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Reimagining the US Sovereign Loan Guarantee Program

A Cost-Effective Strategy for Supporting Developing Country Partners

SCOTT MORRIS · ROWAN ROCKAFELLOW · DALEEP SINGH

Abstract

The global pandemic, combined with multiple economic shocks and increased global interest rates, has intensified debt risks and limited the fiscal space of lower-income and emerging market governments. The Biden administration has recognized the need to address these challenges and compete with China's Belt and Road Initiative by providing direct and concessional support to developing country partner governments. However, current efforts have primarily focused on scaling up private financing channels, leaving partner governments with limited options for direct support. This paper proposes the reimagining of the US Sovereign Loan Guarantee (SLG) program as a means to mitigate debt vulnerabilities and support governments in dire fiscal straits.

This paper begins by reviewing the functions and history of the SLG program, which has been utilized sporadically and primarily as a foreign policy instrument. By examining wider usage of guarantees from a cost-benefit perspective, the paper evaluates the potential value of expanding the SLG program and establishing it on a sustainable and enhanced basis. The analysis indicates that an expanded SLG program, carefully targeted to minimize risk for the US government and maximize benefits for partner governments, could generate significant savings for partner governments while costing the US government less. The model suggests an initial savings ratio of $3.5 billion for partner governments for every $1 billion of cost to the US government, with the potential for further leverage if funding is provided on a revolving basis.

Given the urgent financial needs of developing country governments, the paper argues for the immediate deployment of a reformed and expanded SLG program. In addition to lessening the financial challenges facing partner governments, SLGs provide a uniquely swift, scalable, and efficient instrument to compete with China's global lending activities. The paper concludes by recommending reforms to the governance of the program to formalize its operations, improve risk management, and enable its expanded use in support of US development objectives.

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Introduction

Multiple economic shocks have severely limited the borrowing capacity and fiscal space of lower-income and emerging market governments. Debt stresses had already begun to emerge prior to the 2020 global pandemic, driven by an extended period of borrowing with large financing packages on offer from commercial lenders and the Chinese government under the auspices of the Belt and Road initiative. The pandemic and its economic effects, combined with a significant increase in the global interest rates, further exacerbated debt risks and made access to new financing on sustainable terms an urgent challenge across the developing world.

The Biden administration has sought to mitigate some of these challenges with targeted initiatives, relying largely on grant-based humanitarian and health assistance that has traditionally dominated US foreign aid and tends to flow indirectly via non-governmental channels. But a key gap in the US assistance portfolio is direct and concessional support for developing country partner governments. Recently, the US government has committed to stepping up its support for infrastructure finance as an alternative to China's Belt & Road initiative. But even here, efforts to date have largely sidestepped partner governments and their financing needs in favor of scaling up private financing channels. While these efforts undoubtedly hold appeal for developing country partners, they would also welcome more direct measures of support at a time when their budgets are under significant stress to meet a growing spending burden.

This is a key dilemma arising from the US government's desire to compete with the Chinese government for greater influence in the developing world. China's signature Belt and Road initiative has brought hundreds of billions of dollars in direct financial support to governments and government-sponsored entities in developing countries since it was launched in 2013, during a period when just under 4% of US foreign assistance went directly to counterpart governments.[1] The pace and scale of lending by China to these governments has been so great over the past decade that many of them are now at risk of debt distress.[2] In responding to China – and offering the developing world a way out of their current distress—the United States now must consider a strategy that is responsive to debt vulnerabilities by doing more to offer direct support for governments in dire fiscal straights.

Against this backdrop, we recommend that the US government reimagine an existing program that provides guarantees on partner governments' debt, which both enables greater access to commercial

1 Jordan accounts for most of this support. For all other developing country governments, the US government provides direct support of less than $400 million per year out of an annual aid budget of $51 billion: Kenny & Morris, "Biden's Foreign Aid is Funding the Washington Bubble," *Financial Times,* May 6, 2022.

2 Large-scale Chinese lending coincided with high levels of commercial lending during the past decade. While multilateral lenders were also among the largest lenders by volume over the same period, the non-concessional lending terms associated with commercial and Chinese lending have had the most pronounced impact on debt sustainability since they significantly increased the cost of borrowing for developing country governments. As a result, debt service costs have increased dramatically for these borrowers: World Bank. "World Debt Report 2022," *World Bank*, September 21, 2022.

financing and greatly reduces its cost. Sovereign loan guarantees have been offered by the US government on an *ad hoc* basis in a small number of cases over the past three decades. Israel has the been the primary beneficiary, but guarantees have also been issued three times for Ukraine's government in the past decade, as well as Iraq, Jordan, Tunisia, and Egypt. Because guarantees have been used primarily as a foreign policy instrument, they have seldom been subjected to scrutiny as instruments of economic and development policy. Do they represent good value? That is, how does the "subsidy" appropriation cost borne by the US government (reflecting the risk of default) compare to the benefits realized by the partner government? Are there a wider range of use cases that would make sense from this cost-benefit perspective?

This paper reviews the functions and history of the sovereign loan guarantee (SLG) program (Section One), examines wider usage of guarantees from a cost-benefit perspective (Section Two), and proposes reforms to the governance of the program to formalize its operations beyond *ad hoc* arrangements to establish it on a sustainable and enhanced basis (Section Three).

Our model finds that an expansion of the SLG program, one that is nonetheless well-targeted to minimize risk for the US government and maximize benefits for partner governments, would initially generate savings of $3.5 billion for partner governments for every $1 billion of cost to the U.S. government. And if US government funding for the program were provided on a revolving basis, this 3-to-1 leverage would grow further still over time.

Given the degree of financial distress facing developing country governments, there is a compelling and urgent case for deploying the US sovereign loan guarantee program to its fullest capacity right now. And as the administration attempts to mount a competitive response to the Chinese government in the developing world, and lawmakers increasingly see appeal in financial instruments with greater 'bang for buck' in an environment of constrained fiscal capacity, the SLG is the instrument best suited to moving quickly and efficiently.

Section One. Functions and history of the sovereign loan guarantee (SLG) program

How a loan guarantee functions

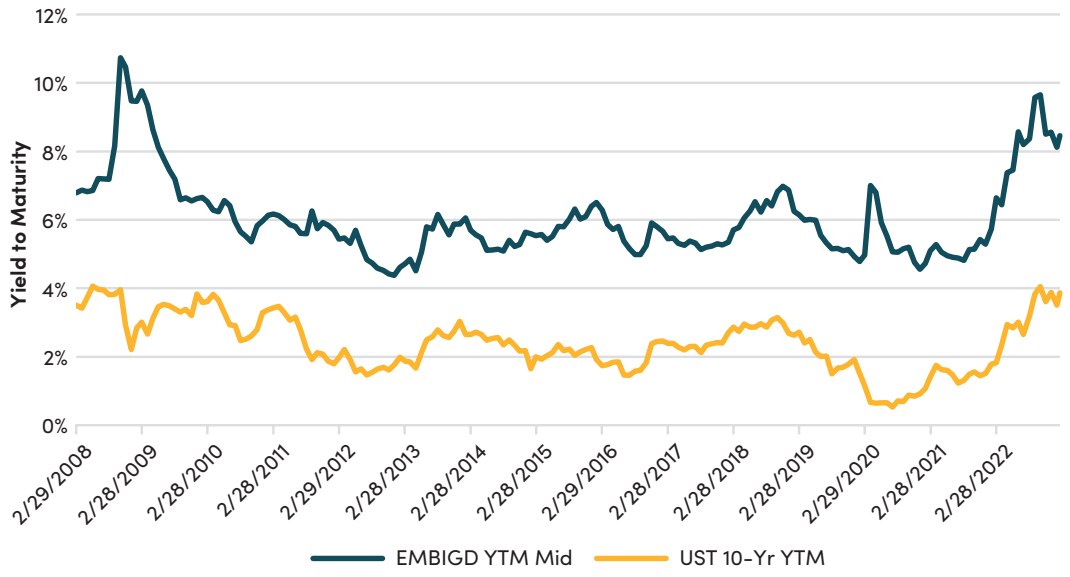
In issuing a sovereign loan guarantee, the United States agrees to repay commercial lenders should a sovereign borrower default on a given bond or loan. Lenders, therefore, treat the guaranteed debt in much the same way they would treat a US sovereign debt issuance, enabling the borrower to access capital on far more favorable terms, particularly during periods of elevated stress in capital markets.[3]

3 Morris, Cameron, & Rockafellow, "Greening the Sovereign Bond Guarantee Program," *Center for Global Development*, February 7, 2022.

In effect, a US sovereign loan guarantee confers the highly favorable US cost of borrowing on another sovereign.

When low- and middle-income countries can access international capital at all, they often face interest rates well above those for established sovereign borrowers like the United States. The differences in interest rates applied to different borrowers, or "spread," reflects the risk levels associated with lending to each borrower. SLGs mostly eliminate this spread by eliminating the risk differential. For context, the spread between emerging market's bond yields and the US government's borrowing costs has averaged 367 basis points since 2008 (see Figure 1).[4]

FIGURE 1. The spread between US and emerging market borrowing costs (the latter measured by JP Morgan EMBIGD index yields) ranged from 255–769 bps since 2008, averaging 367 bps



Source: US Treasury 10-Year YTM data from Bloomberg (ticker GT10:GOV), JP Morgan EMBIGD Index YTM data from JP Morgan (ticker JPGCBLYD). For information on EMBIGD composition, see here.

While SLGs can be effective tools for enhancing capital access to low- and middle-income country governments, they also create contingent liabilities for the US government. A loan guarantee exposes US taxpayers to risk that the borrower will default, obligating the United States to make debtholders whole if the borrower fails to do so. To account for this risk, a subsidy appropriation is set aside for each guarantee, the amount of which is a function of the estimated risk of default. On this basis, we

4 We use the Zero-volatility spread (Z-spread) of J.P. Morgan's EMBIGD emerging markets sovereign bond index as a proxy for the spread between emerging market bond yields and US Treasury yields. For more information on the makeup of the EMBIGD index, see the J.P. Morgan EMBI Product Overview. There is every reason to suspect that low-income countries, representing higher credit risks for bond investors than middle-income countries, pay even higher premiums on their commercial borrowings over US Treasury yields than the emerging market countries included in J.P. Morgan's EMBIGD index.

can evaluate the economic value for money of an SLG by comparing its subsidy cost (borne by the US government) to the reduction in borrowing cost enjoyed by the counterpart government.

SLGs only make economic sense under a specific set of credit conditions. The higher a country's borrowing costs—and the more fragile its financial circumstances—the more valuable SLGs can be. Countries with high borrowing costs benefit from SLGs far more than those with low borrowing costs (high credit ratings). Previous analysis of past US loan guarantees shows that the yield of US guaranteed bonds is equal to the prevailing interest rate US Treasury bills of equal tenor plus a small "illiquidity premium."[5] This premium reflects the fact that SLGs have been seldom used, and SLG debt is rarely included in major bond indices or traded actively in secondary markets. Expanded use of SLGs may drive down the illiquidity premium by making SLGs a more common feature of the emerging market financial landscape.

From a budget perspective, it is expensive for the US government to guarantee the bond issuances of countries with poor credit ratings, even if those guarantees are never called. Federal accounting rules require that any loan or guarantee issued by a US government agency come with a "subsidy cost"—a payment set aside as a security against the expected value of default.[6] Subsidy costs are paid by the agency issuing the loan/guarantees using appropriated funds and are held in a Treasury "financing account" until successful repayment of the loan/guarantee.[7] Importantly, subsidy rates—the share of the loan/guarantee principal set aside as a subsidy cost—are inversely associated with recipient credit ratings. The lower a country's credit rating, the higher the risk associated with a guarantee, and therefore the higher the subsidy cost of new SLGs to that country. Although subsidy funds are returned to the Treasury if the loan/guaranteed bond is successfully repaid, those funds are unavailable for any other use throughout the lifetime of the US contingent liability. This means that there is an opportunity cost in the federal budget generated by every SLG issuance that increases as borrower-country credit ratings decrease.

Previous research suggests there is a "Goldilocks zone" for SLGs: a set of countries whose credit ratings are high enough that subsidy costs can be kept to a minimum, but low enough that credit enhancements have high economic value. This tension between risk and reward is the defining characteristic of SLGs from an economic perspective. Previous US guarantees have been issued to countries with Moody's credit ratings Ca-Baa3. However, some guarantees failed a cost-benefit test, with subsidy costs that outweighed the reduction in borrowing costs, indicating that countries on the low end of this credit rating distribution may be poor candidates for future SLGs.[8]

5 Morris, Cameron, & Rockafellow, "Greening the Sovereign Bond Guarantee Program," *Center for Global Development*, February 7, 2022.

6 OMB, "OMB Circular No. A-11, Section 185," *The White House*, 2022.

7 OMB, "OMB Circular No. A-11, Section 185," *The White House*, 2022.

8 Morris, Cameron, & Rockafellow, "Greening the Sovereign Bond Guarantee Program," *Center for Global Development*, February 7, 2022.

Loan guarantees in the FCRA era

The SLG program as it exists today has its origins in the early 1990s, following a longer history of military-related guarantees issued prior to the Federal Credit Reform Act of 1990 (see Box 1). The first non-military US sovereign loan guarantee was issued in 1990 under the new FCRA rules, when the George H. W. Bush administration guaranteed $400 million in Israeli borrowing to finance the settlement of Jewish refugees from former Soviet states.[9] Three years later, Congress appropriated subsidy funds for a much larger USAID guarantee of $10 billion in Israeli government bond issuances, allocated over five years.[10] This was the first of 14 sovereign bond guarantees issued by the agency to various counterpart governments. In total, sovereign loan guarantees have helped Israel, Egypt, Tunisia, Jordan, Ukraine, and Iraq access $23.8 billion in commercial financing.

TABLE 1. Portfolio of SLGs issued since 1993

Country	Year of Issuance	Guaranteed Amount (Million USD)	Tenor of Guaranteed Bond (Years)
Israel[11]	1993	9199	30
Israel	2003	4100	30
Egypt	2005	1250	10
Tunisia	2012	485	7
Tunisia	2014	500	7
Jordan	2014	1250	7
Jordan	2014	1000	5
Ukraine	2014	1000	5
Ukraine	2015	1000	5
Jordan	2015	1000	7
Jordan	2015	500	10
Tunisia	2016	500	5
Ukraine	2016	1000	5
Iraq	2017	1000	5

Source: USAID FY2020 Agency Financial Report.

To date, each SLG has had a dedicated appropriation, with conditions attached, through the annual congressional appropriations process. The Congressional Research Service indicates that "section 122 of the Foreign Assistance Act (FAA) of 1961 (P.L. 87–195) grants basic authority to the President to provide loans [...] including sovereign loan guarantees."[12] Yet, with no revolving fund or other pool of existing appropriations to draw from, it appears in practice that each guarantee issuance has

9 Nowles & Mark, "Israel's Request for Loan Guarantees," *Congressional Research Service*, July 26, 1994.
10 Nowles & Mark, "Israel's Request for Loan Guarantees," *Congressional Research Service*, July 26, 1994.
11 Israel's 1993 SLG allowed Israel to issue $2 billion in U.S.-guaranteed 30-yr bonds annually from 1993–1997: see Nowles & Mark, "Israel's Request for Loan Guarantees," *Congressional Research Service*, July 26, 1994.
12 Tarnoff, "U.S. Foreign Assistance: USAID Loan Guarantees," *Congressional Research Service*, July 18, 2017.

required dedicated funding through the appropriations process. The need for congressional action sets a high bar for the program, which limits overall uses and likely limits candidate countries to those that meet a pressing foreign policy objective. Further, it generates a temporal mismatch between policy dialogue with counterpart governments and the legislative process. Given the considerable lags involved in the annual budget and appropriations process, prospective guarantees need to be well anticipated, or alternatively, guarantees under discussion with a counterpart government have to wait for congressional action. For many governments, this introduces considerable uncertainty about timelines and outcomes when it comes to their own public financial management.

BOX 1. The Pre-FCRA History of Federal Loan Guarantees

The executive authority to issue loans and loan guarantees to foreign governments was enshrined in the Foreign Assistance Act of 1961, but it was not the only guarantee authority established during this period.[13] Capitalizing on favorable federal accounting rules, the 1960's and 1970's witnessed a dramatic expansion in the use of federal guarantees as agencies sought to subsidize specific forms of borrowing for everything from education to railway development.[14] But the most significant uptake of loan guarantee issuances came from the agency that also pioneered the practice of issuing federal loan guarantees to foreign governments: the Department of Defense.[15]

> Between 1974 and 1984, almost all foreign military financing took the form of guaranteed loans provided through the U.S. government's Federal Financing Bank. In the global recession of the 1980s, repayment of these loans was difficult for developing countries. Congress authorized debt refinancing and debt reduction plans to mitigate these problems. By 1990, DOD changed its financing focus from guarantees to predominantly grants.[16]

In large part, the proliferation of federal loan guarantees following between 1960 and 1990 is a product of how the federal government approached guarantees from a budgetary standpoint during that period:

> Under 1965 budget rules, a direct loan would have to show up in the budget as a total loss in the year it was made, even though most of it would be paid back with interest in future years. In contrast, a guaranteed loan, which placed the full faith and credit of the United States behind a private bank loan, would appear to have no up-front budget cost at all—because the government's payments for defaults and interest subsidies would not occur until later years.[17]

13 Tarnoff, "U.S. Foreign Assistance: USAID Loan Guarantees," *Congressional Research Service*, July 18, 2017.
14 New America, "Education Policy: Student Loan History," *New America*, July 27, 2018.
15 Morgan, "13 Arms Buyers in Default on Interest to US," *Washington Post*, July 12, 1982.
16 Schinasi. "Defense Trade: Status of the Defense Export Loan Guarantee Program." General Accounting Office, December 1, 1998.
17 New America, "Education Policy: Student Loan History," *New America*, July 27, 2018.

This "annual cash flow" basis of accounting enabled the DOD and other federal agencies to rack up enormous contingent liabilities in the form of outstanding loan guarantees without requiring them to provision funds against the possibility of the borrower's default. Between 1976 and 1982, the Pentagon loaned or guaranteed $19 billion to finance foreign military aid.[18] Against these liabilities, the DOD maintained some reserve funds to cover defaults. But by February 1982, when 13 of the Pentagon's recipient governments had fallen behind on their payments, that reserve fund had dwindled to $860 million, prompting concern "that waiving payments, already permitted for Israel and Egypt, [was] destined to become a major and costly part of future military aid worldwide."[19]

To reform the way federal agencies approach loan guarantees and limit the exposure of US institutions to foreign defaults, President George H.W. Bush signed the Federal Credit Reform Act (FCRA) into law as part of the Omnibus Reconciliation Act of 1990. This bill changed the budgetary treatment of federal loan guarantees from the "annual cash flow" basis described above to an "accrual" basis.

The accrual basis of accounting requires the issuer of a loan guarantee to record a "subsidy cost" expense—defined as "the estimated long-term cost to the government of a direct loan or a loan guarantee, calculated on a net present value (NPV) basis, excluding administrative costs"—in the year of issuance.[20] Under FCRA, federal agencies must estimate the expected value of the cost of every guarantee they issue. This expected value calculation is then discounted using the "yields of Treasury securities that mature on dates comparable to those on which the loans are substantially disbursed"—a calculation that resembles the formula below:[21]

(1) *Subsidy Cost* = NPV(*Expected Value of Guarantee Issuance*)
(2) *Subsidy Cost* = NPV[*Probability of Default*' (*Loan Principal* + *Loan Interest*)]

FCRA changed the federal government's approach by imposing an immediate—if fractional—cost on federal agencies for every guarantee issuance. The subsidy cost is paid by the guarantor agency to a Treasury account, where it is held for the duration of the guarantee. If the borrower defaults on the guaranteed loan, the subsidy cost is allocated toward the compensation of the lenders. If not, the subsidy cost is cycled back into the Treasury as budgetary savings upon successful repayment of the guaranteed loan.

18 Morgan, "13 Arms Buyers in Default on Interest to US," *Washington Post*, July 12, 1982.
19 Morgan, "13 Arms Buyers in Default on Interest to US," *Washington Post*, July 12, 1982.
20 2 U.S.C. §661a(5)(A); P.L. 101-508, 2010
21 Gnanarajah, "Federal Credit Programs," *Congressional Research Service*, September 4, 2015.

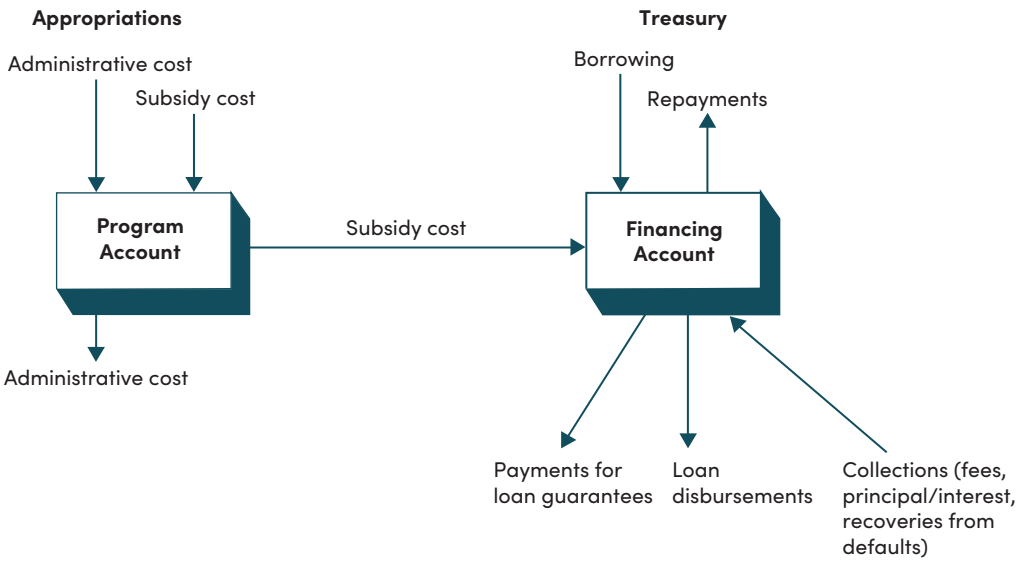
Budgeting dynamics for SLGs

FCRA requires that any federal agency issuing a loan guarantee set aside a portion of the guarantee principle as a "subsidy cost" against the expected value of default. This initial subsidy cost must be appropriated by Congress and paid by the implementing agency into that guarantee program's "financing account"—a nonbudgetary Treasury account where subsidy funds remain throughout the life of the guarantee.[22] Subsidy costs are calculated on a case-by-case basis, with the "subsidy rate" (the share of guarantee principal required as subsidy cost) reflecting the expected value of the guarantee's liability to the US government. The more likely the borrower is to default, the riskier that loan is to guarantee, and the higher the subsidy cost.[23] Subsidy costs are re-estimated annually to account for changes in the default risk of guaranteed loans. If the recipient of a US guarantee defaults, the subsidy rate of its guarantee is upwardly revised to 100 percent.[24] When the borrower of a US-guaranteed loan repays their obligation, the subsidy cost of that loan is downwardly revised to zero and the balance is returned to the Treasury as a means of financing the federal deficit.[25]

Financing accounts pool and distribute the risk of individual loans and guarantees across that program's entire portfolio. Default claims on an individual guarantee may therefore be paid using the subsidy costs of *any* loans or guarantees in that program's portfolio. If an individual guarantee's default claims exceed the balance of that program's financing account, the financing account must borrow additional funds from the Treasury in order to make such payments.[26] FCRA provides government agencies with indefinite budget authority to borrow necessary funds from the Treasury to adjust for upward revisions of subsidy costs. However, if the government's "subsidy cost calculations are accurate, the financing account will break even over time as it uses its collections to repay its Treasury borrowing"[27] (see Figure 2).

22 OMB, "OMB Circular No. A-11, Section 185," *The White House*, 2022.
23 Havens, "Loan Guarantees by the Federal Government," General Accounting Office, March 29, 1977.
24 OMB, "OMB Circular No. A-11, Section 185," *The White House*, 2022.
25 Department of the Treasury, "Financial Statements of the United States Government for the Fiscal Years Ended September 30, 2021 and 2022," *U.S. Department of the Treasury*, February 17, 2022.
26 OMB, "OMB Circular No. A-11, Section 185," *The White House*, 2022.
27 Kushner et al., "U.S. Needs Better Method for Estimating Cost of Foreign Loans and Guarantees," *General Accounting Office*, December 19, 1994.

FIGURE 2. GAO diagram of the federal government's post-FCRA financing structures for loans and loan guarantees



Source: GAO Report: U.S. Needs Better Method for Estimating Cost of Foreign Loans and Guarantees.

The SLG program is unique among federal loan and loan guarantee programs because, from a budgetary standpoint, it is comprised of a small number of very large liabilities. Because SLGs are so seldom used, SLG programs' financing accounts have rarely, if ever, had the requisite resources to cover the costs of even a single default. SLGs are also unique for the difficulty involved in estimating the subsidy costs of individual guarantees. When setting subsidy costs for student loan guarantees, the US Office of Education can model default probabilities using millions of data points from previous guarantees. SLG subsidy cost calculations, by contrast, require that the implementing agency make complex estimates based on very little data, as the countries receiving SLGs often have short credit histories and poor market access. As a result, SLG subsidy costs are determined by the same inter-agency panel that drafts SLG agreement documents, leveraging the various strengths of USAID, the OMB, the Treasury, and the Department of State.

FCRA "defines the subsidy cost of loan guarantees as the present value of cash flows from estimated payments by the government (for defaults and delinquencies, interest rate subsidies, and other payments) minus estimated payments to the government (for loan origination and other fees, penalties, and recoveries)."[28] In the context of SLGs, this expected value calculation incorporates some known quantities, but other variables are true estimates. For example, the NPV discount rate is the interest rate of US Treasury bonds matching the approximate maturity of the guaranteed bond. The total guarantee liability is a simple cash-flow calculation based on the guaranteed bond's

28 Kushner et al., "U.S. Needs Better Method for Estimating Cost of Foreign Loans and Guarantees," *General Accounting Office*, December 19, 1994.

principal amount and coupon rate. But the borrower country's probability of default and estimated US recoveries in a default situation are both far more difficult variables to estimate.

When private companies price a country's credit risk, they base their analysis on two factors: sovereign credit ratings composed by Moody's, Fitch, or S&P, and the secondary market yield of that sovereign's other outstanding hard currency bonds. The former reflects credit ratings agencies' estimates of the sustainability of existing debt burdens and scheduled repayments relative to hard currency reserves and government revenues. The latter reflects market sentiment on the sovereign in question's likelihood of default. While neither of these metrics provides a specific probability that a given country will default, they enable private sector lenders to ordinally compare different countries based on their macroeconomic stability, and price risk accordingly.

FCRA reformed the US Government's model for estimating government-to-government lending risk and standardized the Executive Branch's estimation methods to more closely mirror those of private credit ratings agencies.[29] This methodology is composed of three steps:

1. The Executive Branch (led by the OMB) rates countries on a seven-grade scale called the Interagency Country Risk Assessment System (ICRAS). ICRAS scores are evaluated by the OMB every three years.[30] As of 1994, ICRAS ratings were set according to the country's performance on 5 rating categories. These categories mostly pertain to 5-year expectations of macroeconomic indicators, including the country's "payments history, macroeconomics, debt burden, balance of payments adjustment capacity, and political and social factors."[31] It is unclear whether the ICRAS methodology has changed substantially since 1994 as neither current ICRAS ratings nor their component parts are a matter of public domain.[32]
2. A risk premium committee consisting of representatives from the OMB, US EXIM Bank, Department of State, and Department of Treasury convenes to transform ICRAS creditworthiness measures into estimates of country risk costs. The calculation method by which these risk costs are derived is not publicly disclosed, but a 1994 GAO report suggests that at least one member of the risk premium committee benchmarked risk premiums against those of private credit ratings agencies. The same GAO report critiqued the risk premium committee for basing its risk premium calculations on just 24 observations of

29 Kushner et al., "U.S. Needs Better Method for Estimating Cost of Foreign Loans and Guarantees," *General Accounting Office*, December 19, 1994.

30 Thomas & Brothwell, "OMB's Method for Estimating Bank's Loss Rates Involves Challenges and Lacks Transparency," *Government Accountability Office*, September 2004.

31 Kushner et al., "U.S. Needs Better Method for Estimating Cost of Foreign Loans and Guarantees," *General Accounting Office*, December 19, 1994.

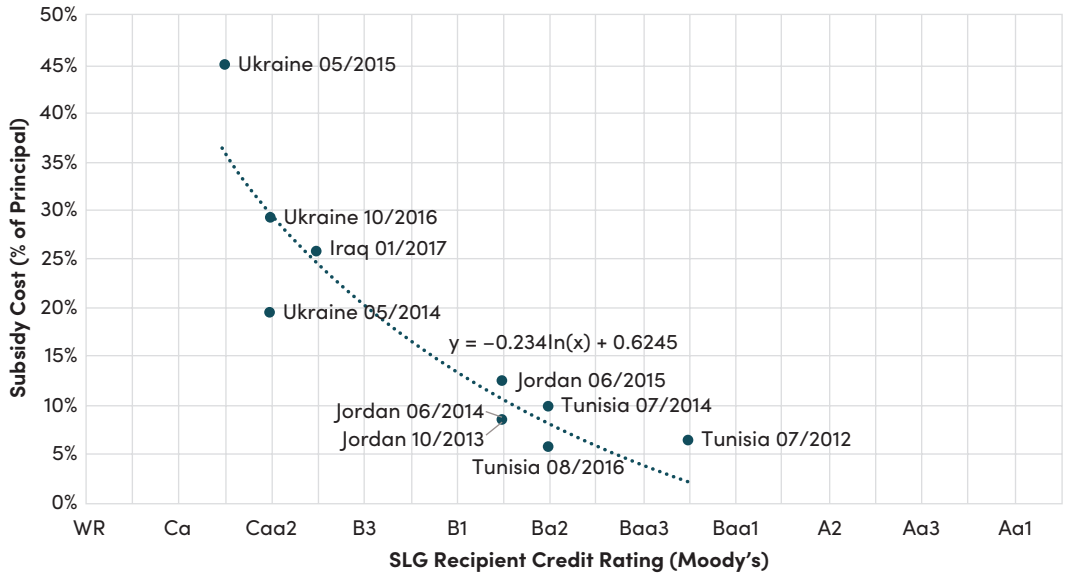
32 It is likely that the ICRAS ratings methodology has changed somewhat since the early 1990's. A 1994 General Accounting Office report refers to eleven ICRAS rating levels while a 2005 Government Accountability Office report refers to just seven ICRAS gradations.

previous bonds and extrapolating to obtain risk premiums for countries on the low end of the ICRAS rating distribution.[33]

3. The inter-agency SLG panel uses the target country's risk premium, interest rate cost, and fee income to calculate the SLG subsidy cost.[34]

Neither current ICRAS scores nor the risk premiums they correspond to are publicly disclosed, but the subsidy cost of historical SLGs are. Empirical research also shows that there is a high degree of correlation between credit ratings systems.[35] This paper's analysis, therefore, relies on Moody's credit ratings as proxy variables for ICRAS scores to evaluate the relationship between the creditworthiness of previous SLG recipients, and the subsidy costs of their respective guarantees. Figure 3, which shows this relationship, illustrates that previous SLGs have been limited to countries in the Caa1-Baa2 range of the Moody's credit rating distribution. Subsidy costs are considerably higher for countries with credit rating of B3 or lower, suggesting that like commercial capital markets, the US SLG panel prices risk using a logarithmic decay function—like the one estimated below—that exponentially increases SLG subsidies as recipient government credit ratings decrease.

FIGURE 3. Previous SLGs have been issued only to countries in the Ca-Baa3 range of the Moody's credit rating distribution, and subsidy costs are considerably higher for countries at the lower end of that range[36]



Source: Greening the US Sovereign Bond Guarantee Program: A Proposal to Boost Climate-Directed Sovereign Finance in Developing Countries.

33 Kushner et al., "U.S. Needs Better Method for Estimating Cost of Foreign Loans and Guarantees," *General Accounting Office*, December 19, 1994.

34 Kushner et al., "U.S. Needs Better Method for Estimating Cost of Foreign Loans and Guarantees," *General Accounting Office*, December 19, 1994.

35 Ruddy, "An Analysis of Bank Financial Strength Ratings and Credit Rating Data," *Risks*, August 26, 2021.

36 Blinken, "US Actions to Strengthen Ukraine's Economy," *Department of State*, February 14, 2022.

Once SLG subsidy costs have been estimated by the inter-agency SLG panel, the agreement is finalized, and any prerequisite conditions have been met, the implementing agency is responsible for finalizing and funding the SLG. This involves getting recipient-country approval to move forward with the guarantee, structuring the public bond issuance, and paying the subsidy cost.[37] Previous SLG subsidy costs were paid using funds appropriated to the Department of State's Economic Support Fund.[38]

No US SLG has been called to date, so all subsidy funds for previous SLGs have been returned as credits to the Treasury's general fund. If an SLG recipient were to become delinquent or default on a guaranteed obligation, the implementing agency would disburse funds from the relevant program account to make creditors whole.[39] FCRA provides implementing agencies with indefinite budgetary authority to borrow from the Treasury for this purpose. The implementing agency would then regard that disbursement for the guaranteed loan claim as a defaulted guaranteed loan receivable, assuming ownership of the borrower's debt.[40] It would therefore be responsible for implementing a plan to recover as much of the loan guarantee principal and interest as possible, using funds received to repay the Treasury for the cost of the upward subsidy cost revision.

In a situation where the US finds itself a creditor to a government at high risk of default, the Executive Branch has the authority to enter an "administrative work-out."[41] Work-outs are plans that offer options short of default for resolving troubled loans consistent with Paris Club principals, and may include "deferring or forgiving principal or interest, reducing the borrower's interest rate, extending the loan maturity, or postponing collection action."[42] Work-outs aim to minimize the cost to the US government of resolving troubled loans, and they may only be utilized if it is likely that the borrower will be able to repay its obligations under the work-out's terms.[43] If the effects of the work-out dramatically alter the cash flow of the outstanding liability, the difference in costs is recorded as a re-estimate of the SLG subsidy cost.[44]

37 SLGs do not necessarily have to support public bond issuances—the legislation surrounding them also allows the U.S. to guarantee private loans made to recipient governments. Some evidence exists to suggest that guarantees are more effective when they back private loans because they remove the element of uncertainty that accompanies a public bond issuance (private lenders usually set an interest rate before finalizing a contract, while public bonds must go to market before the borrower learns the precise interest rate that will be associated with the borrowing). See Landers & Aboneaaj, "MDB Policy-Based Guarantees," *Center for Global Development*, July 20, 2022.

38 Tarnoff, "U.S. Foreign Assistance: USAID Loan Guarantees," *Congressional Research Service*, July 18, 2017.

39 OMB, "OMB Circular No. A-11, Section 185," *The White House*, 2022.

40 OMB, "OMB Circular No. A-11, Section 185," *The White House*, 2022.

41 Kushner et al., "U.S. Needs Better Method for Estimating Cost of Foreign Loans and Guarantees," *General Accounting Office*, December 19, 1994.

42 OMB, "OMB Circular No. A-11, Section 185," *The White House*, 2022.

43 OMB, "OMB Circular No. A-11, Section 185," *The White House*, 2022.

44 It is worth noting that guarantees themselves are a complicating factor in sovereign debt restructurings. As a result, an expanded SLG program introduces the risk that debt restructurings could become more uncertain and drawn out where guaranteed debt is part of the overall portfolio.

If, after assuming ownership of a delinquent guaranteed loan and implementing an administrative work-out, the implementing agency is still unable to recover the full value of dispersed claims, any remaining balance owed to the Treasury would remain on the SLG Program financing account's balance sheet until Congressional appropriations enabled the SLG financing account to repay these loans.[45]

Policy conditionality in SLGs

Policy conditionality has been an important feature of SLGs. In seeking to lower a counterpart government's cost of borrowing, the US government also typically seeks policy commitments as a quid pro quo from that government. Such conditions can be associated with the borrowing itself and generally aimed at ensuring repayment or can be entirely unrelated to fiscal matters. Further, conditions may be delineated in appropriations legislation or by the inter-agency panel (consisting of the implementing agency (historically USAID), the Department of State, the Department of the Treasury, and the Office of Management and Budget) that convenes to craft SLG agreements.[46]

SLG conditions imposed by Congress have tended to be non-economic and unrelated to the fiscal policies of the partner governments.[47] For example, the $10 billion SLG issued to Israel in 1993, which was intended to mobilize funds for refugee resettlement in Israel following the collapse of the Soviet Union, included a congressionally-mandated condition related to adherence to the US-brokered Israel-Palestine peace process.[48] Similarly, a 2003 appropriation for an SLG for the government of Turkey—which was ultimately declined—would have mandated Turkey's cooperation with Operation Iraqi Freedom and prohibited the country from unilaterally deploying forces in Iraq.[49]

In contrast, the inter-agency panel that drafts SLG agreement documents for USAID is more focused on conditions related to debt management practices and overall fiscal and economic performance of the counterpart government. For example, Tunisia's 2014 SLG required that Tunisia meet IMF transparency standards, implementation of tax, customs, FDI, and banking reforms, and expansion of welfare support for vulnerable households.[50] None of these conditions were stipulated in authorizing legislation.

One limitation of the current SLG model is that the United States has little recourse against recipient countries that violate the terms of their SLG agreements. Once the recipient country issues a guaranteed bond, US obligations to guarantee that bond issuance cannot be revoked. It is plausible

45 Kushner et al., "U.S. Needs Better Method for Estimating Cost of Foreign Loans and Guarantees," *General Accounting Office*, December 19, 1994.
46 Tarnoff, "U.S. Foreign Assistance: USAID Loan Guarantees," *Congressional Research Service*, July 18, 2017.
47 For a table categorizing historical SLG conditions by the government body that imposes them, see Annex 1.
48 Nowles & Mark, "Israel's Request for Loan Guarantees," *Congressional Research Service*, July 26, 1994.
49 Young, "Emergency Wartime Supplemental Appropriations Act," P.L. 108–11, 117 Stat. 559 U.S. Statutes at Large, 2003.
50 US Department of State, "Loan Guarantee Agreement Between the United States of America and Tunisia," *Department of State*, June 3, 2014.

then that an SLG recipient could renege on its commitments after the guaranteed bond is issued. To some degree, this risk is mitigated by the recipient country's desire to avoid a conflict with US government counterparts, which could, among other things, jeopardize the offer of a future loan guarantee. Similarly, the US would also have some recourse through the recipient's IMF program, particularly where the SLG was tied to IMF conditions.

But the problem of ex post enforcement of conditionality could also be addressed by pursuing iterative guarantees, whereby the United States commits to backing a series of recipient country bond issuances over a period of several years. If the borrower fails to comply with SLG conditions, the US may reduce the value of future guarantees or even rescind its offer to guarantee future bond issuances.

The United States has opted for the iterative guarantee approach only twice—the 1993 and 2003 Israel SLGs. The approach was tested after Israel reneged on its commitment to refrain from building settlements on Palestinian land, prompting then President Clinton "to reduce the amount available to Israel in FY1994 by $435 million, equal to the amount Israel spent in the occupied territories in FY1993."[51] The failure of the 1993 SLG to influence Israeli policy is likely more reflective of Israel's improved financial position in 1994, and doubts over Clinton's willingness to punish Israel for further settlement construction (which was by no means discontinued following the 1993 reduction). Still, the Israel case is an illustrative example of how revolving guarantees could offer the United States improved leverage to ensure conditions are met.

Governance of the SLG program

Recent legislative changes have introduced uncertainty about which agency or agencies within the US government will administer the SLG program and initiate new guarantees. The Better Utilization of Investments Leading to Development (BUILD) Act of 2018, which created the US Development Finance Corporation, authorized the transfer of "loan accounts and the legal rights and responsibilities of the sovereign loan guarantee portfolio," from USAID to the "[DFC] or any other appropriate department or agency of the United States Government."[52] Following its passage, employees who had previously run the SLG and other loan guarantee programs at USAID were transferred to DFC, effectively removing USAID's existing capacity to analyze and structure guarantees.

51 Nowles & Mark, "Israel's Request for Loan Guarantees," *Congressional Research Service*, July 26, 1994.
52 Guthrie, "FAA Reauthorization Act of 2018," H.R.302, U.S. House of Representatives, 2018.

Yet, when it comes to initiating new guarantees, the program's home appears to remain unsettled, so much so that Congress has repeatedly sought answers from the Biden administration on the question:

> *the Secretary of State, USAID Administrator, Secretary of the Treasury, and DFC CEO shall jointly submit an updated report to the appropriate congressional committees detailing: (1) the current management of the Sovereign Loan Guarantee portfolio and financial exposure, including any duplication or financial management challenges; (2) the impact on each agency of a decision to transfer the portfolio in full to such agency, including any additional resources or legislative fixes required; and (3) the status of an interagency decision on permanent transfer and management of the portfolio.*[53]

As a newly formed development finance institution, the DFC was viewed sympathetically by the authors of the BUILD Act as an appropriate home for loan guarantees. At the same time, the new agency, like its predecessor OPIC, is generally characterized as a private sector investor. And given the history of the State department's policy control over the program, as well as Congress's role in each guarantee issuance, it appears that DFC would simply act as the fiduciary for the program, with no role in selecting guarantees, structuring policy conditions, or monitoring compliance.

Moreover, SLGs can be extremely expensive to provision for a federal agency, particularly when major foreign policy imperatives drive decision making. Ukraine's 2015 SLG on $1 billion in bond issuances cost USAID $446.5 million in subsidy. The BUILD Act did not appropriate new funds specifically to the DFC to fund SLGs, so any SLGs issued by the DFC would require the agency to tap other appropriations to fund SLG subsidy costs. Moreover, the contingent liabilities created by new DFC SLG issuances would almost certainly count against the DFC's $60 billion maximum contingent liability (MCL) limit, absorbing lending capacity that the Corporation could otherwise use in its private sector operations. Legislation was introduced by the 117th Congress to raise the DFC's MCL limit to $100 billion, which would alleviate some constraints on new DFC SLG issuances, but those efforts appear to have stalled since the election of the 118th Congress.[54] As a result, the question of subsidy provisioning on new guarantees remains, as do more fundamental questions about optimal program governance.

Regardless of the SLG program's unsettled oversight structure, significant interest in SLGs persists. Shortly before Russia's invasion of Ukraine in Spring 2022, the State Department published a press release indicating that the United States would guarantee a $1 billion Ukrainian bond issuance.

53 Coons, "Explanitory Statement Accompanying Division K, Department of State, Foreign Opperations, and Related Porgrams Act, 2022," US Senate, March 7, 2022.

54 Johnson, "United States Innovation and Competition Act, 2021," H.R. 4125, *U.S. House of Representatives*, 2021.

The press release did not indicate which U.S. agency would administer the guarantee, and the idea was ultimately dropped—likely because Russia's subsequent invasion reduced Ukraine's credit rating, making the guarantee more expensive to provision.[55] More recently, the Consolidated Appropriations Act of 2023 appropriated $4.8 billion under its Economic Support Fund and Assistance to Asia and Eurasia and Central Asia headings, and authorized the use of these funds and any previous Department of State, foreign operations, and related programs appropriations to fund the costs of "loan guarantees for Egypt, Jordan, Small Island Developing States, Tunisia, and Ukraine," among other programs[56]

We return to the question of program governance in Section Three.

Section Two. Economic costs and benefits of an expanded SLG program

In this section, we estimate the potential economic costs and benefits of an expanded SLG program. To do so, we first establish a list of candidate countries. SLGs are most effective as a development finance instrument, so we limit the list of eligible countries to those with gross national incomes in the low- to middle-income country range. This leaves 125 countries as candidates for potential SLGs. Our previous analysis further limited SLG candidate countries to those with credit ratings Baa3-Caa2. In this analysis, we broaden the upper limit slightly to evaluate the efficacy SLGs to countries with credit ratings as high as Baa1. This leaves 69 low- and middle-income countries with credit ratings Baa1-Caa2—the ideal range to maximize SLG impact (see Annex 3).

55 Blinken, "US Actions to Strengthen Ukraine's Economy," *Department of State*, February 14, 2022.
56 Connolly, "Consolidated Appropriations Act, 2023," H.R. 2617, *U.S. House of Representatives*, 2021.

TABLE 2. There are 69 countries that currently meet the credit rating and GNI conditions for inclusion in this cost-benefit analysis of SLGs

Too Risky for SLGs (WR – Caa3)	SLG Candidate Countries (Caa2 – Baa1)			Too Creditworthy for SLGs (A3 – Aaa)
• Argentina	• Albania	• Gabon	• Namibia	• Botswana
• Belarus	• Angola	• Georgia	• Niger	• Malaysia
• Ecuador	• Armenia	• Guatemala	• Nigeria	
• El Salvador	• Azerbaijan	• Honduras	• Papua New Guinea	
• Ghana	• Bangladesh	• India	• Paraguay	
• Lao PDR	• Benin	• Indonesia	• Peru	
• Lebanon	• Bolivia	• Iraq	• Philippines	
• Pakistan	• Bosnia and Herzegovina	• Jamaica	• Rwanda	
• Sri Lanka	• Brazil	• Jordan	• Senegal	
• Suriname	• Bulgaria	• Kazakhstan	• Serbia	
• Zambia	• Burkina Faso	• Kenya	• Solomon Islands	
	• Cabo Verde	• Kyrgyz Republic	• South Africa	
	• Cambodia	• Lesotho	• St. Vincent and the Grenadines	
	• Cameroon	• Madagascar	• Tajikistan	
	• Colombia	• Maldives	• Tanzania	
	• Dem. Rep. Congo	• Mali	• Thailand	
	• Costa Rica	• Mauritius	• Togo	
	• Cote D'Ivore	• Mexico	• Tunisia	
	• Dominican Republic	• Moldova	• Turkey	
	• Egypt	• Mongolia	• Uganda	
	• Ethiopia	• Montenegro	• Uzbekistan	
	• Fiji	• Morocco	• Vietnam	
		• Mozambique		
		• Nicaragua		

Source: Bloomberg. All credit rating data recorded as of 5:00 pm ET, 04/07/2023.

To estimate the savings generated by a hypothetical SLG, we must first know the target countries' cost of borrowing without credit enhancements. We estimate these costs using the yield to maturity of an existing long-term (7–13 year remaining) bond issued by the candidate country.[57] As of this writing, only 33 of the 69 countries that conform to the credit rating/income level criteria outlined above have outstanding dollar-denominated bonds with tenors of 7–10 years. As a result, this analysis focuses on those 33 countries (see Table 3). The remaining 36 candidate countries are listed in Annex 3.

57 Many of the target countries for SLGs have shallow credit markets, meaning that there are very few bonds issued by these countries that perfectly match the parameters of the hypothetical guaranteed bonds we use to estimate subsidy costs. We therefore limit our analysis to countries that have actively traded bonds broadly matching the parameters of the hypothetical SLG. This means that we give preference to bonds approaching 10 years to maturity with semiannual interest payments and bullet principal repayment at maturity.

TABLE 3. Credit ratings and unenhanced bond yields of SLG candidate countries

Country	Moody's LTFC Issuer Rating	Unenhanced Bond ISIN	Unenhanced Bond Issue Date	Unenhanced Bond Time to Maturity (Years from 04/07/2023)	Unenhanced Bond YTM (04/07/2023)
Angola	B3	US035198AF76	4/14/22	9.0	11.7%
Armenia	Ba3	US042207AD24	2/2/21	7.8	7.3%
Azerbaijan*	Ba1	XS1678625515	9/1/17	9.4	5.2%
Belize*	Caa2	USP16394AG62	3/20/13	10.9	12.8%
Brazil	Ba2	US105756CF53	4/13/23	10.5	6.1%
Colombia	Baa2	US195325BB02	1/28/03	9.8	8.0%
Costa Rica***	B2	US221597CR65	4/3/23	11.0	6.5%
Cote d'Ivoire*	Ba3	XS1632632037	6/15/17	10.2	8.3%
Dominican Republic	Ba3	US25714PEF18	9/23/20	9.5	6.8%
Egypt, Arab Rep.	B3	XS2391395154	9/30/21	10.5	14.6%
Gabon***	Caa1	XS2407752711	11/24/21	8.6	11.4%
Guatemala**	Ba2	US401494AT67	10/7/21	10.5	5.7%
Honduras**	B1	USP5178RAD00	6/24/20	7.2	9.7%
India	Baa3	US30216JAG04	1/18/23	9.8	5.2%
Indonesia	Baa2	US455780AT33	10/12/05	12.5	5.1%
Jamaica	B2	US470160AU62	2/28/06	12.9	6.5%
Jordan	B1	XS2199272662	7/7/20	7.3	7.8%
Kenya*	B2	US491798AL85	6/23/21	10.8	11.2%
Mexico	Baa2	US91086QAN88	4/11/03	10.0	5.4%
Mongolia	B3	US60937LAE56	7/7/21	8.3	8.7%
Morocco	Ba1	XS2595028700	3/8/23	10.4	5.9%
Mozambique*	Caa2	XS2051203946	10/30/19	8.4	14.7%
Nigeria	Caa1	US65412JAS24	9/28/21	10.5	12.6%
Paraguay***	Ba1	US699149AL48	1/28/22	10.2	5.3%
Peru**	Baa1	US715638DP43	12/1/20	9.7	4.9%
Philippines	Baa2	US718286CT23	10/13/22	10.0	4.7%
Rwanda	B2	US78347YAL74	8/9/21	8.3	10.5%
Senegal*	Ba3	XS1619155564	5/23/17	10.1	9.4%
Serbia	Ba2	XS2580270275	1/26/23	10.5	6.4%
South Africa	Ba2	US836205BC70	4/20/22	9.0	7.3%
Thailand	Baa1	XS2314663472	3/12/21	7.9	4.5%
Turkey	B3	US900123DG28	1/19/23	9.8	9.2%
Uzbekistan	Ba3	XS2365195978	7/19/21	8.5	6.7%
Average	**Ba3**			**9.7**	**8.1%**

*Denotes that the bond listed as a comparator is sinkable. **Denotes that the bond listed is callable. ***Denotes that the bond listed is both callable and sinkable. While these features influence the yields of the selected bonds, their effects on our estimates are limited.

Source: Bloomberg. All bond data recorded as of 5:00 pm ET, 04/07/2023.

Previous analysis shows that U.S.-guaranteed bonds price close to U.S. treasury bonds with equal maturities, plus a small illiquidity premium. Across the 12 historical U.S. SLGs, that illiquidity premium averaged 34 basis points, meaning that SLGs had yields that were, on average, equal to the corresponding treasury yield plus 0.34 percent. But how much, in dollar and percentage terms, would bond issuances at these rates save SLG target countries?

To calculate the economic value of an SLG, we first calculate the cash flow of payments that the country would pay on a guaranteed bond. In this case, the U.S. 10-year Treasury rate is 3.39 percent, so the guaranteed bond yield would be 3.73 percent. We then discount that cash flow using yield to maturity from a comparable bond issued by that same country (identified in Table 3) to derive the principal amount supported by this cash flow without an SLG. Holding the cashflow constant, the difference between the principal amounts raised with an SLG and the principal amounts supported by the cashflow discounted at market rates is the SLG's economic value (see Table 4).

The cost of an SLG to the U.S. government (its subsidy cost) is derived from a complex expected loss calculation described in the previous section. While the U.S. government's subsidy cost formula is not publicly available, we estimate subsidy costs using the target countries' credit ratings.[58] We then multiply the hypothetical SLG principal by the subsidy rate to estimate the total subsidy cost of each guarantee.

TABLE 4. Hypothetical SLG estimated costs and benefits

Country	SLG Subsidy Rate (%)	SLG Subsidy Cost (USD, mn)	Principal Amount with SLG (USD, mn)	Principal Amount without SLG (USD, mn)	SLG Economic Value (USD, mn)	SLG Economic Value (% of SLG Principal Amount)
Angola	16%	31.45	199.57	107.57	91.99	46.10%
Armenia	9%	3.06	34.73	26.03	8.70	25.05%
Azerbaijan	6%	5.81	105.62	93.34	12.28	11.62%
Belize	23%	1.68	7.20	3.57	3.63	50.38%
Brazil	7%	210.24	2,977.43	2452.38	525.05	17.63%
Colombia	3%	15.45	551.29	392.12	159.17	28.87%
Costa Rica	13%	13.01	99.61	79.83	19.77	19.85%
Cote d'Ivoire	9%	15.44	175.38	121.23	54.15	30.88%
Dominican Republic	9%	11.33	128.73	100.18	28.55	22.18%
Egypt, Arab Rep.	16%	86.57	549.30	240.33	308.97	56.25%
Gabon	19%	11.10	58.24	32.00	26.25	45.06%
Guatemala	7%	4.01	56.73	48.30	8.43	14.87%
Honduras	11%	7.26	67.36	41.85	25.51	37.87%

58 For the methodology used to estimate the subsidy costs of hypothetical SLGs using credit ratings, see Morris, Cameron, & Rockafellow, "Greening the Sovereign Bond Guarantee Program," *Center for Global Development*, February 7, 2022.

TABLE 4. (Continued)

Country	SLG Subsidy Rate (%)	SLG Subsidy Cost (USD, mn)	Principal Amount with SLG (USD, mn)	Principal Amount without SLG (USD, mn)	SLG Economic Value (USD, mn)	SLG Economic Value (% of SLG Principal Amount)
India	4%	144.67	3,536.25	3147.60	388.64	10.99%
Indonesia	3%	35.14	1,253.42	1123.58	129.85	10.36%
Jamaica	13%	13.49	103.25	82.63	20.62	19.97%
Jordan	11%	9.97	92.52	66.75	25.76	27.85%
Kenya	13%	19.12	146.36	81.80	64.57	44.11%
Mexico	3%	67.37	2,403.27	2104.08	299.19	12.45%
Mongolia	16%	3.07	19.50	13.10	6.40	32.83%
Morocco	6%	13.27	241.17	201.85	39.32	16.30%
Mozambique	23%	14.29	61.26	26.56	34.70	56.64%
Nigeria	19%	126.17	661.85	333.00	328.84	49.69%
Paraguay	6%	2.99	54.31	47.94	6.37	11.72%
Peru	2%	5.82	359.84	327.16	32.68	9.08%
Philippines	3%	15.44	550.86	509.53	41.33	7.50%
Rwanda	13%	5.64	43.20	25.37	17.83	41.27%
Senegal	9%	7.68	87.26	55.52	31.73	36.37%
Serbia	7%	12.47	176.56	142.68	33.88	19.19%
South Africa	7%	58.09	822.74	615.95	206.79	25.13%
Thailand	2%	14.02	866.08	812.18	53.89	6.22%
Turkey	16%	197.98	1,256.17	810.34	445.84	35.49%
Uzbekistan	9%	13.09	148.63	116.86	31.77	21.38%
Total		**$ 1,196.20**	**$17,895.68**	**$14,383.23**	**$3,512.44**	
Average	**6.7%**					**27.31%**

Source: Bloomberg. All bond data recorded as of 5:00 pm ET, 04/07/2023.

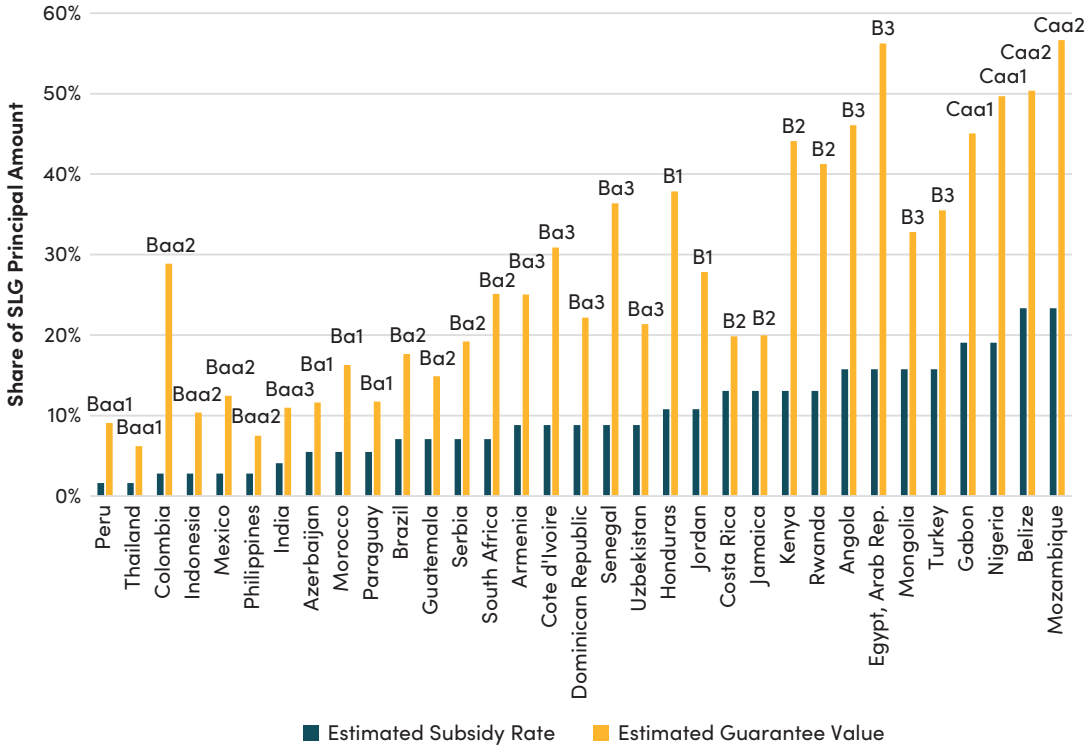
Table 4 shows that across this sample of countries, U.S. guarantees worth 20% of each candidate's IMF (International Monetary Fund) quota would cost the United States $1.2 billion in total subsidy costs. Individual SLGs would require subsidy costs ranging from 2–23 percent of the bond's principal amount and would average 6.7 percent of bond principal.[59] Our analysis shows that U.S. guarantees would enable countries to raise $17.9 billion for the same debt servicing obligations that would support $14.4 billion in bond issuances without SLGs, saving these countries $3.5 billion (27 percent).[60] The benefits derived by individual countries from SLGs range from 6–57 percent of SLG principal amounts, depending on how commercial markets price their unguaranteed debt.

59 Establishing 20% of IMF quota as a target is intended to identify a level of financing that is both sufficient to be of value to the recipient government, while not being so large to raise concerns about debt sustainability.

60 Technically, this model evaluates the difference in principal amounts supported by estimated cashflows holding payments constant and interest rates variable. As a result, the $3.5 billion in savings generated does not reflect a decrease in debt servicing costs, but an increase in principal amounts raised holding debt service costs constant. It may therefore be regarded as budgetary savings.

Each dollar set aside by the US government in subsidy costs would leverage almost $3 in savings for developing countries.

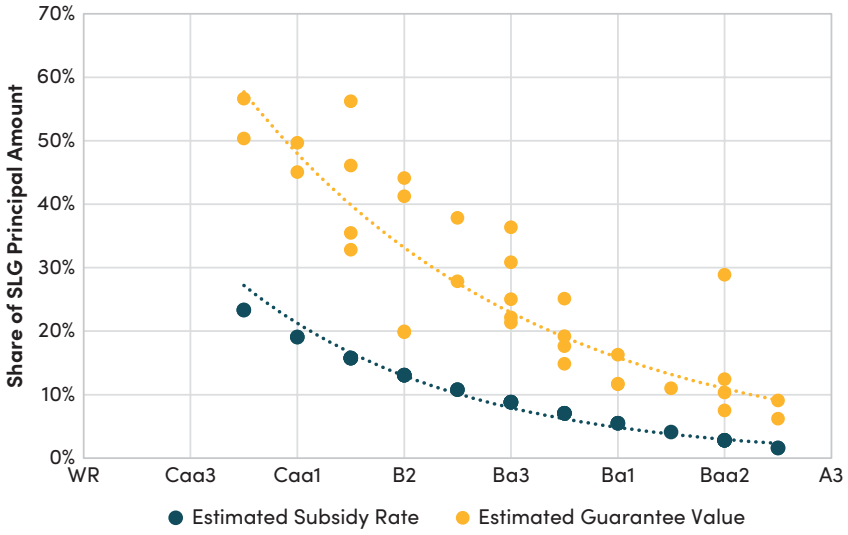
FIGURE 4. Hypothetical SLGs values and subsidy costs (as a share of principal) displayed in order of candidate country credit ratings



Source: Bloomberg. All bond data recorded as of 5:00 pm ET, 04/07/2023.

Figure 4 shows that countries with lower credit ratings benefit far more from loan guarantees than those with higher credit ratings. However, those benefits are not evenly distributed, even among countries with the same credit rating (see Figure 5). Countries with high borrowing costs for their credit rating (i.e., Columbia) achieve greater benefits from SLGs than those with low borrowing costs (i.e., the Philippines). As target country credit ratings decline, guarantee values increase at a far greater rate than subsidy costs. This may reflect that the subsidy cost model used here underestimates the risk of issuing guarantees to countries with low credit ratings, and thereby underestimates the subsidy cost of such guarantees. Still, it means that the economic case for SLGs gets stronger as the spread between U.S. Treasury yields and LIC/MIC debt yields increases.

FIGURE 5. The savings derived from an SLG is higher for countries with high borrowing costs relative to their credit rating



Source: Bloomberg. All bond data recorded as of 5:00 pm ET, 04/07/2023.

The analysis above shows that the economic case for SLGs as a tool of development finance is compelling, but it does not capture all the benefits derived from SLGs. By guaranteeing a country's debt issuance, the United States lends not only its favorable borrowing cost to candidate countries, but also the confidence associated with U.S. bond issuances. Debt issuances among low- and middle-income countries can be highly uncertain, and it is often difficult to determine how LIC/MIC debt will price on an ex-ante basis. SLG issuances, by contrast, consistently price very close to analogous U.S. treasury interest rates, making issuances easier to plan. There is also some evidence that SLGs have helped certain countries issue debt under conditions where they wouldn't otherwise be able to.[61] Capital market access and bond pricing accuracy are therefore key benefits of SLGs that are not quantified in the analysis of this Section.

61 USAID's SLG agreement with Iraq prior to Iraq's 2017 $1 billion US-guaranteed bond issuance included a condition that Iraq would unilaterally issue unenhanced international debt shortly after the US-backed bond. Iraq issued this unenhanced debt in the form of a $1 billion unilateral bond issuance in August 2017, 7 months after issuance of the US guaranteed bond. This was Iraq's first stand-alone international debt issuance since 2006. When Iraq's 2017 US-guaranteed bond went to market, the Government of Iraq did not have a Moody's credit rating. Moody's withdrew Iraq's provisional (P)Caa1 rating prior to an aborted 2015 Government Bond issuance, and did not assign the Government of Iraq a new credit rating (Caa1, Stable) until August 2017: seven months after the US-guaranteed bond issuance and days before Iraq's issuance of the $1 billion unenhanced bond. The Moody's ratings decision issued in August 2017 cites fiscal improvements that were expressed conditions of Iraq's January 2017 SLG agreement with the United States. It also points to "support from the international community [that] gives Iraq an opportunity to bolster the country's macroeconomic, institutional, fiscal, and balance of payments position" as a primary reason for Moody's "stable" outlook on Iraqi government debt. Similar examples could be cited for US guarantees of Jordanian, Tunisian, and Ukrainian debt.

Section Three. Proposed governance reforms to the SLG program

In this section, we identify key principles to guide the policy framework and governance for an enhanced and sustainable SLG program and offer views on a viable governance structure. If SLGs are going to play an expanded role in the US government's policy toolkit, then the program will need to be placed on sounder footing when it comes to governance roles, with greater clarity about the program's objectives. Governance and policy reform should be guided by key principles.

- SLGs should be embraced as a development finance instrument, and as such, their uses should be evaluated alongside other foreign aid instruments across the full array of the United States' developing country partners.
- The SLG program should have a revolving pool of subsidy resources to address the inefficiencies of dedicated congressional appropriations for each SLG issuance. Statutory authority and budget appropriations should be consistent with multi-year programmatic governance, rather than country-by-country governance. A key element here is to authorize a multi-year fund of subsidy appropriations, with expired subsidies recycled in the fund.
- Effective program governance requires appropriate incentives across federal agencies. The agency that bears the contingent liability, and the subsidy costs, should also play a meaningful leadership role in program governance.
- Program governance should reflect the nature of the engagement and the leading objectives of the engagement. SLGs are not simply a financing instrument. They also represent a mechanism for bilateral policy engagement, particularly on questions of economic and development policy.
- SLGs should no longer be viewed exclusively as instruments of foreign policy under very narrow use cases. Decisions to deploy SLGs, as well as the policy objectives reflected in SLG conditions, should reflect and be supportive of broader US goals related to development policy and economic statecraft.
- Other possible guiding principles: 'calibrated to maximize the likelihood of coordination with like-minded partners to multiply the development impact'; 'flexible to ratchet the lending amount higher or lower in response to the impact delivered and recipient country's policy response'; 'sustainable through iterative guarantees where appropriate to deliver long-term development impact'.

With these principles in mind, it is worth considering necessary changes to the current governance arrangements. The governance uncertainties created by the BUILD Act present a barrier to wider use of the instrument. As a starting point for reform, embracing the Act's preference for the US DFC to play the fiduciary role makes sense, particularly in the absence of an unequivocal case for any other agency.

Yet, under current arrangements, DFC leadership faces strong disincentives to make use of the instrument. There is no clear policy mandate within the agency, and there are no incentives to make use of SLGs under the DFC's financing framework. Nonetheless, the staff expertise and considerable exposure headroom at DFC, along with the strong bi-partisan political support for the agency, make it an attractive home for an expanded SLG program.

BUILD Act reforms could better ringfence and support the SLG program within DFC. Legislation could provide notional targets for SLG exposures, effectively carving out a defined amount of the DFC's statutory exposure limit for SLG use. In turn, annual subsidy appropriations could direct funds to SLGs, separate from DFC's regular appropriations. Legislation could also allow for a revolving subsidy fund, which over time, would diminish the need for annual appropriations. The revolving fund in particular would likely lead to fixed-period authorizations for the SLG program more generally, as a basis for congressional oversight. Finally, statutory changes could clarify the policy framework and cross-agency governance of the program. DFC's existing board, with cabinet-level participation from State, Treasury, USAID, and Commerce, is already well constituted to provide principal-level oversight of the program. This governance structure could be supported by a working level interagency group following the same model: State Department as chair, with participation from the other three agencies.

The working level group could be tasked initially with creation of a policy framework for expanded use of the SLG. As with the analysis in this paper, the framework could start with the broadest definition of eligibility supported by economic characteristics (I.e., identify the broadest possibility eligibility parameters consistent with cost-benefit analysis). From there, country and use selection could be guided dynamically to reflect development and foreign policy priorities. Articulation of priorities would be useful both for purposes of selecting eligible countries and for the purpose of shaping policy conditions for each SLG. For example, in an earlier paper, we proposed a "green" SLG, which would make the instrument available to support climate mitigation goals in high emissions developing countries. Further, this group could also assess demand for the SLG among prospective countries. Not all countries that appear to benefit in financial terms according to our analysis will necessarily find the offer attractive, whether due to policy constraints or dynamics related to public financial management in their governments. Dialogue with prospective governments would be valuable in assessing demand, as would observable metrics such as the composition of country demand for MDB lending, including the degree to which countries seek direct budget support from the MDBs.

When it comes to the function of policy conditions, a more sustained approach to SLGs could better align the instrument with the iterative nature of policy reform. As described earlier, the one-off nature of SLGs in most cases creates a challenge with affecting policy over time in partner governments. With the promise of multiple rounds of a guarantee, the conditionality framework could be more effective in tracking progress over time, with conditions in subsequent SLGs tailored to reflect policy performance under a prior SLG. The creation of a revolving subsidy window would provide the financing basis for considering a multi-guarantee structure for some partner

governments, with traunching of guarantees in tandem with policy performance akin to an IMF program.

Reform of the SLG program also presents an opportunity to address shortcomings in the risk models that inform the determination of subsidy rates. Because the underlying risk model mirrors the behavior of commercial lenders, the incentives for US policymakers favor pro-cyclicality. Yet, from a policy standpoint (whether considered in terms of foreign policy or development policy), the instrument will tend to have its highest value as a countercyclical instrument, providing support when commercial lending is faltering. Of course, the subsidy model is simply reflecting the reality that default risks are higher under certain conditions. But those risks could be mitigated with a staggered issuance schedule, stricter conditionality, and possibly joint guarantees with like-minded official creditors. In short, where the subsidy model makes the SLG unattractive from a cost-benefit standpoint, there may be other compelling reasons to pursue it. And in such circumstances, there are other ways to mitigate the risk of default and the costs associated with default.

Finally, it is worth recognizing that Initial capitalization of the subsidy fund that would make a larger SLG program possible represents a significant challenge at a time when US foreign aid is under stress. If annual foreign aid itself remains fixed or declines, then a scaled-up SLG program necessarily reflects a trade off with other areas of aid.

From this standpoint, it is worth emphasizing two points. First, this proposal is attractive in offering financial leverage. Per our estimates, the SLG program would initially provide leverage at a rate of $3 dollars in benefits for every dollar of appropriations. Traditional foreign aid offers no financial leverage, and therefore struggles to achieve similar scale in a cost-effective manner. As a result. Traditional aid also largely avoids providing significant grant support directly to counterpart governments. And again, if the SLG subsidy fund were established on a revolving basis, future need for subsidy appropriations would fall as retired guarantees free up new financing headroom, greatly improving the overall leverage of the program from an already favorable 3-to-1 rate.

Second, the value of the SLG program in offering counterpart governments direct, large-scale support represents an attractive alternative to Chinese financing. As a form of budget support, the SLG is much more flexible than the Chinese government's approach to project finance (which is tied to Chinese construction firms and typically comes with significant contractual restrictions), and the implied interest rate for SLG debt is much more favorable than average Chinese terms.[62] There is bipartisan support for a competition agenda targeting China's lending to developing country governments, and this proposal offers high value for money in that effort.

62 Gelpern et al. "How China Lends: A Rare Look into 100 Debt Contracts with Foreign Governments." Washington, D.C.: *Peterson Institute for International Economics, Kiel Institute for the World Economy, Center for Global Development, and AidData at William & Mary*, March 31, 2021.

Annex 1. Policy conditionality in historical SLGs (subject to availability of SLG agreement language)

Country	Year of Issuance	Legislative (Congressionally Mandated) Conditions	Implementing Agency (SLG Panel) Conditions
Israel	1993	Appropriations Bill • Constraints on use of SLG proceeds in disputed regions • (non-binding) Request that borrower consult US Government on economic policies	No agreement document available
Israel	2003	Appropriations Bill • Constraints on use of SLG proceeds in disputed regions • Compliance with economic conditions as defined by President	No agreement document available
Turkey	2003	Appropriations Bill • Guarantee of cooperation on ongoing military operations • Guarantee of cooperation on humanitarian efforts • Restriction on deployment of military forces • Compliance with economic conditions as defined by President	• SLG never implemented—no agreement text available
Egypt	2005	Appropriations Bill • Compliance with economic conditions as defined by President	No agreement document available
Tunisia	2012	Appropriations Bill • No conditions specified	Agreement Text • Commitment to begin monitoring social spending performance indicators and publish accessible performance data • Commitment to share report on streamlining Finance Ministry procedures • Implementation of reforms to regulation governing credit institutions • Commitment to transparent cooperation with IMF Article IV assessment • Restriction on use of SLG proceeds for military or paramilitary procurement

Country	Year of Issuance	Legislative (Congressionally Mandated) Conditions	Implementing Agency (SLG Panel) Conditions
Tunisia	2014	Appropriations Bill • No conditions specified Appropriations Bill • No conditions specified	Agreement Text • Commitment to continued implementation of IMF Stand-By Arrangement • Enactment of Financial transparency reforms and tax policy modernization • Enactment of customs and trade policy modernization in line with Kyoto Convention and WTO standards • Formulation of plan to reform foreign investment regulation in collaboration with the IFC • Formulation of a plan to reform bank regulation and financial crisis management • Commitment to expand social supports for vulnerable households • Restriction on use of SLG proceeds for military or paramilitary purposes
Jordan	2014	Appropriations Bill • No conditions specified Appropriations Bill • No conditions specified	Agreement Text • Commitment to macroeconomic transparency and requisite data sharing to demonstrate implementation of IMF Stand-By Agreement • Adoption of a bulk electricity tariff and retail tariff methodology sufficient to make state-owned power utilities solvent • Draft scope of work and issue RFP for independent audit of electricity distribution companies • Enact a plan for fast-tracking renewable energy project licensing and permitting • Establishment of a public-private partnerships unit within the Ministry of Finance • Submission of a strategy paper to reduce water sector losses • Establishment of a system to report debt stocks and debt arrears quarterly • Restriction on use of SLG proceeds for military or paramilitary purposes

Country	Year of Issuance	Legislative (Congressionally Mandated) Conditions	Implementing Agency (SLG Panel) Conditions
Jordan	2014	Appropriations Bill • No conditions specified	Agreement Text • Commitment to macro-fiscal transparency and requisite data sharing to demonstrate implementation of IMF Stand-By Agreement • Approval of a letter of intent authorizing the Ministry of Energy and Mineral Resources to start LNG supply contract negotiations • Enactment of increase in wastewater tariffs on all governorates by 15% • Approval of specific terms defining the mandate of public-private partnership unit within Ministry of Finance • Authorization for Ministry of Finance to hire key personnel for financial management transparency and public private partnerships units • Restriction on use of SLG proceeds for military or paramilitary purposes
Ukraine	2014	Appropriations Bill • No conditions specified	Agreement Text • Commitment to macroeconomic reforms in line with IMF Stand-By Agreement • Expansion of housing and utility safety net system • Commitment to use SLG proceeds to increase social spending and protect vulnerable households • Public announcement of energy sector schedule of tariff prices • Enactment of public procurement reform • Restriction on use of SLG proceeds for military or paramilitary purposes (with caveat)

Country	Year of Issuance	Legislative (Congressionally Mandated) Conditions	Implementing Agency (SLG Panel) Conditions
Ukraine	2015	Appropriations Bill • No conditions specified Appropriations Bill • No conditions specified	Agreement Text • Fulfillment prior actions and reforms for IMF Extended Fund Facility arrangement • Affirmation that SLG proceeds will contribute to social spending and protection of vulnerable households from energy subsidy reductions • Adoption of a plan to reform gas sector in line with World Bank and IMF requirements • Inclusion of specific provisions related to competition and cost transparency in gas sector reforms • Concrete steps towards enactment of gas sector reform plan • Commitment to fund and resource state anticorruption agency • Enactment of legislation strengthening asset disclosure regulation in line with IMF recommendations • Restriction on use of SLG proceeds for military or paramilitary purposes (with caveat)
Jordan	2015	Appropriations Bill • No conditions specified	Agreement Text • Financial transparency and commitment to reduce macroeconomic vulnerabilities • Implementation of two solar power purchase agreements • Plan to clear remaining balances owed to state-owned power utilities • Enactment of new secured lending law • Enactment of by-laws clarifying investment regulation • Enactment of by-laws related to public-private partnerships regulation • Submission of public debt management framework – must contain strategy for domestic capital mobilization • Commitment to issue unenhanced sovereign debt within four months of US guarantee issuance • Restriction on use of SLG proceeds for military or paramilitary purposes

Country	Year of Issuance	Legislative (Congressionally Mandated) Conditions	Implementing Agency (SLG Panel) Conditions
Jordan	2015	Appropriations Bill • No conditions specified	Agreement Text • Financial transparency and commitment to reduce macroeconomic vulnerabilities • Implementation of two solar power purchase agreements • Plan to clear remaining balances owed to state-owned power utilities • Enactment of new secured lending law • Enactment of by-laws clarifying investment regulation • Enactment of by-laws related to public-private partnerships regulation • Submission of public debt management framework – must contain strategy for domestic capital mobilization • Commitment to issue unenhanced sovereign debt within four months of US guarantee issuance • Restriction on use of SLG proceeds for military or paramilitary purposes
Tunisia	2016	Appropriations Bill • No conditions specified	No agreement document available
Ukraine	2016	Appropriations Bill • No conditions specified	Agreement Text • Fulfillment prior actions and reforms for IMF Extended Fund Facility arrangement • Commitment to use SLG proceeds on social spending and vulnerable households • Commitment to reform social assistance benefit targeting • Enactment of laws formalizing government procurement and procurement transparency • Enactment of laws defining oversight, jurisdiction, and authority of Ukraine's Office of Inspector General in line with US DOJ endorsement • Reform of state-owned gas utility in line with prior commitments to EBRD • Implementation of reforms to State Fiscal Service's oversight of large taxpayers • Digitization of asset disclosure protocols for high-level officials • Commitment to make high-level officials' asset disclosures public • Restriction on use of SLG proceeds for military or paramilitary purposes

Country	Year of Issuance	Legislative (Congressionally Mandated) Conditions	Implementing Agency (SLG Panel) Conditions
Iraq	2017	Appropriations Bill • Equitable distribution of SLG proceeds, including in Kurdistan	Agreement Text • Fulfillment of requisite prior actions and reforms for IMF Extended Fund Facility arrangement • Payment of arrears to Basrah Gas Company, as specified in IMF Stand-By Agreement • Commitment to budget transparency and public disclosure of government audits • Commitment to implement World Bank Public Financial Management (PFM) Institutional Development and Capacity Building project • Commitment to strengthen banking supervision and anti-money laundering enforcement as outlined in an IMF agreement • Commitment to float an unenhanced sovereign bond within four months of US-guaranteed bond issuance • Mandated Iraq's timely compliance with USAID transparency requirements and sets timelines for the submission of supporting documents to USAID • Restriction on use of SLG proceeds for military or paramilitary purposes • Commitment to cooperate with US audits of financial records

Annex 2. Moody's long term foreign currency issuer ratings

Grade	Moody's Credit Rating
Prime	Aaa
High Grade	Aa1
	Aa2
	Aa3
Upper Medium Grade	A1
	A2
	A3
Lower Medium Grade	Baa1
	Baa2
	Baa3
Non-Investment Grade Speculative	Ba1
	Ba2
	Ba3
Highly Speculative	B1
	B2
	B3
Substantial Risks	Caa1
	Caa2
	Caa3
Extremely Speculative	Ca
In Default	C
Not Rated	WR

Annex 3. Candidate countries for SLGs

Countries Selected	Data Unavailable
Angola	Albania
Armenia	Bangladesh
Azerbaijan	Benin
Belize	Bosnia and Herzegovina
Brazil	Burkina Faso
Colombia	Cabo Verde
Costa Rica	Cambodia
Cote d'Ivoire	Congo, Dem. Rep.
Dominican Republic	Ethiopia
Egypt, Arab Rep.	Fiji
Gabon	Georgia
Guatemala	Iraq
Honduras	Kyrgyz Republic
India	Lesotho
Indonesia	Madagascar
Jamaica	Maldives
Jordan	Mali
Kenya	Mauritius
Mexico	Moldova
Mongolia	Namibia
Morocco	Nicaragua
Mozambique	Niger
Nigeria	Solomon Islands
Paraguay	St. Vincent and the Grenadines
Peru	Tajikistan
Philippines	Tanzania
Rwanda	Togo
Senegal	Tunisia
Serbia	Uganda
South Africa	Vietnam
Thailand	Papua New Guinea
Turkey	Kazakhstan
Uzbekistan	Cameroon
	Bolivia
	Bulgaria
	Montenegro

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