goals represent the first step on the road to the elimination of poverty in all countries; as Kofi Annan warned in 2005, it would be a tragedy if this opportunity was missed.

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