



Debt Sustainability and Debt Management in Developing Countries

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Glossary¹

Amortisation is the repayments of principal on a loan and does not include interest payments.

Concessionalality is a measure of the “softness” of a loan reflecting the benefit to the borrower compared to a loan at market rate. Technically, it is calculated as the difference between the nominal value of a credit and the present value of the debt service as of the date of disbursement, calculated at a discount rate applicable to the currency of the transaction and expressed as a percentage of the nominal value.

Contingent liabilities are obligations that do not arise unless a particular, discrete event(s) occurs in the future. A key difference between contingent liabilities and current financial liabilities (and public sector debt) is that one or more conditions must be fulfilled before a financial transaction is recorded.

Credit default swaps (CDSs) have become a key financial instrument in sovereign debt markets. It is essentially a credit derivative contract between two counterparties, which is comparable to an insurance policy on a bond or loan. In a CDS, the “protection buyer” agrees to pay a quarterly premium to the seller of the CDS who, in exchange, commits to cover the losses in case of a credit event, be it due to a default, bankruptcy or distressed exchange. The CDS buyer thereby protects him/herself against the occurrence of a default or restructuring.

Credit risk refers to the risk of non-performance by borrowers on loans or other financial assets, or by a counterparty on financial contracts. This risk is particularly relevant in cases where debt management includes the management of liquid assets. It may also be relevant in the acceptance of bids in auctions of securities issued by the government as well as in relation to credit guarantees, and in derivative contracts entered into by the debt manager.

Debt instrument is defined as a financial claim that requires payment(s) of interest and/or principal by the debtor to the creditor at a date, or dates, in the future. The following instruments are debt instruments: Special drawing rights (SDRs); Currency and deposits; Debt securities; Loans; Insurance, pension, and standardised guarantee schemes; and Other accounts payable.

Debt default is the failure of a government to make a principal or interest payment on due time (beyond the grace period).

Debt liability in arrears is when it has not been liquidated by its due-for-payment date, that is, when principal or interest payments are not made when due.

Debt relief is any form of debt restructuring/reorganisation which relieves the overall burden of debt.

Debt rescheduling is a bilateral arrangement between the debtor and the creditor that constitutes a formal postponement of debt-service payments and the application of new and generally extended maturities.

Debt restructuring (also referred to as debt reorganisation) is defined as an arrangement involving both the creditor and the debtor (and sometimes third parties) that alter the terms established for servicing an existing debt.

Debt service is the sum of interest payments and repayment of principal.

Debt sustainability. Debt is defined as sustainable when a country can meet its current and future debt service obligations in full, without recourse to debt relief, rescheduling or accumulation of arrears.

¹ Definitions of terms are taken from IMF 2014c; IMF 2013a; IMF and World Bank 2009; and OECD glossary.

Domestic debt has three possible definitions. It can be defined as debt issued in domestic currency; as debt liabilities owed by residents to residents of same economy or debt issued in the home country and under the jurisdiction of a domestic court.

Exchange rate risk refers to the risk of increases in the cost of the debt arising from changes in exchange rates. Debt denominated in or indexed to foreign currencies adds volatility to debt servicing costs as measured in domestic currency owing to exchange rate movements.

External debt, like domestic debt, has three possible definitions. It can be defined as foreign currency debt; as debt owed to non-residents or debt issued in foreign countries and under the jurisdiction of a foreign court. The second definition is the one which is officially adopted by the main compilers of statistical information on public debt.

Grace period of a loan is the period from the date of signature to the first repayment of principal. It has to be noted that in most of the cases interests are paid during the grace period. The repayment period is the period from the first to last repayment of principal. Maturity corresponds to the sum of both periods: grace plus repayment periods.

Grant element is a calculation reflecting the financial terms of a commitment: interest rate, maturity and grace period (interval to first repayment of capital). It measures the concessionality of a loan, expressed as the percentage by which the present value of the expected stream of repayments falls short of the repayments that would have been generated at a given reference rate of interest. In December 2014 the reference rate applied in DAC statistics is now the IMF 5% discount rate. The grant element is higher the longer the grace period, the lower the interest rate and the longer the maturity.

Heavily Indebted Poor Countries (HIPC) initiative is a framework for action to resolve the external debt problems of heavily indebted poor countries (HIPCs) that it was developed jointly by the IMF and the World Bank; it was adopted in September 1996 and expanded in 1999. The Initiative envisaged comprehensive action by the international financial community to reduce to sustainable levels the external debt burden on HIPCs, provided they build a track record of strong policy performance.

Interest rate risk refers to the risk of increases in the cost of the debt arising from changes in interest rates. For both domestic and foreign currency debt, changes in interest rates affect debt servicing costs on new issues when fixed rate debt is refinanced, and on existing and new floating rate debt at the rate reset dates.

Liquidity risk refers (in the context of debt management) to a situation where the volume of liquid assets diminishes quickly as a result of unanticipated cash flow obligations and/or a possible difficulty in raising cash through borrowing in a short period of time.

London Club is an ad-hoc grouping of commercial banks exposed to developing countries' debts. In contrast to the Paris Club (see below) there is no formal framework for restructuring commercial bank loans. Instead, the banks with the greatest exposure to a country seeking to reschedule its debts will form a committee to cater to the interest of all commercial banks with loans to that country.

Market risk refers to the risk of increases in the cost of the debt arising from changes in market variables, such as interest rates and exchange rates. The most common types of market risk are the interest rate risk and exchange rate risk.

Medium Term Debt Strategy is a plan that the government intends to implement over the medium-term in order to achieve a desired composition of the government debt portfolio, which reflects the government's preferences on the cost-risk trade-off. It should operationalise country authorities' debt management objectives.

Multilateral Debt Relief Initiative (MDRI) goes further than HIPC by providing full debt relief on eligible debt from three multilateral institutions (the IMF, the International Development Association (IDA) of the World Bank, and the African Development Fund (AfDF)) to a group of

low-income countries with the aim of freeing up additional resources to help these countries reach the MDGs.

Net debt is calculated as gross debt minus financial assets corresponding to debt instruments.

Net Present Value (NPV) is the nominal amount outstanding minus the sum of all future debt-service obligations (interest and principal) on existing debt discounted at an interest rate different from the contracted rate.

Official Development Assistance (ODA) refers to flows of official financing administered with the promotion of the economic development and welfare of developing countries as the main objective, and which are concessional in character with (as per the December 2014 reform using a 5 percent rate of discount with an adjustment factor of 1% for UMICs, 2% for LMICs and 4% for LDCs and other LICs). To ensure that loans to LDCs and other LICs are provided at highly concessional terms, only loans with a grant element of at least 45% will be reportable as ODA. Loans to LMICs need to have a grant element of at least 15%, and those to UMICs of at least 10%, in order to be reportable as ODA.

Operational risk refers to a range of different types of risks, including transaction errors in the various stages of executing and recording transactions; inadequacies or failures in internal controls, or in systems and services; reputation risk; legal risk; security breaches; or natural disasters that affect the debt manager's ability to pursue activities required to meet debt management objectives.

Paris Club is an informal group of official creditors whose role is to find coordinated and sustainable solutions to the payment difficulties experienced by debtor countries. As debtor countries undertake reforms to stabilise and restore their macroeconomic and financial situation, Paris Club creditors provide an appropriate debt treatment in the form of rescheduling or reduction in debt service obligations.

Public and publicly guaranteed (PPG) debt is defined as debt liabilities of public and private sector units, the servicing of which is contractually guaranteed by public sector units. These guarantees consist of loan and other payment guarantees, which are a specific type of one-off guarantees.

Refinancing risk refers to the risk that debt will have to be refinanced at an unusually high cost or, in extreme cases, cannot be refinanced at all. To the extent that refinancing risk is limited to the risk that debt might have to be financed at higher interest rates, including changes in credit spreads, it may be considered a type of interest rate risk. However, it is often treated separately because the inability to refinance maturing debt and/or exceptionally large increases in government funding costs can lead to or exacerbate a debt crisis. Further, bonds with embedded put options can exacerbate refinancing risk. Relevant indicators include average time to maturity, percentage of

Sovereign debt see Public and publicly guaranteed debt.

Total gross debt—often referred to as “total debt” or “total debt liabilities”—consists of all liabilities that are debt instruments.

Executive summary

This topic guide is an introduction to the economics of Debt Sustainability and Debt Management for development economists and practitioners.

It outlines debt developments of recent decades such as the various options for sovereign debt restructuring including the Heavily Indebted Poor Countries (HIPC) Initiative and the Multilateral Debt Relief Initiative (MDRI), and the introduction and subsequent revisions of the World Bank-IMF Debt Sustainability Framework (DSF) used to assess a country's risk of debt distress.

It outlines the main concepts, processes and agencies involved in debt sustainability analysis, debt management and debt restructuring. While most beneficiaries have graduated from debt relief initiatives, some of them now face a rapidly evolving and increasingly complex finance landscape.

This guide primarily focuses on public debt, both external and domestic. Finally, the guide focuses on the experiences and concerns of HIPCs and priority countries of DFID rather than those of advanced economies.

This guide complements the 2013 [Topic Guide on the Financial Sector](#) also produced under EPS PEAKS.

1 Introduction

1.1 Brief history of debt issues in developing countries

In the 1970s and the 1980s several low-income countries rapidly accumulated external debt. Excess liquidity of international finance on the supply side, and overly optimistic expectations of the repayment capacity of low-income borrowing countries on the demand side were the key underlying factors driving this accumulation (Mustapha, 2014). This optimism was shaped by the prevailing macroeconomic conditions of the 1970s, particularly rapid growth in commodity prices in the early 1970s. Circumstances, however, rapidly deteriorated at the end of the 1970s with the onset of the global recession and second oil price shock. As a result many of these low-income countries ran into serious balance of payment problems, which were compounded by high levels of external debt built up as the result of massive public sector spending during the commodity price boom. Debtor countries consequently began to feel the strain of having to make timely payments on their increasingly expensive foreign debt and for some, problems such as arrears, penalties and debt defaults arose. High debt service was demanding funds that the countries needed for essential service provision and public investment, leading to an energetic campaign by NGOs and poverty campaigners that action was needed to reduce debt burdens.

As export and GDP growth faltered, debt ratios among these countries rose from moderate levels to dangerously high levels: on average, the net present value (NPV) of debt as a ratio to exports was below 150 percent in the early 1980s, but by the mid-1990s it had risen to some 800 percent of exports (and 160 percent of gross national income).

Initially, **the international community's solution in the 1980s was to provide temporary liquidity relief by rescheduling a few years of debt service payments.** While this solution did prevent countries from defaulting on their debts, it did not provide any lasting solution to the issue of long-term debt sustainability for the poorest, most indebted developing countries. **This provided the impetus for the Heavily Indebted Poor Countries (HIPC) Initiative, the first international response to provide comprehensive debt relief to the world's poorest, most heavily indebted countries.** The HIPC Initiative was further expanded in 1999 (Enhanced HIPC Initiative) to provide faster, deeper and broader debt relief and to strengthen links between debt relief, poverty reduction, and social policies. This was achieved through lower debt thresholds for eligibility, debt relief decided at decision point data, interim assistance and floating completion point. It was then supplemented by the Multilateral Debt Relief Initiative (MDRI) in 2005. These initiatives have committed over \$100 billion dollars in the form of non-payment of current and future debt obligations. Box 1 below describes the main steps for qualifying for debt relief under these initiatives while Table 5 in the Appendix summarises their main differences.

When debt is poorly managed, there are a range of potential impacts on different people in a country. **We do not discuss fiscal incidence in any detail in this guide,** but the main ways that debt management affects different people depend on whether they are: lenders (e.g. government bond-holders), taxpayers (whose taxes finance debt service), users of public services (which might be reduced or of lower quality if debt service crowds out expenditure on services) or investors (who might have lower confidence of a stable business environment due to high debt levels, so delay or opt not to invest). Countries vary to the extent that these groups are gender-balanced or not; typically women in developing countries have fewer assets and less income than men (so may be taxed less and/or invest less) but rely more on public services².

2 For a more in-depth look at interrelationships between debt and gender see Dodhia and Johnson, 2005.

Box 1: Eligibility criteria for HIPC and MDRI

To be eligible to benefit from the HIPC initiative, countries had to meet certain criteria, commit to poverty reduction through policy changes and demonstrate a good track-record over time. The Fund and Bank provide interim debt relief in the initial stage (decision point), and when a country meets its commitments (completion point), full debt-relief is provided.

First step: decision point. To be considered for HIPC Initiative assistance and receive interim debt relief, a country had to fulfil the following four conditions:

1. Be eligible to borrow from the World Bank's International Development Agency and from the IMF's Poverty Reduction and Growth Trust.
2. Face an unsustainable debt burden that cannot be addressed through traditional debt relief mechanisms. Originally, the value of main threshold was a NPV of debt-to-export ratio of 200–250%, which fell to 150% under the enhanced initiative.³
3. Have established a track record of reform and sound policies through IMF- and World Bank-supported programs; and
4. Have developed a Poverty Reduction Strategy Paper (PRSP).

Second step: completion point. In order to receive full and irrevocable reduction in debt available under the HIPC Initiative, a country must:

1. Establish a further track record of good performance under programs supported by loans from the IMF and the World Bank;
2. Implement satisfactorily key reforms agreed at the decision point; and
3. Adopt and implement its PRSP for at least one year.

On the one hand, HIPC eligibility criteria are prerequisites for benefiting from MDRI, but on the other hand, the achievement of the completion point is a necessary but not sufficient condition for MDRI eligibility. To qualify for MDRI debt relief, countries must also demonstrate satisfactory performance in three areas: macroeconomic policies; implementation of a poverty reduction strategy; and public expenditure management. It is also important to note that the HIPC Initiative was not intended to be a permanent mechanism to relieve the external debts of LICs and the Initiative was effectively closed to new entrants in 2006 when the sunset clause⁴ was allowed to take effect and the list of potentially eligible HIPCs was ring-fenced.

1.2 Progress under the HIPC Initiative and MDRI

The HIPC/MDRI Initiative is nearly complete. Of the 39 countries that have been eligible under the Initiative, to date 36 have already received 100% relief on eligible debt from IMF and other participating creditors (see Table 6 in Appendix for list of 39 countries). The three currently eligible countries—Eritrea, Somalia and the Sudan—have yet to start the process of qualifying for debt relief under the Initiative, although the Sudan has taken a first step.⁵ Further details on this initiative, particularly its implementation challenges, are provided in section 5.2.3.

Ultimately, these initiatives have been effective in achieving their core goals, substantially alleviating debt burdens in assisted countries, with debt service to GDP and to exports falling from 3% and 15.7% in 2001 to 1.2% and 4.6% respectively in 2013, and facilitating their efforts to increase poverty-reducing expenditures, which rose by two and a half percentage points between 2001 and 2013 (IMF 2014b).

³ There are other thresholds for accessing the initiative under a fiscal window.

⁴ This refers to a two-year period within which members had to adopt an IMF or IDA-supported adjustment programme. The aim of this clause was to limit the build-up of new debt before application of debt relief, thereby mitigating moral hazard.

⁵ The Government of the Sudan has agreed on a new Staff-Monitored Programme (SMP) with the International Monetary Fund (IMF) for 2014, which is a step towards building the track record of sound policies required for HIPC relief.

1.3 Understanding and measuring debt sustainability

The question of whether countries can maintain their debt at sustainable levels remains pertinent even for those developing countries for which HIPC/MDRI has given a clean slate. While debt relief has provided low-income countries with new opportunities, it is a one-off intervention to restore debt sustainability which **does not address the root causes of unsustainable debt accumulation** and challenges remain. In particular, low-income countries tend to have weak institutions, are highly vulnerable to external shocks and struggle with large financing needs. Debt relief has created new borrowing space and low-income countries can now avail themselves of an expanded menu of financing options to access additional resources for development. However, if these new options are not managed carefully, they raise the risk of falling once again into a new debt trap. **Understanding what debt sustainability means, how it can be monitored, and how debt should be managed to avoid such scenarios is therefore of utmost importance.**

Despite being widely used by academics and policy-makers, the concept of ‘debt sustainability’ does not have a widely agreed economic definition (Wyplosz, 2007). The analysis often concentrates on the notion of unsustainability rather than on a positive definition, focusing on operational assessments and thresholds (Prizzon, 2009). Debt sustainability is also far from a homogenous concept, varying with the debtor’s characteristics, the time horizon adopted and can focus on either external or domestic debt (Prizzon, 2009). Further complicating matters is the forward-looking nature of debt sustainability which often requires making guesses about the future evolution of several key macroeconomic variables. For these reasons, **the guide sheds light on the different aspects of debt sustainability, reviewing the World-Bank and International Monetary Fund (IMF) Debt Sustainability Framework (DSF) which was introduced in 2005.** Widely used by a growing community of donors and lenders to help inform their financing decisions, it is essential to fully understand the mechanics of the DSF.

1.4 The current debate on debt sustainability

On average, the current debt situation of developing countries seems generally benign. Public debt levels have declined markedly in the majority of low income developing countries (LIDCs)⁶ since 2000 and are now at relatively low levels. Contributing factors include strong economic growth, low interest rates, and the provision of comprehensive external debt relief under HIPC/MDRI. Some three-quarters of LIDCs are currently assessed as being at low or moderate risk of experiencing external debt distress under the joint Bank-Fund Debt Sustainability Framework (IMF, 2014). Nevertheless, there is a degree of cross-country heterogeneity with high and/or increasing debt levels in recent years in a third of LIDCs. In particular, several post-completion point HIPCs have rapidly accumulated debt (Benin, Ghana, Malawi, Mozambique, Niger, São Tomé and Príncipe, Senegal and Uganda) while debt levels also remain high in several non-HIPC developing countries, particularly small-island states such as Grenada (Lewis, 2013; Thomas, 2012; World Bank n.d.). It is thus too soon to declare a return to sustainability, even in the countries where debt ratios have remained steady, and remains a concern in the context of financing the Sustainable Development Goals (SDGs). The sustainability of countries’ debts depends on how they use any new borrowing or other finance. If borrowing is undertaken to finance consumption and other non-productive uses, then it might compromise future debt sustainability. Without investment and economic growth, resources would have to be diverted from other sectors to service the debt. If external debt servicing claims an increasingly large proportion of government revenue,

⁶LIDC group is a group of 60 countries that have markedly different economic features to higher income countries and are eligible for concessional financing from both the IMF and the World Bank. These countries a) fall below a modest per capita income threshold (US\$2,500 in 2011, based on Gross National Income) and b) are not conventionally viewed as emerging market economies.

correspondingly fewer resources will be available to the government to finance essential expenditures, potentially resulting in adverse economic and social conditions.

Furthermore, the supportive conditions that helped stabilise debt ratios in LIDCs since 2007—notably easy global financing conditions—will likely fade away in the period ahead, so we should not be complacent.

The changing landscape of development finance may also pose a threat for debt sustainability in HIPCs and other LICs with the emergence of new providers and new (debt-creating) sources of development finance unless they are effectively managed. This includes assistance on non-concessional terms from Development Finance Institutions (DFIs) and non-Development Assistance Committee (DAC) donors, blended and climate related finance as well as greater access to international capital markets for developing countries (such as Eurobond issuance in Rwanda and Zambia). Domestic debt is also rising, and its impact on debt service will be larger than that of external debt, typically being more expensive.

1.5 Structure of the topic guide

The rest of the topic guide comprises of 5 sections. Section 2 starts with the basic economic theory on debt sustainability. Section 3 takes this further by exploring what is understood by 'debt sustainability' and examining the tools and frameworks commonly used by borrowers and/or lenders for public sector debt analysis. Section 4 briefly outlines the origins of sovereign debt crises in low-income countries. Thereafter, the topic guide highlights recommendations and actions for the borrower as well as for development partners in two separate sections: Section 5 on options for debt restructuring and Section 6 on debt management. Each section includes country case studies where appropriate to illustrate key messages.

2 Role of debt in the economy

This section is largely theoretical and begins by briefly reviewing the main macroeconomic identities relating to the role of debt in filling the budgetary (or fiscal) and balance of payments financing gaps. It then outlines how public debt can be classified. This is followed by a consideration of two theoretical issues: the relationship between public investment and growth and 'debt overhang', one of the rationales for debt cancellation.

2.1 Macroeconomic identities and basic concepts in debt algebra

As an alternative to taxes, public borrowing can perform important roles in smoothing economic activity and enhancing welfare by allowing for sudden increases of budgetary expenditure without having an immediate effect on the taxation rate.

In macroeconomic terms, first, the government may borrow, either externally or domestically, to finance its budget deficit if tax receipts and other revenues are less than proposed expenditures. Second, government borrowing from abroad usually occurs when national savings is insufficient to finance investment. Finally, governments may use foreign debt to fill an external financing gap if exports and inflows from abroad are insufficient to meet imports and outflows overseas.

These relations can be expressed in terms of the simple macroeconomic identity

$$Y \equiv C + I + G - T + X - M$$

Where: Y = national output/expenditure; C = consumption, I = investment; G = government expenditure; T = taxes; X = exports; M = imports; and $Y - (C + G) = S$ = national savings. Borrowing can arise when:

- Savings (S) are less than Investment (I): $S - I < 0$
- Exports (X) are less than Imports (M): $X - M < 0$
- Government expenditure (G) is greater than Taxes (T): $G - T > 0$.

The rest of this sub-section develops the analysis of financing a deficit with debt, for both the fiscal and the balance of payments gaps, where by "gap" refers to a projected deficit. It is much more difficult to analyse debt on the basis of the savings-investment gap because of insufficient data (on national savings and investment and difficulties in tracking debt disbursement and payment flows of the private sector).

2.1.1 Closing the fiscal gap or budgetary gap

The fiscal or budgetary gap is:

$$(1.1) \text{GAP}_{bud} = C_g - T_g + (i_d * DOD_d) + (E * i_e * DOD_e) - [(DF_d - RF_d) + E * (DF_e - RF_e)]$$

Where:

- GAP_{bud} : Budget financing residual gap
- C_g : Government expenditures other than debt service
- T_g : Government revenue
- i_d : Average rate of interest on domestic debt
- i_e : Average rate of interest on external debt
- DOD_d : Stock of domestic debt outstanding in nominal terms
- DOD_e : Stock of external debt outstanding in nominal terms
- RF_d : Domestic debt amortisation flow
- RF_e : External debt amortisation flow
- DF_d : Domestic debt gross flow
- DF_e : External debt gross flow

E: Exchange rate (FCY/DCY): units of domestic currency (DCY) for one unit of foreign currency (FCY)

For definitions of debt terms not defined in the glossary, see Box 2.

Rearranging terms in (1.1), we can write:

$$(1.2) \text{GAP}_{bud} = C_g - T_g - [(DF_d - RF_d - i_d * DOD_d) + E x (DF_e - RF_e - i_e * DOD_e)]$$

The third term in (1.2) is the domestic debt net transfer with a minus sign, and the fourth term is the external debt net transfer expressed in domestic currency, also with a minus sign as well. Thus (1.2) can be written as:

$$(1.3) \text{GAP}_{bud} = C_g - T_g - [NT_d + E * NT_e]$$

Closing the ex-ante gap, i.e. to equal it to zero, implies:

$$(1.4) \text{GAP}_{bud} = 0 \rightarrow C_g - T_g = NT_d + E * NT_e$$

On the one hand, the equalities expressed in (1.4) mean that external and domestic debt are substitutable for each other, because for a given deficit, $C_g - T_g$, the financing resources to close it can be domestic, external or a mix of both, depending on the arbitrage that the Debt Management Office would do to choose the optimal financing (Cosio-Pascal, 2012). On the other hand, (1.4) shows that the additional resources needed to close the gap are net flows, i.e. for calculating the gross flows we need to take into account repayments of principal and interest payments originated by these new debt flows.

Box 2: Definitions of key concepts

- Debt Outstanding and Disbursed or Nominal value (DOD): The debt outstanding and disbursed is the difference between the sum of total disbursements and the sum of total principal repayments. It is the amount of principal outstanding and still owed to the creditor. Nominal value of the debt is a synonym of DOD that differentiates the value of tradable debt instruments which is a market value.
- Debt Net Flow is the difference between the disbursements (DF) and the principal repayments flows (RF): $NF_t = DF_t - RF_t$
- Debt Net Transfer (NT) in period 't' is the debt net flow in period 't' minus the interest payments flow (IF) in period t: $NT_t = NF_t - IF_t$
- Disbursement is the full or a portion of the face value that is made to the borrower for utilisation of the loan proceeds. The disbursement can be made in one transaction or can be staggered on time. Normally, the borrower has to fulfil certain requirements, stipulated in the contract, for the creditor to trigger disbursements.
- Repayment of principal is the reimbursement of the loan principal by the borrower to the creditor. There are different modalities for undertaking the repayment of principal, i.e. there are different types of principal amortisation methods. The specific method applied is spelled out in the contract. Dealing with loans—i.e. non-tradable instruments—the total principal repayments equal total disbursements.
- Stocks vs. flow: When calculating DOD, the exercise will involve the concept of stocks and flows. A stock is a value at a given date, for instance the DOD, and a flow is a series of transactions made in between two dates, i.e. a period.

2.1.2 Closing the balance of payments gap

The balance of payments gap (in foreign currency units only) may be written as:

$$(1.5) \text{GAP}_{bop} = M - X + (i_e * DOD_e + RF_e - DF_e)$$

Where:

GAP_{bop} : Balance of payments gap

M : Imports

X : Exports

i_e : Average rate on interest in external debt

DOD_e : Stock of external debt outstanding in nominal terms

RF_e : External public debt amortisation flow

DF_e : External public debt gross flow

The third term in equality (1.5) is in fact the net transfer on external public debt with a minus sign, because in this case the net transfer is expressed as:

$$(1.6) NT_{bop} = DF_e - RF_e - i_e * DOD_e$$

Therefore, equality (1.5) can be written as:

$$(1.7) GAP_{bop} = M - X - NT_{bop}$$

And for a gap equal to zero:

$$(1.8) GAP_{bop} = 0 \rightarrow M - X - NT_{bop} = 0$$

So that:

$$(1.9) NT_{bop} = M - X$$

Ultimately, these equations demonstrate how debt can be used to close ex-ante fiscal and balance of payments gaps. The analysis is "ex-ante" because the borrowing plans have to be established and approved before the period starts, otherwise, "ex-post", i.e. at the end of the period, the deficit will be always closed, but through arrears which would not be an efficient and sustainable way to finance a deficit. Moreover, these algebraic manipulations reveal that the residual gap is a net transfer concept and, thus closing the gap in each period will increase the financing needs in future periods, depending on the financial terms of the new borrowing, increasing the stock of debt. Therefore, **the only way to repay the debt is to create surplus in the balance of payments and the fiscal budget, otherwise, the debt will continue to increase over time.**

2.2 Type of public debt

Governments issue several types of debt, which can be classified in various ways. This section distinguishes between domestic and external debt, and defines contingent liabilities.

2.2.1 External debt vs. domestic debt

There are **three possible definitions of external** (and thus, domestic) debt. The first focuses on the **currency in which the debt is issued** (with external debt defined as foreign currency debt). The second focuses on the **residence of the creditor** (external debt is debt owed to non-residents). The third focuses on the **place of issuance** and the legislation that regulates the debt contract (external debt is debt issued in foreign countries and under the jurisdiction of a foreign court). The second definition is the one which is officially adopted by the main compilers of statistical information on public debt. In fact, the External Debt Statistics: Guide for Compilers and Users jointly published by the BIS, Eurostat, IMF, OECD, Paris Club, UNCTAD and the World Bank defines Gross external debt in terms of the outstanding amount owed to non-residents by residents of an economy.

This definition makes sense from a theoretical point of view because it focuses on the transfer of resources between residents and non-residents; however, **it may not always be possible to define or identify external and domestic debt on a residency basis.**

In relatively advanced LICs with open capital accounts, debt issued by the government may be traded on the secondary market and passed between residents and non-residents. As a consequence, most countries end up reporting figures for external and domestic debt by using information on the place of issuance and jurisdiction that regulates the debt contract (Panizza 2008). The shortcoming of this approach is that the information is misleading because it does not measure what it promises to do (i.e., transfer of resources from non-residents to residents). Thus **any write-up should disclose which definition is used** and should note when there are large divergence in the shares of domestic and external debt depending on the definition.

2.2.2 Contingent Liabilities

Contingent liabilities are not debt as such, but are obligations that arise from a particular discrete event(s) that may or may not occur. They can be explicit or implicit. A key aspect of such liabilities, distinguishing them from current financial liabilities (and external debt), is that one or more conditions or events must be fulfilled before a financial transaction takes place. These liabilities have gained prominence in the analysis of public finance and the assessment of the financial position of the public sector, because **while “invisible” in good times, they may result in costly fiscal surprises and risk public indebtedness.** For example, contingent liabilities played a major role in the recent debt crisis of the Dominican Republic. In 2002 and 2003, large-scale fraud and losses were discovered in several major banks, resulting in bank runs and a systemic financial crisis (Das et al., 2012).

2.3 Debt and public investment-growth nexus

2.3.1 Theory

The general idea that public capital and infrastructure will boost economic growth has a long history and remains a prominent feature of government economic programs across the world⁷. It is thus no surprise that proponents of scaling up public investment via borrowing argue that productive investment, while increasing debt ratios in the short run, can lead to higher growth, revenues, and exports—and therefore to lower debt ratios—over time.

Theoretically, there are several channels through which increases in public capital may affect growth (Agénor 2012). For example, there can be positive productivity and cost-saving effects—more public capital raises the productivity of labour and private capital and lowers the unit costs. The other channels correspond to (i) a complementary effect on private capital, whereby more public capital increases the rate of return on private capital; (ii) a crowding-out effect, when increases in public capital requires domestic financing and, therefore, displaces private investment, and (iii) a “Dutch vigor” effect, where higher public capital can raise the total factor productivity through positive learning-by-doing externalities. **Scaling up public investment in developing countries, however, may not always enhance growth.** Historically, LIC governments have faced significant challenges in making productive public investments. First, spending on public investment does not always imply an equivalent increase in the stock of public capital. Depending on the “efficiency” of public investment, some of the spending may be wasted or spent on poor (inframarginal) projects. In addition, absorptive capacity constraints such as coordination problems or supply bottlenecks during the implementation phase of public investment projects may result in large costs overruns that adversely affect the budget. **Ultimately, both efficiency and absorptive capacity play key roles in determining the final impact of public investment on growth, and hence the economy’s repayment capacity.**

⁷ The idea that infrastructure would revive growth was an important plank in the Egyptian government's economic revival programme in August 2013 and the Indian BJP Party's election manifesto in the Spring of 2014 (Warner, 2014).

2.3.2 Evidence

Most of the empirical literature investigating whether public capital and infrastructure boost economic growth cautions against excessive optimism. This is partly due to the importance of a number of country-specific factors such as the quality of public investment, the crowding-in effect of public investment for private investment, and the capacity of the government to increase revenues to repay the initial debt (IMF 2013b). Furthermore, even if individual projects have high rates of returns, the macroeconomic returns (notably the impact on GDP, government revenues, and exports) tend to be considerably lower than the rates of return on individual projects.

Using both quantitative⁸ and qualitative⁹ techniques, Warner (2014) concludes that public investment drives have “probably very little” to do with accelerating economic growth, and that whether or not future public capital drives will be more successful depends on overcoming incentive problems, agency problems, and a pervasive avoidance of rational analysis. Case studies reveal that public investment drives have been plagued by poor analytics at the time investment projects were chosen, incentive problems and interest-group-infested investment choices.

Employing a different empirical strategy from Warner, Gupta et al. (2011) finds that public capital contributes to economic growth. While Warner (2014) focuses on “surges” in public expenditure to get around issues of endogeneity, Gupta et al (2011) looks at the relationship between growth and the quality of public investment, as measured by variables capturing the productivity of the capital stock. The key findings of Gupta et al (2011) are that there is a statistically significant but relatively small contribution of this efficiency-adjusted public capital to total income, and that project selection and implementation turn out to be important contributors to public capital and growth.

Both Warner (2012) and Gupta et al (2011) are relatively silent on the issue of debt financing and sustainability. However recent contributions by Buffie et al. (2012) have focused on bringing the debt financing of public investment into the debate by explicitly modelling the investment growth nexus in macroeconomic models for policy making. The authors conclude that while increase in infrastructure investment can produce striking benefits for the real economy in the long run, positive results are contingent upon the country's structural conditions. For example public investment inefficiencies and absorptive capacity constraints can imply that the increases in private capital and GDP that result from increased public investment may be disappointing.

2.3.3 Models

Great care must be taken when modelling the benefits of debt-financed public investment. **The IMF and World Bank staff have long recognised the importance of gaining a better understanding of the public investment-growth nexus, and have recently developed several models to do so** (IMF & WB 2012). One such model is a dynamic general equilibrium model that analyses the linkages between public investment and growth and the implications for debt sustainability (Buffie et al. 2012). This model was applied to Togo in 2011 to evaluate the authorities' investment plan, worth 192% of GDP over 10 years, and concluded that a gradual investment path was preferable, to reduce inefficiency losses due to capacity constraints and to allow time for reforms in public financial management. A further description of this model and two others are provided in Box 3. Notably, a single model cannot accommodate the heterogeneity of country-specific circumstances with regard to growth and investment. In fact, **available tools offer complementary views on the investment-growth nexus** and could be used jointly where appropriate (IMF & WB 2012).

8 A sample of 21 LICs and MICs with identified “big pushes” in public investment is assembled from the WEO database.

9 Case studies for Bolivia, Mexico, Philippines, Korea and Taiwan are investigated for the link between public investment drives and long run economic growth.

Box 3: Modeling the links between public investment and growth

Buffie and others (2012) constructed a dynamic general equilibrium model to analyse the links between public investment, economic growth and debt sustainability. The model aims to complement the standard IMF-World Bank debt sustainability framework for low-income countries and includes features and shocks that are common in LICs. It incorporates a production function with private and public capital, so productive government spending can raise output directly and crowd in as well as crowd out private investment. It takes into account potential inefficiencies in translating a dollar of public investment into a dollar of public capital, as well as absorptive and capacity constraints. It also allows for government concessional and non-concessional borrowing and states explicitly the fiscal policy reactions that may ensure debt sustainability. The Togo pilot highlighted that judgment is critical when applying the model since it requires a careful choice of parameters and scenarios. In this sense, the model helps apply empirical information where available and makes explicit the assumptions underlying the projections.

The Bank has also developed the Maquette for MDG Simulations (MAMS) to inform medium- and long-term government development policies for reducing poverty and achieving the Millennium Development Goals (MDGs), MAMS is a dynamic computable general equilibrium model which quantifies investment levels needed to meet the MDGs and estimates their impact on growth. It includes fiscal spending across sectors and various financing options. Economic performance is measured by the evolution of macroeconomic indicators such as GDP, the budget, and the balance of payments, and other indicators such as poverty or MDG targets.

A third model is the Spatial Approach model, created to help countries assess their proposed infrastructure investment plans by identifying priorities and formulating an adequate sequencing of projects. By geo-referencing data on productive sectors and infrastructure networks, the analysis portrays the economic geography of a country and allows for evaluating the returns associated with existing and proposed investment packages, as well as the synergy effects of creating spatially coordinated bundles of infrastructure.

Adapted from IMF & World Bank 2012

2.4 Debt as a constraint to growth: Debt overhang theory

To understand why it can be in the creditor's interest to forgive debt and the rationale behind debt cancellation, it is important to note that the ability of the debtor country to pay is not independent of the size of its debt obligations. There are reasons to believe that debtors are more likely to default on their debts the larger the face value of debt. For example, if debt stock is very large, then the benefits of efforts to improve the economic situation in the debtor country mainly go to the creditors (in the form of large debt-service-related outflows), giving the debtor country very little incentives to improve its economic fundamentals. Another reason why debt repudiation might become more likely as the level of debt gets high is that the debt burden might ultimately appear as a tax on domestic capital implicit in the government's need to collect large amounts of resources to meet external obligations, and thus act as a disincentive for domestic investment. **The idea that the probability of repayment is low when the level of debt is high has come to be known as the debt overhang argument** (Krugman 1988; Sachs 1984 & 1986).

Notably, **reduction of the stock or overhang of debt, rather than rescheduling service payments, is the solution implied by the debt overhang hypothesis as debt reduction will remove the 'tax' distortion; thereby leading to higher investment and economic growth.** Furthermore, there is the 'catalytic effect,' whereby reducing the overhang means the remaining, and any new, debts are more likely to be paid, especially if the new money results in higher investment and economic growth. In contrast, rescheduling of service payments results in the capitalisation of interest payments and hence can increase, rather than decrease, the debt overhang.

3 Frameworks and tools for analysis public sector debt

This section defines debt sustainability and presents some specific analytical tools and frameworks that have been developed in the economic literature to look at the issue of public debt sustainability in developing countries: (i) debt sustainability framework (DSF), (ii) debt-stabilising primary balance and (iii) portfolio analysis.

3.1 Defining debt sustainability: A taxonomy

Debt sustainability is a widely debated concept in the theoretical and empirical literature, which presents different approaches, depending on the economic targets and on the consideration of lender and borrower behaviour. Nonetheless, one of the most commonly used definitions is that debt is sustainable when a country can meet its current and future debt service obligations in full, without recourse to debt relief, rescheduling or accumulation of arrears (IDA and IMF, 2001).

Debt sustainability, thus, reflects a country's solvency, liquidity, and adjustment capacity:

- A government is solvent if the present value of its income stream is at least as large as the Present Value of its expenditure plus any initial debt (i.e. future primary balances must be greater than or equal to the public debt stock).
- A government is liquid if it is able to rollover its maturing debt obligations in an orderly manner.
- Debt sustainability also captures the notion that there are social and political limits to adjustments in spending and revenue that determine a country's willingness (as opposed to its economic ability) to pay.

Notably, these criteria estimate debt sustainability along different time horizons: liquidity is a short-run measure whereas solvency is a long-run criterion. Stability of debt ratios is another short-run measure for debt sustainability. It evaluates the evolution of the debt ratio from year to year, and may be defined in terms of the situation under which the debt indicator does not increase, i.e. it remains stable or decreases (Blanchard, 1990 and Buiter 1985). For example, a stable debt to GDP ratio is attained if the growth rate of the debt stock is lower than the nominal GDP growth rate.

3.2 Debt Sustainability Framework (DSF) for Low-income countries

3.2.1 Broad Overview of the DSF

The World Bank and IMF jointly introduced a standardised debt sustainability framework (DSF) for conducting public and external debt sustainability analysis (DSA) in low-income countries (LICs) in 2005. **Widely used by both borrowers and lenders, the DSF helps guide the borrowing decisions of LICs, provides guidance for creditors' lending and grant allocation decisions, and improves World Bank and IMF assessments and policy advice.** Although the terms "DSF" and "DSA" are sometimes used interchangeably, they are in fact distinct: the DSF is the framework within which a DSA is produced for a particular country. Importantly, the DSF is not static, and is periodically reviewed to assess whether it remains adequate in light of changing circumstances in LICs. The next review is expected to be completed in 2015/early 2016.

The DSF has two components: an external DSA and a public DSA. The former covers total external debt in the economy (public and private). The public DSA covers total debt of the public sector, both external and domestic. Public external debt, which is common to both DSAs, includes both external debt owed by the public sector and external debt guaranteed by the public sector. The DSF does not capture private domestic debt.

Another key feature of the DSF is that it **uses indicative thresholds that facilitate the assessment of solvency and liquidity risk**: ratios of debt stock relative to repayment capacity measures are indicators of the burden represented by future obligations of a country and thus reflect long-term risks to solvency, whereas the evolution of debt-service ratios provides an indication of the likelihood and possible timing of liquidity problems.

The DSF is built on two key pillars:

- **A standardised forward-looking analysis** of public sector and external debt and its vulnerability to shocks, the latter of which is assessed via standardised stress tests. There are two types of stress tests: alternative scenarios and bound tests. Alternative scenarios are permanent modifications to key assumptions in the baseline scenario. Bound tests are temporary shocks that last one or two years, after which the modified variables return to their baseline values. The impact of stress tests is channelled in two ways: through changes in the evolution of indebtedness and through changes in the capacity to repay. There are a total of 16 standardized stress tests in the DSF, as presented in Table 7 in the appendix.
- **A debt sustainability assessment**, including an explicit rating of the risk of external debt distress. A country can be assigned one of four risk ratings, depending on how current and projected PPG external debt indicators compare with the indicative thresholds under the baseline scenario and standardized stress tests.

3.2.2 Debt sustainability indicators and thresholds

The risk of external debt distress is assessed by comparing external debt burden indicators with indicative policy-dependent debt burden thresholds as shown in Table 1. The quality of a country's policies and institutions is measured by its Country Policy and Institutional Assessment (CPIA) score (see below). **Countries with higher CPIA scores face higher thresholds**, reflecting the empirical findings that the external debt levels that LICs can sustain are influenced by the quality of their policies and institutions.¹⁰ Table 8 in the Appendix describes the debt burden indicators used in the DSF in more detail.

Benchmarks for public debt differ from thresholds for external debt in their functionality. Whereas the thresholds for PPG (public and publicly guaranteed) external debt play a fundamental role in the determination of the external risk rating, the benchmarks serve primarily as triggers for conducting a deeper analysis of domestic debt. In other words, when total public debt reaches levels that imply elevated risks, the next step is to determine the extent to which domestic debt is a contributing factor. This involves looking at following characteristics of domestic debt where relevant, and where information is available: level, trends, maturity, currency composition, creditor base, Fixed vs. floating interest rates, and contingent liabilities.

¹⁰ The thresholds were re-estimated econometrically by IMF and World Bank staff at the time of the 2012 review of the DSF. The results validated the thresholds that had been in existence since the framework's inception, with the exception of the thresholds for the ratio of debt service to revenue, which were revised lower (IMF 2013b).

Table 1: PPG External Debt Thresholds & Public Debt Benchmarks (as of November 2013)

Quality of policies & institutions (CPIA score)	PV of PPG external debt in percent of			PPG external debt service in percent of		PV of total public debt in percent of
	GDP	Exports	Revenue	Exports	Revenue	GDP
Weak policy (CPIA ≤ 3.25)	30	100	200	15	18	38
Medium policy (3.25 < CPIA < 3.75)	40	150	250	20	20	56
Strong policy (CPIA ≥ 3.75)	50	200	300	25	22	74

Based on the abovementioned thresholds for external debt, countries are assigned one of the following four risk ratings:

- **Low risk:** All the debt burden indicators are well below the thresholds.
- **Moderate risk:** Debt burden indicators are below the thresholds in the baseline scenario, but stress tests indicate that the thresholds could be breached if there are external shocks or abrupt changes in macroeconomic policies.
- **High risk:** One or more debt burden indicators breach the thresholds on a protracted basis under the baseline scenario.
- **In debt distress:** The country is already experiencing difficulties in servicing its debt, as evidenced, for example, by the existence of arrears.

3.2.3 How are DSAs produced

The following 4 steps are taken in producing a DSA:

Step 1: Construct the macroeconomic framework. A DSA starts with a macroeconomic framework—a set of interrelated projections of key macroeconomic variables from different sectors of the economy. Projections should be realistic and internally consistent. In cases where a country is considering a significant scaling up of public investment, users should consider using models developed by IMF and World Bank staff to help assess the impact of the planned investment on economic growth as discussed in Section 2.3.3.

Step 2: Enter data from the macroeconomic framework into the DSA template that is available online. For most variables, the user is required to input both historical data (previous 10 years) and projected values (next 20 years). Projections include new PPG external borrowing, along with the terms of borrowing. Once the macroeconomic framework has been finalised, the DSA template automatically generates the projected path, over the next 20 years, of each of the debt burden indicators in the external DSA and the public DSA. To gauge the sensitivity of the baseline scenario to shocks and changes in assumptions, the DSA template automatically applies a series of standardised stress tests, both within the external DSA and the public DSA. The template also allows users to design customised scenarios to analyse country-specific risks that are not captured by standardised stress tests.

Examples of situations that may warrant the inclusion of a customised scenario include high investment/growth¹¹, contingent liabilities, narrow export base, and tail risks¹². The results of customised scenarios are displayed alongside the results of the standardised stress tests.

Step 3: Assess risks within the external and public DSAs.

External DSA - To determine the risk of external debt distress, the user compares the projected evolution of PPG external debt indicators to thresholds in the baseline scenario and under stress tests.¹³ For each debt burden indicator in the external DSA, the template displays the baseline scenario, the historical scenario (a type of stress test), the most extreme stress test, and the relevant threshold. For borderline cases, the user should take into account the results of the probability approach¹⁴. The user may also separately analyse the projected evolution of private external debt. If risks are significant, the user should flag them in the assessment of the overall risk of debt distress.

Public DSA - In this case, the user analyses the projected evolution of public debt indicators in the baseline scenario and under stress tests. If public debt to GDP is moving rapidly toward, or exceeds, the relevant benchmark in the baseline scenario, the user should conduct in-depth analysis to determine the extent of public domestic debt vulnerabilities. If significant vulnerabilities are detected, they should be flagged in the assessment of the overall risk of debt distress.

Step 4: Draft the write-up. Depending on the circumstances, the write-up can take the form of either a full DSA or a light update with the IMF providing a particular format to follow for each (See IMF 2013b).

Ultimately, DSA results should not be interpreted in a mechanistic or rigid fashion, but should be assessed against relevant country characteristics, including the country's policy track record and policy space (IMF 2013a). For instance, a certain path for the primary balance (which has critical implications for the trajectory of debt ratios) might be politically difficult to sustain in one country but not in another country. The degree of exposure to various market risks (for example, interest rate risk or rollover risk) is also a critical consideration in assessing debt sustainability. Thus, DSAs provide valuable inputs for macroeconomic policy design but cannot, in isolation, determine an optimal borrowing path.

Box 4 below provides an example of using the external DSA to assess Ghana's debt distress rating.

11 One benchmark for "large" is growth rates of at least one standard deviation above the historical average.

12 Tail risks are low probability events with potentially severe consequences, such as a catastrophic financial shock or natural disaster.

13 If remittances are large, users of the DSA can include them in the base case and use remittance-adjusted thresholds.

14 The probability approach focuses on the evolution of the probability of debt distress over time, rather than on the evolution of debt burden indicators. The probability approach provides complementary, country-specific information to help decide cases where a country's risk rating is on the border between two categories.

Box 4: External DSA for Ghana, 2014

Based on an assessment of external public debt indicators (involving a baseline scenario and stress tests) conducted in 2014, Ghana faces a *moderate risk of debt distress*, but overall debt vulnerabilities have increased, and Ghana's debt service-to-revenue ratio is approaching high-risk levels. As highlighted in the main text, a country faces a *moderate risk of debt distress* when debt burden indicators are below the thresholds in the baseline scenario, but stress tests indicate that the thresholds could be breached if there are external shocks or abrupt changes in macroeconomic policies. This was the case of Ghana in the external DSA conducted in 2014.

Baseline scenario

In the baseline scenario, the external debt service-to-revenue ratio breaches its indicative threshold temporarily in the long term (Figure 1), but a probability approach confirms that the breach is not significant (Figure 2). Without assuming measures to smooth the amortisation of the 2013 Eurobond, the 2023 bullet repayment results in a breach in the indicative external debt service-to-revenue ratio. However, a complementary probability approach, which assesses Ghana's external debt sustainability based on an indicative threshold derived from Ghana's own institutional and growth characteristics, suggests that this breach is minor and temporary (1 year). Thus, the breach, which could be smoothed out in the course of the next 10 years, does not warrant a change in Ghana's assessed risk of debt distress, but is nonetheless indicative of the longer-term perils of continued resorting to market financing to finance recurrent fiscal deficits.

Standardised stress tests

Standard stress tests confirm this moderate risk of debt distress. All three stock indicators (external debt to GDP, to exports, and to revenue) as well as the external debt service-to-export ratio remain under their respective thresholds even under the standardised stress tests (not shown). However, the external debt service to-revenue-ratio—temporarily breaching its threshold level in the baseline scenario—increases to above 30% under the most extreme shock which constitutes a one-time 30% real depreciation relative to the baseline in 2015.

Figure 1: PPG external debt service to revenue under different Scenarios, 2013-2033

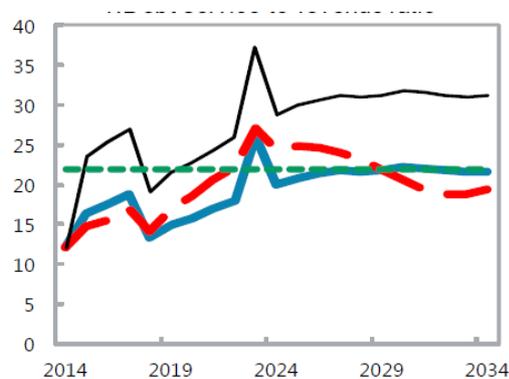
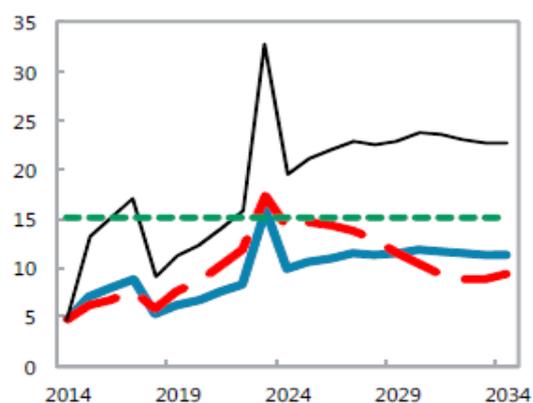


Figure 2: Probability of Debt Distress of PPG external debt (debt-service-to-revenue) under Different Scenarios, 2013-2033



— Baseline — Historical scenario — Most extreme shock
 - - - - - Threshold

Source: Adapted from IMF 2014d. Ghana: Staff Report for the 2014 Article IV Consultation—Debt Sustainability Analysis.

3.3 Fiscal Sustainability of debt

Another commonly used approach for assessing public debt sustainability is to view fiscal policy as sustainable if it delivers a ratio of public debt to GDP that is stable, and then to calculate the primary budget balance that would achieve that (known as the “debt stabilizing primary balance”). This approach is based on an alternative definition of ‘debt sustainability’ in that **debt is considered to be sustainable when a debt burden indicator is not expected to follow an explosive path over time**, since a debt is sustainable if it is on a non-increasing trend (Blanchard, 1990; Buiters 1985). If the actual primary balance is less than the debt stabilizing balance, current fiscal policy implies an increasing ratio of public debt to GDP, and is therefore viewed as unsustainable. The difference between the actual and debt stabilizing primary balance indicates the degree of fiscal adjustment that is needed to achieve a constant debt-to-GDP ratio. A judgment can then be made as to whether such an adjustment is attainable in the political and economic environment of the country concerned (IMF, 2003).

3.4 Portfolio Review

Poorly structured debt portfolios, in terms of maturity, currency, or interest rate composition and large contingent liabilities, have been important factors in inducing or propagating economic crises in many countries throughout history. **A portfolio analysis that examines the current debt stock and flows and identifies trends is therefore a critical tool for assessing risks, and is generally the starting point in developing a debt strategy.** It is a key component of the World Bank and IMF’s framework for developing an effective public sector debt management strategy—that is, to achieve a desired composition of the public sector debt portfolio that reflects a cost-risk analysis and captures the government’s preferences with regard to the cost-risk trade-off (IMF & World Bank, 2009).

To undertake a comprehensive portfolio review, the debt manager (DM) should gather the following data: the total size of debt, a breakdown by currency, creditor type, instrument-type, i.e., fixed, floating, or indexed, bullet or amortising. The DM should organise the data so that the debt servicing and debt maturity profile can be readily determined and the impact of changing assumptions assessed.

The DM should then analyse the debt stock on the basis of key cost and risk indicators. This requires the DM to identify a clear definition of cost and risk. In practice, this is an issue that debt managers struggle with (IMF & World Bank, 2009). Key measures of cost include Interest cost (key for budget preparation); Interest/GDP or Interest/Revenues (captures the economic burden of debt); and Present value of Debt/GDP (also captures the extent of the debt burden). In regard to assessing the cost-risk trade-off, the focus is typically on market risk (i.e. the exposure to shifts in interest and exchange rates), where risk is measured as the potential for the cost to deviate from its expected outcome. However, **effective debt management means managing a spectrum of risks that also include refinancing/rollover risk and operational risk.** Refinancing risk captures the exposure of the debt portfolio to unusually higher interest rates at the point at which debt is being refinanced; in the extreme, when this risk is too high debt managers are unable to roll over maturing obligations. Operational risk refers to a range of different types of risks, including transaction errors in the various stages of executing and recording transactions; inadequacies or failures in internal controls, or in systems and services; reputation risk; legal risk; security breaches; or natural disasters that affect the debt manager’s ability to pursue activities required to meet debt management objectives. The costs and risk factors of different financing instruments are summarised in Table 9 in the Appendix.

Based on an assessment of these indicators, the DM should identify sources of vulnerability to the existing debt. The extent of the risk will depend on the risk factors, such as the

variability and trends in interest rates, and exchange rates, as well as the risk exposure, such as the share of domestic debt, short-term, and variable rate debt. Box 5 summarises the findings of a recent portfolio analyses conducted in Ethiopia as part of developing its medium term debt strategy 2013-2017.

Box 5: Key findings of Ethiopia's debt portfolio analysis, FY 2011/12

A portfolio analysis conducted at the end of FY 2011/12 assessed the exposure of Ethiopia's debt portfolio to risk captured using the following risk indicators: refinancing risk, interest rate risk and exchange rate risk (as shown in Table 2). Based on the average time to maturity (ATM), the domestic debt portfolio is highly exposed to refinancing risk. This is due to the short term nature of domestic debt which is mostly in the form of treasury bills that mature in less than or equal to one year and get rolled over. In contrast external debt is less exposed to this risk with an ATM of 12.6 years, and can in turn be explained by the structure of the external debt profile, which is comprised of concessional loans.

Ethiopia's external public debt portfolio is subject to low interest rate risk because huge portion of the loans contracted is in fixed interest rate. Interest rate risk of the public debt is captured by the proportion of debt that is subject to interest rate re-fixing within a specified period. A higher proportion of debt that is subjected to re-fixing within one year indicates high risk to adverse interest rate movements. The ATR of the external debt stands at 11.1 years which indicates lower interest risk while domestic debt is highly exposed to interest rate risk with a low ATR of 4.2 years.

Finally, there are three methods of quantifying exchange rate risk of the debt portfolio namely: the share of external debt in total debt, the currency composition of the debt portfolio and degree of currency mismatch between the debt service obligations and the composition of foreign exchange reserves for a given country. While the external debt portfolio is exposed to exchange rate risks owing to adoption of free floating rate, the currency composition of total public debt exhibits minimal exchange rate risk emanating from currency mismatch since most of the external debt service obligations are in United States Dollars and all domestic debt service obligations are in Ethiopian Birr. It means the currency composition of Ethiopia's external debt does not constitute a significant source of external vulnerability (except exposure to exchange rate fluctuation) since the currency structure closely matches with foreign reserves/earnings.

Table 2: Cost and risk of existing public debt, as at end FY 2011/12

Risk indicators		External debt	Domestic debt	Total debt
Refinancing risk	ATM (years)	12.6	4.2	11.2
	Debt maturing in 1 year (% of total)	6.7	64.3	11.9
Interest rate risk	ATR (years)	11.1	4.2	9.9
	Debt refixing in 1 year (% of total)	36	64.2	41
	Floating rate debt (% of total)	34	25.1	31
Exchange rate risk	FX debt (% of total debt)			67

Source: Adapted from Government of Ethiopia. 2012. Ethiopia's Medium Term Debt Strategy (2013-2017). October.

4 Triggers of Debt Crises

This section focuses on the origins of sovereign debt crises based mainly on the experience of low income countries. Understanding the common causes of debt crises, especially in HIPCs, will help to avoid similar crises arising in the future and deter the emergence of vulture funds i.e. the term given to entities that purchase distressed debt on the secondary market, where it trades significantly below its face value, and then seek to recover the full amount, often through litigation.

In general, debt crises are often triggered when economic growth slows or interest rates rise, leading to a vicious cycle of larger and larger interest payments. However, they are several underlying factors that can increase the likelihood of a country falling into a debt problem. This was clearly demonstrated by the experience of the HIPCs in the 1980s and 1990s. In fact, **the large stock of (external) public debt in the HIPCs has a long history, but it did not start out as large.** Contributing factors included imprudent lending and borrowing; structural vulnerabilities and exposure to shocks (e.g. natural disasters and commodity prices), and political instability (Mustapha, 2014). These factors are briefly summarised below.

4.1 Imprudent lending and borrowing

Imprudent lending. The debt crisis experienced by several developing countries in the 1980s and 1990s¹⁵ had its genesis in the mid-1970s due to the windfall in terms of increased income for petroleum exporting countries of the third world. In the face of such massive build-up of surplus capital by OPEC countries in Western Banks, OECD countries actively encouraged the recycling of this built up capital through extension of loans to developing countries, often without careful credit analysis. For example, despite the low prices faced by mineral exporters like Liberia and Mauritania throughout the 1970s, these countries were able to borrow abroad to maintain their public expenditure programmes because of expectations of a return of prices to historical levels. The rapid debt accumulation of HIPCs was thus partly the result of overly optimistic expectations of the repayment capacity of borrowing countries. When these assumptions proved inaccurate, the vulnerability of debtor countries became increasingly apparent.

Imprudent borrowing. On the debtors' side, in some cases loans were used for projects with limited or no economic returns or poorly planned projects i.e. the purchase of consumer items, obsolete equipment and machinery, or were procured for projects that never took off or later became "white elephants". Loans also financed balance of payments deficits, which under normal circumstances should have been corrected by restrictive fiscal and monetary policies. In most cases, basic elements of debt management were lacking, for example an overall public indebtedness strategy consistent with the macroeconomic priorities. The various elements of sound debt management are discussed in greater detail in Section 6.

4.2 Structural vulnerability and exposure to shocks

The drop in the prices of primary commodities worldwide in the late 1970s and early 1980s was another trigger of the debt crisis. The interaction between volatile commodity prices and HIPCs' highly concentrated export base made them vulnerable to declining terms of trade, which adversely affected their export earnings and hindered their capacity to repay their external debt. Vulnerability is often greater for smaller and

¹⁵ During the 1990s, a small number of the upper middle-income countries run into problems of a different kind: the "tequila" crisis in Latin America in 1994 and the 1997 financial crisis in South East Asia, and later in the same decade the crisis in Russia in 1998. The crisis in emerging market countries is more related to the deregulation of domestic financial markets and to the attraction of external flows to domestic financial markets for speculation than to external factors.

emerging market countries because their economies tend to be less diversified, have a smaller base of domestic financial savings and less developed financial systems, and may be more susceptible to financial contagion through capital flows. Nevertheless, events since the global financial crisis in the late 2000s demonstrate that larger and developed economies have their own structural vulnerabilities in regards to exposure to external shocks.

4.3 Political instability and institutional weaknesses

Civil strife is another factor that has exacerbated the debt burdens of several countries. This was the case in Nicaragua and Uganda, and to a lesser extent the Democratic Republic of the Congo and Niger (Brooks et al, 1998). In some cases it eroded the export base by destroying the country's infrastructure while in others it led to a rise in debt-financed military and non-military imports and may have given risen to what is known as 'odious debt'. This is generally understood as debt taken on by a country that serves the interests of the ruler or the ruling regime (typically a non-democratic one) rather than the country as a whole and its people (Kremer et al., 2002). Moreover, it can be seen as a manifestation of imprudent lending.

In sum, several factors exacerbated the debt problems of HIPC's, namely imprudent lending and borrowing, structural vulnerabilities and exposure to shocks, and political instability and institutional weaknesses. The international financial community, including multilateral organizations and governments, eventually had to work together to reduce to the external debt burdens of the most heavily indebted poor countries by restructuring their debt through the HIPC initiative and MDRI. This sets the stage for the theme of the following section, sovereign debt restructuring.

5 Debt restructuring

This section defines sovereign debt (external and domestic) restructuring, explores basic concepts and outlines various options for sovereign debt restructuring by drawing heavily on a literature review conducted by the IMF in 2012 (Das et al., 2012). It concludes by outlining the costs and implications of sovereign debt restructuring. It should be noted while the topic guide generally focuses on low income and lower-middle income countries, this section includes illustrative examples from upper middle income countries.

5.1 Understanding sovereign debt restructuring

5.1.1 Definition and basic concepts

Debt restructuring is broadly defined as arrangements involving both the creditor and the debtor (and sometimes third parties) that alter the terms established for servicing an existing debt. More specifically, while there is no universally accepted definition; sovereign debt restructuring can be defined as an exchange of outstanding sovereign debt instruments, such as loans or bonds, for new debt instruments or cash through a legal process (Das et al., 2012). Generally, debt restructuring is undertaken to provide some debt relief to the debtor and can address liquidity and/or sustainability problems arising from future and current payment obligations. Debt relief results where there is (1) a reduction in the present value of these debt-service obligations; and/or (2) a deferral of the payments due, thus providing smaller near-term debt-service obligations.

There are generally four main type of debt restructuring. These are:

- **Debt forgiveness-** a reduction in the amount of, or the extinguishing of, a debt obligation by the creditor via a contractual arrangement with the debtor.
- **Debt rescheduling or refinancing-** A change in the terms and conditions of the amount owed, which may result, or not, in a reduction in burden in present-value terms. Depending on the nature of the transaction undertaken, the reorganisation is described as debt rescheduling (lengthening of maturities) or refinancing (or debt exchanges). Included are transactions that change the type of debt instrument owed—e.g., loan for bond swaps—but are not debt-forgiveness transactions.
- The creditor exchanges the debt claim for something of economic value, other than another debt claim, on the same debtor. This includes **debt conversion**, which is an exchange of debt—typically at a discount—for a non-external debt claim, such as equity, or for counterpart funds that can be used to finance a particular project or policy such as health, education, and environmental conservation. Debt-for-equity, debt-for-nature, and debt-for-development swaps are all examples of debt conversion (see Box 8 in appendix for an example of a Debt-for-Development swap).
- **Debt assumption-** A new debtor assumes the former debtor's outstanding liability to the creditor and is liable for repayment of the debt.

5.1.2 Process of sovereign debt restructuring

Default events and debt restructurings are closely related, but not identical. A default is the failure of a government to make a principal or interest payment on due time (beyond the grace period). A restructuring episode is usually triggered by a default on debt payments or the announcement of a debt restructuring (Das et al., 2012). Thereafter, the government usually embarks on some form of negotiations with its creditors to agree on the terms of a debt exchange. The negotiation or 'preparation' phase can take months or even years and usually goes hand in hand with a macroeconomic adjustment programme and an evaluation of the country's financial situation. Although debt

restructuring processes tend to be triggered by a default event¹⁶, recent years have also seen a number of pre-emptive debt restructurings¹⁷, which can be defined as debt exchanges that occur prior to a default, so that outstanding debt instruments are exchanged before the government misses any payments.

Among the first steps a country needs to undertake when considering a debt restructuring is to verify its total debt claims, which means understanding the characteristics of the government's outstanding loans, bonds, and other debt instruments, including their legal and financial features. It then conducts a detailed DSA, which provides an indication of the financing gap, the macroeconomic adjustment effort, and the degree of required debt relief. On this basis, governments typically develop a set of restructuring scenarios and prepare a final restructuring proposal, often with the support of legal and financial advisors. After the restructuring offer is presented to creditors, they have to decide whether to accept or reject the offer. In most cases, a successful exchange requires a certain minimum threshold of acceptance by creditors. Creditor coordination problems and holdout risks are thus likely to be most acute during this period.

Typically creditors involved in restructuring sovereign debt are multilaterals (IMF and World Bank), bilateral (governments), or private (commercial creditors and bondholders). One-third of the more than 600 external debt restructurings that took place between 1950 and 2010 were debt exchanges with private creditors (commercial banks and bondholders) and about two-thirds have been Paris Club agreements for official bilateral debt (Das et al., 2012).

Notably, the role of third parties—in particular, the IMF—in these negotiations has changed over the years (Panizza et al., 2009). During the debt restructurings of the 1980s, the IMF was both as a source of independent information about the debt service capacity of the debtor countries, and a provider of new financing to the debtors (in addition to the debt relief itself) conditional on economic adjustment and reform measures. In the 1990s, the Fund still played its traditional role of conditional lending to countries experiencing external financing crises, but generally took a more distant approach to the debt restructuring negotiations themselves. This was motivated, in part, by the desire of not appearing partial to either side and, in part, by the fact that the Fund was itself a major creditor and hence faced a conflict of interests in important restructuring cases such as Russia (1998–2000) or Argentina (2002–05). Nonetheless, the IMF's involvement continues to be central in determining when and how should such a restructuring take place in light of the fact that creditors who are engaged in the restructuring will look to the Fund for judgments as to how much debt relief is needed to achieve sustainability (IMF, 2013). The Fund has also developed policies and tools (such as the DSA described in Section 3.2) to address the question of whether the member's debt is unsustainable. The Fund's determination on this question has an important bearing on the timing of any restructuring.

5.2 Restructuring external sovereign debt

This sub-section outlines debt restructuring options by type of creditor: bilateral, commercial banks, multilateral, bondholders, and suppliers/trade creditors (table 3). The restructuring of supplier and trade credits is not discussed here, as it usually takes place ad hoc or is excluded from the restructuring exercise (Das et al., 2012). Options for reforming the international financial architecture for sovereign debt restructuring are summarised in Box 9 in the appendix.

16 For example, Argentina defaulted on sovereign bonds on January 2002, announced its restructuring on September 2003, started negotiations on January 2004 and reached a final exchange offer on January 2005.

17 Examples of announcements of pre-emptive debt restructurings: Dominican Republic (external bonds) in 2004, Grenada (bonds/loans) in 2004; Belize (external bonds/loans) in 2006, Jamaica (domestic bonds) in 2010; St. Kitts and Nevis (bond/loans) in 2011; Greece (domestic/external bonds) in 2011, Belize (external bonds) in 2012 and Jamaica (domestic bonds) in 2013 (IMF, 2013).

Table 3: Overview of Current Debt Restructuring Options by Type of Creditor

Creditor	Bilateral (Governments)	Commercial Banks	Multilateral (World Bank, IMF)	Bondholders	Suppliers, Trade Creditors
Restructuring Option	Paris Club	London Club (Creditor Committees)	Preferential Treatment; Restructuring only for poorest countries	Exchange Offers	Ad hoc

Source: Das et al., 2012

5.2.1 Restructuring bilateral debt: The Paris Club

In the absence of a Sovereign Debt Rescheduling Mechanism (SDRM), the Paris Club has emerged as the main ad hoc mechanism with a permanent organisation and infrastructure¹⁸ for restructuring external bilateral sovereign debt (i.e. public and publicly-guaranteed debt owed to other governments). The origin of the Paris Club dates back to 1956 when Argentina agreed to meet its public creditors in Paris. Since then, the Paris Club has reached 430 agreements with 90 different debtor countries, with the debt treated in the framework of Paris Club agreements amounting to US\$ 583 billion (Paris Club website).

Paris Club creditors provide debt treatments to debtor countries in the form of rescheduling, which as mentioned above is debt relief by postponement or, in the case of concessional rescheduling, reduction in debt service obligations during a defined period (flow treatment) or as of a set date (stock treatment). The permanent Paris Club creditors include most of the OECD countries and Russia.¹⁹ Other creditors are allowed to participate in negotiations on an ad-hoc basis, and have included Abu Dhabi, Argentina, Brazil, People's Bank of China, Korea, Kuwait, Mexico, Morocco, New Zealand, Portugal, South Africa, Trinidad and Tobago and Turkey.

The Paris Club does not exist as a formal institution. It is rather a set of rules and principles for debt relief that have been agreed on by its members. These include:

- **Solidarity:** All members of the Paris Club agree to act as a group in their dealings with a given debtor country and be sensitive to the effect that the management of their particular claims may have on the claims of other members.
- **Consensus:** Paris Club decisions cannot be taken without a consensus among the participating creditor countries.
- **Information sharing:** Paris Club members regularly share views and information with each other on the situation of debtor countries, benefit from participation by the IMF and World Bank, and share data on their claims on a reciprocal basis.
- **Case by case:** The Paris Club makes decisions on a case-by-case basis in order to tailor its action to each debtor country's individual situation.
- **Conditionality:** The Paris Club only negotiates debt restructurings with debtor countries that need debt relief; have implemented and are committed to implementing reforms to restore their economic and financial situation, and have a demonstrated track record of implementing reforms under an IMF programme. This means in practice that the country must have a current programme supported by an appropriate arrangement with the IMF (Stand-By,

18 To facilitate Paris Club operations, the French Treasury provides a small secretariat, and a senior official of the French Treasury is appointed Chairman.

19 Member countries are Austria, Australia, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Israel, Italy, Japan, Netherlands, Norway, Russia, Spain, Sweden, Switzerland, the United Kingdom and the United States.

Extended Fund Facility, Poverty Reduction and Growth Facility, Policy Support Instrument). The level of the debt treatment is based on the financing gap identified in the IMF programme.

- **Comparability of treatment:** A debtor country that signs an agreement with its Paris Club creditors should not accept from its non-Paris Club commercial and bilateral creditors terms of treatment of its debt less favourable to the debtor than those agreed with the Paris Club.

The process of debt restructuring with the Paris Club can be summarised as follows: A country that wants to restructure its debt has to approach the Club's secretariat and demonstrate its payment difficulties and need for debt relief based on its economic and financial situation. Debtor countries are also required to agree to a structural adjustment programme with the IMF. Once a country satisfies these criteria, it meets and negotiates with a group of its creditors at the Paris Club so as to come to an agreement on broad restructuring terms. This final agreement (the "agreed minutes") is not legally binding, but establishes the minimum debt relief conditions that will guide the bilateral negotiations required for the bilateral agreements to become effective. Box 6 below briefly summarises an agreement reached by the Paris Club and the Republic of the Union of Myanmar in 2013.

Box 6: The Paris Club and Myanmar agree on a Cancellation of USD 5 925 Million

The representatives of Paris Club creditors and the representatives of the Government of the Republic of the Union of Myanmar agreed on a comprehensive treatment of the Republic of the Union of Myanmar's public external debt. Myanmar's public external debt was estimated to be \$15.3 billion as of end 2012 while the debt owed to Paris Club creditors was estimated to be \$ 10.33 billion as of 1st January 2013.

The Myanmar delegation described the economic and social challenges faced by the country during the current transition process and presented the main measures, included in the programme of the Government and supported by the Staff Monitored Programme (SMP) with the IIMF, aimed at maintaining macroeconomic stability while creating the institutions necessary to manage a rapidly changing economy and at achieving inclusive and sustainable economic growth.

The representatives of the Creditor Countries then agreed on a debt treatment to ensure its long term debt sustainability. To this end, once multilateral arrears have been cleared, representatives other than that of Japan will recommend that their Governments deliver an exceptional treatment providing a cancellation of 50% of the total of arrears due to Paris Club creditors in nominal terms in two phases. The remaining amounts will be rescheduled over 15 years, including a 7-year grace period. Moreover, Norway has committed to an exceptional full outright cancellation of its claims. In total this combined effort results in a reduction of net present value of more than 60%.

Source: Adapted from Paris Club. 2013.

5.2.2 Restructuring commercial loans: The London Club

The process of debt renegotiations between governments and commercial banks is typically labelled as "London Club" restructuring. **Unlike the Paris Club, there is no permanent London Club membership.** At a debtor nation's request, a London Club meeting of its creditors may be formed, and the Club is subsequently dissolved after a restructuring is in place. Notably, the financing package agreed between the London club and the debtor country is legally binding, unlike the Paris Club Agreed Minute. The Paris Club therefore requires the expertise of specialised law firms that would advise the debtor country in the negotiation process for the drafting and the approval of the agreement.

London Club negotiations tend to proceed as follows: In the early stage of financial distress, a debtor government contacts its one or two major bank creditors asking them to organise and chair a steering committee known as a Bank Advisory Committee (BAC). This committee negotiates on behalf of all banks affected by the restructuring and would meet the country's government officials on a regular basis. These negotiations typically cover the full spectrum of crisis resolution measures, including the provision of new financing, short-term liquidity support via rollovers or credit lines, as well as the restructuring of loans with maturity prolongation and/or outright reductions in face value.

The BAC is thus a key vehicle to address both the liquidity and solvency problems of sovereigns in distress.

Within the responsibilities of the London club, one of paramount importance is to carry out the market validation of the financing package provisionally agreed with the debtor country, i.e. to seek for approval on the package from the totality of creditor banks non-members of the London club (Cosio-Pascal, 2012). The approval, by consensus, of the provisionally financing package proves to be difficult, as very often the large banks' interests—members of the London club—differ from those of smaller banks non-members of the London club. If the number of banks that would not agree was small, they could be offered an “exit deal”, in order to let the banks in the “critical mass” implement the agreement.

5.2.3 Restructuring multilateral debt: HIPC and MDRI

The Bretton Woods institutions jointly launched the HIPC Initiative in 1996 to guarantee a permanent exit from debt rescheduling in favour of LICs that were not eligible under the Brady Plan²⁰. As discussed in introduction, it was intended to reduce the overall debt stock to a sustainable level within a reasonable period of time in a coordinated effort of multilateral, bilateral and commercial creditors, with the ultimate goal of eliminating the debt overhang as a constraint to economic growth and poverty reduction. The total cost of debt relief to creditors under the HIPC Initiative is currently estimated to be US\$75.0 billion, while the costs to the four multilateral creditors providing relief under the MDRI is estimated to be US\$41.1 billion in end-2013 present value terms (IMF, 2014b).

Despite the initiative being nearly completed, challenges remain. **The three countries that have not yet completed the requirements for full debt relief face common challenges**, including preserving peace and stability, improving governance and the delivery of basic services. Addressing these challenges will require continued efforts from these countries to strengthen policies and institutions, and support from the international community.

Another challenge is to ensure that eligible countries get full debt relief from all their creditors. Although the largest creditors (the World Bank, the African Development Bank, the IMF, the Inter-American Development Bank, and all Paris Club creditors) have provided their full share of debt relief under the HIPC Initiative, and even beyond, others are lagging behind. Given the voluntary nature of creditor participation in the HIPC Initiative, the IMF and the World Bank will rely on moral suasion to encourage creditors to participate in the Initiative and to deliver fully their share of HIPC Initiative debt relief.

5.2.4 Sovereign bond exchanges

The initial steps in preparing a bond exchange involve gaining a full understanding of the details of all outstanding bonds, including knowing who holds the bonds and possibly who bought Credit default swaps (CDSs) on them. Typically, debtor governments also contact legal and financial advisors early on. Legal advisors may provide insights on possible legal hurdles of a restructuring, can provide an overview of the legal characteristics of bonds, and may help in drafting the bond exchange documentation and terms of the new bonds. Financial advisors can help in identifying and reaching out to bondholders, and they can play an important role in designing the financial terms of the exchange, such as computing different bond exchange options, drafting “carrot” and “stick” features, and assessing the required scope of debt relief. Similarly, member countries also frequently contact the IMF for advice on bond restructuring.

²⁰ The goal of the Brady Plan was to restructure the public and publicly guaranteed debt claims of the commercial banks in such a way that interest payments would be reduced, principal forgiven and maturities lengthened. Countries that received a Brady Plan between 1989 and 1995 were Argentina, Bolivia, Brazil, Bulgaria, Costa Rica, the Dominican Republic, Ecuador, Jordan, Mexico, Nigeria, Panama, Peru, the Philippines, Poland, Uruguay and Venezuela.

In preparing an exchange offer, sweeteners can take the form of upfront cash repayments, advantageous legal features of the new bonds, or add-ons to the new instruments, such as the GDP-linked warrants in the 2005 Argentinean exchange (Das et al, 2012). Another strategy to encourage participation is to design a menu of exchange options. This allows investors to choose among different new instruments when tendering their old claims, thus accounting for differing preferences across creditors. Exchange offers can also contain “stick” features, which are intended to make the outstanding bonds less attractive. Stick features can be agreed upon by participating creditors via exit consents, a legal vehicle that allows the removal of clauses from the old bonds. This will effectively reduce the value of the old bond and central bank acceptance as eligible collateral after the exchange and, thereby, encourage bondholders to accept the offer.

The **key difference between sovereign bond and bank debt restructurings is the creditor structure**, which tends to be much more dispersed, especially if bonds were sold to retail investors (Das et al., 2012). For example, bond restructurings of Argentina in 2005 and Ukraine in 2000 affected thousands of individual creditors. However, bondholder numbers are not always large. In cases like Jamaica (2010), Belize (2007), Grenada (2005), and Ecuador (2000), sovereign bonds were mostly held by a relatively small group of institutional investors. Strategies for bondholder communication and negotiation are nonetheless critical given potentially dispersed creditor structures.

5.3 Restructuring domestic sovereign debt

Due to data constraints, there is limited evidence on the occurrence, causes and effects of domestic debt defaults and restructurings. However, **the available evidence shows a large number of parallels between domestic debt restructurings and external debt restructurings** (Reinhart and Rogoff, 2009; Erce and Diaz-Cassou, 2010; Sturzenegger and Zettelmeyer, 2006). In particular, the negotiation process and the basic restructuring mechanics (as described section 5.1) are essentially the same (Das et. al, 2012).

Despite these similarities, there are several key differences relative to external debt that should be emphasised. First, domestic debt is often adjudicated domestically, so that investors may be constrained to litigate in domestic courts and may not be able to file suit in London or New York (Das et al., 2012). Second, investors in domestic instruments are normally mostly residents. Domestic banks, insurance companies, and pension funds often hold the majority of outstanding domestic public debt, also because they may act as primary dealers or because governments require them to hold a minimum fraction of public debt. A restructuring of domestic debt instruments will therefore directly affect the balance sheets of domestic financial institutions and, relatedly, the country's overall financial stability. Thus, financial sector stability considerations often play an important role in domestic sovereign debt restructurings. Finally, exchange rate considerations and currency mismatches play a lesser role in domestic debt than in external debt restructurings.

These differences can have important implications for debt restructuring. For example, debt held by residents can be easier to settle than external debt. Domestic bondholders are closer to the economic situation and the government's fiscal situation, which usually makes them more likely to understand the policy imperatives for restoring fiscal sustainability. At the same time, they are more invested in the restoration of fiscal sustainability and the development implications that it implies. This usually means that they are willing to arrive at a reasonable combination of fiscal effort and creditor burden sharing. In fact, a database compiled Trebesch (2008) indicates that domestic debt restructurings were implemented fairly quickly, especially when compared to external debt.

5.4 Costs and implications of sovereign debt restructuring

Sovereign restructuring can be costly for both the government and its creditors, as well as for the private sector of a debtor country.²¹ It can adversely affect borrowing costs and access to capital markets; output and trade; financial stability; and FDI flows and private sector credit. From an administrative point of view, fees and negotiating costs of debt restructuring can be expensive making sound debt management (see Section 6) even more relevant.

5.4.1 Borrowing costs and access to capital markets

First, defaults and restructurings may have adverse consequences for the debtor government's access to capital post-crisis, leading to higher interest premia and exclusion from capital markets. While the empirical support for this proposition is mixed, most of the empirical contributions of the past thirty years come to the conclusion that default premia in sovereign credit markets are negligible, particularly in the medium and long run (Borensztein and Panizza 2009; Richmond and Dias, 2009 and Gelos et al. 2004). One possible explanation concerns the timing of the default with policymakers postponing it until there is broad consensus that the decision is unavoidable and not strategic, thereby limiting the potential reputation loss. Conversely, a recent study by Cruces and Trebesch (2011) which uses a dataset on haircuts in all 180 restructurings with banks and bondholders since 1978, finds that debt restructurings can indeed have a substantial and longer lasting impact on post-crisis market access conditions. The effect largely depends on the outcome of restructurings, in particular the size of haircuts, or creditor losses.

5.4.2 Output and trade losses

Several academic studies suggest that sovereign debt crises are associated with a notable decline in trade and output, ranging from 2 to 5% of GDP per year, and may last up to 10 years depending on the duration of arrears and negotiations (Sturzeneger, 2002; De Paoli, Hoggarth, and Saporta 2009). The authors also find that the size of output costs largely depends on whether debt crises occur simultaneously with banking and currency crises. Bilateral trade flows fall up to 7 percent after Paris Club restructurings, and for more than 10 years (Rose, 2005). However, it is difficult to conclude that these are causal effects, rather than correlations.

5.4.3 Financial sector implications

There has been considerable debate regarding the degree to which sovereign restructurings affect banks and domestic investors, possibly endangering financial stability. A sovereign debt restructuring can strongly negatively affect the financial position of banks, pension funds, insurance companies, mutual funds, and other financial institutions, particularly if they hold the affected instruments or if they are exposed via CDS positions. During the debt crises of the 1980s and early 1990s foreign banks and investors were most affected because developing country debt during this time was to a large extent held by Western banks. More recently, debt crises have also affected domestic financial sectors. Two main examples are the defaults of Russia and Ecuador during 1998–2000, which contributed to the effective collapse of the domestic banking systems in these countries (Das et al., 2012). In contrast, in the recent restructuring case of Jamaica in 2010, the government adopted a preventive and early financial sector contingency plan. With the help of international financial institutions, the government introduced a facility to support banks or funds affected by the sovereign restructuring.

5.4.4 FDI Flows and Private Sector Access to Credit

Sovereign default and restructurings can generate reputational spillovers on other fields of the economy, in particular for foreign direct investment (FDI) and private sector access

²¹ It is difficult to isolate the costs of default and to test whether these costs are driven by the default episode per se or by a series of other factors that are the cause of both the debt default and an economic recession.

to credit. The study by Fuentes and Saravia (2010) shows that countries that undergo a debt restructuring see their FDI flows reduced by up to 2 percent of GDP per year, though this effect decreases over time. Their results suggest that the effect depends on the creditor-borrower relationship with the reduction in FDI coming from countries directly affected by the default, based on Paris Club data. Based on this, the authors conclude that the drop in FDI is a form of punishment for defaulting countries. Several studies also find that sovereign debt crises and restructurings with official creditors have a strong negative impact (Arteta and Hale, 2008; Das, Papaioannou and Trebesch, 2010, 2011) on private sector access to credit.

5.4.5 Negotiating costs and fees

Debtor governments can incur substantial expenses for their financial and legal advisors and for negotiating and communicating with bondholders, e.g. due to roadshows or travel expenses. Restructuring can also imply significant administrative costs, as government staff and senior officials in the country may need to invest months of work into preparing and implementing a debt exchange.

6 Debt Management

This section begins by defining and highlighting the importance of public debt management (PDM) and the location of the debt office. It then outlines key issues in debt management, focusing on recent developments in country practices, and experiences of reform in developing countries. It concludes by describing the key capacity-building activities undertaken by the IMF, World Bank, UNCTAD and Commonwealth Secretariat in regard to improving developing countries' debt management capacity.

6.1 Definition and importance of public debt management

Public debt management is the process of establishing and executing a strategy for managing the government's debt in order to raise the required amount of funding at the lowest possible cost over the medium to long run, consistent with a prudent degree of risk (IMF, 2014). It should also meet any other public debt management goals the government may have set, such as developing and maintaining an efficient market for government securities or debt to GDP ratio. Furthermore, in terms of scope, debt management should encompass the main financial obligations over which the central government exercises control.

In a broader macroeconomic context for public policy, governments should seek to ensure that both the level and rate of growth in their public debt are on a sustainable path and that the debt can be serviced under a wide range of circumstances, including economic and financial market stress tests, while meeting cost and risk objectives (IMF, 2014). While the responsibility for compliance with debt ceilings and for conducting debt sustainability analysis (DSA) lies with the fiscal authorities, public debt managers in the responsible central government agencies should monitor any emerging debt sustainability problems, based on portfolio risk analyses and market reactions observed when conducting debt management operations, and inform the government on a timely basis.

Ultimately, **there are several benefits associated with good public debt management**. First, it can help countries reduce their borrowing cost in many ways. For example, a well designed and implemented borrowing programme can give confidence to investors and thus reduce the lending spread (refers to difference in borrowing and lending rates of financial institutions in nominal terms). Second, a carefully balanced composition of securities can contain risk—which are harder to manage in countries having few alternative sources of finance. Good public debt management can also help develop the domestic financial market²². Domestic financial institutions benefit from having available public debt instruments in which to invest and which can provide benchmarks for the pricing of other instruments. Moreover, firms and individuals also benefit for similar reasons. In turn, a well-developed domestic financial market can facilitate economic development, and make the economy more resilient to external shocks, such as capital outflows.

Third, effective debt management practices can reduce the vulnerability of the economy to economic and financial shocks. Poorly structured debt portfolios, in terms of maturity, currency, or interest rate composition and large contingent liabilities, have been important factors in inducing or propagating economic crises in many countries throughout history even though they may not have been the sole or even the main trigger of such crises.

22 See 2013 Topic Guide on the Financial Sector also produced under EPS PEAKS available at <https://partnerplatform.org/eps-peaks/library/bw1dka4k?o=lc>

6.2 Location of the Debt Office

Historically, operational debt management functions have been centralised in the Ministry of Finance or the Central Bank. However, the location of the Debt Management Office (DMO) at the Central Bank has been more a recognition of the weaknesses of the Ministry of Finance, as far as retention of qualified personnel is concerned, than a natural responsibility for the Central Bank (Cosio-Pascal, 2012). Presently, the DMO location has been shifted from the Central Bank to the Ministry of Finance in many countries with the evolution of the role of the Central Bank, which is becoming an autonomous body in charge of monetary policy, and the Ministry of Finance taking more responsibility in integrating the public financial management.

A separate unit, external to the Ministry of Finance and the Central Bank, is another option. This model requires very efficient and well-organised information flows structure given the fragmented structure and the need for coordination. Yet, there is no clear evidence that this kind of arrangement would be more efficient—with the exception of retention of personnel—than the DMO within the Ministry of Finance (Cosio-Pascal, 2012). **Ultimately, what is important is that DMO takes decisions independently of fiscal and budgetary policies though in close coordination and cooperation.** The debt managers, fiscal policy advisers, and monetary policy authority (for example, the central bank) should share an understanding of how their respective policy instruments operate, how they can reinforce one another, and how policy tensions can arise.

6.3 Key policy, institutional and operational challenges

Improved macroeconomic management and debt management capacity in developing countries have helped them navigate the global financial crisis that began in 2008. However challenges remain in the post-crisis environment. This subsection highlights these challenges, drawing on results from the World Bank's Debt Management Performance Assessment (DeMPA) tool, applied in more than 20 low income countries, and early experience from the technical assistance provided to low income countries in developing medium-term debt-management strategies (MTDSs). Box 7 provides a brief description of this tool while Table 10 in the Appendix provides a breakdown of Nigeria's score against each of the performance indicators.

Box 7: Assessing Public Debt Management using the DeMPA

The Debt Management Performance Assessment (DeMPA) was developed by the World Bank to evaluate strengths and weaknesses in public debt management in a “snapshot” of existing policies, practices, and capacity. It does this through a comprehensive set of 14 performance indicators²³ covering the following five core areas of public debt management:

1. **governance and strategy development**- The legal framework should clarify the authority to borrow and to issue new debt, to hold assets for cash management purposes, and, if applicable, to undertake other transactions on the government’s behalf. The organizational framework for debt management should also be clearly specified and the mandates and roles well- articulated.
2. **coordination with macroeconomic policies**- Debt management should be carried out in coordination with fiscal and monetary policy since all three elements have policy interdependencies and inter-linkages.
3. **borrowing and related financing activities**- This area looks at best practices associated with domestic borrowing, external borrowing, loan guarantees, on-lending and derivatives.
4. **cash flow forecasting and cash balance management** evaluates whether there are cost-effective cash management policies and accurate and timely forecasts of the central government expenditure and revenue cash flows in place to enable the authorities to meet with a high degree of certainty their financial obligations as they fall due.
5. **debt recording and operational risk management** evaluates whether there are comprehensive debt management systems that record, monitor, settle, and account effectively for all central government debt and debt-related transactions. It also evaluated debt administration, data security as well as whether there is an efficient organizational structure in place across the principal DeM entity (or the DeM entities).

Each dimension of the DeMPA is measured across a set of benchmarks. This allows country authorities to monitor improvements over time and benchmark their performance relative to international sound practice. **Emphasis is placed on meeting the minimum requirement considered to be a necessary condition for effective performance, i.e., achieving a C score** for a specific dimension (detailed requirements to be met for a ‘C’ in provided in Table 11). A score of ‘D’ is interpreted as signalling a serious deficiency in performance and a priority area for reform. The A score reflects sound practice for that particular dimension of the indicator. The B score lies between the minimum requirements and sound practice for that aspect.

The implementation of DeMPAs is driven by country demand and is generally undertaken by a team of external evaluators since a self-assessment would not be officially endorsed by the World Bank. The World Bank recommends an assessment be undertaken three years after the implementation of relevant Public Financial Management (PFM) reforms.

Since 2009, there have been 49 assessments in 46 IDA-eligible countries and with two sub-national authorities. Methodological differences apart, **the results across two periods (2007-2009 vs. 2010-2012) provide key pointers and help identify common priority areas for debt management reform across countries** (IMF and WB, 2013). In both periods, there have been major deficiencies in operational risk management and cash flow forecasting and management. Less than half of the sample met the minimum requirements for sound governance, performance of public debt management audits and the development of a robust debt management strategy. Most were not able to assess the cost-risk trade-offs of the existing debt portfolio. A closer look to the 15 individual indicators and their associated dimensions highlights key areas of concern, which are summarised in Table 4 below:

23 DeMPA was revised in 2015 and was reduced from 15 performance indicators to 14 by combining operational risk management indicator with debt recording.

Table 4: Key areas of concern emerging from DeMPA

Core area	Area of concern
Weak operational risk management	Absence in most of the countries of (i) business continuity planning; (ii) strong operational controls; and (iii) well-articulated responsibilities for staff.
Poor performance under sound governance and debt management strategy	Very few countries in the sample had a formal debt management strategy, or effective accountability frameworks with regular performance audits, in place. Strategies for most countries did not have approval of the relevant policy makers and was not supported by a decision making process that ensured its implementation, regular updating, and publication. Also most strategies were not underpinned by any sound cost-risk analysis of the debt portfolio.
Weak cash flow forecasting and cash balance management	Weak forecasting of the aggregate cash balances in government bank accounts.
Weak external borrowing strategy	Weak assessments of the most beneficial/cost-effective terms and conditions of available borrowing options; and a generalized absence of documented procedures for borrowing in foreign market

Source: Adapted from IMF and WB, 2013

Further complicating matters is that **debt management has become more complex and cross-cutting** in recent years. The rising appetite and ability of LICs to issue sovereign bonds on the international capital market, a large build-up of domestic public debt, borrowing by sub-national governments, increased use of PPP schemes, as well as the large private capital inflows—just to name a few—pose significant challenges and risks to developing country policy makers. Importantly, DeMPA does not assess the ability to manage the wider public debt portfolio, including implicit contingent liabilities (such as liabilities of the pension system) or the debt of State Owned Enterprises (SOEs), if these are not guaranteed by the central government. It is worth noting that the DSF itself includes one standardized stress test that resembles a generic contingent liability shock. Where information is available, a more country-specific scenario may be warranted to capture contingent liabilities arising from, inter alia, state-owned enterprises, sub-national governments, public-private partnerships (PPPs), and weaknesses in the financial sector.²⁴

6.4 Support for public debt management

This sub-section outlines various initiatives undertaken by the IMF, World Bank, and UNCTAD to assist low income countries to build their debt management capacity.

6.4.1 IMF and World Bank

The IMF and World Bank's work programme for helping developing countries improve their public debt management capacity was initially targeted at countries included in the heavily indebted poor countries (HIPC) initiative. Both the nature of activities and the country coverage of the programme expanded to reflect the nature of demand and significance of needs. A range of additional complementary activities, such as Bank-assisted Debt Management Reform Plans, and other Bank and Fund TA and training, are now provided, and country beneficiaries have been expanded to cover all IDA-eligible countries.

Up to end-December, 2012, fifty-nine IDA-eligible countries have received support under the IMF-World Bank debt-management work programme (Table 12 in Appendix). Reflecting the programmatic approach adopted by the Bank—with countries encouraged to undertake a DeMPA, and receive joint Bank-Fund Medium Term Debt Strategy (MTDS) and Debt Management Reform Plan missions, many countries have received assistance

²⁴ For further guidance on the treatment of contingent liabilities, see Hemming et al., 2006; Cebotari, 2008; and Everaert et al. (2009).

through multiple channels. Many countries have also chosen to complement Bank support with targeted TA from the Fund.

In particular, the MTDS programme has gathered significant momentum since 2009. **The MTDS is a comprehensive framework designed to help countries develop an effective debt management strategy for the medium term that explicitly recognises the relative costs and risks involved.** The MTDS toolkit includes a guidance note on the process of designing and implementing a debt management strategy in a low-income country context, a template for strategy documentation, and a quantitative cost-risk analytical tool with an associated handbook that provides a key input into the debt management strategy decision-making process. In implementing the MTDS framework, the Treasury's team of public debt management experts in the developing country partners with the World Bank's Economic Policy and Debt Department.

Demand for bank-assisted debt management reform plans- a time-bound agenda designed to put in place an effective debt management framework- has also grown. In 23 IDA-eligible countries, a Bank-assisted Debt Management Reform Plan mission has followed a DeMPA and / or MTDS mission, and helped design a plan to address the weaknesses identified (IMF and WB, 2013). The missions focused on helping countries develop a reform plan outlining actions and their sequencing, expected outputs and outcomes, and time-bound milestones. These plans also provided an estimate of the budget and resources required to implement the plan.

In addition to the MTDS, the Fund provides a range of other targeted TA assistance on analytical, operational and institutional aspects related to debt management in developing countries. For example, it advises on portfolio risk analysis and strategy development, the legal framework for debt management, the organization of the debt management office, staffing requirements and profiles, policy coordination challenges (cash and debt, monetary and debt, fiscal and debt), and debt recording and statistics. It has also provided targeted advice on how to identify fiscal risks associated with contingent liabilities in one additional instance in Africa.

6.4.2 UNCTAD

UNCTAD is the focal point within the United Nations system for the integrated treatment of debt issues, and unlike the IMF and World Bank primarily provides assistance for downstream debt related activities associated with middle debt management offices. This includes the maintenance of debt databases, debt-data validation, debt operations, internal and external debt reporting, debt statistics and basic debt analysis, and building system links between debt management and other financial software.

Through its Debt Management and Financial Analysis System (DMFAS) programme, UNCTAD works directly with more than 60 low- and middle-income States, whose economies account for more than \$500 billion of outstanding public and public-guaranteed long-term debt, approximately 40% of the total long-term debt of all developing countries (UNCTAD website)²⁵. The DMFAS Programme has developed a computerized system designed to satisfy three distinct debt management needs: day-to-day operational needs of the debt manager; statistical requirements of the debt office; and analytical needs of the policymaker. For the DMFAS client countries, in 2013 concrete sustainable results included improved external and domestic debt data recording, enhanced reporting both internally and at the international level and improved debt analysis capacities (UNCTAD, 2013).

25 [http://unctad.org/en/Pages/GDS/Debt%20and%20Development%20Finance/Debt-Management-and-Financial-Analysis-System-\(DMFAS\).aspx](http://unctad.org/en/Pages/GDS/Debt%20and%20Development%20Finance/Debt-Management-and-Financial-Analysis-System-(DMFAS).aspx)

6.4.3 Commonwealth Secretariat

The Debt Management Section (DMS) at the Commonwealth Secretariat is another important provider of technical assistance on debt and development resource management. Its support focuses on the following areas:

- Commonwealth Secretariat Debt Recording and Management System (CS-DRMS) software which assists countries record, manage and analyse their debt from a holistic perspectives through the extensive coverage of various types and categories of debt liability and debt related financial instruments for sovereign as well as sub-national governments. CS-DRMS is used by over 100 agencies, and is in operation in 60 countries;
- The Commonwealth Secretariat Securities Auctioning System (CS-SAS) is software which allows clients to manage auctioning of securities from time of issue through selection of bidders to generation of allotment letters.
- Building capacity in debt management;
- Providing policy advice and assistance with debt analysis;
- Publishing articles and documents on debt management issues; and
- Contributing to debt data standards and the dissemination of debt statistics.

The principal delivery instruments of DMS for capacity building include training/workshops; country assessment missions; hotline support on the use of CS-DRMS/CS-SAS; debt experts on long-term or short-term assignment in countries and local resource persons for trouble shooting; publication of articles in the debt management series and stakeholder meetings.

6.5 Lesson learnt

Developing countries have made significant progress in debt management over the last decade. Favourable liquidity conditions and debt relief initiatives have allowed many countries to make their debt burden manageable. In addition, various initiatives have focused on the reform of debt management practices and the development of domestic debt markets. Nonetheless, the recent turmoil in international markets provides a reminder that benign conditions may change rapidly. The financial crisis has also made the tasks of debt managers even more complex by increasing financing needs. Cost and risk characteristics of many financing options have also changed, requiring a re-evaluation of existing debt management strategies. It is therefore **important for countries to continue and deepen reforms that will help them maintain access to markets and avoid a repetition of past crisis situations.**

Ultimately, each country's capacity building needs in public debt management are different. Their needs are shaped by the capital market constraints they face, including the exchange rate regime, the quality of their macroeconomic and regulatory policies, the institutional capacity to design and implement reforms, the country's credit standing, etc. Capacity building and technical assistance therefore must be carefully tailored to meet policy goals, taking into account country characteristics.

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Appendix

Table 5: Comparison of HIPC and MDRI

	HIPC	MDRI
Country coverage	IDA-only, PRGF-eligible countries with debt indicators above the HIPC Initiative thresholds which have been engaged in qualifying IMF and IDA-supported programs	Completion point
Participating creditors	All multilateral, official bilateral and commercial creditors of external public and publicly guaranteed debt to HIPC	IDA, IMF and AfDF only
Debt relief provided	External PPG debt is reduced to the HIPC Initiative thresholds as calculated at the time of the decision point	Debt disbursed before end-December 2004 (IMF and AfDB) and end-December 2003 (IDA) and still outstanding at the time of qualification (after the provision of debt relief) is reduced to zero

Source: IDA and IMF 2006

Table 6: List and Status of HIPC's (as of May 2015)

Post-Completion-Point HIPC's (36)	
Afghanistan	AFG
Benin	BEN
Bolivia	BOL
Burundi	BDI
Burkina Faso	BFA
Cameroon	CMR
Central African Republic	CAF
Chad	TCD
Comoros	COM
Cote d'Ivoire	CIV
Congo, Dem. Rep.	COD
Congo, Rep.	COG
Ethiopia	ETH
Gambia, The	GMB
Ghana	GHA
Guinea	GIN
Guinea-Bissau	GNB
Guyana	GUY
Haiti	HTI
Honduras	HND
Liberia	LBR
Madagascar	MDG
Malawi	MWI
Mali	MLI
Mauritania	MRT
Mozambique	MOZ
Nicaragua	NIC
Niger	NER
Rwanda	RWA
São Tomé and Príncipe	STP
Senegal	SEN

Sierra Leone	SLE
Togo	TGO
Tanzania	TZA
Uganda	UGA
Zambia	ZMB
Pre-Decision-Point Countries (3)	
Eritrea	ERI
Somalia	SOM
Sudan	SDN

Table 7: Stress Tests used in IMF-World Bank DSF

External DSA	Public DSA
<i>Alternative scenarios</i>	
<p>A1. Historical Real GDP growth, GDP deflator, non-interest current account, and net FDI flows set to their historical averages</p> <p>A2. External financing External borrowing assumed to be less concessional (by 200 basis points)</p>	<p>A1. Historical Primary balance-to-GDP ratio and real GDP growth set to their historical averages</p> <p>A2. Primary balance Primary balance-to-GDP ratio set to its value in the first year of the projection period</p> <p>A3. Lower real GDP growth Real GDP growth lowered by a fraction of its standard deviation</p>
<i>Bound tests</i>	
<p>B1. Real GDP growth Real GDP growth set to its historical average minus one standard deviation</p> <p>B2. Exports Nominal export growth (in USD) set to its historical average minus one standard deviation</p> <p>B3. Deflator Domestic GDP deflator (in USD) set to its historical average minus one standard deviation</p> <p>B4. Other flows Current transfers-to-GDP and FDI-to-GDP ratios set to their historical average minus one standard deviation</p> <p>B5. Combination of B1 through B4 Each variable set to its historical average minus half a standard deviation.</p> <p>B6. Depreciation One-time 30 percent nominal depreciation of the domestic currency in the first year of the projection period</p>	<p>B1. Real GDP growth Real GDP growth set to its historical average minus one standard deviation</p> <p>B2. Primary balance Primary balance-to-GDP ratio set to its historical average minus one standard deviation</p> <p>B3. Combination of B1 and B2 Real GDP growth and primary balance-to-GDP ratio set to their historical average minus half a standard deviation</p> <p>B4. Depreciation One-time 30 percent nominal depreciation of the domestic currency in the first year of the projection period</p> <p>B5. Other debt-creating flows One-time increase in other debt-creating flows amounting to 10 percent of GDP in the second year of the projection period</p>

Table 8: Debt Burden Indicators in the DSF

Indicator	Use
<i>Solvency</i>	
Present value of PPG external or public debt to GDP	Compares the debt burden with the resource base. This indicator is commonly used, but may be misleading. For example, a low debt-to-GDP ratio could coexist with a high debt-to-exports ratio if exports make up a very small proportion of GDP.
Present value of PPG external debt to exports of goods and services	Compares the debt burden with the country's capacity to generate foreign exchange receipts. A debt-to-exports ratio that is increasing over time, for a given interest rate, implies that total debt is growing faster than the economy's basic source of external income. This ratio is more precise than the debt-to-GDP ratio but may be volatile (given the price volatility of exports) and incomplete (because countries may have other important sources of external income, such as remittances).
Present value of PPG external or public debt to fiscal revenue	Compares the debt burden with public resources available for repayment. This is a critical ratio for relatively open economies facing a heavy debt-service burden. An increase in this indicator over time suggests that the country may have budgetary problems in servicing the debt.
<i>Liquidity</i>	
PPG external debt service to exports	Indicates how much of a country's export revenue is used to service the debt, and how vulnerable the payment of debt service is to an unexpected fall in export proceeds. This ratio tends to highlight vulnerabilities in countries with significant short-term debt. The higher the share of short-term debt to overall debt, the larger and more vulnerable is the annual flow of debt-service payments.
PPG external or public debt service to fiscal revenue	Indicates how much of a country's fiscal revenue are used for debt-service payments, and captures the associated vulnerability of debt service to variations in fiscal revenue.

Source: IMF 2013b

Table 9: Cost and Risk Factors of Different Financing Instruments

Instrument type	Cost characteristics	Risk characteristics	Other comments
<i>External instruments</i>			
Multilateral concessional loan (e.g., IDA, AfDF, ADF)	Highly concessional	Fixed rate; denominated in foreign currency; ultra-long tenor; amortizing structure; long grace period.	Access will decline and terms will harden as income level increases. Limited flexibility to negotiate terms. Typically involves a commitment fee. Disbursement can be dependent on certain conditions being met.
Multilateral nonconcessional loan (e.g., IBRD, AfDB, ADB)	Some concessionality	Both fixed and variable rate; denominated in foreign currency	Flexibility to tailor terms (e.g., currency and interest rate structure) to suit recipient risk preferences. Tenor and grace period linked to country category. Involves a commitment fee. Not available to IDA-only countries
Bilateral loan (including project loans)	Typically some concessionality	Both fixed and variable rate; denominated in foreign currency	Limited flexibility on choice of terms. Various transaction charges involved. Project loans tied to specific project use; consequently disbursement highly dependent on progress of project.
Commercial bank loan (including syndicated loans)	Market rates	Can be fixed or variable rate; can be short-, medium- or long-term; typically denominated in foreign currency.	Flexibility to influence terms will depend on relative negotiating power. Can involve significant transaction fees.
Sovereign bonds	Market rates (depending on liquidity conditions and country credit rating)	Can be fixed or variable rate; typically denominated in foreign currency; typically bullet structure.	Authorities choose key features (e.g., interest rate structure, currency and maturity). Significant transaction fees involved. Resource intensive to launch.
<i>Domestic instruments</i>			
Treasury bills	Market rates	Short-term; denominated in domestic currency	Typically the first instrument introduced in the domestic market.
Treasury bonds	Market rates	Medium- to long-term; typically denominated in domestic currency. Can be fixed or variable rate. Can be indexed.	Structure of investor base will be determinant of relative cost of different types and maturities.
Retail instruments	Administrative or market rates	Can be fixed or variable rate; denominated in domestic currency; can be indexed. Typically short- to medium-term.	Developing retail investor base can provide some support in face of rollover risk. Can be relatively costly depending on the distribution arrangements.
Commercial bank loan	Market rates	Can be fixed or variable rate; generally short term; typically denominated in domestic currency.	Flexibility to influence terms will depend on relative negotiating power. Some transaction fees involved.

Source: IMF & World Bank 2009

Table 10: Summary of Nigeria's results of Debt Management Performance Assessment (DeMPA), 2012

Performance Indicator		Score
Governance and Strategy Development		
DPI-1	1. Legal Framework	C
DPI-2	1. Managerial Structure: Borrowing and Debt-Related Transactions	A
	2. Managerial Structure: Loan Guarantees	A
DPI-3	1. Debt Management Strategy: Quality of Content	D
	2. Debt Management Strategy: Decision-Making Process	C
DPI-4	1. Evaluation of Debt Management Operations	A
DPI-5	1. Audit: Frequency	D
	1. Audit: Appropriate Response	NR
Coordination with Macroeconomic Policies		
DPI-6	1. Fiscal Policy: Provision and Quality of Debt-Service Forecasts	C
	2. Fiscal Policy: Availability and Quality of Information on Key Macro Variables and DSA	A
DPI-7	1. Monetary Policy: Clarity of Separation between DeM and Monetary Policy Operations	B
	2. Monetary Policy: Regularity of Information Sharing	A
	3. Monetary Policy: Limited Access to Central Bank Financing	C
Borrowing and Related Financing Activities		
DPI-8	1. Domestic Borrowing: Market-Based Mechanisms and Preparation of a Borrowing Plan	A
	2. Domestic Borrowing: Availability and Quality of Documented Procedures	B
DPI-9	1. External Borrowing: Borrowing Plan and Assessment of Costs and Terms	C
	2. External Borrowing: Availability of Documented Procedures	D
	3. External Borrowing: Involvement of Legal Advisers	A
DPI-10	1. Loan Guarantees: Availability and Quality of Documented Policies and Procedures	D
	2. On-lending: Availability and Quality of Documented Policies and Procedures	A
	3. Derivatives: Availability and Quality of Documented Policies and Procedures	NR
Cash Flow Forecasting and Cash Balance Management		
DPI-11	1. Effective Cash Flow Forecasting	D
	2. Effective Cash Balance Management	D
Operational Risk Management		
DPI-12	1. Debt Administration: Availability and Quality of Documented Procedures for Debt Service	C
	2. Debt Administration: Availability and Quality of Documented Procedures for Data Recording and Storage	A
	3. Data Security: Availability and Quality of Documented Procedures for Data Recording and System and Access Control	A
	4. Data Security: Frequency of Back-Ups and Security of Storage	A
DPI-13	1. Segregation of Duties	A
	2. Staff Capacity and Human Resource Management	C
	3. Operational Risk Management, Business Continuity, and Disaster Recovery Plans	B
Debt Records and Reporting		
DPI-14	1. Debt Records: Completeness and Timeliness	C
	2. Debt Records: Registry System	A
DPI-15	1. Central Government Debt Data: Statutory and Mandatory Reporting Requirements	C
	2. Public Sector Debt Data: Statutory and Mandatory Reporting Requirements	NR
	3. Debt Statistical Bulletin: Quality and Timeliness	C

Source: World Bank. 2012. Nigeria - Debt Management Performance Assessment Tool (DeMPA). <http://documents.worldbank.org/curated/en/2012/05/18792740/nigeria-debt-management-performance-assessment-tool-dempa>

The first DeMPA in Nigeria was undertaken in 2008, and this assessment offered an opportunity to take stock of progress of debt management reforms in recent years. Areas with very high scores include the managerial set-up, evaluation of debt management operations, as well as domestic and external borrowing practices. The assessment of these areas was very much in line with the 2008-assessment. There have been substantial improvements in management of operational risks, demonstrated by the availability of procedures manuals and in regarding to data security and back-ups, and in debt reporting.

There were only few areas where the development has been in negative direction. In the 2008 DeMPA the minimum score was given to the quality of the debt management

strategy. In the current DeMPA that score was reduced. The reasoning is that there has been external market borrowing, but no guidelines exist for the foreign currency exposure. And it should be noted that a debt management strategy is currently being drafted. The other notable of a move in negative direction is the absence of external auditing of the debt management activities and policies. One area that remains weak is cash forecasting and cash management, where the requirements for the minimum score were not met.

Table 11: Requirements for score 'c' on DEMPA assessment

Performance indicator	Minimum requirement for score 'c'
<i>Governance and strategy development</i>	<ul style="list-style-type: none"> • The legislation (primary and secondary) provides clear authorization to borrow and to issue new debt, to undertake debt-related transactions (where applicable), and to issue loan guarantees (where applicable), all on behalf of the central government. In addition, primary legislation specifies for which purposes the executive branch of government can borrow. • Borrowings and debt-related transactions are undertaken either by the principal DeM entity or, if there is no principal DeM entity, by the DeM entities that regularly exchange debt information and closely coordinate their respective activities. • Loan guarantees are prepared and issued by one (the principal guarantee entity) or more government entities that regularly exchange information and closely coordinate their respective activities both between themselves and, when there is a principal DeM entity, this principal DeM entity. • A medium-term debt management strategy is in place covering all existing and projected central government debt, based on the DeM objectives. The strategy is expressed at least as guidelines for the preferred direction of evolution of specific indicators for interest rate, refinancing, and foreign currency risks. In addition, if applicable, the strategy document contains a description of measures aimed at supporting domestic debt market development. • The strategy proposal is prepared by the principal DeM entity or, if there is no principal DeM entity, jointly by the DeM entities. The views of the central bank are obtained; the strategy is formally approved; and the strategy is made publicly available, including through publication on official website(s) and in print media. • A debt statistical bulletin (or its equivalent), with the main categories listed in the "Rationale and background" section of this DPI (with the exception of the basic risk measures of the debt portfolio), is published annually, with debt data that are not more than six months old at the date of publication. • A report (or section of a wider report) providing details of outstanding government debt and DeM operations is submitted annually to the parliament or congress and is also made publicly available. • An external financial audit of DeM transactions is undertaken annually. • External compliance audits have been conducted in the past two years. • Audit reports are publicly available within six months of completion of the audit. • The relevant decision makers produce a management response to address the outcomes of the internal and external audits of government DeM activities.
<i>Coordination with macroeconomic policies</i>	<ul style="list-style-type: none"> • As part of the yearly budget preparation, forecasts are provided on total central government–debt service. • Key macro variables (actual outcomes and forecasts) and a DSA that has been undertaken by the government within the past three years are shared with the principal DeM entity (or DeM entities). • Monetary policy operations are kept formally separate from DeM transactions insofar as the central bank carries out DeM transactions as an agent of the central government. In addition, the central bank keeps the government and the market informed when transactions are undertaken for monetary policy purposes and when it transacts in the market as an agent on behalf of the central government. • When relevant for monetary policy implementation, there is at least monthly information sharing on current and future debt transactions and central government cash flows with the central bank. • Access to financing from the Central Bank has a ceiling limit imposed by legislation.
<i>Borrowing and related financing activities</i>	<p>Domestic market borrowing</p> <ul style="list-style-type: none"> • The central government raises funds domestically using market-based instruments to fund the projected borrowing requirement. An annual borrowing plan for the projected aggregate amount of domestic borrowing—divided between the wholesale and retail markets and other sources—is prepared. In addition, a borrowing calendar that contains issue dates and instruments for

wholesale securities for the following month is prepared and published at least one week ahead of the start of the month.

- Borrowing procedures for all domestic borrowing as well as terms and conditions and criteria for access to the primary wholesale market and retail market are provided in print media or on the central government or the central bank web sites.

External borrowing

- A yearly borrowing plan for external borrowing is prepared and assessments of the most beneficial or cost-effective terms and conditions for external borrowing that are obtainable from potential creditors and markets are conducted annually.
- Adequate and readily accessible internal documented procedures exist for all external borrowings, including from international capital markets, and contain the requirement to enter all financial terms of the loan transaction into the debt recording system within three weeks of signing.
- Legal advisers are involved before concluding the negotiating process of the legal agreements related to the borrowing.

Loan Guarantees, On-lending and Derivatives

- There are adequate and readily accessible internal documented procedures for the approval, issuance, and monitoring of loan guarantees.
- There are adequate and readily accessible internal documented procedures for the approval and provision of credits, in the form of on-lending from external or domestic borrowing sources.
- There is a DeM system with functionalities for handling derivatives. In addition, there are adequate and readily accessible internal documented procedures for the use of derivative transactions.

Cash flow forecasting and cash balance management

- Reasonably reliable monthly aggregate forecasts of cash inflows and outflows and cash balances on central government bank accounts are produced for the budget year and are made available to the DeM entity. In addition, the cash balance forecast is updated monthly.
- Issuance of short-term instruments is planned according to the forecast of monthly cash balances. In addition, the central government manages its surplus cash (that is, cash in excess of the target) through investment in the market in line with appropriate credit risk limits or with the central bank at market-related rates.

Debt Recording and Operational Risk Management

- There is an adequate and readily accessible procedures manual for the processing of debt service payments.
- There are adequate and readily accessible procedures manuals for debt data recording and validation, as well as for storage of agreements and debt administration records.
- There are adequate and readily accessible documented procedures for controlling access to the central government's debt recording and management system.
- Debt recording and management system backups are made at least once per month, and the backups are stored in a separate, secure location where they are protected from incidents such as theft, fire, flood, or other incidents that may damage or destroy any of these backups.
- There is clear separation between staff responsible for loan negotiation and preliminary contract data entry and those responsible for (a) confirmation of contract information and finalization of records in the system, and (b) initiating and processing payments.
- There are sufficient and adequately trained staff members with formal job descriptions reflecting their current tasks.
- There is a written business continuity plan and DRP, which has been tested in the past three years.
- There are complete records within a three-month lag for central government domestic, external, and guaranteed debt, as well as all debt-related transactions, including past debt relief and debt restructuring.
- Government securities are dematerialized and kept in a central registry that has up-to-date and secure records of all holders of government debt. It is subject to an audit of internal controls and management of operation risk every two years.

Source: Adapted from World Bank. 2015 http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2015/06/01/090224b082edfdc5/1_0/Rendered/PDF/Debt0managemen000DeMPA00methodology.pdf

Table 12: Detailed Country Coverage of the IMF-World Bank Work Programme

Country	HIPC Status	Debt Management Activities	Country	HIPC Status	Debt Management Activities
Africa			East Asia and Pacific		
Angola	NA	F	Cambodia	NA	D
Benin	Post-CP	D	Mongolia	NA	D, D(F), F, M
Burkina Faso	Post-CP	D, D(F), M	Papua New Guinea	NA	D
Burundi	Post-CP	D, D(F), RP, F	Samoa	NA	D
Cameroon	Post-CP	D, M, M(F), RP, RP(F)	Solomon Islands	NA	D, RP
Cape Verde	NA	D, M, M(F)	Tonga	NA	RP
Central African Republic	Post-CP	D, D(F), RP	Vietnam	NA	D, RP
Comoros	Post-CP	D, RP			
Congo, Dem. Rep	Post-CP	D, RP	Europe and Central Asia		
Congo, Rep. of	Post-CP	D, RP, RP(F)	Armenia	NA	M
Cote d'Ivoire	Interim Period	D, M, F	Kosovo	NA	D
Ethiopia	Post-CP	M	Kyrgyz Republic	NA	M
Gambia, The	Post-CP	D, D(F), M, RP	Moldova	NA	D, M, M(F), RP
Ghana	Post-CP	D, D(F), M, M(F), RP	Tajikistan	NA	D, M, RP
Guinea	Interim Peirod	D			
Guinea-Bissau	Post-CP	D	Latin America and the Caribbean		
Kenya	NA	M, M(F)	Bolivia	Post-CP	D, F
Lagos, Nigeria	NA	D(SN)	Grenada	NA	D, F
Lesotho	NA	D	Guyana	Post-CP	D
Liberia	Post-CP	D, RP	Haiti	Post-CP	F
Malawi	Post-CP	D, D(F), M, RP, RP(F)	Honduras	Post-CP	D, F
Mali	Post-CP	D, D(F)	Nicaragua	Post-CP	D, D(F), M, M(F)
Mauritania	Post-CP	D, M, RP	St. Lucia	NA	F
Mozambique	Post-CP	D, M, M(F)			
Niger	Post-CP	D	Middle East and North Africa		

Nigeria	NA	D, D(F), M, M(F)	Djibouti	NA	D
Ondo, Nigeria	NA	D(SN)	Yemen	NA	D
Rwanda	Post-CP	D, M			
Sao Tome and Principe	Post-CP	D, D(F), RP	South Asia		
Senegal	Post-CP	D, M	Afghanistan	Post-CP	D
Sierra Leone	Post-CP	D, RP	Andhra Pradesh, India	NA	RP, RP(F)
Sudan	Pre-DP	D	Bangladesh	NA	D, F, M, M(F), RP
Tanzania	Post-CP	D, F, M, M(F), RP	Bhutan	NA	D, RP
Togo	Post-CP	D, D(F)	Maldives	NA	D, RP
Uganda	Post-CP	D	Nepal	NA	D
Zambia	Post-CP	D, D(F), M, RP	Pakistan	NA	D
Zimbabwe	NA	D, RP			

Note: Notes: D - DeMPA, D(F) - DeMPA Follow-up, D(SN) – Subnational DeMPA, M - MTDS Baseline, M(F) - MTDS Follow-up, RP - Reform Plan, F – other Fund TA

Source: IMF and World Bank, 2013

Box 8: Debt-for-development swaps

Middle-income countries like Indonesia, that are not eligible for the most advantageous of such grand debt relief initiatives (due to their relatively moderate debt levels) but nevertheless want to bring down their external debt as part of routine liability management operations, have resorted to the instrument of bilateral debt-for-development swaps. In a typical swap deal, the creditor cancels certain debt claims owed to it in exchange for the debtor's commitment to mobilise local currency 'counterpart' funds for shares in local companies or for social and environmental purposes. Since 2002 Indonesia has signed 11 debt swaps, with four different creditors (Germany, the US, Italy and Australia) and with applications in various sectors (education, health, environmental conservation and reconstruction). When (and if) fully completed, this will amount to approximately \$385.1 million of debt relief and an equivalent of \$227.5 million of counterpart fund investments in total.

Although debt swaps are typically lauded by the parties involved (and in the media) as mutually beneficial, this kind of operations does not carry the best of reputations. Assessments of the first wave of debt swaps and related instruments show that debtors typically paid too high a price for retiring their debt (Bulow and Rogoff, 1988); that swaps may complicate short-term macroeconomic and fiscal management (Mistry and Griffith-Jones, 1992); and that there was often very strict micro-earmarking of the local currency funds released through swaps to specific (NGO-operated) projects (Kaiser and Lambert, 1996).

A systematic evaluation of the Indonesian swaps specifically concluded that **while overall, swaps lead to a (modest) increase in resources at the country level, it remains difficult to estimate to what extent the swaps' contribution to the education, health and environmental conservation sectors and reconstruction is truly additional to other donor aid and to the Indonesian government's own expenditures in these fields.** Moreover, even taken together, the little debt relief provided by the swaps is too insignificant to make a difference in Indonesia's public debt burden.

Source: Adapted from Cassimon et al. 2013

Box 9: Reforming the international system for sovereign debt restructuring

There is widespread consensus that there are major institutional deficiencies of the international financial architecture, such as the inadequacy of existing institutions and frameworks to manage debt crises. In effect, the environment for sovereign debt restructuring has been criticised for being uncertain, unpredictable, fragmented, ad hoc and non-transparent (IMF, 2013c, Haley, 2014; Schneider and Haley, 2012; UN, 2009). However, **there are differing views on the best way forward with the debate generally framed in terms of contractual versus statutory approaches.** This debate is by no means new and dates back to the mid-1970s.

Under the statutory route sovereign debtors and their creditors would be bound by an international convention that sets forth a process to facilitate debt restructuring. In contrast a contractual approach will mean that sovereign debtors and their creditors would attempt to consensually negotiate a debt restructuring, aided by collective-action clauses and by exchange offers with exit consents.

Some stakeholders (such as the **IMF**) favour improved contractual arrangements in bond contracts and a voluntary code of conduct as solution to problems related to holdout creditors and other issues; however others (such as the **UN**) see these as insufficient, leading to calls for further policy action on improving the architecture for debt restructuring and a sovereign debt resolution mechanism. In fact, **the UN General Assembly has passed a landmark resolution in 2014 that mandates the UN to create a “multilateral legal framework for sovereign debt restructuring” aimed at increasing the efficiency, stability and predictability of the international financial system (GA resolution 68/304).**

In previous years, a group of **UN experts have proposed the establishment of an International Debt Restructuring Court (IDRC).** The court would ensure that agreed international principles regarding the priority of claims, size of necessary overall write-downs, and the burden sharing of write-downs are followed (UN, 2009; IMF, 2013c). It would be part of a more permanent debt mediation and arbitration mechanism created under UN auspices with technical support from the Bretton Woods institutions; however, it would be independent from those institutions.

An alternative that has been suggested is the creation of a non-statutory sovereign debt forum (Gitlin and House, 2013; IMF, 2013c). It would comprise a neutral standing body created by informal consensus and will bring together debtors, creditors, and international institutions.

Ultimately, it is likely that the current debate on sovereign debt restructuring would have a direct impact on financing sustainable development and the post-2015 development agenda, as countries with unsustainable debt burdens spend a large proportion of public resources on debt servicing, which diverts resources from expenditures necessary for sustainable development. Therefore, **the need for a durable solution to the current debt crisis is an important aspect of the global governance agenda.**