

MDB Policy-Based Guarantees: Has Their Time Come?

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MDB policy-based guarantees (PBGs) have long been an instrument in search of demand. First introduced in 1999 at the International Bank for Reconstruction and Development (IBRD) to help governments access market borrowing at attractive rates, their track-record has been uneven, and their uptake limited. The multilateral development bank (MDB) business model tends to favor direct lending over non-lending products. And MDBs have experienced high-profile bumpy patches with PBGs—including a 2015 PBG for Ghana which sparked significant controversy around whether it generated an actual financial benefit for the country—that may have deterred countries from using the instrument.¹ Moreover, the benign global interest rate environment that has prevailed since the global financial crisis (GFC) has generally helped governments access external commercial financing at historically low rates, making PBGs less directly relevant.

But PBGs have also had their successes, especially during times of stressed market conditions. PBGs have proven useful in insulating issuers from external market turmoil and helped governments secure better terms—reducing funding costs by an average of 330 basis points compared to what governments would have achieved had they pursued unenhanced issuances. They have helped new issuers establish market access and grow their investor base. They have helped countries reprofile expensive commercial debt on more favorable terms. They have helped governments secure private sector participation in restructuring exercises. And some governments are starting to use PBGs to raise funds for environmental, social, and governance (ESG) programs and projects, raising the possibility of a new generation of ESG PBGs.

PBGs have also proven more catalytic than direct lending, with \$1 PBG mobilizing on average \$1.8 in commercial finance.

https://documents1.worldbank.org/curated/pt/293331492579395041/pdf/114407-WP-PUBLIC-Rothschild-report.pdf

² https://ieg.worldbankgroup.org/sites/default/files/Data/reports/lp_policy_based_guarantees_102116.pdf

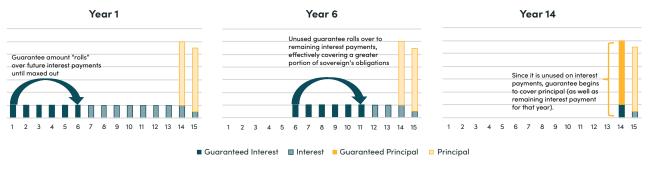
PBGs could become freshly relevant as the world grapples with multiple crises, increased capital market volatility, heightened risk aversion, and tightening monetary conditions. Indeed, many of their strengths are well-tailored to the challenges governments in emerging and frontier markets will increasingly face in the coming years. Going forward, PBGs could be particularly useful debt management tools to help governments maintain market access on more favorable terms and reprofile or restructure debt while mobilizing more private finance for ESG programs.

What are PBGs?

PBGs are instruments that protect private lenders against the risk of debt service default by a sovereign borrower by providing a partial credit guarantee on principle and/or interest repayments. They are available across all the major MDBs, including the concessional lending windows like the International Development Association (IDA) and the African Development Fund (AfDF). In most instances, MDB guarantees have covered commercial loans rather than sovereign bond issuances.

MDBs usually provide a partial guarantee, meaning that they do not cover the total value of the loan. Partial guarantees are generally "rolling" or "back-ended". A rolling guarantee means that the guarantee can be called at any point over the course of the repayment schedule. As the sovereign makes payments, the portion of remaining debt "covered" by the rolling guarantee increases, making it progressively less likely that the creditor will incur a loss. (See structure illustration of a rolling guarantee in Figure 1 below.) A "back-ended" guarantee only covers a select set of payments in the final portion of a debt repayment schedule.³ For both the rolling and back-ended structures, the guarantee can cover interest and/or principal.

Figure 1. Mechanics of a partial rolling guarantee



Note: Illustration adapted from World Bank, https://openknowledge.worldbank.org/handle/10986/23758

³ Back-ended structures have become more common, and are usually chosen to facilitate banks' valuation of the guarantee. Though a rolling guarantee may provide a greater level of overall coverage of default risk, it is often easier for lenders to properly account for back-ended guarantees, since the coverage of the risk, though smaller, is fixed. For rolling guarantees, coverage is variable.

MDB guarantees are priced like loans. For the hard loan windows, the PBG price is based on the MDB's cost of funds plus a contractual fee that covers risks and administrative costs, similar to a loan. For the concessional windows, the guarantee has the same fee structure as the country's concessional lending terms. Some MDBs also include additional fees including front-end and standby fees. Unlike for loans, however, MDBs do not have to hold liquidity to cover PBG exposure unless there is a call.⁴

MDBs generally treat guarantees like loans in terms provisioning. MDBs book guarantees on 1:1 basis as loans, meaning they take up as much equity capital as a direct loan despite the fact that guarantees call rates are much lower than loan default rates. In addition, from the MDB perspective, guarantees increased transaction complexity by adding the guarantor to lender and borrower counterparties. The result is that that MDBs do not fully benefit from the financial efficiency gains that guarantees could generate if provisioning were relaxed. But many MDBs have introduced nuances to incentivize uptake. Notably, while all MDBs book guarantees like loans on their balance sheets, some MDBs have set-asides windows that allow them to only count PBGs on a 1:4 basis against a country's lending limit. This reduces the opportunity cost for a country pursuing a PBG instead of a loan, thereby increasing the appeal of a PBG.

The track record

PBGs have historically been used by upper-middle income countries facing difficult external financing conditions. The first MDB PBG was for Argentina in 1999, and was subsequently called in 2002 when the country defaulted. This default and Argentina's subsequent failure to reimburse the World Bank on its coverage within the repayment period led to the downgrade of outstanding World Bank guarantee-backed bonds from Colombia and Thailand. These events prompted the retirement of reinstatable guarantees—a guarantee which can be reinstated after a sovereign pays back MDB coverage of its debt service—and a decade long pause of the World Bank PBG program.⁷

PBGs saw renewed interest from European emerging markets in the context of the Eurozone crisis.

After a period of easy credit following the establishment of the eurozone in 2002, the Global Financial Crisis of 2008 set of a chain of debt crises across Europe and appetite for European sovereign debt fell dramatically, especially for the continent's less established markets. In a context of limited market access and tighter financial regulation, PBGs became attractive instruments for many World Bank clients, with Montenegro, Macedonia, Serbia, and Albania all signing up.8

⁴ If the guarantee has been 'called' by the borrower, the MDB pays the sovereign's debt service, which it then attempts to recover from the sovereign.

⁵ https://cdn.odi.org/media/documents/9398.pdf

⁶ https://openknowledge.worldbank.org/bitstream/handle/10986/25284/109334-WP-Public-IEG-LP-Lessons-from-PBGs. pdf?sequence=16isAllowed=y

⁷ https://openknowledge.worldbank.org/bitstream/handle/10986/2627/484540PUB0guar1010fficial0Use0Only1.pdf?sequence=16isAllowed=y

⁸ https://ieg.worldbankgroup.org/sites/default/files/Data/reports/lp_policy_based_guarantees_102116.pdf

Table 1. The track record of policy-based guarantees

DATE	MDB	COUNTRY	TYPE	PRINCIPAL (\$ MILL)	GUARANTEE (\$ MILL)	MOBILIZATION RATIO	GUARANTEE %
Mar-20	IBRD	Montenegro III	Loan	\$325	\$104	3.1	32
Dec-18	IBRD	Ukraine	Loan	\$1300	\$975	1.3	75
Dec-17	IBRD	Montenegro II	Loan	\$325	\$104	3.1	32
Jun-16	IBRD	Pakistan	Loan	\$700	\$420	1.7	60
Mar-15	IBRD	Albania	Loan	\$325	\$260	1.3	80
Jan-13	IBRD	Macedonia II	Loan	\$325	\$202	1.6	62
Jul-12	IBRD	Montenegro I	Loan	\$130	\$78	1.7	60
Dec-11	IBRD	Macedonia I	Loan	\$169	\$128	1.3	76
Feb-11	IBRD	Serbia	Loan	\$381	\$381	1	100
Sep-18	IDA	Benin	Loan	\$450	\$180	2.5	40
Oct-15	IDA	Ghana	Bond	\$1000	\$400	2.5	40
Feb-10	AfDB	Seychelles	Loan	\$136	\$10	13.6	7
Mar-17	AfDB	Madagascar	Loan	\$67	\$48	1.4	73

However, despite an IEG report's prediction that "a new generation of PBGs may be on the horizon," interest in the instrument from IBRD EMs following the GFC/Eurozone crisis was modest. Since 2015, IBRD has approved PBGs at a rate of less than one per year (on average). Moreover, there does not appear to have been a single IBRD PBG since the COVID-19 crisis, which may largely reflect the fact that EMs generally enjoyed favorable market conditions throughout the period.⁹

Over the last decade, PBGs have also become available to countries that borrow from the MDB

concessional windows. The first PBG in the IDA context was for a Ghanaian sovereign bond issuance in 2015. This proved a controversial operation because it did not appear to materially bring down the country's cost of funds. A subsequent Rothschild report commissioned by the World Bank argued that the PBG actually allowed Ghana to retain market access on the tails of a major EM bond market exodus and ultimately avoid a sovereign default in a context of rapidly depleting foreign exchange reserves. While this marked the last IDA PBG for a sovereign bond, IDA subsequently had more success with PBGs for syndicated loans which provide more certainty over the ultimate terms of the loan. In a package of PBGs for Benin, IDA helped the country reprofile its external commercial debt replacing short-term commercial debt that cost over 7 percent annually with cheaper longer-term loans at a 4 percent interest rate. ¹⁰

⁹ https://www.bloomberg.com/news/articles/2021-12-08/emerging-markets-pandemic-fueled-debt-party-is-coming-to-an-end

¹⁰ https://projects.worldbank.org/en/projects-operations/document-detail/P167278?type=projects; https://www.worldbank.org/en/results/2019/05/16/guaranteeing-success-in-benin

PBGs have also been employed in the context of external debt restructuring programs. After

the Seychelles defaulted on a Eurobond interest payment and other commercial debt, it sought to restructure \$320 million of its debt. As an incentive to get creditors to participate in the restructuring on terms comparable to the 45 percent reduction agreed with the Paris Club, the government took out a PBG with the AfDB to cover interest payments on a new instrument tendered in the context of the restructuring exercise.

Are PBGs financially attractive?

PBGs are effective at reducing a country's cost of funds relative to an unenhanced issuance on average by 330 bps.¹¹ PBGs are also distinctly catalytic, the \$4 billion in guarantees included in our sample have crowded in \$7.2 billion worth of total commercial financing, or 78 percent more than would have been possible using traditional MDB loans.¹²

IDA—Ghana
AfDF—Madagascar
IBRD—Macedonia II
IBRD—Macedonia I
IBRD—Ukraine
IBRD—Serbia
IBRD—Montenegro I
IBRD—Pakistan
IBRD—Benin
IBRD—Albania
IBRD—Montenegro II
IBRD—Montenegro II
IBRD—Montenegro III

Figure 2. Rate discount, by PBG

 ${\it Source}: {\tt CGD} \ staff \ calculations, Bloomberg, project \ documents.$

Note: AfDB Seychelles PBG excluded in the table and in headline 330 bps figure, since comparable commercial rate at the time of the PBG was too high for the country to realistically consider issuing commercially. This is a conservative decision, since exclusion underestimates the cost of funds reduction figure.

Percent

10

PBGs generally provide a good financial return to the sovereign compared to direct MDB lending.

To estimate this, we compared the financial cost of MDB guaranteed debt to 'hypothetical alternative packages' comprised of direct MDB loans alongside commercial financing of the same combined volume (see annex for methodological details). ¹³ For example, we would compare a PBG backing

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¹¹ 3.3 percent refers to average rate discount, further illustrated in Figure 2.

¹² This is an underestimation, since loans to Ghana and Benin would have been eligible for only a quarter of the amount provided through their IDA guarantees.

We choose discount rate by adopting the perspective of the lender; the US 10-year treasury notes represent the safest interest-bearing sovereign instrument a lender could invest in in lieu of the sovereign debt of the country in question. Our dataset and calculations are available for download on the publication page.

40 percent of a \$1 billion loan to a hypothetical alternative package comprising a \$400 million MDB loan and a \$600 million unenhanced commercial loan in present value terms.

But MDBs treatment of guarantees relative to country lending limits is critical to their financial appeal. The method of counting against country lending limits differs across MDBs and time periods, with enormous consequences for guarantees' appeal. For example, analyzing our entire sample set using a 1:4 counting method, where only one-fourth of a guarantee's value counts against a country's lending limit, yields savings of 25 percent compared to the hypothetical alternative financing package, the equivalent of over \$2 billion. When using the 1:1 method, where guarantees and loans count the same against a country's lending limit, the savings fall to 14 percent—significant, but perhaps not enough to incentive takeup of a relatively non-traditional instrument.

The choice of a syndicated loan versus sovereign bond is also consequential. PBGs for loans generated an average 345 bps interest rate discount, compared to an average 150 bps for bonds. We attribute this significant gap to the different ways prices are set. In the case of commercial loans, the sovereign and the guarantor can negotiate the final rate directly with creditors or through a competitive bidding process between several banks. Bond issuances are less predictable, which can limit PBGs pricing benefits. ¹⁴ In addition, investors have limited experience assessing the value of a partial guarantee which has caused confusion around pricing. ¹⁵ (In response, the World Bank has developed a useful framework for pricing partial guarantees. ¹⁶)

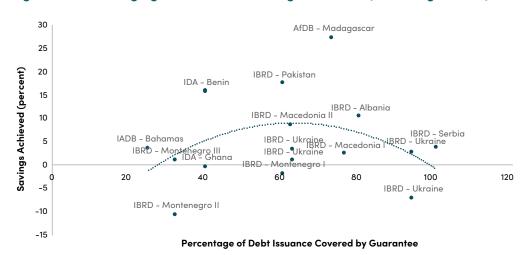


Figure 3. Percentage guaranteed vs. savings achieved (excluding default)

Source: CGD staff calculations, project documents.

Note: This chart reflects the analysis with 1:4 country lending limit accounting method. While this was the method utilized for some guarantees in our sample, for others it may not have been. As such, the savings plotted represents a hypothetical scenario.

¹⁴ Rothschild & Co. "Utilizing World Bank partial guarantees in support of sovereign or sub-sovereign commercial debt financings." Washington, D.C.: World Bank Group, 2016. https://documents1.worldbank.org/curated/pt/293331492579395041/pdf/114407-WP-PUBLIC-Rothschild-report.pdf; Smith, Gregory. Where Credit is Due. London: C Hurst & Co Publishers Ltd, 2021.

 $^{15 \}quad https://documents1.worldbank.org/curated/pt/293331492579395041/pdf/114407-WP-PUBLIC-Rothschild-report.pdf/114407-WP-PUBLIC-Roths$

¹⁶ https://openknowledge.worldbank.org/handle/10986/23758

PBGs generally yield the most financial benefit when they back 40 to 80 percent of a total debt

issuance. Above this range, guarantees can still provide a financial benefit, but this depends more on counting 1:4 against a country lending limit than the guarantee's impact on interest rate. When counting on a 1:1 basis, a full guarantee is rarely worthwhile—even if a sovereign's fully guaranteed commercial debt achieves a low interest rate, it will be at least a marginally higher interest rate than that of a traditional MDB loan. And because of the 1:1 accounting, the guarantee eats up the same amount of the sovereign's country lending limit. With 1:4 accounting, a sovereign has access to four times more MDB money by opting for a guarantees compared to a loan. So while the interest rate on the commercial financing (fully backed by the guarantee) may be significantly higher than what the sovereign could achieve from the MDB directly, it is still cheaper than the total cost of the hypothetical 'traditional' alternative package, which would entail an MDB loan one-quarter the size of the guaranteed commercial financing and a standalone issuance of debt for the other three-quarters. Combined, the graph above shows that even for guarantees nearing 100 percent coverage, when accounting against country allocations on a 1:4 basis, they are still signifantly cheaper than the alternatives.

Given the small sample size of our study, this trend and the others we identify should be put into the prevailing market context. For example, Ghana, whose PBG did not deliver savings, was facing a trinity of headwinds at the time: a high debt-to-GDP ratio, a hostile market environment, and its choice of a bond issuance instead of a loan. This makes it difficult to ascribe the PBG's performance to any single factor.

The principal non-financial burden that we do not capture in our analysis is administrative complexity. Even where a PBG offers more attractive financing terms, a sovereign may opt to pursue commercial financing on a standalone basis in order to avoid policy conditionality and protracted negotiations between multiple parties.¹⁷

A reform agenda for a new generation of PBGs

Going forward, we see a greater rationale for PBGs for countries borrowing from the concessional windows and smaller economies. In the current economic context, they could be particularly useful for countries with sound macroeconomic fundamentals facing unfavorable external financing conditions. For instance, at least seven African issuers will need to rollover their Eurobonds in 2024 and PBGs could help them secure syndicated loans at better rates.¹⁸

¹⁷ https://cdn.odi.org/media/documents/9398.pdf

¹⁸ Including both LICs and MICs; Zambia, Ivory Coast, Senegal, Kenya, Ethiopia, Tunisia, and Egypt (Bloomberg).

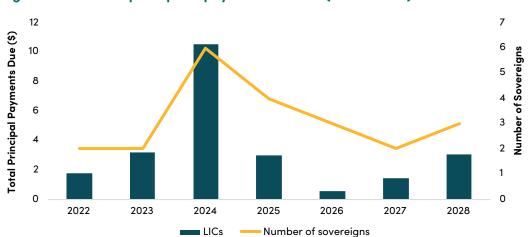


Figure 4. Eurobond principle repayments for LICs (USD billions)

PBGs could also be useful instruments in the context of sovereign debt negotiations to entice private sector participation. This has only been attempted once in the context of a restructuring in the Seychelles in 2010 but could be relevant, especially as several countries seek to secure private sector participation in their debt restructuring negotiations. It could allow countries to reduce their commercial debt and refinance into cheaper loan arrangements with an ESG/SDG component. While there has been a dearth of successes so far, the recent Belize experience represents a possibly scalable model. Last year the government got its creditors to agree to a \$553 million restructuring that saw the government commit to investing some of the savings in marine conservation. Many attribute the success of this program to the fact that it was embedded in the government's existing homegrown policy agenda rather than a policy agenda that is externally imposed by bondholders.¹⁹

Apart from debt restructuring, a major untapped PBG angle is to bring together countries' interests in advancing their ESG policy objectives with private investor interest in boosting the ESG share of their portfolios. To date, much of the MDBs' PBG policy agenda has focused on macroeconomic reforms, but PBGs could be used to support ESG policies and programs, similar to a proposal CGD colleagues presented in the context of the USG loan guarantee program. ²⁰ The IDB has recently approved the first ESG-branded PBG in the Bahamas whose associated debt will be issued later this year. ²¹ In addition, while not a PBG is the strict sense of the term, recent ESG project-based guarantees including a 2018 guarantee for a Seychelles Blue Bond by the World Bank and The Global Environmental Facility (GEF) as well as a guarantee-backed social bond for Ecuador's *Casas Para Todos* program illustrate how ESG priorities can be tied to guarantee-backed debt issuances.

¹⁹ https://www.cgdev.org/blog/belizes-big-blue-debt-deal-last-scalable-model

²⁰ https://www.cgdev.org/publication/greening-us-sovereign-bond-guarantee-program-proposal-boost-climate-direct-ed-sovereign

²¹ This guarantee is in our sample and is analyzed using the expected terms of the associated bond issuance as presented by IDB and others.

MDBs could also impart a credibility advantage to ESG bonds by helping countries establish robust ESG frameworks and setting up strong verification processes. For instance, the Ecuador Casas para Todos bond has benefited from two parallel verification processes: the IDB's own monitoring and evaluation process, as well as annual, external review to ensure that proceeds are used in accordance with the bond's unique Social Bond Framework, which was developed in accordance with the International Capital Markets Association's (ICMA) social bond principles. 22,23 Indeed, MDBs can help boost the credibility of ESG bonds can take place even where they are not themselves involved in a bond issuance by supporting broader harmonization and standardization around ESG frameworks. For example, in 2019 IDB provided technical assistance supporting Chile's first sovereign green bond issuance and its accompanying Green Bond Framework. 24 The instituions also recently launched a broader Green Bond Transparency Platform, which supports transparency by allowing users to learn about the proceeds, impacts, and methodologies for each green bond in Latin America and filter data to access environmental performance using different criteria. With or without guarantees, this will allow the region to scale up green issuances, and should be considered in other regions where ESG disclosures are fragmented. 25

Finally, a fundamental issue inhibiting the deployment of guarantees is how they are counted against a country's overall programmatic envelope. MDB hard loan windows should explore taking a more dynamic risk-based approach to provisioning. The concessional windows could consider creating a dedicated PBG window that would alleviate the direct tradeoff countries make between their regular policy-based allocation (PBA) program and taking out a guarantee. One way to do this in IDA would be to entirely fund the guarantee program out of the Private Sector Window (PSW). Another related area for further exploration is around the appropriateness of pricing PBGs the same as loans.

Conclusion

The prime benefit of PBGs is their ability to mobilize private capital and bring down a sovereign's cost of funds. And while demand for PBGs from upper-income countries is likely to diminish, the instrument seems particularly relevant for LMICs and LICs as a growing number strive to maintain their access to global credit markets and secure more favorable financial terms. A key untapped area for PBGs going forward is the urgent need for massive ESG investment, where the MDBs's broad toolkit give them a unique comparative advantage. In light of the volatile global economic environment and growing demand for ESG financing, PBGs may have found their market. It is incumbent on the MDBs themselves to create the environment that will allow the instrument to deliver value to clients in need.

²² The ICMA also provides Social Bond Principles and Sustainability-linked Bond Principles; https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/

²³ https://www.finanzas.gob.ec/wp-content/uploads/2019/11/Marco_Bono_Ecuador_ENG.pdf

²⁴ https://www.iadb.org/en/news/idb-supports-chile-sovereign-green-bond-development

²⁵ https://www.omfif.org/forging-the-path-to-international-standards-in-sustainable-finance/

²⁶ https://cdn.odi.org/media/documents/9398.pdf

Annex

Methodology

To gauge the value of a PBG, we compare it to an 'alternative financing package' of the same volume using traditional MDB instruments. In the case of a \$1 billion commercial debt backed by a \$400 million PBG, for most MDBs 'alternative financing package would be a \$400 million traditional MDB loan alongside a \$600 million unenhanced sovereign debt. (For IDA or AfDB, which both count only 25 percent of guarantee face value against country allocations, it would be \$100 million traditional loan plus \$900 million unenhanced sovereign debt.) Comparing these 'PBG financing package (actual)' with the 'alternative financing package (hypothetical),' the question becomes: which package is cheaper to the sovereign over the entire life of the debt instrument(s)? To answer this question, we calculate the cash flows of all the instruments involved: the guarantee-backed commercial debt, but also the hypothetical traditional loan and the unenhanced sovereign debt. To account for the time value of money, we then compare the net present value of both packages' cash flows, discounting by the 10-year US Treasury bill yield at the date of the actual guaranteed commercial debt issuance. This gives us one final NPV value for the guarantee, and two NPV values for the 'alternative financing package'-one for the loan, and one for the unenhanced sovereign debt. After combining the two NPVs of the 'alternative financing package,' we are left with two values, from which we calculate the discount (or markup) offered by the PBG versus the 'alternative financing package.'

Cash flows

Guarantees

- As we calculated the cash flows of the MDB guarantees, we included applicable MDB fees in
 addition to the respective interest rates of the financing. These differ slightly across MDB, and
 were determined using institutional sources and project documents.
- For IBRD, guarantees are subject to two main fees—a flat 'front-end fee' of 25 bps charged in the first pay period, and a recurring 'guarantee fee' tied to maturity (ranging from 50-165 bps) and charged at every period over the life of the loan. For IDA, there is no 'front-end fee,' only a recurring flat 75 bps 'guarantee' fee. All of these fees are charged on the respective institution's financial exposure under the guarantee—in other words, the guarantee amount, as opposed to the total debt issuance amount. Additionally, as noted in guarantee project documents, recurring fees, though applied on the financial exposure at every pay period over the life of the loan, is generally paid in a lump-sum 'up-front.'²⁷ For this reason, in our IBRD and IDA guarantee cash flows, all the fees—both front-end and recurring—are paid in the first pay period. Like loans, both are also

²⁷ Up-front payment of the guarantee fee is not required for IBRD and IDA guarantees, and some of the institutions' guarantees leave the manner of payment (up-front vs. over the life of the guarantee) ambiguous. However, since whenever the manner of payment is clearly defined, it is up-front, we have assumed up-front payments for all IBRD and IDA guarantees; see for example: https://documents1.worldbank.org/curated/en/726681513998049930/pdf/Montenegro-DPG-PD-11292017. pdf

subject to a recurring 'standby fee' on undisbured balances, which we did not incorporate in any of our cash flows.²⁸

- For IDB guarantees, the only applicable fee is the recurring IDB lending spread, which changes across pay period. As noted in our data set, the applicable spread in the case of the Bahamas guarantee is 90 bps. Unlike in the IBRD and IDA case, this fee is applied on a recurring basis, and calculated as such in our cash flow for the instrument.
- For AfDB guarantees, the fee structure is similarly simple—public sector borrowers are only subject to a recurring guarantee fee, which mirrors what the recurring lending spread would be for a loan offered in the same context.²⁹ In this case of Seychelles, this amounted to 40 bps, as specificed in the project document.³⁰ In the case of Madagascar, where the guarantee fee was explicitly enumerated in the project document, we took it to be 75 bps, the lending spread for poorer African Development Fund (AfDF)-eligible category of countries, of which Madagascar is a member.

Comparison MDB loans:

- The MDBs in our sample continuously update their lending terms for traditional loans operations. In light of this, when calculating the hypothetical cash flows of the traditional loan portion of each 'alternative financing package,' we used the terms that would have been applicable in the context in which the guarantee was issued (maturity, date, country).
- For IBRD, the terms applicable in different periods are contained in multiple separate documents. ³¹ For IDA, these historical terms sheets are consolidated and linked in a single webpage. ³² In addition to the greater concessionality of interest rates for IDA loans, a key difference in lending terms across the two institutions is that maturities of IDA loans are much longer than those of IBRD loans, as well as those of the IDA guarantees they are comparing to (the longest guarantee in our sample has a 15 year maturity, whereas IDA maturities can be over 30 years). For this reason, our hypothetical IDA loans have longer maturities than the guarantees they compare to, for the simple reason that IDA does not offer loans with such short maturities. We note that this is a conservative feature of our methodology, since extending the maturity of the loans makes them less costly in NPV terms. In turn, this makes it more likely that the 'alternative financing package' appears more attractive.

 $^{28 \}quad See\ table; https://treasury.worldbank.org/en/about/unit/treasury/ibrd-financial-products/lending-rates-and-fees\#3 \\$

²⁹ https://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/10000026-EN-BANK-POLICY-ON-GUAR-ANTEES.PDF

³⁰ See page 13, https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Seychelles%20-%20Policy%20based%20partial%20credit%20guarantee%20%28PBPCG%29%20programme.pdf

³¹ For 2018–present see: https://treasury.worldbank.org/en/about/unit/treasury/ibrd-financial-products/lending-rates-and-fees#a; for 2014–2018 see: https://www.worldbank.org/en/news/press-release/2014/02/11/world-bank-board-of-executive-directors-announces-change-in-ibrd-loan-terms; for 2010- 2014 see: https://treasury.worldbank.org/en/about/unit/treasury/ibrd-financial-products/lending-rates-and-fees#a

³² https://ida.worldbank.org/en/financing/ida-lending-terms

- AfDB loans are more straightforward, and fewer in number. In the Seychelles case, the only applicable fee for a hypothetical loan in the same context would be exactly the same as for the guarantee, 40 bps recurring, owing to the principle of price neutrality between loans and guarantees.³³ In the case of Madagascar, since it is an ADF country, AfDF loan terms apply, meaning only a 75 bps recurring charge on disbursed loan balances.³⁴
- Repayment structure: We assume that loans are repaid semi-annually in equal installments of
 principal plus interest on original principal, except for in the case of comparison IDA loans, in
 which case we structured the cash flow according to the structure outlined in IDA pricing charts
 (available in dataset).

Comparison standalone sovereign debt:

- Interest rates: To determine a hypothetical interest rate, we use the effective interest rate of the sovereign's closest matched outstanding bond issuance in terms of tenor and currency of issuance, taking the rate at the time the guaranteed debt was issued. Where no such issuance exists, we use the rate from the issuance of a similarly rated sovereign, or from MDB sources, listed in table below.
- Repayment structure: We assume bonds have bullet repayments (i.e., interest is paid at a constant rate over the life of the bond, and principal is repayed in a single 'bullet' repayment on the last repayment date.
- Maturity: Since one of the key benefits of a PBG is longer maturity than would be otherwise
 available to the sovereign, the maturity of the comparable nonguaranteed commercial financing
 is generally shorter than the guaranteed financing. However, in our comparison, we make the
 conservative assumption that the nonguaranteed commercial financing has the same maturity as
 the guaranteed financing.

³³ See pg. 13, https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Seychelles%20-%20Policy%20based%20partial%20credit%20guarantee%20%28PBPCG%29%20programme.pdf

³⁴ https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/FAQS%20on%20ADF%20Eng%20_2_pdf

NAME	COMPARABLE COMMERCIAL RATE (%)	PBG RATE (%)	COMPARISON SOURCE
IBRD-Montenegro III	2.30	3.63	XS2050982755
IBRD—Ukraine	8.49	4	XS1902171591; XS1902171757; XS1902171591; XS1902171757°
IBRD-Montenegro II	2.44	2.95	XS1377508996
IBRD—Pakistan	7.23	3.00	US695847AR45
IBRD—Albania	6.73	1.53	Case study: shorturl.at/tKQRS
IBRD—Macedonia II	9.81	3.90	XS0438534579
IBRD-Montenegro I	7.91	4.71	Case study: shorturl.at/osCEM
IBRD—Macedonia I	9.60	4.25	XS0438534579
IBRD—Serbia	8.20	3.29	RSMFRSD82183
IDA-Ghana	12.25	10.75	XS1108847531
IDA-Benin	7.00	4.00	Press release: shorturl.at/oEMSZ
AfDB-Seychelles	108.39	3.95	XS0269874664 ^b
AfDF-Madagascar	10.00	4.95	Assumption ^c

a. Since guarantee backed multiple loans of multiple maturities, multiple comparisons were used.

Discount rate

As mentioned above, we use the 10-year US Treasury bill yield at the date of the actual guaranteed
debt issuance to discount the cash flows in our comparison. We do this because the time value of
money changes depending on prevailing interest rates (which the 10-year UST bill rate serves as a
proxy for).

Project-based guarantees

We did not include the IBRD's 2018 guarantee to the Seychelles or IDB's 2020 guarantee to Ecuador within our sample for analysis because neither are policy-based guarantees (PBGs), the focus of our research. Instead, these two operations constitute project-based guarantees, which differ in two ways. Firstly, in project-based guarantees, the financing supported by the guarantee is conditioned on executing one or more projects, as opposed to policy reforms. Secondly, whereas policy-based guarantee conditionality is *ex ante* (meaning it must be completed prior to the issuance of the guarantee), project-based guarantee is *ex post* (the completion of the project follows the issuance of the guarantee).

As sovereigns and MDBs move towards green, blue, and social debt issuances, the distinction between these two sub-types of guarantees could be reduced. Conceivably, a sovereign receive a policy-based guarantee from an MDB specifying *ex ante* policy conditions, and use it to back a green

b. Extremely high due to default; realistically, standalone market access would have been impossible.

c. Hyper-conservative assumption, as Madagascar had no bond issuance or credit rating at the time.

bond devoted to a specific project, progress towards which would also be monitored *ex post* by an MDB. In this case, the guarantee would be both policy and project-based. Both types of guarantees are important, and have the potential to be mutually-reinforcing—social protection and climate adaptation and mitigation projects perform better in a policy environment which enables and encourages sustainable growth, and conversely, having a robust pipeline of green, blue, and social projects could drive country ownership of sustainability-linked policy reforms.

Another important distinction of the IBRD Seychelles and IDB Ecuador guarantee are their unique structures

- The Seychelles issued \$15 million of bonds, with a 10-year tenure, 6.5 perfect interest rate, and backed by \$5 million IBRD guarantee. The debt also benefited from a \$5 million grant from the Global Environment Facility (GEF), which subsidized the bond coupon payments (but not the principal payments). This lowered the interest rate payable from Seychelles government resources to 2.8 percent—far lower than it could possibly be with only a partial guarantee.
- In the case of Ecuador, a legally distinct third party (Ecuador Social Bond S.à r.l., a private LLC) issued \$327 million of 'Class B' zero-coupon bonds (equivalent to \$184 million of bonds with a 12.25 percent interest rate) and \$231 million of 'Class A' bonds with a 2.6 percent interest rate. Using the proceeds from these issuances, this third party then purchased \$400 million of 'Republic Note' bonds from the Republic of Ecuador, at a 7.25 percent interest rate. This sovereign bond issuance benefited from a \$300 million guarantee from the IDB. In the case of a sovereign default, the IDB would cover \$300 million of outstanding interest and principal to the third party (Ecuador Social Bond S.à r.l.). In turn, this third party would then buy back its Class A notes from bondholders (effectively cancelling the debt). Class B notes would be redeemed in proportion with the amount Ecuador paid back on its 'Republic Note,' but they would in no way benefit from the guarantee (i.e., even if a portion of the guarantee amount were unused, it would not go towards towards Class B notes). As far as we know, this structure is the first of its kinds, and seeks to address the challenges of pricing partial guarantees by breaking up the partial guarantee into one full guaranteed issuance (Class A Notes), and one unenhanced issuance (Class B Notes).

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