IMF staff regularly produces papers proposing new IMF policies, exploring options for reform, or reviewing existing IMF policies and operations. The following document has been released and is included in this package:

The prepared by IMF and World Bank staff and completed on December 26, 2017.

GUIDANCE NOTE ON THE BANK-FUND DEBT SUSTAINABILITY FRAMEWORK FOR LOW INCOME COUNTRIES

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I. WHAT IS THE LIC DSF?

1. The joint IMF-World Bank Debt Sustainability Framework for Low-IncoD

- For World Bank financing requests, when countries that are subject to IDA's Non-Concessional

III. INPUTS

The DSF toolkit requires a number of inputs. First, comprehensive information on the current stock of public and publicly guaranteed debt must be compiled and a decision must be taken about the concept of the public sector to be used. Second, macroeconomic projections covering 20 years must be produced. Third, financing projections for external and public debt covering the projection period must also be produced. This Section discusses each of these issues in turn.

Debt Definition: Coverage of the Public Sector

19. Public sector debt, in its broadest definition, comprises debt from several different sub-sectors.[13] These include the general government (comprising the central, the state, and the local governments, social security funds, and extra-budgetary funds); the non-financial public enterprises; and financial public enterprises (including the central bank). Other sources include long-term obligations of the general government, such as unfunded liabilities of social security funds (when they are not explicitly recognized as part of

concept, then debt securities issued by the government and held by the central bank or any other advances to the government should also be included in public debt (i.e., no netting out).

- **State-owned enterprise (SOE) debt.** The user should include all available information on the debt of non-financial public enterprises. The exclusion of

25. Normally, a government liability should be considered debt when future payments of interest and/or principal are required from the debtor to the creditor.[15, 16] Examples include debt securities, loans, and other accounts payable (including verified arrears to suppliers). Verified and recognized obligations that are not debt arising from a financial claim (e.g., ICSID arbitration awards; amounts owed to suppliers, etc.) should also be included, on a best understanding of their due date.

26. For a DSA, gross debt should capture the face value of debt and include appropriate consolidations. The use of market value would create circularity, since this concept embodies an assessment of the nominal debt burden. Debt that is within the concept of the public sector used should be shown on a consolidated basis to avoid double-counting (e.g., loans to state governments by the central government would not constitute debt for a general government concept).

27. Public debt should be included in the DSF based on actual debt or

29. There are limited cases where debt should be excluded from the DSA (and such exclusions should be reported in the write up of the DSA, or as memo items in tables):

- Where there is a dispute with respect to the validity of a claim or the amount of a claim, the entire amount in dispute should be treated as a contingent liability (not included in the stock, but modeled for the purpose of the contingent liability stress test). Where only a part of the claim is in disp the tTSBL5(m)-6.A6616.7 (nge227 Tc 0 Td( )Tj 0.261 0 Td)23cf luden

- The assumed debt instrument amount from each source and, if available, the residency of the debt holder;
- The average terms of each debt instrument: interest rates, grace periods, and maturities of new public borrowing.

Table 2. Macroeconomic Variables for the LIC DSA

Variable	Currency	Historical	Projection
Balance of Payments			
Current account balance	U.S. dollars	x	x
Exports of goods and servn3t23t (t)3.5 4rvU.S. dollars			
			U.S. do

Table 3. Financing Variables for the LIC DSA

36. Financing assumptions should take into account shifts in borrowing terms and financing mix over time:

- Over the near term and up to 5 years, assumptions should generally follow: (i) the authorities' borrowing plan, laid out in a published medium-term debt management strategy document (as agreed in a Bank budget support operation or Fund program where available); and/or (ii) donors' financing plans for grants, concessional, and non-concessional borrowing.[19]

- Over the longer term, as countries grow, available external financing would be likely to shift from grants to concessional loans (for the poorest and most vulnerable countries), and from concessional loans towards less concessional loans and more loans on commercial and market terms (for others). At the same time, domestic debt would be efd003 Tw 4.6 (A).3 (fd00ar7)2.30ar7,ame.3 (.4 (.6 (1

38. The treatment of debt relief under the HIPC and MDRI Initiatives depends on a country's status in the process. It should be reflected in the baseline for those countries that have reached the HIPC completion point, or in a customized scenario for pre-HIPC completion point countries (see Appendix V).

39. If precise information on the amount of loans and the terms of loans is not available, this needs to be disclosed in the DSA write up, and potential risks from data gaps should be discussed. Occasionally information on the terms and conditions of external debt may be difficult to obtain, for example, due to uncertainty associated with loan negotiations, or due to confidentiality requirements in loans. In such circumstances, every effort should be made to collect the information, drawing from multiple possible sources, including the creditor. The quality of a DSA crucially depends on the accuracy of inputs including on financing instruments. The DSA write-up should identify gaps, note possible risks, and discuss possible remedial measures to improve data collection.

IV. REALISM TOOLS

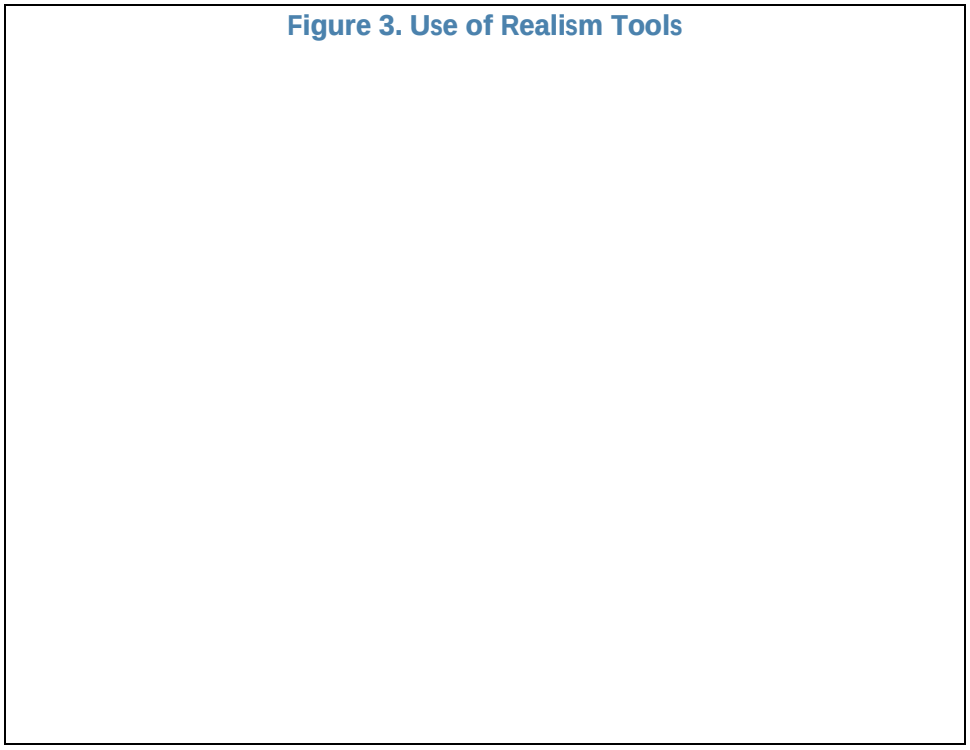
The next step is to examine the realism of the baseline scenario, which is critical for a credible assessment of debt sustainability. The DSF includes four realism tools, each of which is published: (A) drivers of debt dynamics, (B) realism of planned fiscal adjustment, (C) fiscal adjustment-growth relationship, and (D) public investment-growth relationship. Realism tools are not meant to be prescriptive. They are designed to encourage examination of baseline assumptions. In cases where tools flag differences from cross-country or a country's historical experience, these may well be explained by country-specific factors. Such justifications should be clearly discussed in the DSA write-up. In other cases, a re-examination, and possibly revision, of the macro projections may be warranted as part of the iterative process of producing a DSA (Figure 3). This section discusses each of the realism tools in turn.

Drivers of Debt Dynamics

40. The first DSF realism tool presents a decomposition of past and projected drivers of external and public debt dynamics (Figure 4). The DSF.7 (o)Tw 1.864cn/TT1xt 16.11s67o-8.8 (6.7 (n/s(e)2.4 6.716 (

The tool provides two signals that may point toward areas of the macro framework which may require deeper consideration: (i) significant differences between past debt creating flows and projected debt creating flows; and (ii) high unexpected changes in public debt over the past 5 years. To illustrate, Figure 4 highlights differences in flow history/projections related to the primary deficit, the real effective exchange rate, and residuals. It also highlights a large contribution of residuals to unexpected changes.

Figure 3. Use of Realism Tools



41. When the tool sends such signals, possible explanations should be considered. If a reasonable explanation cannot be identified, then consideration should be given to amending the macroeconomic framework (as part of the iterative process of constructing a DSA). The user must, of course, take any potential methodological changes

- A high contribution of real exchange rate depreciation to past debt accumulation would caution aga

Realism of Planned Fiscal Adjustment

42. The second DSF realism tool assesses the credibility of projected fiscal adjustment based on cross-country experience with sustained fiscal adjustments. The comparison group constitutes LICs that have requested Fund-supported programs, as these countries generally have faced a need to adjust their fiscal positions. The tool presents the distribution of observed primary fiscal adjustment over a three-

country's development priorities, poverty reductions plans, and/or need to comply with standards of human rights or social protection.om]/BBox [369.a6 (c)9.52(O)-7 .7 (.1 (y)(0.7 (.1 r3 (9 (l)2 ƀDC.1 (y)1]TJ0 Ths)16a (l)3

46. The tool flags potential optimism/pessimism when the projected growth path significantly deviates from the path derived using a typical multiplier in a LIC (about 0.4).[23] If

that the coverage of the public sector used for this assessment is comparable across historical and projected data.[27] Users should also note that the tool only considers the

- There is a difference between the newly projected relationship between public investment and growth and the calculated historical relationship.

52. Where potential optimism/pessimism is flagged, the user should consider whether there is a reasonable explanation. For instance, calculations underlying the tool rely on an investment efficiency estimates, and an estimate of the impact of changes in the capital stock on output (based on cross-country evidence). The user might assess that these parameters differ from what is assumed (e.g. strong efficiency and higher impact due to strengthening of institutions, or better prioritization of projects could lead to stronger effects). Also,

Country Classification: Debt Carrying Capacity

55. The DSF draws on the macroeconomic framework and other country-specific information to classify countries based on their debt carrying capacity. Countries with different policy and institutional strengths, macroeconomic performance, and buffers to absorb shocks, have different abilities to handle debt. Such abilities are also influenced by the global environment through demand for LICs' exports and remittance inflows into LICs.

56. To capture the different factors affecting a country's debt carrying capacity, the DSF uses a composite indicator (CI). The CI captures the impact of the different factors through a weighted average of the World Bank's Country Policy and Institutional Assessment (CPIA) score,[28] the country's real GDP growth, remittances, international reserves, and world growth.

- For currency union members, the use of the union-wide reserve coverage for classifying countries' debt-carrying capacity would generally be appropriate. However, where union members have effectively lost access to the reserve pool or are about to for an extended period, this approach may overestimate their reserves and thus

61. The calculation of the CI should draw on the IMF's World Economic Outlook (WEO) releases, which occur semi-annually in October and April of each year, and on the World Bank's annually published CPIA.[30] The CI can be calculated once WEO submissions are finalized, and does not change until a new WEO submission is finalized.[31] Remittances data should be consistent with the macroeconomic forecast underlying the WEO framework.[32] The timing leverages the existing schedule for a comprehensive update of all countries' macro framework, ensuring cross-country and within-country consistency while minimizing operational burden on users.

62. The LIC DSF user should only revise the country classification if two consecutive signals suggest the need for an upgrade or downgrade. To reduce potential variations in risk assessments stemming from volatility in macro projections, a change in country classification would require at least two consecutive designations in the new category. For example, a country with medium debt carrying capacity in October would be reclassified to strong debt carrying capacity if in the following year both the interim update in April and the October update put the country into the strong debt carrying category.[33]

Thresholds for PPG External Debt

63. The DSF uses indicative thresholds, linked to country classification, to analyze the risk of external debt distress. Thresholds are

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Table 6. PPG External Debt Thresholds

Benchmarks for Total Public Debt

64. The DSF uses benchmarks for total public debt to help flag risks from broader debt exposures. Benchmarks for total public debt, linked to country classification, help guide the analysis of risks stemming from domestic debt.[35] Total public debt is the sum of PPG external debt and public domestic debt. While PPG external debt remains the largest component of total public debt in most LICs, a systematic analysis of total public debt is needed because: (i) domestic debt is an

DSA threshold, the signal shifts from “low” to “moderate” (Section VII below). This section considers each type of stress test in turn.

Standardized Stress Tests

65. There are six standardized stress tests in the DSF, each applied to both the external and the public DSA (Table 8). In standardized stress tests, a variable is subject to a shock, and the post-shock values of the stressed variables are set to the baseline projection minus one standard deviation. H3.7 (e)-19.7 An (d)-11.8 s (9)-11.8 e (e)-11.8 n (d)-11.8 s (9)-11.8 i (e)-11.8 t (i)-11.8 i (v)-11.8 e (i)-11.8 s (9)-11.8 h (e)-11.8 o (l)-11.8 d (i)-11.8 s (9)-11.8 c (u)-11.8 s (9)-11.8 s (9)-11.8 i (e)-11.8 o (l)-11.8 n (d)-11.8 s (9)-11.8 a (e)-11.8 r (e)-11.8 e (e)-11.8 s (9)-11.8 t (i)-11.8 a (e)-11.8 k (e)-11.8 e (e)-11.8 n (d)-11.8 s (9)-11.8 t (i)-11.8 o (l)-11.8 d (i)-11.8 e (e)-11.8 t (i)-11.8 e (e)-11.8 r (e)-11.8 m (d)-11.8 i (e)-11.8 n (d)-11.8 e (e)-11.8 t (i)-11.8 h (e)-11.8 e (e)-11.8 x (e)-11.8 t (i)-11.8 e (e)-11.8 r (e)-11.8 n (d)-11.8 a (e)-11.8 l (l)-0.6 (a)-6.4

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Table 8. External and Public DSAs: Standardized Stress Tests

Contingent Liability Stress Test

68. A contingent liability stress test—which involves a one-off increase in the debt-to-GDP ratio in the second year of the projection—applies to all countries. The shock has two components: (i) a minimum starting value of 5 percent of GDP (representing the average cost to the government of a financial crisis in a LIC since 1980; see Laeven and Valencia (2013); and (ii)a tailored value,o (ng v)5.1 (alc5.95(ta)1.8 (c)g9.4 (h)-2.1j0 scn9 ( )]T3980.001 TwJ0.009 Td5.909 .5 (co)-5.6 (nd)1 (8 0.003 t)52.3

the export prices of various fuel and non-fuel commodities, as relevant (informed by commodity price distributions), with macro interactions incorporated, based on staff event analysis and recent studies.

- Where countries also import a commodity that informs this export price stress test, a net export figure for that commodity may be applied. Where a country has large commodity imports potentially subject to the same price shock as modeled for exports, a customized re-run of the tailored scenario should be done (with the shock re-calibrated to adjust for the weight of the import), to see what mitigating effects the import side could have.

- Market financing shock Applies to LICs with market access, i.e. those who: (i) have outstanding Eurobonds; or (ii) meet the market access criterion for PRGT graduation but have not graduated due to serious short-term vulnerabilities.[41] The scenario assesses rollover risks resulting from a deterioration in global risk sentiment, temporary nominal depreciation, and shortening of maturities of new external commercial borrowing. This tailored stress test supplements the consideration of market financing risks in the baseline, under the market financing module (see Section VII). It is important to understand whether market-related risks are already present in the baseline, and not just in a stress scenario.

72. DSF users are expected to customize the scenarios for these other tailored

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74. A customized scenario can also be used to assess and illustrate financing needs and risks. Where such an exercise is undertaken, it is understood not to affect the risk rating, and users Bf0 489 Tc 8 187 3 0 T3( )Tj-455 1 Tf0.001 Tc 9 -0 0 9 358.727 0 T[(W)-FooteeOa b i-2.3 l(e)-7.23.6 s un36 3-3.1 (na)0.3

are such that payment of external debt service and priority primary spending (safety net, wages, pensions, etc.), can no longer jointly be achieved, given minimum domestic debt service needs.

82. When there is a high-risk signal coming from the [illegible]

should closely assess and fully disclose in the DSA write-up the characteristics of the government assets considered for judgment. In this regard:

- The assets should be sufficiently liquid (i.e., they are not encumbered in any way, and can be liquidated quickly at prices reflecting fair value). Foreign exchange deposits and amounts in sinking funds generally would qualify (subject to their use not leading to a deterioration in reserve adequacy). [45]

- When assets are denominated in local currency, consideration needs to be given to: (i) the minimum needed level of deposits (given the usual check float); (ii) the ability to withdraw deposits from domestic financial institutions without creating systemic stress; and (iii) whether

Other Considerations

88. There are other country specific circumstances which may warrant some application of judgment to DSF results. In general, where judgment on other considerations not captured in the DSF is used to inform the risk rating, the user should aim to reflect the judgment used in a customized alternative scenario. Key circumstances for consideration include:

- **Conflict, fragility and violence:** Countries in conflict tend to have very weak institutions and policies which may distort their risk of debt distress rating. To better evaluate the risk of debt distress in countries affected by fragility, conflict and violence (FCV),[46] teams are encouraged to capture the specific challenges of FCV countries through country-specific alternative scenarios.

- **Reserve pooling arrangements.** Currency union members or members of a regional financial arrangement (e.g. a swap arrangement) may gain greater balance of payments protection from

IX. THE FINAL RISK RATINGS

DSF users are expected to combine the signals from the model on the risk of debt distress with judgment based on knowledge of the country analyzed to arrive at a final assessment on the risk of external debt distress and on the overall risk of debt distress.

judgment would need to be made that the non-payment of suppliers reflects government insolvency and/or liquidity problems (i.e., that the arrears are forced borrowing by the government, without which there would be a default).

91. A country may also be assessed to be in debt distress when the debt sustainability analysis indicates that there is a high probability of a future debt distress event. This situation can arise when a country faces: (i) large near-term breaches in debt service indicators (implying a high-risk signal where resources for payment cannot be identified); and/or (ii) significant or sustained breaches of debt thresholds that, in staffs' judgment, renders the debt position unsustainable. It should be noted that an assessment that a country is at "high risk" of debt distress, or even "in debt distress", does not automatically mean that debt is unsustainable in a forward-looking sense (the debt event could simply be a liquidity-related event). Section X.B provides further discussion on sustainability7 (e)13.9 (m)-1Tw (a)2.7 (l)8.5 (ea)5.3 (l)ent)eald[(r)-2.3 (e)2.6 (nt))r Tw 8 (a)2.7 (.9 (us)6n.9

Figure 8. Shock Analysis of Rating Downgrades from Moderate to High Risk

a. Illustration of "limited space to absorb shocks" **b. Illustration of "substantial space to absorb shocks"**

Note: For the PV of debt/GDP and PV debt/exports thresholds, X is 20 percent and Y is 40 percent. For debt service/exports and debt service/revenue thresholds, X is 12 percent and Y is 35 percent.

- **Availability of financing.** To the extent marginal finance is expected to come from markets, then the DSF's market financing module can flag risks of market financing pressures. This would then need to be complemented with analysis of how markets could respond to the considered volumes of additional financing.

- **The state of public d**

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Appendix I. Review Process and Dispute Resolution Between IMF and the World Bank

This appendix discusses the expected review process for IMF and World Bank and dispute resolution process between IMF and World Bank in producing DSAs.

Review Process

1. The IMF and World Bank staff are expected to follow the review process summarized below.

Stage	Preparation of DSA
Preparation of the draft DSA.	IMF country teams and World Bank country economists begin to jointly prepare a draft DSA (write-up and template; see Appendix II). A preliminary meeting is held between the teams to discuss the macroeconomic assumptions and coverage of the DSA. The draft DSA is included in the IMF policy note. World Bank country economist informs the Global Macro and Debt Analytics Unit in Macroeconomic, Trade, and Investment (MTI) about the schedule for the preparation of DSA. At this stage, the Bank country team can request technical support ("upstream comments") from the unit.
Departmental review of the draft DSA.	The IMF country team sends the draft DSA (write-up, charts, and tables), together with the policy note, to SPR and other departments, and the World Bank country economist (when needed). The World Bank country economist sends the draft DSA (write-up and template) to the MTI Global Macro and Debt Analytics Unit for formal review. At this stage, it should be understood that the draft DSA is subject to change depending on the mission's findings (if any). This review of the draft DSA in the IMF and World Bank has the objective of raising and resolving all major issues related to content, coverage, and broad assumptions.

- Projected evolution of PPG external debt burden indicators compared to thresholds in the baseline scenario. Discussion of breaches, if any.
- Projected evolution of PPG external debt burden indicators under stress tests including tailored stress tests,[3] compared to thresholds. Discussion of breaches, if any.
- Results of customized scenarios, where relevant.

Overall risk of public debt distress

- Signal from the model:
  - Projected evolution of total public debt under the baseline, including with respect to the benchmark on public debt to GDP.
  - Projected evolution of total public debt under stress tests, including with respect to the benchmark on public debt to GDP.
  - Results of customized scenarios, where relevant.

Market module (where relevant)

- Risks identified by the market-financing pressures tool.
  - Table: Market Financing Pressures
- Deeper discussion of liquidity risks and creditors exposures (where the tool provides a red flag)

Other factors to account for (application of judgment)

- Existence of arrears/restructuring (with few exceptions this would lead to an "in debt distress" rating)
- Discussion of one-off/marginal breaches (where relevant).
- Are market risks important enough to over-ride the risk rating?
- Discussion of assets (where relevant)
- Long-term considerations (where relevant)
- Private external debt (should always be covered)
- Other considerations (where relevant)

[3]The write-up should include a clear justification for changing the default settings in standard or tailored stress tests.

Appendix III. Treatment of State-Owned Enterprises

This appendix discusses the criteria for excluding the debt of a public enterprise from the D$A.

1. Removing a public enterprise from the DSA can be considered if the enterprise can borrow externally without a public guarantee and its operations pose limited fiscal risk. If the enterprise is judged to meet these conditions, its external debt would be exclntidf lim1edb(li8 ( )113 (d)11.6 (f))-2xte

Appendix IV. Long-Term Macroeconomic Projections (Beyond 5 Years) and Financing Assumptions

Macroeconomic projections (beyond 5 years)

1. Projections about policy should reflect several considerations (with assumptions carefully justified):

- Regarding fiscal policy, care needs to be taken in assuming a long-term structural improvement in the primary balance. Empirical evidence suggests that short-run improvements in the primary balance are rarely sustained over the longer term. Permanent improvements need to be justified, such as due to the introduction of a fiscal rule or other structural changes to policies or institutions. Further, long-term fiscal policy should take account of spending pressures associated with making progress towards a country's development goals (for example, the SDGs).

- Natural disasters or persistent domestic instability lower long-term growth prospects. Countries exposed to frequent natural catastrophes and fragile states suffer economic disruptions and loss in resilience that hamper long-term growth prospects. One way to account for this is to incorporate into the baseline the average annual expected impact of natural disas

financing, should be examined in terms of their cost and risk implications under the baseline and risk pricing assumptions.[6]

5. Domestic financing should be expected to evolve over the medium to long term. The pace at which domestic debt markets can absorb larger debt with longer maturities depends, among other things, on macroeconomic stability, the desire not to crowd out private sector borrowing and investments, domestic savings rate, as well as market microstructures.[7] As domestic issuances increase, the need to borrow externally is reduced, helping governments to mitigate external debt vulnerabilities emanating from exchange rate depreciation.

6. Broadly, countries can be categorized into three groups – low, moderate and mature market development:

- Countries with low domestic government debt market development will rely heavily on short-term financing (T-bill issuance) and central bank financing.
- Countries with a moderate domestic government debt market development will display less reliance on short-term and central bank financing and would have begun issuing government bonds with medium-term maturities (3-7 years) and contracting commercial loans. Government domestic debt will be typically largely held by domestic banks.
- Countries with mature domestic market development would display a broader range of government bonds, with longer-term maturities (greater than 7 years) being issued regularly. It is likely also t-0.6 (i)9to7 (l)-0.49to7 (l)-0.49t8.9 (o)2.4- (u)1vctw 27.5453to7 (l)-r4 (y)-h.1 (o)-t0.49t8.7o (ss)-0.6 (u)-0.7 (g)-5.97

Table AIV.1. Average Cost of Borrowing (LICs and EMs)

Decile	10	20	30	40	50	60	70	80	90
GDP per capita*, US$	576	1019	1467	2816	3542	4852	6501	9333	13636
Implied interest rate, percent	2.8	3.1	3.4	3.8	3.9	4.1	4.3	4.5	4.7

* Relationship based on average GDP per capita during 2007-2016.

Source: Fund staff calculations.

Appendix V. HIPC Initiative and MDRI

HIPC Initiative and MDRI debt relief should be accounted for in the baseline or in a customized scenario, depending on a country's HIPC status. The DSA should include the following baseline and customized scenarios (see section V.D. for a further discussion of customized scenarios):

- For post-completion point countries, the DSA should incorporate HIPC Initiative and MDRI debt relief in the baseline scenario. This assumption of full debt relief on HIPC terms from all external creditors should

Appendix VI. How Stress Tests Work in the DSF: Illustrative Examples

This appendix explains how shocks in the standard stress tests result in a deterioration in the relevant debt indicators through interactions among key variables.

1. Stress tests in the DSF are conducted by adding a temporary shock onto the baseline macroeconomic indicators (e.g., real GDP growth rate, primary balance, and exchange rate). They are partial-equilibrium (rather than general-equilibrium) analyses meaning that shocks are simulated through changes in a small number of variables with other variables kept unchanged.[1] The impact of stress tests is channeled in two ways: through changes in **indebtedness and debt service** (numerators of the debt burden indicators) and through changes in **the capacity to repay** (denominators of the debt burden indicators). Figure AVI.1 illustra10.4 (t)-11.7 10.5hde a(7td.ŧ3 (a)1)td.g[t(t)]TJ8.77

Appendix VII. The Use of the Probability Approach in Borderline Cases

1. The probability approach focuses on the evolution of the probability of debt distress over time, rather than on the evolution of debt burden indicators. Under the probability approach, the country-specific probability of debt distress is directly calculated from the estimated probit equations, using country-specific debt indicators and other key economic variables, along with global economic growth.[1]

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where $@_{\wp}$ represents one of the four different debt burden indicators (PV of debt to GDP, PV of debt

below a threshold but with small margins. Thus, the probability approach could be used to both upgrade and downgrade a mechanical rating under the traditional approach.

4. In practice, the following borderline cases can be considered:

- A borderline **low/moderate** case is one where: (i) debt burden indicators are below thresholds in the baseline scenario, but (ii) a threshold is nearly breached under a standardized stress test, or there is a small breach of a threshold under a standardized stress test.

- A borderline **moderate/high** case is one where: (i) stress tests result in one or more breaches, and (ii) a threshold is mand 5(h2ei)8. 7 0 Td (2)Tj 0.005 Tc -0.f -0.00 [(m)-4.4errr9 (t)14 b71 (e)9.4 b71ilitc -0.0y(

Kaminsky, G, and C. Reinhart, 1999, “The Twin Crises: The Causes of Banking and Balance-Of-