
An Innovative IFI Operating Model for the 21st Century: A roadmap

June, 2023



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An Innovative IFI Operating Model for the 21st Century

June, 2023



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ABOUT CLIMATE POLICY INITIATIVE

CPI is an analysis and advisory organization with deep expertise in finance and policy. Our mission is to help governments, businesses, and financial institutions drive economic growth while addressing climate change. CPI has six offices around the world in Brazil, India, Indonesia, the United Kingdom, and the United States.

ABOUT SAN GIORGIO GROUP

The San Giorgio Group convenes climate finance leaders who are actively engaged in accelerating the transition to more sustainable, lower-emission economies. Bringing together key stakeholders across the public and private sectors, the Group leverages diverse viewpoints and frank discussion to assess and prioritize critical issues that require our collective effort to address in the near term.

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KEY TAKEAWAYS

Last year saw major contributions to the international finance reform agenda, including [Finance for Climate Action](#) (the “Songwe-Stern report”), the [Bridgetown Agenda](#), and the [Independent Review](#) of Multilateral Development Banks’ Capital Adequacy Frameworks submitted to the G20 finance ministers.

2023 will be a critical period for implementing reforms to meet the scale and urgency of the climate crisis while also addressing the other crises facing developing countries – food and energy price inflation, debt sustainability, among others – as well as development priorities as targeted in the Sustainable Development Goals. The emerging markets and developing economies (EMDEs) most impacted by the rising cost of capital and the sovereign debt crisis are also some of the most vulnerable to climate impacts, making it difficult for them to find the financial and fiscal stability needed to make climate and transition investments.

International pressure and a leadership change at the World Bank have created an opportunity to reassess international financial institutions’ approach to climate, which needs to lead to a dramatic increase in the volume of finance that the international financial system deploys to meet climate finance needs. As shareholders look to reform the international financial architecture, it is important to consider not only where the additional capital will come from, but also *how* capital can be effectively spent for maximum climate and development impact.

This paper lays out key products and processes that need to be introduced, reformed, and/or scaled to effectively deploy existing and the needed new volumes of climate finance to EMDEs. The paper focuses on the multilateral development banks (MDBs), recognizing that the institutions differ in mandate, strategy, and geography and some recommendations may only apply to a subset of MDBs. This is also notwithstanding the critical roles of other institutions such as the International Monetary Fund (IMF) and other public development banks (PDBs). It builds on seminal reports such as the “Songwe-Stern report” by zeroing in on the specific models that can be adopted and scaled with urgency.

This paper elaborates a set of discussions convened by CPI in March 2023 under the San Giorgio Group.

We divide the actions into three categories:

- **Increased focus on the scale of country sector platforms**, moving away from the current project-by-project approach to more program-based funding facilities to drive systemic shifts. This implies focusing on the needs-based funding, which effectively uses international and domestic resources to improve the quality of finance, support shifts that incentivize domestic private capital, and advocate for the integration of key national and subnational financial institutions to pursue the domestic climate agenda.
- **Deployment at scale of risk-sharing instruments to catalyze private capital** and to address cost of capital, including through expanded and new guarantee products, mechanisms to address exchange rate risks and increase local currency finance, and project preparation facilities.
- **A business model overhaul** of the World Bank and other MDBs that repositions them as “mobilizers in chief,” including the standardization of multiple processes, balance sheet optimization through a new “originate-to-distribute” model, eligibility for concessional finance, cross-country data-sharing, and a response that meets the needs of the current polycrises.

SCALING UP COUNTRY SECTOR PLATFORMS

MDB finance needs to move away from a project-by-project approach, which can be ad-hoc in operation, towards a coordinated and collaborative country sector platform approach that results in a more cohesive vision with long-term impacts. A successful country sector platform relies on combining ambition and support to create transformational change. Scaling these up would include expanding and supporting country sector-led platforms such as the Just Energy Transition Partnerships (JETPs) and V20 Climate Prosperity Plans¹. The integration of domestic financial institutions, particularly finance ministries and national development banks, into country sector platforms at an early stage is key to ensure a balanced platform.

Financing country sector platforms can start by focusing on the quality of finance to ensure systemic outcomes. The emerging new directions being led by global South initiatives targeting better quality of finance need to be considered. For example, the South African JET Investment Plan² specifies several funding principles as basis for financing its JETP. A proposed Just Term Sheet³, to support standardized financing of

¹ Climate Prosperity Plans (<https://www.v-20.org/climate-prosperity-plans>)

² South Africa Just Energy Transition Investment Plan, 2023-27 (<https://www.thepresidency.gov.za/content/south-africa%27s-just-energy-transition-investment-plan-jet-ip-2023-2027>)

³ Rabia Transitions (<https://www.rabiitransitions.org/showcases/>)

just transition efforts, offers practical focus to place people and planet at the center of negotiating finance for just and equitable transitions. These approaches have a common focus on needs-based finance, systemic impacts, going beyond project-by-project funding, and building fiscal and social resilience through risk sharing arrangements that collectively deliver a just and equitable transition. Just Term Sheets could outline the investment pricing, identify the risk sharing approaches and instruments needed, and identify the partners engaged. Platforms such as the JETPs and the V20 Climate Prosperity Plans⁴ bring together many stakeholders such as communities, trade unions, financiers, investors, and policymakers, which make them a useful basis for engaging on the quality of finance needed by multiple stakeholders at the country level and on effective risk-sharing.

MDBs play a key role to support countries in making policy adjustments that encourage climate investments, from both domestic and international financial institutions. Financial support for capacity building and reform efforts via direct grants and policy-based lending can unlock the potential for significant private investment. For example, grants to support renewable energy auction design have mobilized many times the initial investments. MDB support for capacity building in EMDEs, throughout all parts of the climate finance process, is critical for capital mobilization.

Domestic financial players, including financial regulators, national and subnational development banks, pension funds, insurance companies, and local banks need to be brought in early to investment platforms. Between 2011 and 2022, 76% of all climate finance flows were raised and spent domestically⁵, and domestic financing can account for around 50% of needed climate financing in emerging market and developing economies (EMDEs)⁶, but activating this capital through capacity building and risk sharing is critical. EMDEs with more sophisticated domestic capital markets are likely to require less subsidy to mobilize capital, especially for projects with strong revenue profiles, reserving subsidy for less developed countries. To mobilize the domestic capital needed, MDBs will need better coordination and data sharing with domestic financial players like central banks and local PDBs, but there is little data on current spending levels, few systems in place to track domestic spending levels from either private or public sources, and scant information on the real economy impact of domestic or international financing. Better coordination

⁴ V20 (<https://www.v-20.org/climate-prosperity-plans>)

⁵ CPI, Global Landscape of Climate Finance: A Decade of Data, 2022 (<https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-a-decade-of-data/>)

⁶ Finance for Climate Action, 2022. (<https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/11/IHLEG-Finance-for-Climate-Action-1.pdf>)

with central banks, ministries of finance, and local PDBs can help fill in current knowledge gaps and create effective platforms for data and best practice sharing.

Any change at the country level will require the integration of domestic finance ministries and key national public financial institutions to push the climate agenda.

There are opportunities to engage with finance ministries through the [Coalition of Finance Ministers for Climate Action](#), which aims to bring together fiscal and economic policymakers to lead a global climate response. Because ministries and other financial institutions can move slowly when it comes to reform, MDBs must engage them early and often to create lasting partnerships for country action.

RISK-SHARING INSTRUMENTS TO CATALYZE PRIVATE CAPITAL

The cost of capital in EMDEs makes otherwise bankable projects unviable for private investors⁷, pointing to a key role for MDBs to mobilize private investment by sharing risks such as credit risk, off-taker risk, political risk, and liquidity risk. Yet the IMF found that MDBs crowd in private finance on average only about 1.2 times the resources they commit themselves.⁸ Moving to a program-based approach, with an emphasis on guarantees, local currency, and other instruments, would require internal incentive changes at MDBs, in particular their private sector arms, but could bring in greater volumes of private finance by helping private financial institutions overcome real and perceived risks and other barriers to investment.

MDBs need to deploy financial mechanisms and instruments that can raise and leverage capital at the scale and speed needed while addressing some of the critical barriers that exist in the current system. Some of these require long term reform, especially of MDB risk appetite and business models, so that MDBs themselves can issue more guarantees, issue more loans in local currency and/or facilitate local currency lending using off-shore guarantees, and support earlier stage project development. In the short term a variety of initiatives are ready to be introduced or to be scaled; this section highlights some of those.

To mobilize the volumes of private finance needed and reduce cost of capital, guarantees will need to be deployed at a greater scale. An OECD evaluation found

⁷ Finance for Climate Action, 2022. (<https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/11/IHLEG-Finance-for-Climate-Action-1.pdf>)

⁸ IMF, Global Financial Stability Report, 2022. (<https://www.imf.org/en/Publications/GFSR/Issues/2022/10/11/global-financial-stability-report-october-2022>)

that guarantees leveraged 26% of all mobilized private finance between 2018-2020, and were a preferred blended finance tool of private investors.⁹ MDBs both need to deliver more guarantees from their own balance sheets as well as collaborate with existing guarantee providers to deploy more guarantees. We recommend scaling, reforming, and/or creating the following initiatives:

- “Greening” the Multilateral Investment Guarantee Agency ([MIGA](#)), which specializes in political risk guarantees to incentivize foreign direct investment in EMDEs, needs to scale significantly and increase guarantees for green projects, as well as increase the efficiency of its processes to mobilize the amount of private finance needed. Additionally, the introduction of a complete payment protection product, even if synthetically, e.g., by combining MIGA’s existing credit enhancement product for failure of a (sub-)sovereign to pay with a liquidity facility that covers the failure of a (sub-)sovereign to pay on time, would do more to attract private investments to EMDEs and riskier sectors.
- [GuarantCo](#), part of the Private Infrastructure Development Group (PIDG), provides guarantees to banks and bond investors to develop capital market projects based on local currency.
- The [Green Guarantee Company](#) is the world’s first credit guarantor dedicated to climate solutions in the developing world.
- [iTrust](#) is a pre-funded guarantee scheme for all projects in a given tender, offered by [Greenmap](#), which assists governments in the design and execution of renewable energy procurement programs.
- [Climate Policy Initiative](#) (CPI) has proposed a debt credit guarantee for renewables and other climate projects in emerging markets, based on callable capital.
- The Global Revenue Guarantee (GREG) proposal of [FAST-Infra](#) would assure timely payments on behalf of (sub-) sovereign off-takers through a mix of public and private finance.

Borrowers have identified exchange rates as a risk throughout all levels of a project, from preparation through operation, but primarily for financing capital expenditures (capex). A recent study found that approximately 60% of foreign currency debt issued by firms is USD denominated, and an additional 23% are Euro denominated.¹⁰

⁹ OECD, Private Finance Mobilized by Official Development Interventions, 2023. (<https://www.oecd.org/dac/2023-private-finance-odfi.pdf>)

¹⁰ Schclarek, Alfredo, & Xu, Jiajun. Exchange rate and balance of payment crisis risks in the global financial architecture, 2022. (<https://www.sciencedirect.com/science/article/pii/S1042443122000580#b9>)

MDBs need to support solutions that increase investment projects with local currency denominated loans instead of hard currency loans, or a mix of the two. Solutions to support include:

- Scaling up the [Currency Exchange Fund](#) (TCX), a co-funded pool that works in EMDEs to provide financial instruments, mainly swaps and forward contracts, that enable investors to provide borrowers with financing in domestic currency while shifting the currency risk to TCX. This will likely require that TCX's commercial pricing be associated with some form of an independent concessional financing pool as demonstrated by pairing market-rate solutions offered by TCX with the private sector local currency financing window under IDA.
- Explore other proposals such as Just Environment Transition - Foreign exchange Investment Trust ("JET-FIT") to use SDR-backed guarantees to further reduce hedging costs in JETP countries. Build domestic capital markets to become sources of finance for climate action through capacity building, which will in turn increase the risk management capacity of borrowers.
- Guaranteeing domestic capital to mobilize investment in local currency and developing local green financial sectors by supporting e.g., local bond issuances and municipal creditworthiness.

Project preparation facilities and developer platforms that support the creation of bankable, investment-ready projects in EMDEs will be critical to increasing climate investments. Private financiers are often limited in the amount of capital they can deploy because they are unable to find projects that meet their investment criteria, meanwhile, project sponsors struggle to secure funding due to high project development risks. Global estimates of project preparation financing needs range from 5% to 10% of total investment cost, although this will vary by region.¹¹ Yet MDBs themselves don't typically invest in project preparation for the same reasons as private investors. Project preparation facilities and developer platforms can address these risks by supporting the development of bankable climate projects in EMDEs and assisting in attracting private financing. Project preparation facilities like PID, GIF, and the Gap Fund that need support to scale include the following:

- The [Private Infrastructure Development Group](#) (PIDG) Technical Assistance program provides support to aid project development and enable transactions

¹¹ ODI, Clean energy project preparation facilities, 2018. (<https://cdn.odi.org/media/documents/12504.pdf>)

across the project lifecycle, providing over USD 51mn to 262 technical assistance grants as of the end of 2021.

- The [Global Infrastructure Facility](#) (GIF), a G20 Initiative and housed at the World Bank, was created to address the shortage of bankable infrastructure projects and works to build pipelines of infrastructure projects that have the potential to attract private financing.
- The [City Climate Finance Gap Fund](#), housed at the World Bank and the European Investment Bank, helps cities in EMDEs turn low carbon, climate resilient ideas into strategies and finance-ready projects.

BUSINESS MODEL OVERHAUL

To execute the above recommendations, MDBs need to overhaul their business models via standardization, balance sheet optimization, eligibility for concessional finance, and greater transparency.

STANDARDIZATION

Greater product and system standardization throughout MDB processes can create greater uptake and impact.

- The standardization of [Key Performance Indicators \(KPIs\)](#) for public financial institutions can drive action and coordination from MDBs, particularly when KPIs move beyond financial flows to measure real economy or on-the-ground impacts. This can also include re-envisioning qualitative or quantitative sustainability targets to better connect climate and development finance mobilization, and support country-level Sustainable Development Goal (SDG) targets.
 - MDB targets for private sector mobilization could incentivize greater public to private funding ratios for financing activities.
 - Country level KPIs should be impact oriented, such as energy access, and set standards across domestic DFIs that are driven by country needs, bridging across the climate action and development agendas. The proposed country sector approach, above, will support linking finance to impact metrics.
- The uptake of [investment standardization initiatives to define climate-friendly investments](#), like resilient investments or sustainable infrastructure, can establish

an asset class, as has happened for green bonds. [FAST-Infra](#) has established a globally applicable labeling system for sustainable infrastructure assets. Similarly, the [Coalition for Climate Resilient Investment](#) (CCRI) is working to more efficiently integrate physical climate risks into investment decision-making through standardization.

- Standardized and streamlined tools could help reduce the transaction costs by creating off-the-shelf blended finance instruments, allowing EMDEs to avoid the current model of bespoke blended finance vehicles. Replicating or scaling existing structures offers EMDEs both flexibility in their use and faster access to capital.¹²
- [Mobilizing Institutional Capital Through Listed Product Structures](#) (MOBILIST) supports the listing of products such as trusts and private equity funds on global and local public exchanges through a fairly standardized process, with an aim of building momentum for EMDE investment opportunities at scale.
- [Sustainability-linked sovereign debt](#) is a performance-based financial instrument that commits its issuer to achieving certain predefined and forward-looking sustainability targets, including climate and nature risks in sovereign debt markets.¹³

BALANCE SHEET OPTIMIZATION

Originate-to-distribute models should be adopted to significantly increase private sector mobilization. The current “originate-to-hold” model, where an MDB makes a loan on their own account and holds it until the loan's end date not only ties up capital for extended periods of time, but also does not fully leverage the origination and de-risking capabilities of MDBs. Instead, an “originate-to-distribute” model creates (debt) portfolios for future private capital re-financing, i.e., an MDB provides a larger loan than it would hold for its own account and then “sells down” most of it by securitizing or bundling loans and selling them to the private sector. This will mobilize private sector investment upstream and recycle capital to increase MDB lending capacity. Most MDBs do this to optimize their balance sheets and manage exposure limits, etc., but few examples exist for pro-actively using originate-to-distribute as an operating business model. While these securitizations will need pre-agreed underwriting criteria and market-oriented pricing, as well as enough residual

¹² CPI, 2018. Blended Finance in Clean Energy: Experiences and Opportunities. (<https://www.climatepolicyinitiative.org/wp-content/uploads/2018/01/Blended-Finance-in-Clean-Energy-Experiences-and-Opportunities.pdf>)

¹³ Nature Finance, 2023. Sustainability-linked Sovereign Debt Hub. (<https://www.naturefinance.net/making-change/sovereign-debt/sustainability-linked-sovereign-debt-hub/>)

assets on MDB balance sheets to ensure they maintain a viable economic model, the new model would leverage MDBs' abilities (particularly those oriented to private sector financing) to originate and structure for risk-sharing.

VOLUME & ELIGIBILITY FOR CONCESSIONAL FINANCE

Concessional finance is scarce; therefore the volume of concessional finance needs to increase, be more flexible in how it can be utilized to address risks, and the eligibility and access to it needs to be reformed for enhanced efficacy. Blended finance fund managers report that securing public finance takes longer and is more laborious than private capital.

- Concessional finance efficiency: Reverse auctions of concessional capital (e.g., first loss capital) to fund managers could maximize the impacts of public money and bring greater transparency to public financing while reducing transaction times and costs.
- Climate risks: Not only should all projects be screened for climate risks, but all projects receiving concessional funding must be resilient. In addition, vulnerability should be a criterion for receiving adaptation finance, ensuring that countries with more vulnerability receive more funding.
- Rewarding ambition: Countries with more ambitious climate action plans and evidence of progress should be eligible for more concessional climate finance and better pricing. Single borrower exposure limits within MDBs may need to be re-examined to fully realize the potential financial increase.

DATA SHARING AND TRANSPARENCY

The standardization of data collection and data-sharing platforms can assist countries in creating viable climate plans based on sectoral and regionally applicable data and private investors in understanding performance of investments.

- **For performance**, the [Global Emerging Markets](#) (GEMS) risk database consortium pools credit default data from MDB and DFI investments. Making this data publicly available and GEMS an independent legal entity is critical for expanding private sector financing, particularly on "originate-to-distribute" models outlined below, as it builds investor understanding and strengthens the risk assessment of MDB assets. However, data on performance, for example

blended finance or individual project investments, are not readily available and therefore introduce barriers for market development.

- **For adaptation**, common databases of climate data and scenarios would reduce transaction costs for project developers, countries, and cities to prepare funding applications and demonstrate that their projects address climate risk.
- **Across sectors and regions**, coordinating transparent and standardized tracking and sharing of (ideally) project-based climate finance data would provide a greater understanding into global climate finance flows and trends.

MDBs and PDBs could replicate their counter-cyclical crisis response to address the climate crisis. The way MDBs currently deploy their resources needs to evolve to mirror their crisis response toolkit, particularly to provide more flexible instruments, higher risk tolerance, and faster decisions.^{14,15} The World Bank's roadmap has stated the institution only has funding for approximately one mid-sized crisis per decade, which is inadequate for the current environment of polycrises.¹⁶ The MDB successes during the Covid-19 pandemic (and in the past for the Asian financial crisis), need to be institutionalized for regular action over the status-quo of business operations.

BEYOND MDB REFORM

The recommendations above are intended to focus on the roles and responsibilities of MDBs within the context of the current MDB reform agenda.

Further capacity building, both within EMDEs and MDBs themselves to support the instruments or overhauls, is necessary to develop each idea into a working model. None of the recommendations are guaranteed to work within the current context, none will be able to solve the climate crisis alone, and many may not work at all without the broader proposed long-term reforms to the financing models of the IFIs. Some ideas, such as using insurance to mobilize capital, are underutilized in this context and deserve further thought. Others, such as guarantees, FX risk hedging, project preparation models, and standardization, have the potential to be operationalized and scaled in the near term.

¹⁴ Professor Stephany Griffith-Jones, Comments to UNCTAD, 2022. (https://unctad.org/system/files/non-official-document/tbd_efd5_presentation_session3_griffithjones_en.pdf)

¹⁵ https://unfccc.int/sites/default/files/resource/Finance_VisionSummary_V2.pdf

¹⁶ World Bank Roadmap, 2022.

(<https://documents1.worldbank.org/curated/en/099845101112322078/pdf/SECBOS0f51975e0e809b7605d7b690ebd20.pdf>)

There are additional, critical actors and actions that need to take place to support the broader agenda of international financial architecture reform. These include:

- The IMF and other public development banks, and their global and/or domestic responsibilities for facilitating climate finance and mobilizing private capital;
- Global frameworks such as the International Sustainability Standards Board (ISSB) and future reforms to banking and insurance regulation, which when adopted by country regulators need to ensure they don't hinder financial flows to developing economies; and
- Developed economy governments, particularly those in the G7 and/or in the European Union, which need to support climate investments with real economy impacts. For example, fiduciary regulation of pension funds must enable, not restrict, increased investment into emerging economies where actual risk is more than priced in.

All key policy actors in the global financial system will need to recognize their critical role in truly unlocking the scale and quality of sustainable finance required in coming decades. No one organization can deliver change alone - new leadership at the World Bank will need to be met with renewed leadership across the board and the willingness to work as a system.

The last several years have been rife with concurrent crises, including the climate crisis, and have laid bare the need to reform the international financial architecture. This paper contributes to that discussion by highlighting the specific models and operational changes that can be adopted and scaled with the speed required to address the current global needs.

Capital Mobilization Roadmap

Discussion Draft

June 6, 2023



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INTRODUCTION

This roadmap seeks to build on the discussion paper, [An Innovative IFI Operating Model for the 21st Century](#), by describing pathways for implementing some of the most promising risk-sharing instruments and business models described briefly in the paper, with a focus on mobilizing private capital. This is not meant to be a comprehensive document. Rather, it will isolate 4 high-impact instruments and initiatives that address:

- **Credit risk** with increased and purposeful guarantees
- **Currency risk** at scale by creating markets, with more funding to existing initiatives, guarantees, and blending to improve affordability
- **Development risk** by scaling project development business models and tailoring models to attract earlier investment
- **Mis-aligned MDB incentives** by standardizing mobilization targets, underwriting criteria, and asset classes

These reforms are most appropriate for the private sector arms of MDBs as well as DFIs that directly lend to the private sector, municipalities, and via financial intermediaries. While some are well established and in need of scaling, others are relatively undeveloped and not guaranteed to work, but do have significant potential. Our focus is on short run reduction of risk and cost of capital, to accelerate private investments that target both climate and broader development priorities. Many of these initiatives will facilitate capital mobilization for both infrastructure development and to support businesses where climate impacts are crucial. In order to focus on the above opportunities, and given the excellent work done by many in the field, we are not addressing sovereign lending, policy reform technical assistance, and business models related to those. This is not to say that they are not important – they are arguably more important in the long run for private capital mobilization by building better enabling environments.

As this roadmap developed, we encountered a wide variety of key operational questions. As such, the roadmap outlines questions that need to be answered for each instrument or initiative and suggests key events and convenings to agree on either basic frameworks or more detailed approaches for scale up. Another key aspect is determining both the decision makers and the supporting actors for each initiative or instrument, and determining who needs to be included in the discussions, in what capacity, and at what stage. While 2024 political milestones like the Brazil G20 meetings and the 80th Bretton Woods Anniversary will be critical for shaping conversation and supporting momentum for fundamental long-term reforms, they are not included as their political context at the moment is too uncertain.

We believe that these initiatives are achievable in the next 18-24 months based on existing track records and consultations with key stakeholders. However, it will require significant capacity and unparalleled collaboration among public and private finance institutions, shareholders, advocacy and civil society organizations, donors, philanthropies, and external experts. The goals and political milestones listed here are intended to be picked up by MDBs, government shareholders, developing country clients, and advocacy groups that are best situated to make concrete progress in these areas, with CPI and many other field builders, as well as private sector stakeholders, providing technical expertise and helping to connect relevant initiatives.

This is a draft for consultation. CPI welcomes feedback on this roadmap to framework@cpiglobal.org.

1. ADDRESS CREDIT RISK WITH INCREASED AND PURPOSEFUL GUARANTEES

SHORT TERM REFORM

A credit guarantee facility with standardized contracts and agreed criteria to accelerate both the creation of the guarantee and the payment in case of default, and requiring only the estimated default rate to be used as capital to seed the guarantees. The facility could be jointly capitalized by MDBs.

What it builds on and existing impact: There are a number of successful institutions with a track record of guarantee issuance, such as PIDG's GuarantCo, MIGA, and SIDA. Green Guarantee Company and Greenmap are recent initiatives.

Decision makers: MDBs to provide capital for guarantees at expected default rate.

Who else needs to support: Donors could provide grants for set-up costs and fees, project sponsors (e.g., developers, municipalities).

Impact potential: Mobilization potential at least 6x lending¹, some papers suggest 25x or more². A USD 10 bn facility could mobilize USD 25 -100 bn. Standardizing and coordinating guarantees across institutions and across countries would lower the transaction costs.

Key questions:

- Where will this facility be housed? Would it be more straightforward to develop it through an increase in MIGA's range of risks covered (beyond political risks), or does it need to be operationalized outside of MIGA and/or the MDBs to ringfence?
- Can existing products, including those offered by MIGA, be repurposed or enhanced to create interim synthetic solutions?
- Is it possible for MDBs to capitalize the guarantee facility directly, similar to how they capitalized TCX at the outset?
- How would the facility be capitalized?
 - Can a facility outside the MDBs, or within MIGA, use MDBs' callable capital as a backing for some of the guarantees to increase liquidity?
 - Is donor capital necessary for facility development and launch? Should donor capital be used to provide guarantees directly to PDBs in emerging markets and developing economies? Are there any early lessons learned from the IF-CAP efforts to provide guarantees to ADB?

¹ Blended Finance Taskforce, Better Guarantees Better Finance Consultation Paper, 2023, Exhibit 5

² CPI discussion paper, June 2023, Cost of Capital for Renewable Energy in Developing Economies

- What is the default rate on a global level that should be used in instrument calculations? How do geographic and technology variations need to be considered?

LONG TERM REFORM

Change capital allocation rules to incentivize guarantees under existing structures:

- 1) MDB internal risk weightings,
- 2) Overseas Development Assistance accounting rules, and
- 3) clarification of key bank regulatory regimes vis-à-vis participating in co-financing with MDBs and other public finance institutions.

What it builds on and existing impact: Current MDB and ODA rules require capital to be set aside at higher-than-expected default rates, typically indistinguishable from a loan of the same value. Changing the accounting rules would allow for guarantees to be based on estimated default rates, rather than requiring the full amount of the guarantee to be held, which could allow for guarantees to be used over loans. Commercial bank regulations are often silent on how to treat public risk sharing in capital adequacy and therefore banks take a risk-averse stance. Clarifying capital adequacy rules when investing alongside MDBs and other public finance institutions could free up commercial capital.

Decision makers: MDB shareholders, financial sector regulators, MDB leadership, OECD Development Assistance Committee.

Who else needs to support: G7, Lower-income and Middle-income country governments, developing country public and private financial institutions and project developers.

Key questions:

- Can an MDB use a probabilistic approach (like MIGA does) to guarantees and estimated default rates in house, or do guarantees need to be ringfenced?
- How much capital could be freed by changing the ODA accounting rules?
- How can increased guarantees be complemented by partnerships with domestic and international finance institutions and project sponsors to make sure they are utilized?

CREDIT RISK ROADMAP

	Summit for a New Financial Pact	Africa Climate Action Summit	Finance In Common Summit	India G20 Summit	2023 Annual Meetings	COP28	2024 Spring Meetings	2024 Annual Meetings
	June	September	September	September	October	November	April	October
Credit guarantee facility	Convene with MDBs, PDBs, and V20 governments to discuss basic facility organization	Feedback on guarantee potential and design in Africa	Convene interested PDBs to agree on basic needs and best practices for guarantee instruments	MDB Expert Group highlights need for more guarantees as a short- & medium-term solution	Facility announced with support of two or more MDBs Convening to agree on basic facility organization Expanded financing for PIDG announced	Donors announced for facility set up costs Convening to stress test and discuss facility organization with developed and developing country governments, MDBs, PDBs, and private sector stakeholders	Update on facility & mention of importance Convening to fully flesh out and agree upon detailed facility organization	Credit guarantee facility launched
New capital allocation rules	Convene with MDBs and PDBs to discuss changes to guarantee risk weightings	Call for changes to the guarantee system to increase climate finance to EMDEs	Convene with MDBs and PDBs to agree on basic tenets of guarantee risk weighting changes	MDB risk weighting evaluation announced ODA rules & regulatory clarifications included in reform discussions	Convening to discuss MDB risk weighting changes, effects on global climate finance Convening to agree on basic ODA rule and regulatory clarifications changes	ODA rules & regulatory clarifications included in direct discussions with WB shareholders as necessary change Convening with governments, MDBs, and PDBs to agree upon final MDB risk weighting changes	MDB risk weighting launched ODA rules changes announced Convening with governments, MDBs, PDBs, and private sector to discuss regulatory clarifications	

2. ADDRESS CURRENCY RISK WITH MORE FUNDING TO EXISTING INITIATIVES, GUARANTEES, AND GREATER USE OF LOCAL CURRENCY

SHORT TERM REFORM

- 1) Scale up the market creation capacity of TCX by adding capital and increasing the scale and scope of its blending program to improve affordability, and
- 2) Explore other proposals such as Just Environment Transition - Foreign exchange Investment Trust ("JET-FIT") to use SDR-backed guarantees to further reduce hedging costs in JETP countries.

What it builds on and existing impact: TCX has created long-term price hedges for a wide range of currencies and can scale significantly with additional investment, including concessional investment that allows below-risk rates.³ An additional \$5b investment would allow TCX to reach \$60b in hedging capacity by 2025. The JET-FIT concept seeks to leverage IMF's capabilities to guarantee SDR exchange rates in the long run.

Decision makers: MDB leadership & shareholders, TCX leadership, Government Investors, IMF, JETP countries.

Who else needs to support: Domestic and commercial banks, and institutional investors.

Key questions:

- How can affordability of currency hedging be improved while supporting the creation of markets?
- What are the capacity needs of countries, for example for better currency risk management?
- Is the JET-FIT proposal technically viable, including its assumptions on short and long term risk premia?
- What is the role of IMF?

LONG TERM REFORM

Increase use of guarantees and capacity for local currency lending as well as MDB direct currency lending

³ For example, the EU Market Creation Facility – Pricing Component program blends capital to increase affordability. <https://www.tcxfund.com/projects-initiatives/eu-market-creation-pricing-facility/#:~:text=TCX%20has%20established%20a%20program,local%20currency%20in%20development%20finance.>

What it builds on and existing impact: One example of an initiative under development is the Rwanda Green Investment Facility, spearheaded by FONERWA in partnership with other local DFIs, which proposes a Green Guarantee Facility to reduce interest rates and encourage the local currency market by guaranteeing local financial institution green lending.

Decision makers: DFIs, MDBs, EMDE country governments, donor countries.

Who else needs to support: Local financial institutions, IMF.

Key questions:

- Would guarantee funds depend on local currency being available through local banks? What is the role of intermediary lending between MDBs and PDBs?
- What are ways MDBs and local governments can support efforts to increase direct loans in local currencies?
- What would be the optimal way to approach direct currency lending by MDBs? What are the implications for others, e.g., credit rating agencies?
- What are the capacity needs of countries, for example for better risk management?
- What is the role of IMF?

CURRENCY RISK ROADMAP

	Summit for a New Financial Pact	Africa Climate Action Summit	Finance In Common Summit	India G20 Summit	2023 Annual Meetings	COP28	2024 Spring Meetings	2024 Annual Meetings
	June	September	September	September	October	November	April	October
TCX expansion & JET FIT	Convene TCX, TCX investors, and borrower representatives to discuss potential changes and expansion	Agree on basic tenets of foreign exchange risks and climate finance impacts to gather support for short- and medium-term FX and local currency solutions	PDB discussion on how to best support TCX expansion and local currency lending and guarantees	Expert working group supports TCX expansion as a short-term solution to currency risks and assesses potential for SDR exchange rate guarantees	MDBs announce additional investments in TCX; IMF issues statement on SDR guarantees	TCX announces new government capital that will allow below risk rates to more climate projects; JET FIT program announced	TCX releases impact report for climate investments since COP28	JET FIT facility launched
Local currency guarantees and capacity for local lending	Convene developing country governments, PDBs, and MDBs to discuss using guarantees to hedge local currency lending and increased local currency lending from MDBs	Agree on basic tenets of foreign exchange risks and climate finance impacts to gather support for short- and medium-term FX and local currency solutions	PDB discussion on how to best support TCX expansion and local currency lending and guarantees	Expert working group recommends further work on the use of local currency guarantees and recommends local currency lending.	Convening to agree on details of local currency guarantee instruments Convening to discuss direct local currency lending from MDBs	Pilot guarantee instrument announced with support of 1 MDB and 1 developing country government.	Pilot facility launched Announcement on direct currency lending	Pilot facility replicated for 2 or more additional EMDE countries Launch of direct currency lending instruments

3. ADDRESS DEVELOPMENT RISK BY SCALING PROJECT DEVELOPMENT MODELS AND TAILORING MODELS TO ATTRACT EARLIER INVESTMENT

SHORT TERM REFORM

Increase funding for existing project development models and platforms to scale proven, working programs and increase the amount of bankable, investment-ready projects in EMDEs. Improve efficiency of existing models through standardization and data sharing.

What it builds on and existing impact: There is a strong track record of existing project development facilities, funds, and advisory services, including the Global Infrastructure Facility (GIF), regional clean energy facilities like Southeast Asia Clean Energy Facility (SEACEF), now being replicated in other geographies by Allied Climate Partners, Gap Fund, and Climate Investor One's Development Fund. The SOURCE platform provides standardized infrastructure project preparation management software to countries. Fast-INFRA provides a sustainable infrastructure label towards creation of a standardized asset class.

Decision makers: Donors, philanthropies, MDBs/DFIs.

Who else needs to support: Private sector financial institutions and developing country-based project developers.

Impact potential: Project development is typically 2-5% of total project cost on average, and on the higher end of this range in EMDEs, so leverage can be 20-50x early-stage investments.

Key questions:

- How much funding could potentially be deployed by existing facilities?
- How much concessional funding will be required to scale up the existing models?
- What limits the availability of grant funding for project development?

- Which communities, regions, or technologies are underserved by project development facilities? Could the existing organizations expand to these areas?
- What improvements on ease of access for both project developers and private investors will reduce frictions in the system?
- How can PPFs better align with investors, and what platforms exist to facilitate those conversations?
-
- How can MDBs invest directly in the GIF or other project development facilities, similar to how they invest in TCX or other equity platforms?

LONG TERM REFORM

Improve impact and dramatically scale up MDB and DFI support for project development

What it builds on and existing impact: MDBs currently fund some early stage project preparation activities, mostly via grants and technical assistance. More sustainable financing models need to be adopted.

Decision makers: Donors, Philanthropies, MDBs, shareholders, borrowers.

Who else needs to support: Domestic and international public and private sector financial institutions

Impact potential: Project development models with returnable grants and investments, and lower transaction costs, can reduce reliance on grants, allowing for longer term sustainability and better targeting of scarce grant capital. Early investment in project development can also create significant bankable assets for private sector investment.

Key questions:

- How can the MDBs support broader coordination and increased effectiveness of their existing project preparation services?
- What is the increase in MDB risk by investing in project development directly, rather than relying on grants, and how can that be mitigated by the capital adequacy framework reforms?
- What kinds of funds (grant, concessional equity/debt, commercial) are needed for which technologies in which geographies?
- How can we better coordinate and construct a continuum of support between pure grant (or returnable grant) models and investment or returnable capital financing models, based on differing development risks?

DEVELOPMENT RISK ROADMAP

	Summit for a New Financial Pact	Africa Climate Action Summit	Finance In Common Summit	India G20 Summit	2023 Annual Meetings	COP28	2024 Spring Meetings	2024 Annual Meetings
	June	September	September	September	October	November	April	October
Scaling existing project preparation models	Convening with existing project development models to share best practices	Collective call from group of African nations for MDBs, donors, and private capital to support project pipelines	Convening with PDBs to discuss early domestic financing in PPFs and finance accessibility challenges Existing project development models to announce plans for increased cooperation and data sharing		Project development facility success stories shared with MDB shareholders	Funding announcements from philanthropies and donors, MDBs, and private funds to scale up existing models Convening of project development facilities and PDBs to discuss access to financing improvements		
MDB project development reforms	MDBs discuss potential for increased project development investments		Project development facilities and PDBs discuss improved collaboration and how PDBs can better support project development	Expert working group issues recommendations on MDB project development investment	Announcement of initial MDB commitments to invest in project development		MDBs make pilot investments in project development	Announcement of MDB early investments in project development facilities and project preparation

4. ADDRESS MIS-ALIGNED MDB INCENTIVES BY STANDARDIZING MOBILIZATION TARGETS, UNDERWRITING CRITERIA, AND ASSET CLASSES

SHORT TERM REFORM

Align staff performance and institutional targets to better incentivize private sector mobilization and total investment volumes, rather than institutional volumes.

What it builds on & existing impact: In 2021, MDBs climate finance mobilization for LMICs was only \$13B against \$51B of climate finance. \$10B of the \$51B was for private borrowers, but there is no reporting on private capital mobilization per borrower type (e.g., public vs private).

Decision makers: MDB leadership & shareholders.

Who else needs to support: MDB operations.

Key questions:

- What are the right metrics for measuring effective mobilization and real economy impacts?
- Should they be included in the KPIs for executive compensation?
- How can the KPIs be standardized across the MDBs in a manner that accounts for regional differences?
- Can inter-MDB cooperation regarding mobilization be included as a KPI?
- What is the appropriate level of reporting?

LONG TERM REFORM

Standardize underwriting criteria and asset classes to allow “originate-to-distribute” models to be implemented.

Purpose: Originate-to-distribute models could crowd in significant private sector investment upstream and better leverage MDB capital.

What it builds on and existing impact: A relatively new idea that builds on the success of MDBs being able to source new deals and de-risk transactions (particularly for private financing) and the potential for these MDBs to effectively bundle diversified projects into attractive portfolios through securitization or other similar means by using pre-agreed underwriting criteria.

Decision makers: MDB leadership and shareholders.

Who else needs to support: Private sector financial institutions.

Key questions:

- How should originate-to-distribute models adjust to different MDB types, particularly between sovereign and private MDB arms?
- How can the model be standardized to facilitate ease of use?
- How will the securitization of the loans impact the financial models of the MDBs themselves?
- What is the market appetite for such securitizations, and does it change by region?

MDB INCENTIVE ROADMAP

	Summit for a New Financial Pact	Africa Climate Action Summit	Finance In Common Summit	India G20 Summit	2023 Annual Meetings	COP28	2024 Spring Meetings	2024 Annual Meetings
	June	September	September	September	October	November	April	October
Mobilization targets	Convening of MDBs to agree on need for and basic outline of new KPIs	Call for MDBs to create standardized KPIs that focus on capital mobilization and support EMDE SDG goals	Convening of PDBs to discuss KPI standardization	MDB expert group makes a statement in support of standardized, mobilization-focused KPIs	Announcement of new KPIs, promise to implement by July 1 (start of new FY)	Convening of MDBs, donor governments, and CSOs to agree upon new KPI framework	Final KPIs announced, along with approach to measure and report progress against KPIs	Initial KPI results shared
Underwriting criteria and asset classes	Convening of high-level experts to discuss “originate-to-distribute” idea and agree on basic framework		Convening of MDBs and financial actors to discuss changes needed to the system to broadly support an “originate-to-distribute” model	MDB expert group calls for MDBs to cooperate on data sharing and standardization of criteria	Underwriting criteria and asset classes discussed as part of reform package and with shareholders Coordinated MDB pilot of originate-to-distribute model announced at Marrakesh	Private sector institutions state support for “originate-to-distribute” model with capital estimates	MDB shareholders express support for “originate-to-distribute” Announcement of underwriting criteria and asset class evaluation and standardization	Full scale implementation announced for July 1, 2025, in line with new fiscal year

Additional Resources

This section contains short technical briefs from contributing experts:

1. **Allied Climate Partners:** Anchoring and Scaling Local Investment Managers
2. **Avinash Persaud: A FX Guarantee for the Green Transformation in Developing Countries**
3. **Climate Policy Initiative:** Risk-Sharing Guarantee Facility to Address Cost of Capital for Renewable Energy
4. **Concito:** MDB “Commitment to Catalyse”
5. **Intellidex:** Opportunities for IFIs to Support the Scaling of Transition Finance
6. **iTrust:** Greenmap Guarantee Facility
7. **Private Infrastructure Development Group:** GuarantCo Local Currency Credit Solutions
8. **Private Infrastructure Development Group:** InfraCo Project Development Risk Capital
9. **Sustainability-linked Sovereign Debt Hub:** Sustainability-Linked Sovereign Debt
10. **TCX:** Creating Currency Risk Markets to Mitigate Currency Risk at Scale

Allied Climate Partners – Project Preparation Facility

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Concept summary

Allied Climate Partners (ACP) is a \$825 million investment platform, backed by \$235 million in philanthropy, with a mission to increase the number of bankable, climate-related projects and businesses in the Global South¹.

ACP selects regional investment managers in the Global South. Each manager deploys an innovative investment model, designed to address a financing gap at the early stages of the development process for climate-related projects and asset-oriented businesses.

Without this capital, many projects and businesses struggle to reach financial close and completion. ACP is focused on projects and businesses in sustainable energy (e.g., utility-scale and distributed renewables, storage), industrial and productive use (e.g., green manufacturing, cold storage, irrigation), and green urban development (e.g., electric transport, water and waste, efficiency and cooling).

By providing targeted, risk-tolerant capital and expertise to select regional investment managers, ACP induces government, non-governmental organizations, and private-sector investors to participate where they would not otherwise. ACP is building on the early success of a model its investors helped to establish in Southeast Asia (the [Southeast Asia Clean Energy Facility](#)) and execute this model across the Caribbean and Central America, Africa, and India.

Track record to date

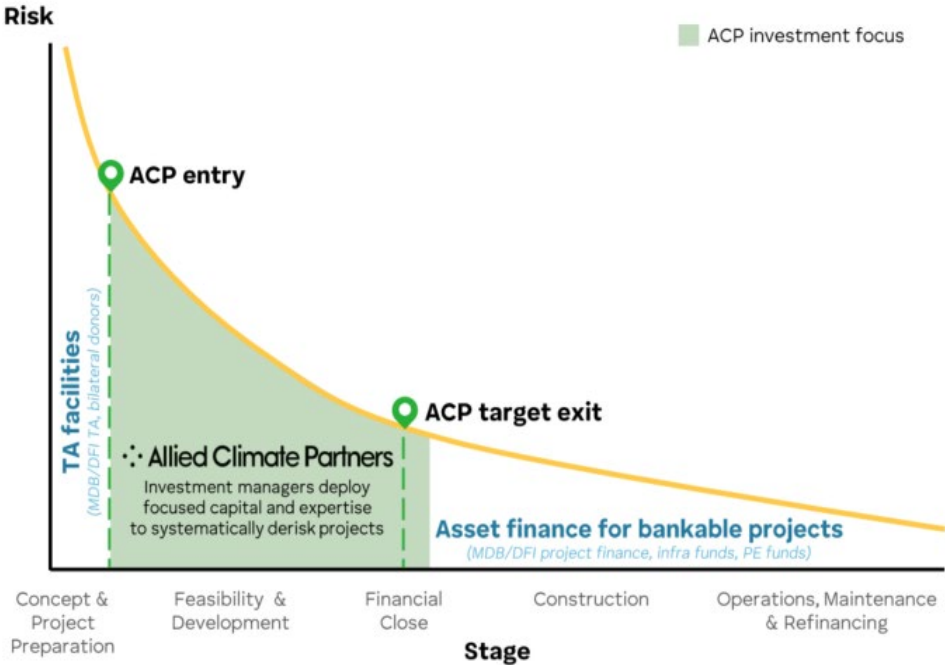
The effectiveness of the ACP model has been demonstrated by the Southeast Asia Clean Energy Facility (SEACEF). This fund, focused on Vietnam, Indonesia, and the Philippines, is accelerating the low-carbon transition in Southeast Asia and is supported by leading international foundations (including the Sea Change Foundation, Children's Investment Fund Foundation, Sequoia Climate Foundation, and Packard Foundation) as well as impact investors and corporates, including Microsoft. SEACEF's initial \$22.5 million facility has made nine early-stage investments to innovative, high-impact, clean

¹ For the purposes of this memo, we use the term Global South to refer to emerging and developing economies, with a particular focus on Southeast Asia, India, the Caribbean and Central America, and Africa.. As is described in detail, Allied Climate Partners' regional managers will select individual countries in which to invest.

energy projects and scalable businesses in its first 2.5 years. These nine investments have catalyzed more than 20x the initial funding in third-party, private-sector capital, already achieved one successful [exit](#), and spurred development of potentially billions of dollars' worth of climate assets.

Instrument mechanics

A crucial bottleneck impeding the flow of climate-related capital in the Global South is a lack of bankable projects. In infrastructure, the earliest stages of project development are the riskiest. These risks are heightened in the Global South, where the enabling policy or regulatory environment is often underdeveloped, and projects can take a longer time to reach completion. Yet early-stage development represents the smallest portion of the overall funding need for a project. Of the total cost of a completed project, approximately 95% is needed to build the project, and as little as 5% is spent during the development period for items like land acquisition, engineering studies, technical analysis, modeling, permitting, and environmental impact assessment. While 5% of the capital can unlock 95%, this early-stage capital is the hardest to raise because public and private funders are unwilling to accept the risk.

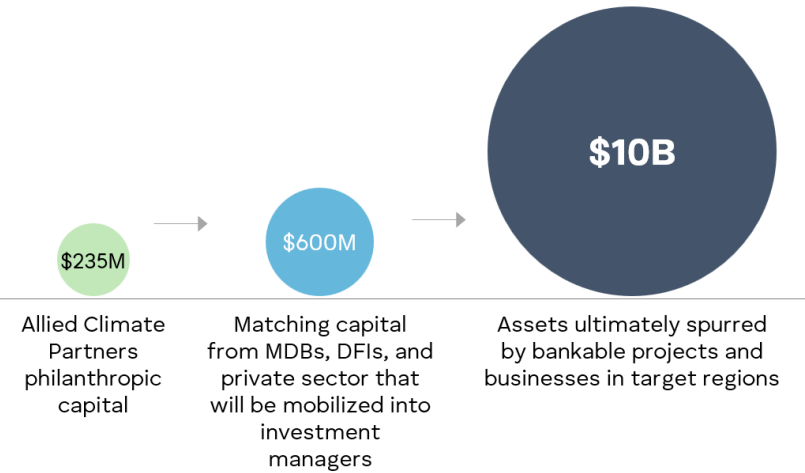


ACP's regional investment managers focus on this early stage of development when risk capital has significant additionality, and provides tranching, milestone-based investments and hands-on management support to systematically derisk investments. ACP's managers seek to exit at financial close, crowding in asset investors, and recycle proceeds to create even more bankable projects.

In each regional manager's fund, ACP provides philanthropic capital representing 25% of the capital in the form of junior equity. The philanthropic capital encourages the remaining 75% of the capital, which is provided by DFIs, governments, foundations, and

other private and public sector investors, in the form of senior equity. By focusing on this high-leverage intervention, ACP catalyzes funds at scale. Over time, ACP hopes to prove out this model, encourage greater private sector involvement, and lessen or eliminate the need for philanthropic capital.

As ACP's regional investment projects mature and reach financial close, the projects are expected to raise approximately \$10B from asset financiers to construct the projects (a ~12x multiplier on the \$825M).² ACP investment managers will seek to exit investments at financial close to DFIs, governments, infrastructure funds, corporate developers, and other public and private sector investors. The combined multiplier on the philanthropic capital is expected to be 40x ($\$10B / \$235M = 40x$).



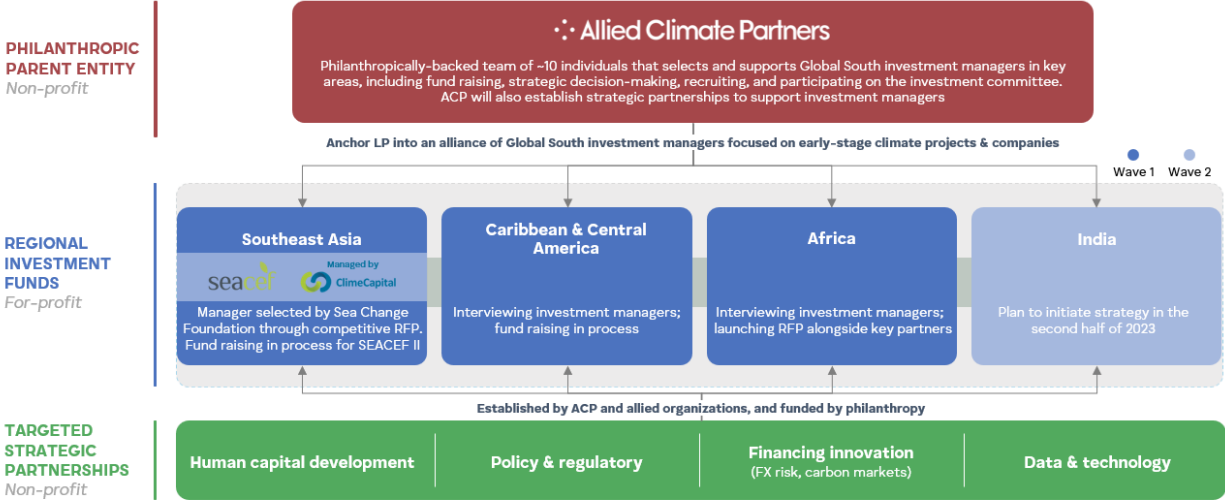
Scale-up pathway

ACP is taking a staged approach to expansion – first scaling up SEACEF II, the existing fund manager in Southeast Asia, while in parallel, progressing through diligence and a Request for Proposal process to select its managers in Africa and the Caribbean. In the second half of 2023, ACP will advance its strategy development and market exploration for India as the fourth target geography.

ACP is raising \$235 million of junior equity from philanthropic organizations and is working with major MDBs, DFIs, private, and corporate investors who will participate as senior equity.

² Calculations do not include recycling

ACP: Anchoring and Scaling Local Investment Managers



Note: Three Cairns Group and Sea Change Foundation are founding philanthropic anchors of ACP. ACP will become an independent 501(c)3 nonprofit entity with a for-profit investment subsidiary.

Unblocking the green transformation in developing countries with a partial foreign exchange guarantee.¹

Avinash Persaud²

1. Summary

Though rich countries contributed 70% of the stock of greenhouse gases causing global warming, developing economies now contribute over 63% of greenhouse gas emissions. And rising. There is no pathway for the world to remain below critical climate tipping points that does not include an accelerated investment in the green transformation of emerging economies. The 2022 report of the High-Level Expert Group on Climate Finance estimated that by 2030 annual investments exceeding US\$2.4 trillion are needed, of which, given the scale and limits of domestic resources, up to US\$1 trillion will need to be foreign private investment. But outside of China, the high cost of capital in developing countries – almost always two or three times the cost in developed economies – means we are only seeing a trickle of the necessary foreign private investment. Unless we lower the cost of capital, the needed transformation will not materialise. An analysis of what makes up the high cost of capital suggests we can.

The cost of capital reflects the rate of return projects have to offer investors to compensate them for their fear of loss from the risks they perceive. Development banks are project financiers, so they have focused on reducing project risks, such as construction and regulatory risks, and the risks that buyers or suppliers will default. The standard policy recommendation is to redouble these efforts. However, market data suggest the biggest opportunity for reducing the cost of capital for industrialising emerging economies lies elsewhere.

We can break down the cost of capital into the risk-free rate of return an investor requires of all their investments, plus the macro- and micro-risk premia applying to particular investments in a specific country. The macro-risk premium reflects political, sovereign credit and currency risks. We can see it in the higher yields developing-country governments pay investors to buy their bonds. Recently, the South African Government offered investors 12% annually when it borrowed ten-year money, while the German Government paid 1%. The micro-risk premium is the extra return a project has to offer investors above the Government's borrowing cost. The evidence we show in this paper is that in industrialising emerging economies, excluding China, the micro-risk premia are similar or smaller than in developed countries. The macro-risk premia therefore account entirely for the higher cost of capital in emerging economies. This striking result may reflect existing micro-risk

¹ Version 7.0, June 7, 2023. Special thanks to Amar Bhattacharya, Karima Degia, Emma Hamilton, Michael Hugman, Michael Jacobs, Sony Kapoor and Rockefeller Foundation, for direct assistance in the development and preparation of this paper which has also benefited from the wisdom and encouragement of too many others along the way to mention individually here.

² Emeritus Professor of Gresham College, Chair, CARICOM Commission on the Economy, Special Climate Envoy to Prime Minister Mottley.

reduction efforts, but the message is clear: to make a difference we must reduce the macro-risk premia.

In industrializing emerging economies like Brazil, India, Indonesia, Mexico and South Africa, but unlike most other developing countries, investors can hedge a large proportion of the additional macro-risk premia in the forward currency markets. But the costs of doing so are so high that what is left of the return is not enough to generate interest in an investment or even in developing a supply of investment-ready projects. Studying where exchange rates end up and where they were predicted to end up by the forward foreign exchange (FX) market reveals that these hedging costs include a substantial excess risk premium or 'overpayment' for actual currency risks. And because capital flows to emerging markets are highly cyclical, if we narrow our focus to when hedging costs rise above the recent norm, this *overpayment* both doubles, *and* becomes more certain. At these times, if an FX Guarantee Agency provided investors with hedging at costs that were reduced by historic excess amounts which could mean a halving of current market costs, there would be adequate protection for future FX risks and sufficient currency-hedged returns to send investors gleefully to emerging economies. By reducing the overpayment only, we are correcting this market failure without subsidy, allowing us to scale up this partial guarantee to cover the entire green transformation investment that needs to be financed externally.

To do this we would need a counter-cyclical mechanism with a public-good mandate, pooling FX risks, and the necessary liquidity and capital to hold fundamentally profitable trades over time. It could be implemented by a joint agency of multilateral development banks, where there is diversity and project expertise, and the International Monetary Fund (IMF), where there is liquidity and macro knowledge.

2. Introduction, or why this is a planet-sized problem to be solved

We care about greenhouse gas (GHG) emissions because they stick around in the atmosphere, in some cases, for hundreds of years. Over the past 270 years, North America and Europe have contributed over 70% of the stock of GHGs in the atmosphere.³ GHG emissions were an integral part of their story of increased food production, industrialisation, and economic growth. In recent years, as rich countries have reached a point of wealthy post-industrialisation, the carbon intensity of their GDP growth has fallen.⁴ Now, as developing countries pursue more intensive agriculture, industrialisation, and economic growth without the spoils of imperialism, their emissions represent 63% of global emissions.⁵ This will only grow.

Equity may demand that developing countries wait till they are wealthy to reduce their carbon intensity. The challenge is that earlier rich-country-led industrialisation used up 86%

³ <https://ourworldindata.org/grapher/cumulative-co2-emissions-region>. North America and Europe have contributed 70.8% of cumulative CO₂ emissions emitted between 1750 and 2021. Note, this measures CO₂ emissions from fossil fuels and industry only.

⁴ <https://ourworldindata.org/co2-gdp-decoupling>

⁵ <https://www.cgdev.org/media/developing-countries-are-responsible-63-percent-current-carbon-emissions>

of the planet's carbon budget.⁶ As we use more of this budget, the planet's physical, chemical and biological systems will destabilise, with cascading effects.⁷ These processes are not linear or geographically uniform. The 40% of the global population living between the tropics of Cancer and Capricorn, where temperatures and sea levels will rise to the highest levels, are already experiencing unprecedented loss and damage from climate change impacts amplified by poverty, vulnerability, and indebtedness.⁸ Alongside historic responsibilities and differentiated impacts there are now no current pathways in which the planet's temperature remains below critical climate tipping points that do not involve a rapid green transformation in developing countries.

According to the 2022 Songwe, Stern and Bhattacharya (2022) report of the High-Level Expert Group on Climate Finance established by the COP26 and COP27 Presidencies, we need over US\$2.4 trillion per year of investment in the green transformation in developing countries if we are to reduce GHG emissions at the correct scale and pace *for the planet*.⁹ ¹⁰ The good news is that this transformation represents a strong national development and growth strategy for many countries. Moreover, in the developed world, 81% of green transformation investments are financed by the private sector, underscoring that many of these projects are commercially viable.¹¹

In the developing world, only 14% of these investments are funded by private savings.¹² Developing-country governments have tried to fill the gap themselves. Some, suspicious of the motives of private investors, believe they should continue to do so. But developing-country governments cannot invest to the scale and pace the world needs. It would be nice if the world financed it for them but we will be waiting for Godot for that. Total global expenditure on aid is less than one tenth of the cost of the green transformation in developing countries and, if anything, aid budgets are getting stretched on non-traditional things – not quadrupling. And developing countries do not have the space on their balance sheets for the debt required even if they wished to finance it themselves. Recall that developing countries start from high debt levels, worsened by the pandemic, the food and fuel crisis following the Russian–Ukraine conflict, and rising loss and damage

⁶ <https://www.carbonbrief.org/analysis-which-countries-are-historically-responsible-for-climate-change/>
"by the end of 2021, the world will collectively have burned through 86% of the carbon budget for a 50-50 probability of staying below 1.5C".

⁷ <https://www.ipcc.ch/sr15/>

⁸ <https://www.bbc.co.uk/news/world-58080083>

⁹ Songwe V, Stern N, Bhattacharya A (2022) 'Finance for climate action: Scaling up investment for climate and development'. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science. <https://www.cgdev.org/sites/default/files/HLEG-report-finance-for-climate-action.pdf>
"Emerging markets and developing countries other than China will need to spend around \$1 trillion per year by 2025 (4.1% of GDP compared with 2.2% in 2019) and around \$2.4 trillion per year by 2030 (6.5% of GDP), on the specific investment and spending priorities identified above. These numbers are based on the analytical work set out in Bhattacharya et al. (2022) assessing sector and geographical requirements for investments and actions to keep the target of capping warming at 1.5C in reach and to meet the goals of the Paris Agreement across all its dimensions. The numbers are broadly consistent with the work of the International Energy Agency and the Energy Transition Commission."

¹⁰ Bhattacharya A, Dooley M, Kharas H, Taylor C (2022) 'Financing a big investment push in emerging markets and developing economies for sustainable, resilient and inclusive recovery and growth'. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science, and Washington, DC: Brookings Institution. <https://www.lse.ac.uk/granthaminstitute/publication/financing-a-biginvestment-push-in-emerging-markets-and-developing-economies/>

¹¹ Songwe et al. (2022).

¹² Songwe et al. (2022).

from climate change impacts.¹³ About 60 percent of low-income developing countries are already at high risk of or in debt distress.¹⁴

To solve the problem of equity, pace and scale, we must find a way to excite and catalyse investment of domestic and external private savings into developing countries for that part of the green transformation that generates revenues. The challenge is that the green shift is highly capital-intensive, and outside of China, a high cost of capital is blocking domestic and overseas investment. Unless we can reduce that, either the green transformation will not happen, with grave planetary consequences, or it will create an inequitable drag on the economic development of the poor. There is a way, however. A significant proportion of the high capital cost in emerging economies represents an excess risk premium, in short, an overpayment for perceived risks that do not materialise. This paper sets out why, what, how and who can remove this overpayment and, by doing so, unblock the flow of private capital.

There are two important caveats to flag before we go further. First, the problem and solution set out here are most relevant to industrialising emerging countries, *excluding China*. This group is still big. It emits, in aggregate, almost as much GHGs as the United States, and their emissions are multiplying fast. The reason China is excluded from this particular solution is that it already has a surfeit of local savings and technology. Its cost of capital is at developed country levels and markets are not holding back its green transformation. Second, this paper focuses on unblocking the flow of private finance for green transformation projects with a revenue stream. This is the most significant part of the climate finance that developing countries as a group need and according to Songwe, Stern and Battacharya is almost US\$1.4 trillion per year, split between the domestic and external private sector. But it is far from the whole story, and it is essential to separate this story's parts. A substantial amount of the investment climate-vulnerable countries require today has no revenues. Much of this is for adaptation projects, like sea and flood defences. Because these countries need to be more resilient today and not in the distant future, we must also urgently find a way to finance these investments. Where the investments yield annual savings, if not revenues, like reduced annual loss and damage from flooding, these are best funded through a tripling of long-term and low-cost development bank financing for resilience building. There are also climate investments where there are no revenues or annual savings, like the reconstruction of low-income housing after a climate disaster. These need to be the focus of new, non-debt, external revenue sources.¹⁵

¹³ <https://blogs.worldbank.org/voices/are-we-ready-coming-spate-debt-crises>

¹⁴ <https://www.imf.org/external/pubs/ft/ar/2022/in-focus/debt-dynamics/>

¹⁵ This framework is set out in Persaud, A. (2022) 'Breaking the deadlock on climate: The Bridgetown Initiative', After Cop 27: Geopolitics of the Green Deal, Issue #3. *Geopolitique*.
<https://geopolitique.eu/en/articles/breaking-the-deadlock-on-climate-the-bridgetown-initiative/>

3. Identifying the biggest obstacle to the green transformation in industrialising emerging economies

The average cost of capital of a utility-sized solar farm in our sample of industrialising emerging economies excluding China (Brazil, India, Indonesia, Mexico and South Africa) is 10.6%, compared to 4.0% in the EU (statistics from the IEA for 2021; see Table 1). This difference of 6.6% per year in the cost of capital matters critically because renewable energy projects are capital-intensive. Take solar; after a developer has paid for the land, panels, batteries, and erection and connection cost upfront, the operating costs of generating power are nearly zero. Given these different costs of capital, most of what is profitable in the EU and other G7 countries is not profitable in industrialising emerging economies. If two similar projects can earn a rate of return on capital employed of 10%, and the cost of capital is 4.0% in Germany and 10% in South Africa, it will happen in Germany but not South Africa. And it is unclear how the South African project could push up its local rate of return when it is essentially providing energy to poorer consumers than in Germany. We must lower the cost of capital.

Table 1. Comparative cost of capital (2021) for a utility-sized solar farm between developed countries and industrialising developing countries.

Country category	Weighted cost of capital	Difference from EU
Developed countries (represented by the European Union as a sample group)	4.0%	-
Industrialising developing countries – sample average	10.6%	6.6%
Sample breakdown		
Brazil	13.1%	9.1%
India	9.9%	5.9%
Indonesia	10.1%	6.1%
Mexico	9.7%	5.7%
South Africa	10.0%	6.0%

Notes:

Cost of capital: The nominal cost of capital is the midpoint of the ranges included in the Cost of Capital Observatory.

Weighted cost of capital source: <https://www.iea.org/reports/cost-of-capital-observatory/tools-and-analysis#abstract>

The cost of capital reflects the rate of return investors require to compensate them for their fear of losses because of the risks they perceive. Development banks are project financiers, so they have focused on reducing project risks, such as construction, and regulatory risks and the risks that buyers or suppliers will default. Like the World Bank's Multilateral Investment Guarantee Agency (MIGA), Multilateral Development Banks (MDBs) and their agencies also offer project guarantees. This is essential work. But it is said that when you have a hammer, all you see are nails, and most development bankers

believe that project risks are the nail to hammer down. Their standard policy recommendation is to redouble these efforts. Their theory of change is that developing countries need better sectoral policies. Market prices tell us something more.

We can break down the cost of capital into three components:

1. The risk-free rate of return is universal to all investments.
2. The rate of return to compensate investors for macro risks at the level of the country.
3. The rate of return to compensate investors for micro risks at the level of the project or sector.

When we turn to the difference in the cost of capital for the same project in different countries, the risk-free rate common to both projects falls away, leaving differences in macro and micro risks. Macro risks – like government, political, credit and currency risks – are partly reflected in the higher yields developing countries have to offer investors above those offered in countries investors consider safer. In the bond markets our industrialising emerging economies paid on average 8.0%¹⁶ more per annum than G7 countries in 2021 – and even more this year.¹⁷

The additional return a project has to offer investors over and above the return available on government bonds is compensation for project risks or other micro risks (Table 2, column 3). In 2021, solar projects in industrialising emerging economies paid on average 2.9% over government bond yields to attract investors. That is lower than the micro-risk premium for solar projects in the EU or other G7 countries. This striking result is consistent with the earlier observations that the average difference in the cost of capital between developed and developing projects is 6.6%, and the additional macro-risk premia of investing in developing countries is 8%. *The difference in project risks is not adding to the higher cost of capital in industrialising emerging economies compared to developed ones – it is subtracting from it.*

This result will surprise some but resonates with my experience as a government negotiator in a developing country in two ways. First, it is not that there aren't great policy uncertainties in developing countries, but that they exist elsewhere too. Twenty-five-year power purchase agreements that span several elections will carry risks and uncertainties wherever they are. Germany and Spain, for instance, started off with feed-in tariffs for renewable projects but then changed tack and introduced auctions. Pipeline projects in the US have a long history of stop-go with commercial consequences for all energy projects. There is an evolving and sometimes bewildering set of community, national and EU-wide carbon credits, renewable subsidies, and tax regimes. Europe will introduce a new Carbon Border Adjustment Mechanism next year which I quite like but its effects and implementation are uncertain. And yes, even in the US and Europe, regulatory changes or

¹⁶ See Table 2, column 2. Difference between the Group average (7.7%) and EU government cost of borrowing (-0.3%).

¹⁷ We use bond spreads here because there is greatest consistency in these long-dated instruments across countries, but where they exist, the forward foreign exchange markets, which reflect the largest component of the macro-risk premia, the FX risk, suggests this is likely an underestimate of the macro-risk premia and therefore an overestimate of the micro-risk premia.

the lack of changes are the result of local lobbying that may be prejudicial to foreign firms and investors.¹⁸ Second, across these tax and incentive changes, developed economies (correctly) hold tightly to their sovereign right to make changes without compensating anybody who loses directly or indirectly. But in developing countries, foreign investors threaten to walk if they are not given guaranteed fiscal privileges and immunities and agreements that subject developing countries for decades to come to international arbitration around compensation for policy changes.

Table 2. Comparative Project risks or Micro Risks (using 2021 annual data) between developed countries and industrialising developing countries.

Country category	(1) Weighted cost of capital (as in Table 1)	(2) Gov cost of borrowing	(3) Project risk (1) - (2)
Developed countries (represented by the European Union as a sample group)	4.0%	-0.3%	4.3%
Industrialising developing countries – sample average	10.6%	7.7%	2.9%
Sample breakdown			
Brazil	13.1%	9.7%	3.4%
India	9.9%	6.3%	3.8%
Indonesia	10.1%	6.2%	3.7%
Mexico	9.7%	6.8%	2.9%
South Africa	10.0%	9.3%	0.7%

Notes:

1. Weighted cost of capital source: <https://www.iea.org/reports/cost-of-capital-observatory/tools-and-analysis#abstract>
2. 10yr government bond rates for 2021 (source: Bloomberg).

These project incentives in developing countries are partly there as an offset for perceived high macro risks. But whatever the underlying reasons, this uncompromising attribution of risks sends a clear message. If we need to reduce the cost of capital of renewable energy projects in industrialising emerging economies, the scope for lowering project and micro risks any further is limited – more limited than commonly thought. We must place far more attention than at present on reducing macro risks. The good news is that further analysis of the macro-risk premia reveals this is possible.

¹⁸ For measures of the success of industry lobby groups in the US and Europe, see Mahoney, C. (2008) 'Brussels versus the Beltway: Advocacy in the United States and the European Union'. Georgetown University Press.

4. Overpaying for macro and FX risks

Green transformation projects earn in local currency but need foreign currency to pay for imported capital and equipment. Someone along the line must exchange local currency revenues for foreign currency interest and dividends: either the project, or the investor. In industrialising emerging economies, investors can use forward FX markets to lock in future exchange rates and hedge against exchange rates moving against them and reducing their returns. Amongst developing countries, having forward markets is almost unique to a handful of industrialising emerging economies. TCX, for instance, is a company that creates FX hedges for projects in approximately 100 developing-country markets that do not have forward FX markets.¹⁹ But even where the forward FX markets exist or have been created, the costs of hedging FX risks are high. This is because the foreign exchange markets act as a proxy for the large macro risks we have just discussed. Most macro risks have a currency impact: political uncertainty leads a currency to fall, as does fear of a government getting into financial problems that raise the risk they would monetise their debt and devalue the currency. Moreover, in developing countries, there are few other ways of hedging future macro risks.²⁰

In the forward foreign exchange market, the cost of an FX hedge is expressed in terms of the difference between the price of buying foreign currency with local currency in the future – the forward rate – and the current price – the spot rate.²¹ To facilitate comparison across projects, we can express this as an annual percentage cost. For example, in March 2016, the average spot rate for the Brazilian Real was 3.91 to the US dollar, and the five-year forward rate was 6.44, meaning that if you wanted to buy US dollars five years ahead and lock-in a rate, it would cost 71% more Real or 11.3% more *per year*. There are a few ways to look at that, but the bottom line is that the cost of guaranteeing yourself against the Real falling against the dollar (reducing the dollar value of your interest and dividends) was 11.3% per year. If a dollar-based investor invested in a Brazilian solar project that boasted a local currency rate of return of 15% per annum, after hedging out the currency risk, they would have been left with a US dollar return of just 3.7% per year (15% minus 11.3%). This would not be enough to get them out of bed in the morning – recall that the US S&P 500 equity index has a long-term return of 6.5% per annum plus inflation.²² Across our sample group of major industrialising emerging markets, the costs of hedging currency risks averaged 5.7% per annum in 2021 and 2022. Like in the 2016 Brazilian example above, foreign currency hedged returns for long-term green projects which generate revenues from consumers in developing countries are too low to generate external investment demand across multiple currencies and decades. But this is because the cost of FX hedging overstates and therefore overpays for the actual risk.

¹⁹ <https://www.tcxfund.com/>

²⁰ See, Liao, G and T Zhang (2020), "The Hedging Channel of Exchange Rate Determination", *International Finance Discussion Paper*.

²¹ It is called "spot" versus forward, because in the case of "spot" the exchange takes place at the exact spot or point that the trade is settled not some forward date.

²² See, Siegel, J. J. (2014) *Stocks for the Long Run: The Definitive Guide to Financial Market Returns & Long-Term Investment Strategies*, fifth edition, New York, NY: McGraw-Hill Education.

If the forward FX market were efficient and transaction costs low, the cost of the FX hedge would over time and currencies, average close to the actual FX depreciation. Individual observations would rarely be the same, but in an efficient market there would be no significant systemic bias. Students of economics would expect that roughly half the time, the current exchange rate would end up stronger than the five-year forward rate, five years ago, and half the time weaker, and these over- and under-"predictions" from five years ago would approximately cancel each other out, especially over 20 years and several currencies. After allowing for transaction costs the average net 'overpayment' should be close to zero.²³ Instead, we find a significant, +2.2% per annum, average *ex post* "overpayment" for FX risks, with an overpayment occurring in 62% out of 372 five-year hedges starting as early as 1999 and finishing in 2022. (The overpayment is the annualised percentage difference between today's spot exchange rate and the rate implied five years ago by the five-year forward market; see Table 3 column 2).

Table 3. Annual overpayment (excess foreign exchange risk premium) for hedging when hedging costs are below or above the trailing three-year average, using spot versus 5-yr forwards, 5 years ago.

Country	Average "overpayment" for all periods (annual %)	Average "overpayment" when hedges costs begin >3y MA (annual %)
Brazil	4.71	5.31
India	1.95	3.68
Indonesia	3.18	5.07
Mexico	1.54	4.33
South Africa	2.2	3.89
Group Average	2.72	4.65

Notes:

1. Figures for India are calculated using the 10-year bond spread as there is a longer data series (see Appendix 1 for more detail).
2. For all other countries, calculations use spot FX versus 5-year forward rates 5 years ago.

In our 2016 Brazilian example, between March 2016 and 2021, the Real depreciated against the dollar by 6.9% per annum, not the 11.3% discounted in the five-year forward market. In this case the overpayment for hedging turned out to be 4.3% per annum. To appreciate the significance of this overpayment, if an investor was charged what turned out to be the fair price for the hedge in March 2016, their expected dollar return would not have been a debilitating 3.7% per annum, but a compelling 8% plus diversification benefits. That is the prize. Is it achievable *ex-ante* or just observable *ex-post*?

While the average level and probability of overpaying for FX hedges across our sample are significant (see the first column in Table 3), the average masks an even more powerful and useful result. The background to what follows is that in the international financial system, markets not defined or treated as safe, experience either feast or famine of

²³ Transaction costs in currency markets are supposedly some of the lowest in financial markets. This is more so in the "spot" foreign exchange markets for developed country currencies than the forward markets and for emerging market currencies, but no one suggests they are close to 1.0% per transaction, or even 0.5% *per annum*, far less 2.2% per annum.

international capital flows.²⁴ Extremes are their normal. And critically, for our purposes, knowing whether we are in a feast or famine does not require omniscience. It can be reasonably identified by looking at current and recent averages of hedging costs. In feast time, capital is flowing and hedging costs are below their recent average. Whenever current hedging costs fall below a trailing three-year average, say, the 'overpayment' using the five-year forward market occurs on only 53% of occasions, almost 50-50.²⁵ But when hedging costs are above the trailing three-year average, the overpayment occurs 74% of the time (Table 4), and the magnitude of overpayment jumps to an average of 4.7% per annum (the second column of Table 3). This result is significant because it means it is possible to intervene safely in FX hedging markets by enough to make a difference.

Table 4. Comparative frequencies of positive versus negative "overpayments" of 5-year hedging costs between periods in which hedging costs begin below the 3-year average and periods above.

	% of hedges that ended up as an over / underpayment when 5-year hedging costs began below 3-year average	% of hedges that ended up as an over / underpayment when 5-year hedging costs began above 3-year average	Total number of observations
Positive excess risk premium (overpayment for hedges)	53%	74%	230
Negative excess risk premium (underpayment for hedges)	47%	26%	142
Total number of observations	213	159	372

Notes:

Quarterly observations based on 5-year FX forward rates vs USD for Brazil (BRL), Colombia (COP), Mexico (MXN), and South Africa (ZAR) for the period Q1-1999 to Q1-2018 and Indonesia (IDR) for the period Q1-2002 to Q1-2018.

If we examine periods in recent history when local hedging costs exceed the 3-year average, we see that the largest market failures often coincide with significant external shocks to the international financial system; see Chart 1 which compares the difference between current and average hedging costs for the Indonesian rupiah with global events.

Chart 1. This chart highlights periods in which the current quarter average, 5-year hedging costs for the Indonesian Rupiah versus the US dollar (the blue line) are above the three-year moving average of 5-year hedging costs (the red line).

²⁴ See, Griffith-Jones S., R. Gottschalk and J. Cailloux (eds) (2003) *International Capital Flows in Calm and Turbulent Times: The Need for New International Architecture* (Development And Inequality In The Market Economy).

²⁵ By using a trailing average we are comparing current with the past and not using any future information, and so the fact that this metric allows us to separate two very different environments in the future is highly significant. There are other similar averages that could be used, perhaps supplemented with other instruments like international interest rates, equity prices and capital flow data to assess feast versus famine.

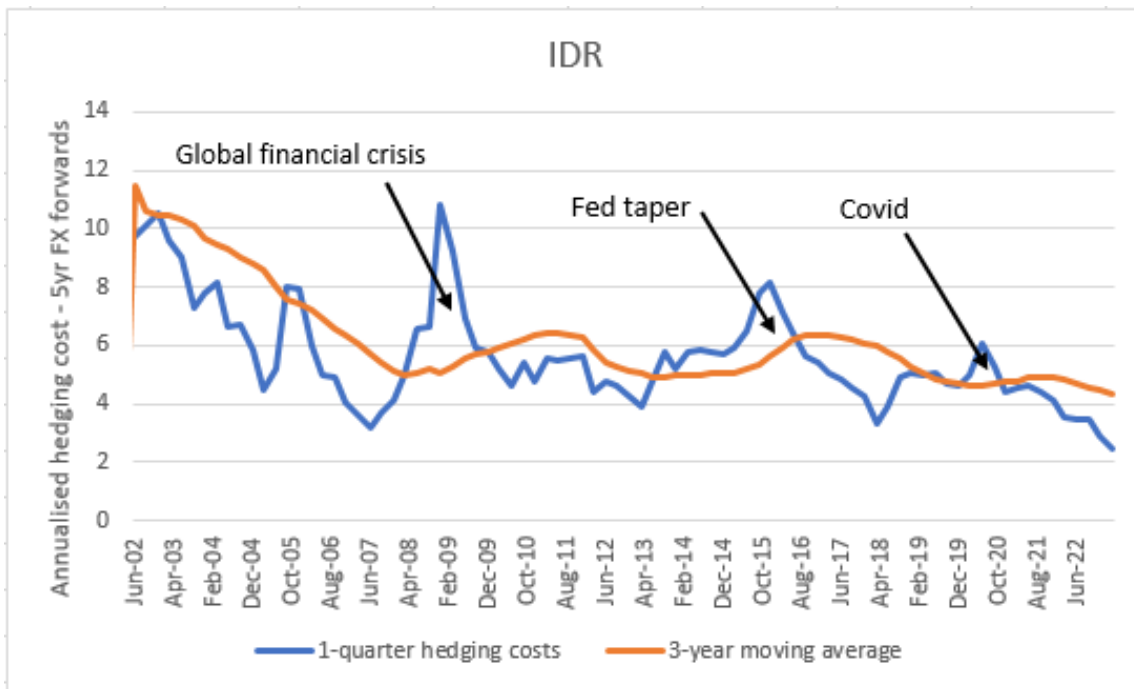
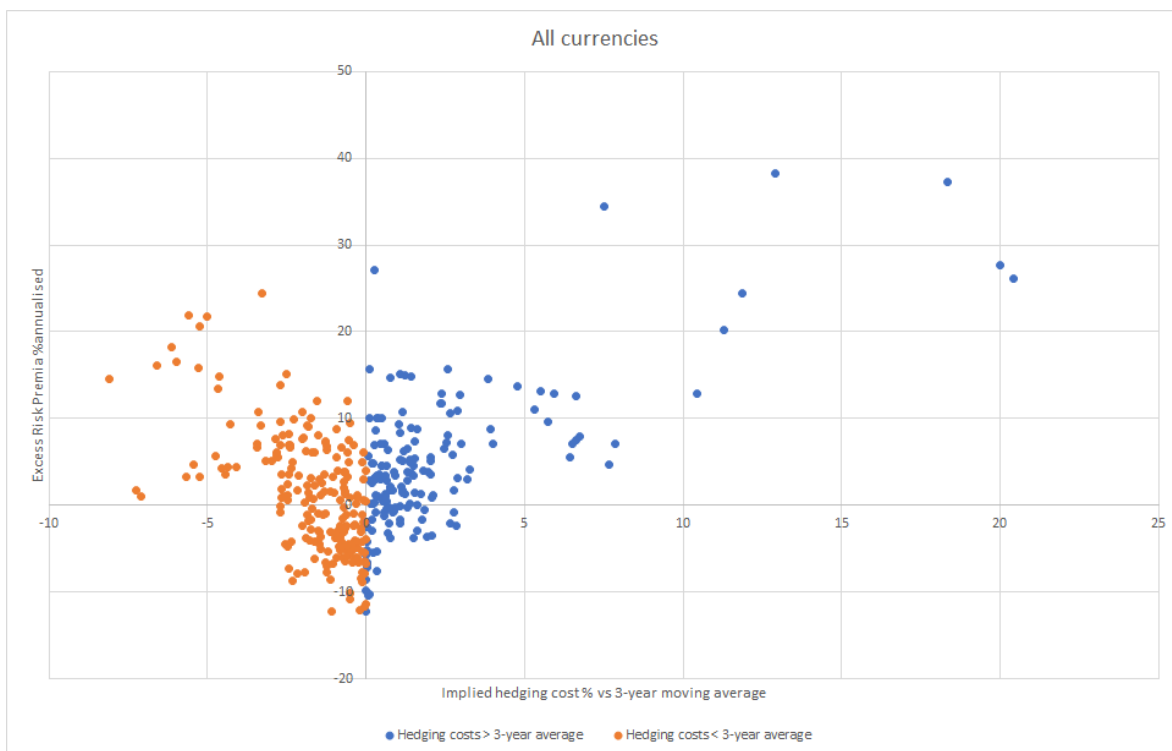


Chart 2 is a scatter diagram showing all 371 "overpayments" across our industrialising emerging economies over 20 to 30 years. On the horizontal axis is how much hedging costs at the beginning of the hedge were above or below the three-year moving average. The right-hand side of the diagram shows over- or underpayments when hedging costs were above average – all painted blue – and the left-hand side shows over- or underpayments when hedging costs are below average – all painted red. There is a heavy skew to overpayments when current hedging costs are above average. Seventy-four per cent of observations are above the zero line on the vertical axis and so in the top right-hand quadrant.

Chart 2. The relationship between over- or underpayments (the vertical axis) and whether hedging costs at the beginning of the hedge were above (coloured blue) or below (coloured red) the three-year moving average (the horizontal axis)²⁶

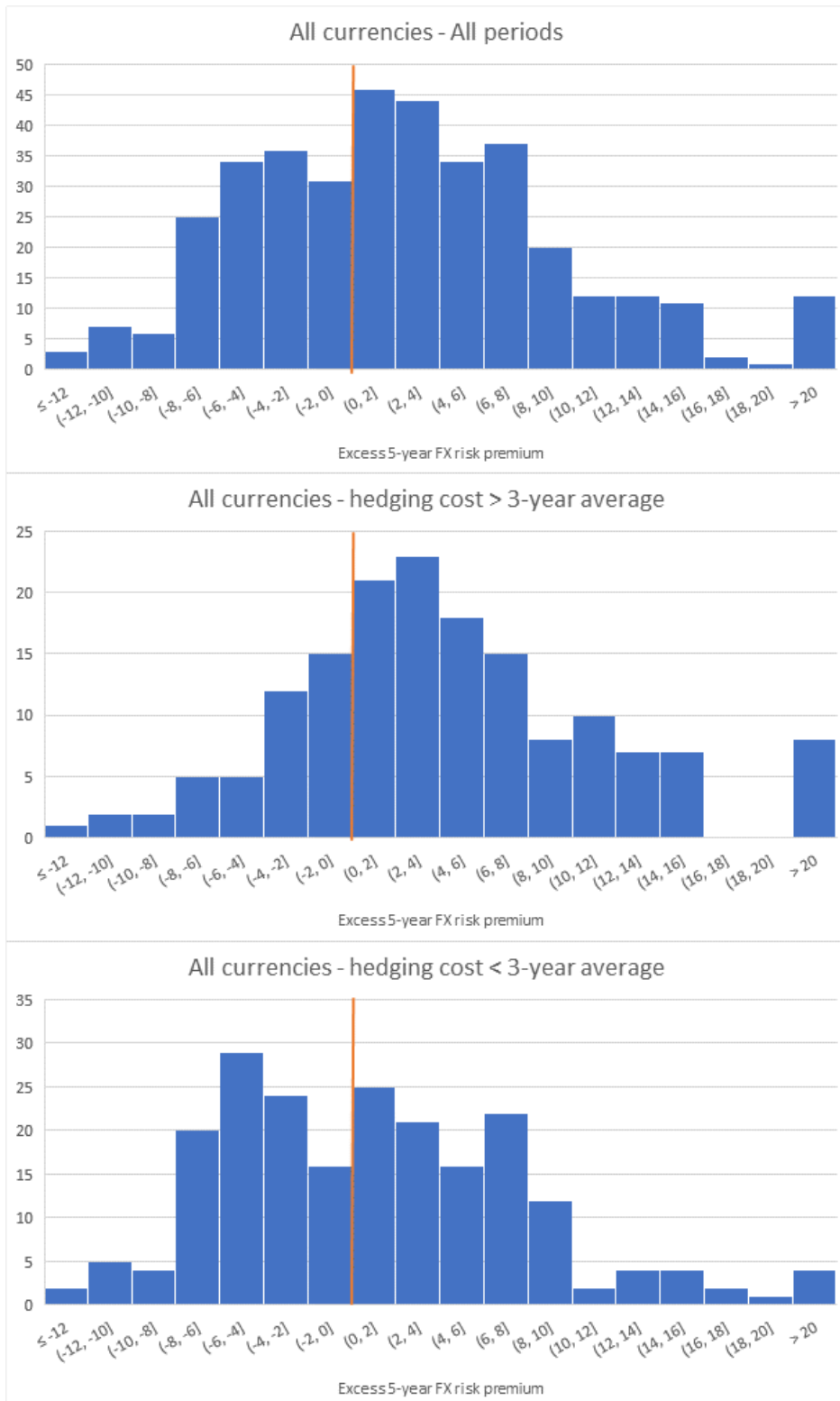


Charts 3, 4, and 5 are histograms showing the distribution of over- and underpayments across our sample of industrialising emerging market currencies over the past 20 to 30 years. For instance, the first blue bar to the right of the zero line indicates that there were 45 occasions (reading off the vertical axis) in which the exchange rate turned out between 0 and 2.0% per annum (reading off the horizontal axis) stronger than the five-year forward rate, five years ago. The first histogram, Chart 2, shows the overpayments for the whole sample of currencies and time. The 371 observations are reasonably evenly distributed around the 0 to +2% and +2 to +4% boxes, showing a bias to overpayments. This bias is also seen by thirty-eight per cent of all the observations being negative and in boxes to the left of the zero line, and sixty-two per cent being positive, and in boxes to the right.

In the second histogram (Chart 4), we only look at overpayments when current hedging costs exceed the past three years' moving average. This shows the histogram shifting right (Chart 3), and now centred around the +2 to +4% and +4 to +6% boxes and the number of underpayments falling sharply to just 26% of observations, and overpayments rising to 74%. These are good odds.

²⁶ The currencies included are: Brazilian Real, Colombia Peso, Mexican Peso and South African Rand, Q1-1999 to Q1-2018 and Indonesian Rupiah for the period Q1-2002 to Q1-2018.

Charts 3, 4, 5. Histograms showing number of quarterly observations (vertical axis) and size of ex-post annual "overpayments" when comparing FX spot with the 5-year forward 5 years previously for the Brazilian Real, Colombia Peso, Mexican Peso and South African Rand, Q1-1999 to Q1-2018 and Indonesian Rupiah for the period Q1-2002 to Q1-2018. ²⁷



²⁷ See Appendix 3 for separate country charts.

In the third histogram (Chart 5), we only look at overpayments when current hedging costs are below the average of the past three years. Now, the histogram shifts left and the distribution is centred around the 0 to +2% box. During these periods 47% of all observations are negative and 53% positive (I recommend avoiding intervention in these periods, but the odds are still better, though not by much, than a coin toss).

In these histograms there are separate observations for each currency. If instead we pool the FX risks and treat them like one currency or portfolio, capturing the benefits of diversification, the number of negative observations when hedging costs are above the three-year trailing average falls from 26% to 21% and the number of positive overpayments rise from 74% to 79%. Those are uncommonly good odds.

In the same way that the average project financier would be unsettled to learn that macro risks are greater than micro risks, the average economist will need support to deal with the idea that there is a persistent overpayment for FX risks and such favourable odds, albeit, at specific, predictable, times. The question we are trained to ask is: why has competition not caused financial institutions to reduce the overpayment (or: why is the author wasting time writing this down and not busy trading FX forwards)? My fellow economists will leave the £5 note lying on the pavement because it cannot be there, leaving us poorer (but still smug).

5. Thoughts on the reasons for persistent 'overpayments' and market failures

Economists are taught at university that systematic biases cannot persist. It would be irrational, and after Bob Lucas' rational expectations revolution in the 1970s, economic ideas and models always assume rationality. It is hard to square that with multiple studies that reveal a long-term "forward rate bias" or the financial sector's healthy profitability.²⁸ The consultant psychiatrist Dr Rajendra Persaud explained to me that economists have it a little off: humans are not rational; but they are rationalising.

There are three ways to rationalise the excess risk premium in the FX markets or overpayment. First, it is an "uncertainty premium". Foreign investors don't know and feel they don't understand these markets, so they stay away. The old trader's adage is that if you don't understand it, don't trade it. Second, it could be "investor risk aversion". The structure of safe and risky currencies, the feast and famine of international capital flows that follows from that, amplifies the boom–bust cycle in emerging markets. As a result, emerging market currencies are more volatile. If investors are more averse to short-term losses than gains, especially in less-familiar markets, they will avoid volatile markets or require an 'overpayment' to offset their risk aversion.²⁹ Third, to capture the more reliable

²⁸ For example, Levine, R. (1991) 'An empirical inquiry into the nature of the forward exchange rate bias'. *Journal of International Economics*.

²⁹ As Michael Hugman has reminded me, it could be a particular type of risk aversion: an aversion to the "peso problem" the small probability of a large depreciation. The good news then is that by focusing only on occasions when hedging costs are above average and pooling FX risks we appear to have sharply reduced, or even eliminated in our sample, the peso

parts of the overpayment is to behave counter-cyclically: to stand down when hedging costs are low and offer below-market hedging costs when they are high. There are plenty of micro-economic reasons why counter-cyclical behaviour is hard for private firms to do and so why this market failure persists. If you were acting counter-cyclically, when investors around you are making out like bandits in a feast of capital flows, you would be tying up capital and not using it. Persuading investors to do this in a short-term, trend-following world is hard. And when investors are risk-averse, and there is a famine of capital flows, you would likely be using scarce liquidity and capital to absorb short-run losses in risky instruments to make modest long-run returns. This is not a winning business model.³⁰ As a result, private investors are leaving money on the table. But even more significant are the far greater social gains from saving the planet and boosting green growth in developing countries that are being left alongside.

It is worth asking why international investors hedge at all if hedging is expensive and often an overpayment. The answer lies in a combination of market behavioural factors. First, the investments must compete with others in the investor's local currency and second, the investors are being paid to find value in equity and credit, not currencies. Investors would rather not take on an additional unfamiliar risk, not just the price risk of currencies, but also currency management and trading risks like counterparty and liquidity risks.³¹

6. A proposed planet sized solution: a partial FX guarantee

To address the planet-sized problem outlined at the beginning, and based on the preceding analysis, I propose a Partial FX Guarantee Mechanism limited to green transformation projects. Market failures and overpayments observed in the historic data offer a basis for intervening to reduce the overpayment when it is most extreme. The micro-economic arguments for the market failure described above, the distribution of the overpayments across time and the portfolio effects discussed earlier, guide us on how we could best operationalise such an FX guarantee. It is best implemented in a public-sector environment with a counter-cyclical and public-good mandate and where liquidity and capital can be employed in market stress. A conservative approach is also critical, as sticking to an objective of reducing the overpayment but not providing a subsidy will allow the mechanism to scale up safely enough to materially close the US\$1 trillion per year gap on private finance. And spreading or pooling currency risks is also a valuable risk-reducer. Based on this, my proposal is for a joint agency of the Multilateral Development Banks and the IMF to offer a partial FX guarantee at specific times and to pool the risks. The MDBs would provide diversity and project expertise, and the IMF could provide liquidity and macro knowledge.

problem. For the classic description of the peso problem that is very apt to what we are describing, see Obstfeld, M. (1987) "Peso Problems, Bubbles, and Risk in the Empirical Assessment of Exchange-Rate Behavior," *NBER Working Paper 2203*, National Bureau of Economic Research, Inc.

³⁰ Of course, highly leveraged funds do try to capture these excess premia, but they have to leverage up the returns to make it sufficiently worth their time which increases risks and limits market-wide scalability. Maybe eight out of ten years they end up in the Hamptons and two out of ten they lose other peoples' money and are trying to avoid Rikers.

³¹ For some sense of these risks see, "Traders Said to Rig Currency Rates to Profit Off Clients", *Bloomberg News*, 12 June 2013.

Projects could come to the FX Guarantee Agency via the MDBs where they may have benefited from project-risk reduction, or some other safe-guarding exercise. The FX Guarantee Agency could prioritise projects that have the most significant projected positive impact on the climate, with the quantity of GHGs reduced per dollar employed as one possible performance measure. As I suggest above, the Agency could wait until hedging costs were above the three-year average and then offer FX hedges that cost on average 3.5% per annum less than that being offered by the forward FX market – less than the historic overpayment in these periods. At this level future FX risks would very likely be still covered while investors hedged returns would rise by 3.5% per annum into the 8% per annum zone that would attract institutional investors. The Agency, however, should determine its own operational rules and be able to adapt them as it treads a fine balance between financial sustainability and making a difference. We don't need yet another small program. Making a dent in the external investment required to finance the green transformation must be embedded in its key performance indicators.

Would the Agency distort the market? We can limit adverse consequences by restricting the availability of these low-cost hedges to only green transformation projects. If the Agency misjudges and ends up paying a subsidy by mistake, the subsidy will support a global public good that can justify being subsidised. And if the Agency impacts pricing outside of these projects, it will reduce excess market-risk premia, not create new ones.

7. Conclusion

The proposed FX guarantee aims to provide a planet-sized solution to a planet-sized problem. It reduces the cost of capital that is blocking the flow of investment into developing countries for the green transformation. It focuses on reducing the largest risk premia, the macro-risk premia, where and when the market failure is greatest. For industrialising emerging markets, there is strong evidence that the amount of the risk premia that can be reduced safely, with the help of pooling and acting counter-cyclically, is enough to make green investments in developing countries attractive for investors everywhere. This means we can scale it up to make a planet-sized difference.

Appendix 1. Average annual excess FX risk premia for India

(Excess Risk Premia equates to overpayment for FX hedge)

	India		
	10-year bond spread (Local-SDR)	Avg. Annual Excess FX Risk Premium (%)	Avg. Annual Excess FX Risk Premium % in 'above average spread' years
1994	5.45	1.30	1.30
1995	7.04	4.08	4.08
1996	7.92	5.14	5.14
1997	6.67	4.19	4.19
1998	7.25	5.10	5.10
1999	7.35	4.85	4.85
2000	6.04	4.32	4.32
2001	5.03	2.93	2.93
2002	2.96	0.30	-
2003	1.96	-1.16	-
2004	1.93	-1.30	-
2005	3.31	0.05	-
2006	3.54	0.11	-
2007	3.69	0.06	-
2008	4.22	0.70	-
2009	3.52	0.80	-
2010	4.71	0.68	-
2011	5.15	1.44	1.44
2012	6.11	3.49	3.49
Average	4.94	1.95	3.68

Sources: 10y bond yields: <https://tradingeconomics.com>; SDR valuation history xls from https://www.imf.org/external/np/fin/data/rms_sdrv.aspx; SDR exchange rates: <https://www.imf.org/external/np/fin/ert/GUI/Pages/CountryDataBase.aspx>; Euro bond yields: <https://sdw.ecb.europa.eu>

Appendix 2. Return expectation from solar projects in Emerging Market Developing Countries³²

Country	S&P Rating	Required return from solar project (%)
Germany	AAA	7%
USA	AA+	9%
UAE	AA	10%
Saudi Arabia	A-	12%
Chile	A	12%
Morocco	BBB-	15%
India	BBB-	17%
Algeria	B	18%
Oman	BB-	18%
Peru	BBB	20%
Costa Rica	B	21%
Namibia	BB-	21%
Ghana	B-	22%
Brazil	BB-	22%
Nigeria	B+	22%
Bolivia	B+	24%
Tanzania	B	24%
Egypt	B	28%
Zambia	CCC-	38 %
Argentina	CCC+	52%

Source: Climate Policy Initiative (forthcoming)

³² <https://www.cgdev.org/sites/default/files/IHLEG-report-finance-for-climate-action.pdf> pp. 50.

Appendix 3. Histograms: All period v >3-year Moving Average Excess Risk Premia (where positive Excess Risk Premia equates to overpayment for FX hedge, negative ERP equates to underpayment)

Figure A3.1. Colombia

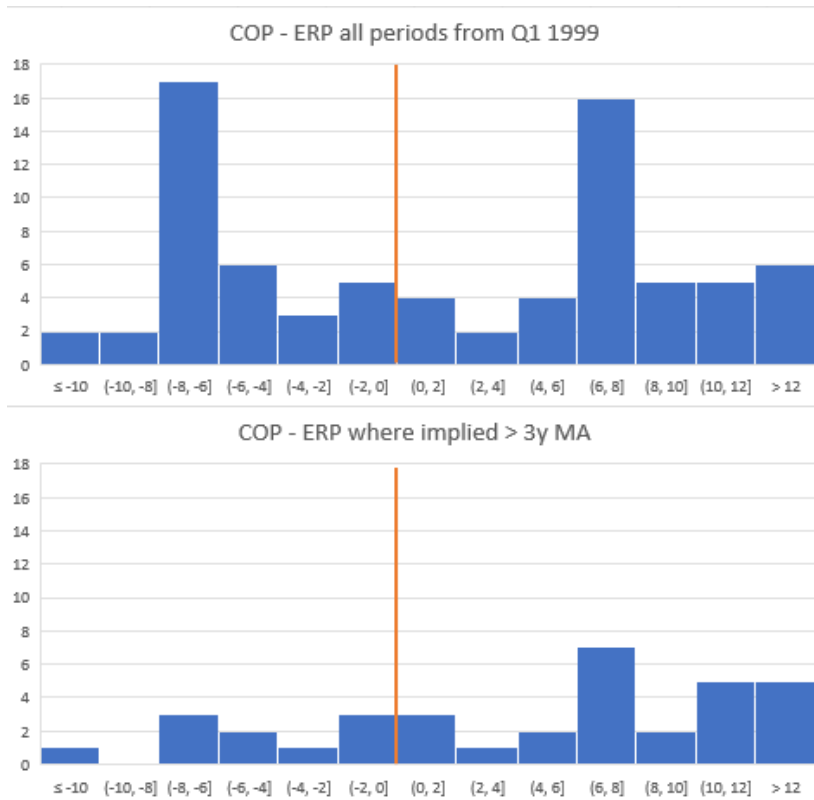


Figure A3.2. Brazil

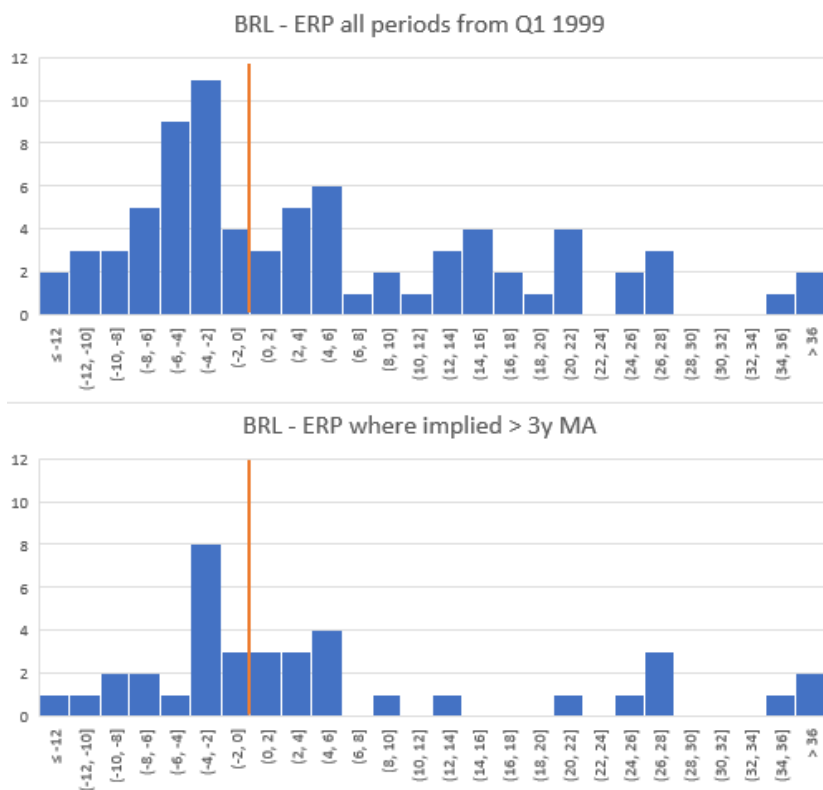


Figure A3.3. Mexico

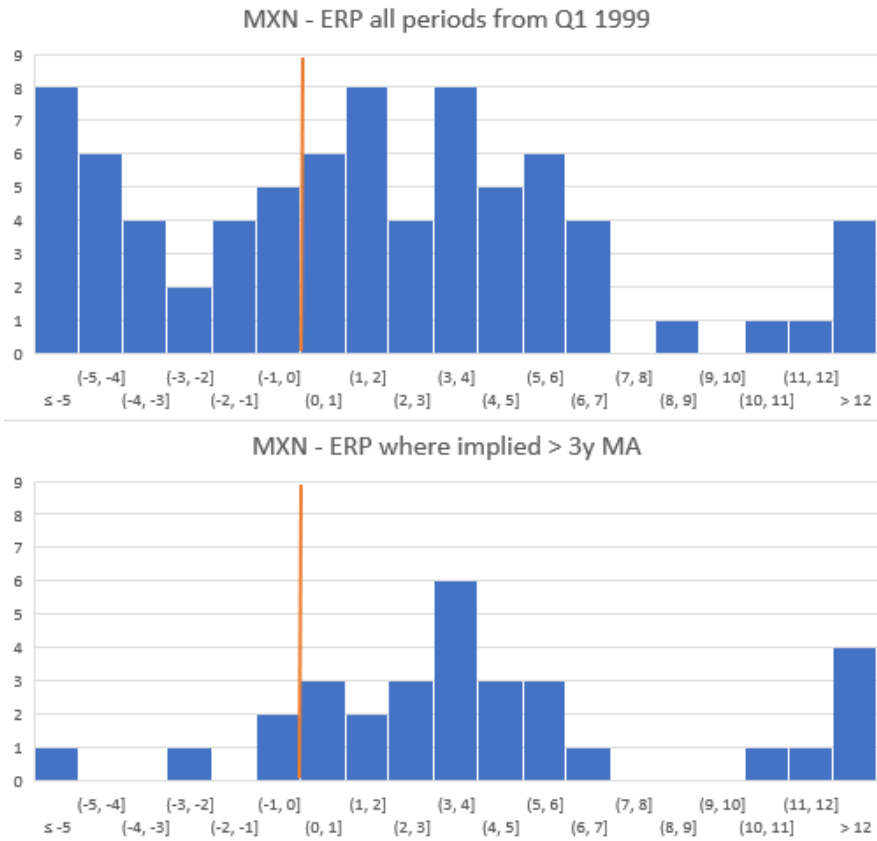


Figure A3.4. South Africa

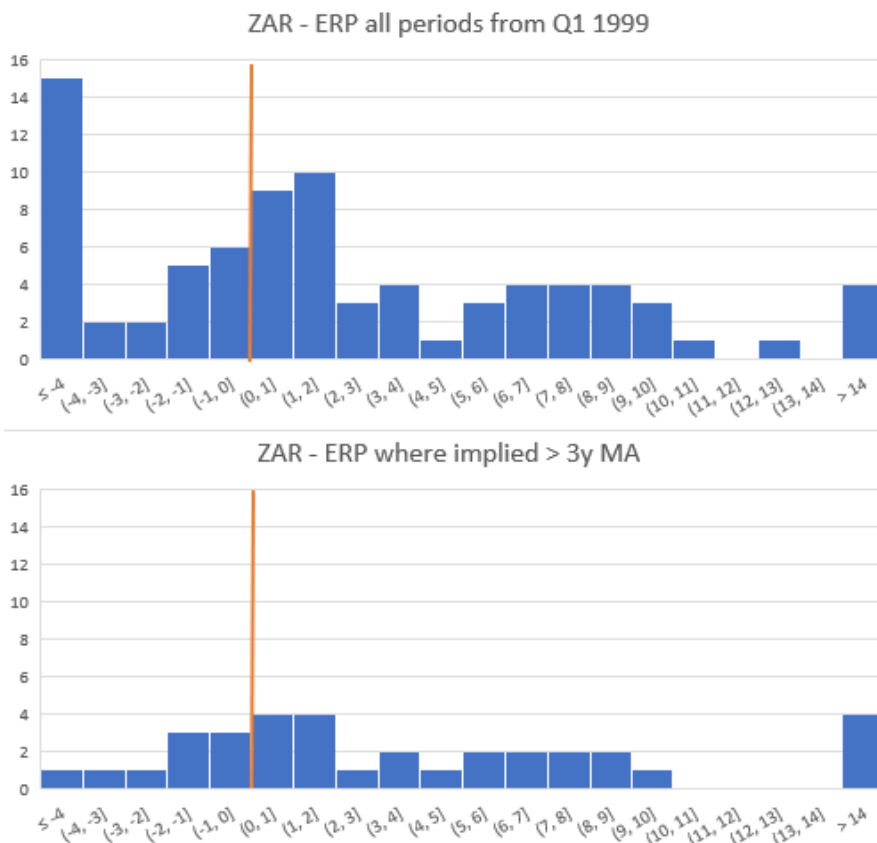
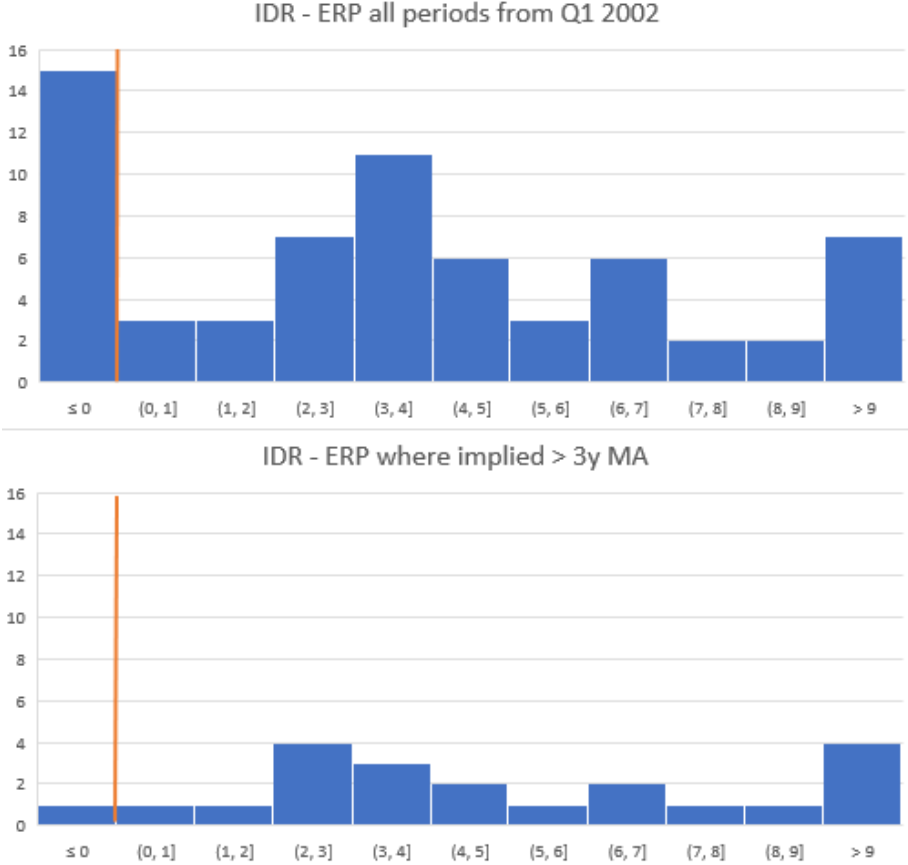


Figure A3.5. Indonesia



Risk-Sharing Guarantee Facility to address cost of capital for renewables in developing economies

Contact

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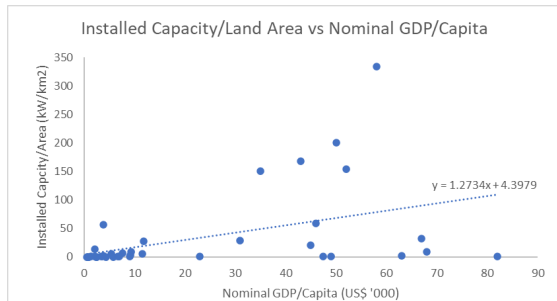
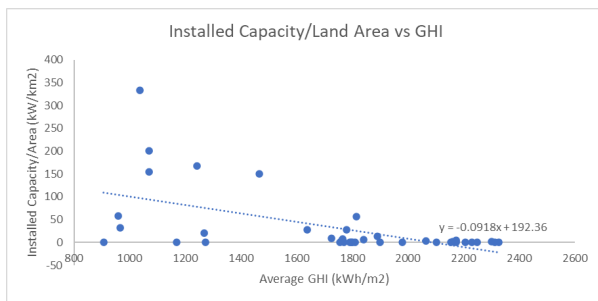
Vikram Widge, Senior Advisor
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Concept summary

In conjunction with the International Solar Alliance (ISA), CPI conducted a market readiness analysis of 40+ ISA member countries and found that the relatively high cost of capital in developing countries is a significant barrier to mobilizing funding for renewable energy projects. A Risk Sharing Guarantee Facility could help reduce these costs and catalyze investments.

Context & Barriers

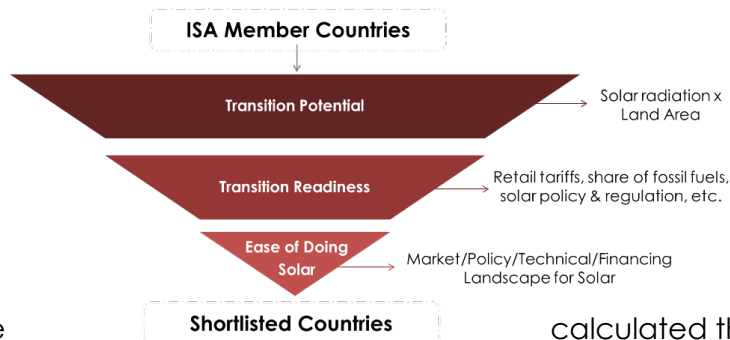
In our research of over 40 developed & developing countries, we found that countries with higher GDP per capita had higher solar installed capacities, but countries with lower



solar installed capacity (and lower GDP per capita) had higher average GHI (an indicator of solar potential).

Risk vs. Return

We believe climate investments have been skewed towards high-income countries as lower-income countries entail higher risk, or perceived risk. To study the relationship between risk and return for climate projects, we created a “Climate Investment Risk Score,” and ranked countries on this parameter. To calculate this score, we considered the sovereign credit risk, political risk, and off-taker risk.



As a next step, we calculated the required rate of return from a climate project in these shortlisted countries. We used the capital asset pricing model and adjusted it for expected climate investment risk in the country.

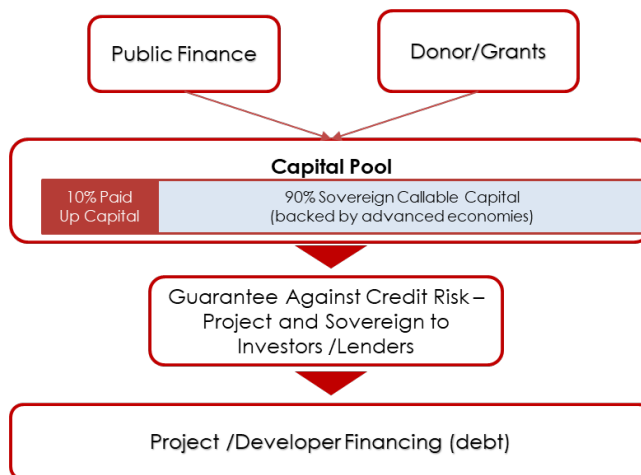
The results indicate that, evaluation of climate projects in line with other commercial projects escalates return requirements, restricting capital flow to emerging markets & hindering global decarbonization.

Proposed Risk-Sharing Facility



There is a need for an unbundled risk mitigation facility to reduce risk premiums for climate projects in emerging markets.

Further to this, our recommendation is to transfer the political risk to existing institutions like MIGA and the foreign exchange risk to TCX or a similar facility and establish an entity to manage the credit risk – sovereign & off-taker – by providing a partial guarantee. The following graphic illustrates the instrument mechanics.



To execute the solar targets announced by governments in the shortlisted set of countries, a total of ~US\$175 billion of capital will be needed, of which 70% or ~US\$120 billion would be debt. With an average default rate of ~11%, and guarantee coverage of 50%, a US\$6.6 billion Guarantee Facility is proposed – capitalized at 10% with the balance as callable capital. This results in a (direct) leverage of 250x for the total capital mobilized.

The Facility's Potential: Impact of Credit Guarantee on Risk Premium

Assuming that the Guarantor would be a supranational agency with a AAA rating, sovereign credit risk and off-taker risk scores were recalibrated, keeping political risk score the same. With this, we arrived at the enhanced climate investment risk score, which was then used in the regression to recalculate the climate investment risk premiums.

For the sample set of countries, the average reduction in risk premium is ~6% and the average improvement in rating is 5-6 notches – the impact is more for the riskier countries and they would benefit more.

MDB “Commitment to Catalyse”

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Concept summary

MDBs have a critical role to play in catalyzing private finance and in supporting the large necessary public investments in climate and development in emerging and developing economies. The catalytic part will require action in a range of areas that can meaningfully be incorporated into a “Commitment to Catalyse” by MDBs. Such a Commitment would include a set of catalytic actions accompanied by KPIs that would incentivize MDBs to take the necessary action both externally and internally.

Context

To get to “the trillions” of investment and finance needed, MDBs must fully embrace their central catalytic role within the international ecosystem of actors that support investments in country and sector transitions.

Catalyzing private investment and finance requires a holistic approach including simultaneous action in many areas. MDBs are uniquely positioned to provide a wide range of catalytic functions to support this, covering both real economy sectors, the financial sector and macroeconomic issues. Examples include:

- Diagnostics of investment needs and investment readiness.
- Investment-enabling policy and regulation in multiple sectors
- Investment planning, market design and pipeline development
- Local financial sector and capital market development
- Provision of risk mitigation instruments addressing both macro and project level risks, thereby enabling pipelines of investments and their financing from domestic and international sources.
- Provision of vehicles and channels connecting private finance with investments through co-investment, re-financing of MDB portfolios etc., including with the use of blended finance.
- Convening country/sector platforms that bring together both national and international public, private and institutional actors around comprehensive, coherent action to catalyse investment in country/sector transitions.
- Engaging in international discussions about “upstream” international barriers to international investment and finance flows.

A reorientation of MDB operating models toward these catalytic functions will entail an increased focus on and resource allocation for:

- A. Provision of technical assistance and investments in human and institutional capacity, which will cover both real economy sectors, finance and macroeconomic dimensions. These “soft investments” are often underappreciated and underfunded.

- B. Supply of targeted risk mitigation and blended finance solutions, which will have to be scaled up and standardized to increase coverage and accessibility while reducing transaction costs.

As part of this reorientation, resources will have to be mobilised including from donors and philanthropy for the scale-up investments in human and institutional capacity as well as for injections of seed capital for risk mitigation and blended finance instruments.

Instrument mechanics: Developing commitments to catalytic functions and associated KPIs

With support from an informal group of experts having first-hand experience from the MDB world, MDBs co-develop a taxonomy of catalytic functions that may be included in a Commitment to Catalyse.

Associated KPIs would be outcome and impact oriented and specific enough to drive adjustments to the operating model and internal incentives of the MDBs. KPIs should look beyond the MDB's own financing and instruments and include the contribution to the overall investment trajectory of countries and sectors, thereby incentivizing MDBs to act as a system and take responsibility for the wider ecosystem and their role in it.

On the basis of this common framework of catalytic functions and associated KPIs, the management of each MDB develops its Commitment to Catalyse and processes it through its governance structure with a view to publishing the CoC in late 2023.

The approach may be extended to other public financial institutions such as bilateral development finance institutions, national development banks and central banks, taking advantage of the *Finance in Common* framework.

Cases/Examples

An [OECD Policy Brief](#) outlines practical steps in moving development banks toward a mobilization focus and showcases the Development Bank of Southern Africa (DBSA) as a first mover in making the transition. Among the featured steps were an explicit mobilization mandate; integration of mobilization in performance indicators and KPI, and the build-out of dedicated bank capacity.

The [Global Infrastructure Facility](#) is a cooperation across MDBs focusing on mobilizing private investment for infrastructure in partnership with governments, private sector and others. Significant resources are deployed to support investment pipeline development.

The [Climate Investment Funds TA Facility](#) finances MDB support for investment-enabling policy and regulatory environments as well as human and institutional capacity.

The [Sustainable Renewables Risk Mitigation Initiative \(SRMI\)](#) enables scaled up solar and wind energy investments by providing integrated packages of support for investment planning, regulation, pipeline development and risk mitigation.

Opportunities for IFIs to support the scaling of financing for the transition

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This note is a summary of Intellidex's key findings in its reports, commissioned by the African Climate Foundation (ACF), on financing and scaling strategies to support the just energy transition (JET). The findings presented in this document focus on the barriers and opportunities underpinning capital flows from the global North to the global South to drive JET initiatives in South Africa but are broadly applicable across EMs. The research included a large number of interviews with asset managers, asset consultants and regulators in the global north. We present an analysis of the existing barriers that impede the mobilisation of resources between the two regions, as well as recommendations on how to overcome them. Additionally, the document offers an overview of the challenges and opportunities related to financing the social justice aspects of JET and the actions required to address these issues.

Context

South Africa needs to unlock an enormous amount of financing to fund its just energy transition, sourced domestically and internationally, with estimates ranging from R4tn to R6.5tn (~\$220bn-\$465bn). Funding for the social justice elements alone come to about R2.5tn (~\$137bn), according to the World Bank.

The highly complex process that will unfold over the next three decades will require concerted efforts from all stakeholders in the financial ecosystem to maximise the probability for South Africa to transition successfully to a net zero economy.

Financing is required at scale, continually, in a way never seen before and the country will not be able to rely on the public sector.

Blockages for mobilising flows from North to South

A significant proportion of the funding needed for the just transition in South Africa, and the global South more broadly, needs to be mobilised from the global North. Several key blockages exist, particularly for mobilising private financing, including:

ESG and sustainable investing practices

- A rather perverse outcome of how ESG and broader sustainable investing practices are being applied is that it often results in financial flows being diverted away from the very markets that need to improve ESG metrics. This trend is at risk of accelerating as regulators across the globe are taking steps to implement legislative parameters on ESG integration, albeit at varying degrees of stringency and at different paces. Some of the most progressive markets (Europe) have already introduced prescriptive reporting requirements as well as limits on exposure to carbon-intensive jurisdictions, both at the corporate and sovereign levels. **This system imposes limitations on institutional investors' ability to allocate capital to emerging and frontier markets.** These markets are not only competing based on macroeconomic fundamentals but also on carbon intensity. With limited portfolio allocation

available for carbon intensive investments, only the best-in-class products will be able to attract much-needed institutional financing.

- Another way in which the wider adoption of ESG integration is having negative implications for emerging and frontier markets is through **exclusion criteria in the investment selection process**. Ratings and scores produced by various ESG agencies and disclosure bodies are used to screen out JET counterparties such as Eskom and Sasol, given their high carbon footprints. Yet the transition that needs to occur is precisely at such firms, ones that need to shift their infrastructure into sustainable business models. In addition to the exclusions related to climate aspects (ie, inability to allocate capital to carbon-intensive corporations and sovereigns), institutional investors' ESG allocation strategies risk diverting capital flows from emerging and frontier markets because these jurisdictions often do not have robust data and tend to score poorly on ESG metrics as currently constructed. This tends to materialise through screening that excludes regions based on their performance on criteria such as corruption, policy uncertainty and energy security. A typical example in South Africa is the Renewable Energy Independent Producers' Procurement Programme, which has suffered significantly from policy uncertainty.
- The **EU taxonomy for sustainable activities** is also considered a blockage because several pools of capital will be unable to participate in funding transition projects due to the taxonomy reporting requirements.

Liquidity, deal size and FX risks

- **Liquidity** is a major issue that emerged across all engagements with market stakeholders. To mobilise private capital at scale, JET instruments must be liquid.
- A lack of pooled-risk green bond markets is seen as problematic for funding renewable energy projects and other sustainable finance instruments (including social bonds and sustainability-linked loans). These will have to be adopted on a much larger scale to enable the funding of the just element of the transition. Banks in the future will play a key role in providing liquidity and will do so better with more standardised instruments.
- From a **deal size** perspective, structuring RE assets becomes an essential element that can either accelerate or stifle the rate at which scale can be achieved. The extensive due diligence process for offshore investors in particular requires large deal sizes (at least \$250m), which means projects need to be aggregated into portfolios to bolster the appeal of investing. This will also help diversify risks.
- **FX risk** is a concern for all investors given the volatility of the rand, the hefty component of imported capital goods likely required (given limited onshore production capacity) and the way that this could sway the tight margins seen in many projects – especially when adding other risks such as capital goods inflation. At the same time, foreign investors are reluctant to take on exposure to the rand given the currency volatility and underlying macro risks and therefore any funding from foreign financiers will likely be in hard currency. This leaves the local market exposed to currency risks, which is problematic.

Systems level approaches

Advocacy related to rethinking existing ESG integration practices

- Emerging and frontier markets are struggling to attract capital flows for transition purposes due to the way in which investors are integrating ESG into their investment decision-making processes. **This is a systemic risk to the global transition.**
- Philanthropic funders with a climate mandate need to provide **evidence-based research to regulators and industry bodies in developed markets to demonstrate the adverse implications of some of the existing ESG practices. They need to advocate for changes to these practices to enable emerging and frontier markets to access capital more easily from developed market capital allocators.** It will be difficult for any one country to undertake this type of advocacy and further work is required to map the full ecosystem of causal factors, but we think this is a crucial unblocking point not just for JET financing but for all EM financing from developed markets.

Designing investment instruments that can unlock financing at scale

- Constraints related to liquidity, concentration risk, FX risks and lacklustre demand can all be eliminated through **product development.** Stronger adoption of sustainable finance instruments listed on exchanges is needed to grow the market and increase liquidity.
- To achieve this, **local capital markets need more robust engagement with transactors to obtain clarity on what is crippling appetite for faster adoption and widespread utilisation of these instruments.** At the same time, banks need to think about how these instruments can be pooled into funds to improve the risk profile for institutional investors, including liquidity and credit risks.
- Development funders have a role to play from **a liquidity and FX risk perspective.** For example, **multilaterals can create fund structures that will help overcome the issues related to deal size and investment due diligence costs.** Developing a renewable energy fund, for example, will de-risk the investment from a portfolio diversification perspective. To enhance the appeal for commercial capital, development funders can provide first-loss capital, guarantees or FX hedges. While recognising that financing at scale hinges upon standardising these credit instruments, it is crucial that they are also flexible and able to take into account the needs and market infrastructure capacity on a local level.
- While this function has traditionally been fulfilled by multilateral development funders, **philanthropists can also act in a similar capacity for funds developed by commercial asset managers.** For example, grant funding can be applied as catalytic capital through the provision of guarantees, FX hedging or first-loss capital. Utilising these tools will bolster the appeal of the fund for commercial investors and help blend in these additional sources of capital.

Building capital market infrastructure

- Considering the relative newness of sustainable finance for the mainstream market, an iterative process is required to ensure that a balance is found between making instruments accessible to the institutional market and achieving sustainability objectives.

- An alternative (and perhaps controversial) option is for development funders (local DFIs, MDBs or philanthropists) to engage with transactors to encourage issuers to adopt these instruments. **Given the costs associated with listing a transition bond, including compliance with all the listing criteria as well as obtaining third party assurance, there is an opportunity for development funders and philanthropists with a climate mandate to provide technical assistance to help develop this market.** There might also be an opportunity to collaborate with heavy emitters and hard-to-abate organisations in the private sector to help advance the transition agenda. Some actors of size in the system (like Eskom) will have to grab the bull by the horns in terms of market development even if the first mover may have questionable financial incentives to do so (where philanthropies etc can support).
- A collaborative effort could unlock the necessary resources to develop the transition bond market and potentially overcome the financial disincentives undermining the mobilisation of capital from the global North to the global South.

Opportunities and barriers for financing the social justice elements of the JET

Opportunity	Barriers to overcome	Actions required from IFIs
ESG investing: The easiest starting point for getting investors and funders to start planning for JET issues is to incorporate JET dimensions into existing ESG strategies. We recommend the adoption of the Impact Investing Institute's Just Transition Framework to structure new investments and reporting on their effects (Spengler et al., 2021). The framework addresses both environmental and social dimensions of the transition.	ESG investing as currently practised is very risk oriented and tends not to seek out opportunities to actively promote ESG outcomes. Subsequently, capital is being diverted from certain markets (for example carbon-intensive economies such as South Africa). This bias will need to be overcome to enable capital to flow to new areas where it is needed.	A redesign of ESG strategy (or a rebalancing that focuses on opportunities as well as risks) is the onus on all corporate, banking and other financial actor boards. Asset managers and financiers must take the lead in designing new investment vehicles and proactively identifying JET-aligned ESG investing opportunities. Involving philanthropists would be useful due to their potential provision of catalytic, first-loss capital in blended structures for new investment vehicles without proven track records. Foundations will also need to integrate JET considerations into their organisational strategies/missions.
Place-based impact investing: These are investments aimed at yielding appropriate risk-adjusted financial returns as well as generating positive local impact, while also addressing the needs of specific places to enhance local economic resilience, prosperity and sustainable development (Impact Investing Institute et al., 2021). The aim is to address structural constraints to economic growth and regional development, chiefly access to finance, to reverse the long-term decline of, in particular,	Fiduciary duty; lack of pipeline; aggregation of smaller opportunities for larger investors; not enough local investors.	As community trusts become active investors (for example in other energy utilities), they can consider more localised roles in PBII. They can do so, for example, via support to small businesses that will have been beneficiaries of grant-based support offered under IPPs' or trusts' enterprise development and socioeconomic development interventions (which could be seen as preparing for investment-readiness). Larger financial institutions must also reconsider their lending policies which tend to discriminate against smaller, black-owned and/or more remote business

<p>small towns that once hosted significant industries (Impact Investing Institute et al., 2021).</p>		<p>owners. Finally, there is a role for philanthropy in coordination: that is, originating and publicising deals/investees; matching investors to investees.</p>
<p>JET funds: The establishment of private debt and/or private equity funds for JET-promoting businesses can help to get funds to flow into economic activity that maximises green and social outcomes. These could be capitalised using blended structures.</p>	<p>Communities in transition will need solutions that are designed from the ground up and community objectives might not align with commercial investor objectives. Blended structures require multi-stakeholder coordination which can be difficult to manage.</p>	<p>Asset managers will need to work on developing this market, for example by consolidating private equity/venture capital investors and investors in existing business incubators; adopting a JET lens and then working towards investment readiness for inclusion in JET funds. Marketing of the funds globally (where JET is increasingly an area of interest for investors) and locally (where significant advocacy will be required).</p>
<p>Transition bonds: These instruments can be used to support hard-to-abate sectors to transition from carbon-intensive to net zero over the next three decades. It allows organisations to continue accessing funding despite performing poorly on climate metrics, granted that an issuer has strategically embedded a pathway to net zero.</p>	<p>The transition finance market is still nascent and issuers are hesitant to utilise these given the lack of an evidence base as well as risks associated with greenwashing. Mixing social and environmental KPIs in a single instrument might not be feasible and thinking around how transition bonds can include social KPIs must be developed.</p>	<p>There is limited movement in the development of standards for transition instruments, largely due to the conceptual differences between transition (process) and other types of bonds (eg, green and outcome-focused bonds) and fears about greenwashing. The onus will lie on companies to develop convincing, actionable and measurable plans that demonstrate how they intend to become better corporate citizens. The same applies to banks and other investors in relation to their investees and companies in their portfolios.</p>
<p>Market-based products for renewable energy: The market for financial products to finance renewable energy projects is small but the rapid expected growth of solar represents an opportunity for financial institutions to develop more, better products, and to specifically develop products for the mass market. The bulk of the population is currently not conceived of as a target market for solar energy and this is a large missed opportunity for banks and the mass rollout of cheaper, cleaner solar energy.</p>	<p>The stringent financing terms by commercial banks' asset managers for small-scale renewable energy projects/ developers. Small-scale solar is still seen to suffer from risky and/or untested business models particularly where this is outside familiar contexts such as installations in residential complexes or large businesses. Pilot projects and innovative first-movers from financial institutions are required.</p>	<p>Banks must take the lead in designing more inclusive financial products for low(er)-income consumers and for small Energy Saving Companies (ESCOs) to enable broader participation in the new solar sector. In relation to community renewable energy projects, foundations have a key role to play in funding demonstration projects to prove (or disprove) sustainable business models for renewable energy SMMEs. Finally, academia must be involved in robust research testing alternative models.</p>

iTrust – Greenmap guarantee facility

Contacts

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Concept summary

The [iTrust](#) is an international cross-border non-profit entity designed by [Greenmap](#) to enable governments in developing countries to provide customised programmed-based guarantees to promote private sector investment in renewable energy (RE) generation, within a framework of transparency and competitiveness. The iTrust guarantee package is specially customised for eligible RE auction programmes and includes (i) a cost-free revolving energy payment guarantee for all awarded projects covering delays or non-payment by the offtaker, and (ii) an optional early termination payment guarantee to cover the offtaker or host government default upon the termination of a PPA following the occurrence of certain country-level triggering events. The early termination payment guarantee fees will result from the iTrust funding costs on a pass-through basis.

Context & barriers the instrument addresses

RE generation costs depend on the amount of capital needed and the weighted average cost of capital. Developing countries have more complex and risky political, economic and regulatory environments which increase the cost of capital and deter long-term private investments. As a result, clean energy investment grows at a slower pace and higher prices, widening the gap with developed nations.

The iTrust guarantees will cover the risks affecting projects' bankability in the developing world including offtaker liquidity and typical country-level risks such as (i) local currency inconvertibility, (ii) hard-currency transferability, (iii) expropriation, (iv) change of law and (v) non-compliance with an arbitral award. The iTrust guarantees will be embedded in auction programmes and automatically granted to awarded projects, allowing to price them in the offer submission. This integrated and program-based feature is key to deploying renewables at scale and reaching a just energy transition.

Climate & socioeconomic impact, track record to date.

The iTrust's objective is to support at least 10-12 developing countries in its first 10 years of operations (2024 to 2033), allowing a total of US\$ 10-15 billion¹ of new-built RE capacity enough to supply clean energy for approximately 90 million people. The cumulative CO₂ equivalent emission reductions could range from 120-150 million tons

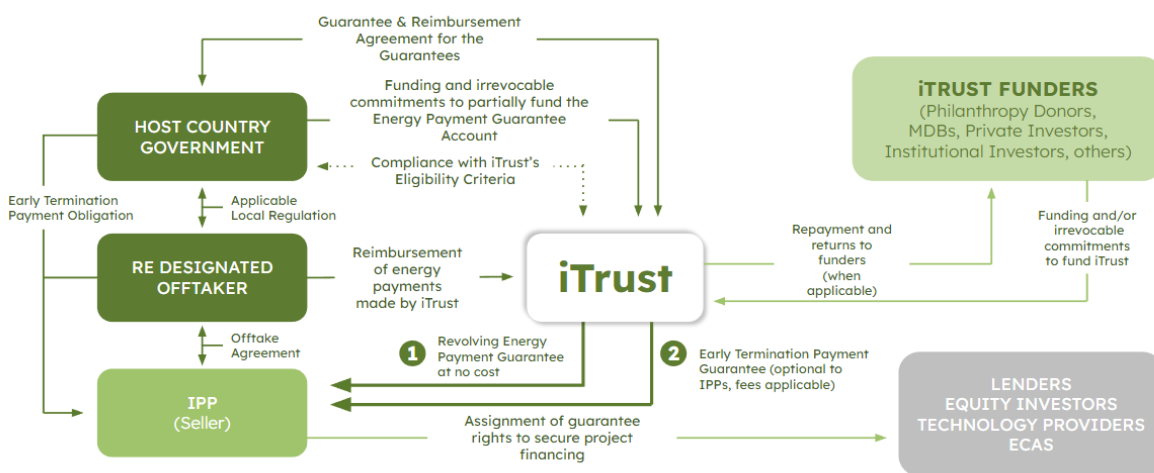
¹ Investment and emission estimations depend on the mix of wind, solar pv and other technologies.

over this period. Over the 20-year expected lifetime of the mobilised projects, the amount of avoided emissions may range from 350 to 400 million tons.

A similar guarantee scheme was implemented under the [RenovAr](#) Programme in Argentina by the current members of the iTrust team -which served as an inspiration for the iTrust- mobilising over US\$ 7 billion of private investment in a very challenging market.

Instrument mechanics

The iTrust will unlock funds from philanthropic foundations, MDBs and/or private/institutional investors to channel them into energy payment and early termination payment guarantees. Host countries will partially fund the iTrust to skinning in the game.



Scale-up pathway. Team. Mobilisation Potential. What is needed to make it happen?

The iTrust is designed by Greenmap's [team](#) in collaboration with [Clifford Chance](#) and [John Pickett](#) (former partner at Linklaters Intl.). Greenmap's team has blended experience in the public and private sectors, with an internationally recognised track record. Greenmap's [Board of Advisors](#) is composed of experienced international leaders with extensive backgrounds in RE and climate mitigation strategies.

The implementation of the iTrust will provide the following benefits to host countries: (i) reducing the cost and accelerating the implementation of RE auctions; (ii) lowering the host country market risks, increasing attractiveness and unlocking investment; (iii) improving energy security, affordability and independence, reducing generation costs and dependence on volatile imported fossil fuels; and (iv) curbing carbon emissions.

The iTrust is working with key stakeholders to validate its final design and conclude its incorporation in a jurisdiction with good international standing and reputation as a stable economy with a reliable legal framework. At the same time, the iTrust is engaging potential donors and funders to support its guaranteed accounts.

GuarantCo – Local currency credit solutions

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Summary

PIDG's guarantee arm (GuarantCo) provides a variety of long term guarantee and contingent credit solutions in both hard and local currencies to unlock private sector funding from the capital markets into sustainable infrastructure projects throughout Africa and Asia. Guarantees help unlock significant lending capacity to critical infrastructure projects that usually require long term funding that is often unavailable, as well as build capacity in local markets. GuarantCo is rated AA- by Fitch and A1 by Moody's. GuarantCo is headquartered in London with branches in Nairobi and Singapore.

Track record

Since 2005, GuarantCo has closed guarantees totalling USD1.5 billion in 22 countries, which has mobilised USD 5 billion of private sector investment.



Supporting smallholder farmers

GuarantCo

Pran

100% guarantee of an onshore Taka denominated 2.1bn (\$25m) bond by Pran to increase production capacity of processed goods in Bangladesh.

Direct impact on people

SDG assessment 2.3 - Increase agricultural productivity and incomes of small-scale food producers

Expected impact 8.6k smallholder farmers are expected to benefit. They are likely to be low income and live in rural areas. The largest impact will be felt by previously unemployed farmers and women.

Direct impact on planet

SDG assessment 8.8 - Achieve full and productive employment and decent work for all women and men.

Expected impact The company will create 780 new jobs - 33% will be taken up by women.

Market transformation

Challenge: Limited number of listed corporate bonds that use proceeds for infrastructure.

Challenge: Demonstration of bond tenor that is longer than corporate loan facilities offer and one of the few ever corporate bonds in country exclusively for infrastructure.

Outcome: An enhanced corporate bond market through replication of similar bonds for infrastructure to unlock deeper pools of capital for projects.

Mobilisation Mobilised \$14.3m of local equity and \$25m of international debt.

Climate risk

Transition: The sponsor is seeking to integrate solar PV to reduce emissions.

Physical: Bangladesh is likely to be impacted by climate change with an increase in extreme weather events. The agriculture sector is considered particularly vulnerable with impacts on availability of cultivatable land; crop yields and quality. This has been discussed with Pran who will limit risks where possible.

Gender and PIDG TA

A PIDG TA grant will be provided to deliver training targeting female farmers to help them become independent growers and agricultural hub leads.

Total commitment: \$25m

Provide greater income generation for 8.6k smallholder farmers and create 780 new jobs of which 33% will be occupied by women.

Bangladesh
LDC and FCAS



Facilitating renewable energy access

GuarantCo

Bboxx

Provide a KES 1.2 bn (\$10.6m equivalent) partial guarantee (75%) to SBM bank with a 5-year tenor to provide 84k solar home system units in Kenya.

Direct impact on people

SDG assessment 7.1 + 7.2 - Access to affordable and reliable renewable energy.

Expected impact 451k consumers are expected to benefit. Over 50% will be first time users and 9% will be below the international poverty line.

Direct impact on planet

SDG assessment 13 - Climate change mitigation.

Expected impact Avoid/reduce greenhouse gas emissions through the displacement of non-traditional fuels.

Market transformation

Challenge: Historically investments in the off-grid SHS sector have been made in hard currency which can expose companies to significant exchange risks.

Challenge: Enabling better matching of currency of funding with operations and collections through mobilising local currency from a Kenyan Bank.

Outcome: Replication of local currency loans to SHS businesses from domestic banks.

Mobilisation Mobilised \$14.1m (KES 1.6bn) from SBM Bank. This will be Bboxx's first LCY transaction and one the first loans provided by a Kenyan bank to a company in the solar home system sector.

Climate risk

Transition: Low - This aligned.

Physical: Risks considered and where possible mitigated.

Gender 40% of the Kenyan workforce will be women.

Total commitment: \$10.6m

Increase access of reliable electricity to 451k consumers to improve quality of life and avoid/reduce greenhouse gas emissions through the displacement of non-traditional fuels.

Kenya
Low and Middle-Income Countries (LMIC) and Fragile and Conflict-Affected States (FCAS)

In Q2 2022, IntraCo Africa invested US\$1.5m to deliver an additional 199k solar home unit across Kenya (32%), DRC (25%), Rwanda (17%), Togo (12%), Nigeria (9%) and Burkina Faso (5%) in the next two years.

Instrument mechanics

GuarantCo provides credit solutions as required for a particular project including full and partial credit guarantees, tenor extension guarantees, liquidity extension guarantees, EPC contractor guarantees, and portfolio guarantees. Other solutions are provided depending on individual project requirements. The basic forms of guarantees provided by GuarantCo cover up to 100% of principal and interest over a loan or a bond issued by a private sector entity of between USD5m and up to USD50m equivalent in tenors of up to 20 years.

Most critically, GuarantCo's guarantees can be denominated in local currency (guarantees denominated in local currencies constitute the majority of GuarantCo's portfolio) and in some circumstances hard currency, thereby building capacity in local markets by unlocking long term sources of capital from local providers including domestic as well as international banks and institutional investors.

Liquidity Extension Guarantee ('LEG')

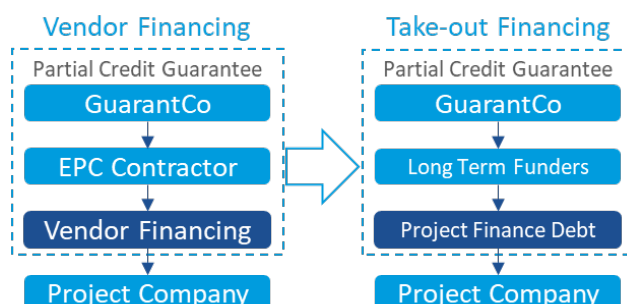
Commercial banks are often limited to a maximum tenor for the loans they provide, or impose high rates of interest, with the result that infrastructure projects may be rendered unviable and abandoned by sponsors. The LEG allows the debt to be structured as if it would amortise over a long tenor with a specified transfer date that meets bank requirements. If, at that date, the project is still performing the bank has the option to transfer the loan to GuarantCo or keep it on its books for the remaining tenor.

Portfolio Guarantee

Designed to mitigate concentration risk, the Portfolio Guarantee allows the lender to target larger transactions, as GuarantCo provides a guarantee against new and existing infrastructure exposures and allows the counterparty (lender or guarantor) to release capital for other loans. The guarantee is structured to cover exposures to corporates, projects or financial institutions involved in facilitating infrastructure and is usually provided on a second loss basis.

EPC Contactor Guarantee

These allow EPC contractors to provide vendor finance in geographies they would not normally consider. With this solution, GuarantCo issues a payment guarantee in favour of the EPC contractor that assures payment once work has been completed, thereby allowing construction to start as well enabling the project to procure long term debt. Reducing uncertainty in this way can help reduce project execution times. GuarantCo has previously combined this solution with a guarantee on the take-out financing to provide a holistic solution for the project in question.

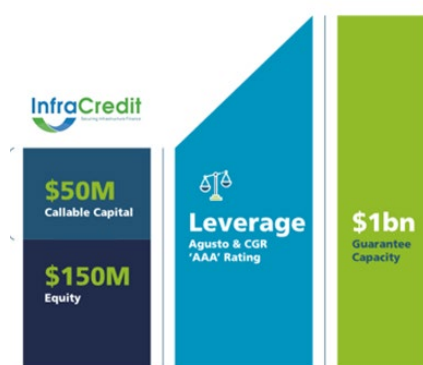


Framework Guarantee

Similar in many respects to the Portfolio Guarantee described above, the Framework Guarantee enables the lender (or guarantor) to originate more and larger transactions in a growing – but perhaps untested – sector. For example, GuarantCo has provided such a guarantee over 10 years to Axis Bank, enabling it to originate loans to the EV sector in India at a faster pace. Axis Bank will benefit from a partial guarantee.

In-country Credit Enhancement Facilities

Building local capacity and tapping into domestic institutional investors to fund infrastructure assets forms a key part of PIDG's strategy to achieve impact at scale. By establishing Credit Enhancement Facilities in certain countries (e.g. InfraCredit in Nigeria, InfraZamin in Pakistan, and Kenya to be launched shortly), local entities are set up onshore to provide a sustainable conduit for mobilizing long-term, local currency debt financing for infrastructure through the issuance of credit guarantees in-country. They also have the benefit of developing local capital markets, which in turn provides long term access for investors to finance infrastructure on the ground.



Credit Enhancement Facilities also provide leverage effect for investor capital – every dollar invested into PIDG can be then leveraged through PIDG's investment into a Credit Enhancement Facility (alongside equity from other co-investors), an entity that itself can typically leverage 3-10 times and deliver multiple transactions with sustainable developmental impact. This multiplier effect is an extremely efficient use of investor capital to achieve impact at scale.

Future development plans

The role that guarantees can provide in mobilizing domestic and international pools of capital as well as in building local capacity is evident, both from studies as well as the on-the-ground experience in GuarantCo and in-country in InfraCredit and InfraZamin. Continuing to build GuarantCo's portfolio and establishing more in-country credit enhancement facilities in target markets lie are key pillars of PIDG's strategic ambition. Realising this will involve working with key local partners as well as the associated requirement for both people and capital. We will be working closely with existing stakeholders and new counterparties to bring this about.

InfraCo - PIDG project development arm

Philippe Valahu, Chief Executive Officer
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Concept summary

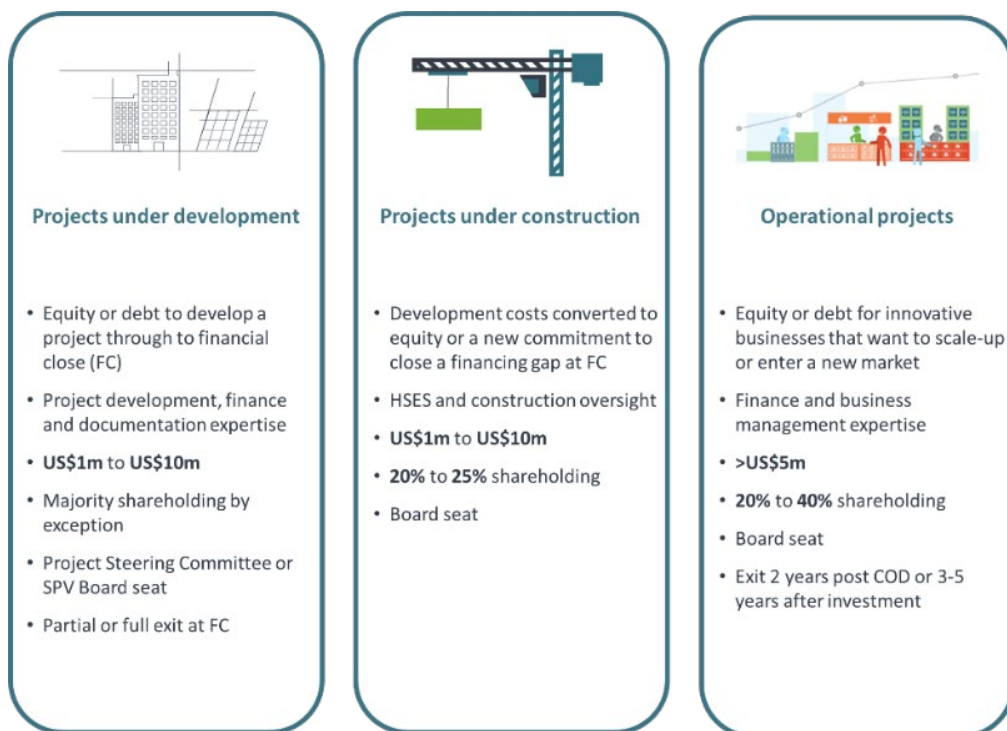
There is broad consensus around what the multiple challenges to unlock private finance for the climate and development agenda are. The specific challenges of investing in infrastructure in emerging markets and developing countries are well recognised; the combination of weak ecosystems, challenging policy and macro-economic environments, combined with additional perceived risks generate a chronic lack of bankable project pipeline, lack of investment in infrastructure by commercial and institutional domestic investors, and lack of the scale, diversification and aggregation needed to attract large flows of private finance in operational – de-risked – assets.

Yet currently, only a small proportion of ODA, or the catalytic capital available within DFIs, MDB or philanthropic institutions is deployed to support the mitigation of early stage development risk; and if private finance is to be mobilized at the scale required to meet the scale of the infrastructure gap in developing markets as well as to address the effects of climate change.

PIDG's success in de-risking projects in some of the most challenging jurisdictions is anchored on six key drivers: Distinct focus and track-record in infrastructure, exclusively in emerging markets and developing countries; Access to the appropriate type of capital to tackle high-risk project development, deployed mainly as equity through InfraCo and quasi equity or returnable grant through PIDG TA; Ability to deploy capital over the life cycle of an infrastructure project and across the capital structure by means of grants, equity, debt or guarantees, including those denominated in local currencies; Use of blended finance tools that have proven successful in de-risking and mobilising private sector at scale, both in PIDG itself and at project level; Experience in mobilising domestic investors and building local capacity, including through locally based credit enhancement facilities in Nigeria and Pakistan, with more planned; Well-developed climate approach with focus on Paris aligned deals, climate mitigation and increasing climate risk and resilience.

Track record & instrument mechanics

PIDG addresses a gap in the international development architecture, which is critical to the achievement of the UN SDGs, delivering pioneering infrastructure through three business lines that deploy a unique set of capabilities. The development arms (InfraCo Africa and InfraCo Asia) both co-develop and invest risk capital in the form of equity, or debt with the intention of de-risking projects during the crucial development stage, thereby creating a pipeline of bankable and sustainable investments and to mobilize capital from others at scale.



Successfully developing infrastructure requires risk capital, patience, and expertise. PIDG's development arms are unique in providing all three.

PIDG development arm has been investing equity at the Financial Close of its projects for several years, to close a financing gap or give confidence to new funders entering at the construction phase. It also means we can ensure that our projects are built and operated as intended: keeping the promises made to partners, local communities, and other stakeholders. We can also invest into innovative infrastructure-related businesses that need support to scale-up, pilot products or enter new markets and so ultimately demonstrate the commercial viability of planned growth.

Successful exits: developing markets to attract private investors

Building the markets for private investment in renewables in Pakistan and Vietnam

Market transformation pathway

- Attracting private investors where they did not previously go is a key signal of building markets
- InfraCo provide early stage high risk project development capital which is vital to create a sizeable pipeline of bankable projects for investment by the private sector, unlocking future flows of private investment and ultimately transforming markets
- Successful exits to private investors is the ultimate test of the viability of the investment and the sign of a market that is starting to function.
- Here we highlight two examples from InfraCoAsia in Pakistan and Vietnam.
- It is significant that a few years after these investment PIDG evolved its role in the two countries.
- In Pakistan PIDG established Zamin Pakistan—a local credit enhancement guaranteee. In Vietnam work is advanced to launch the first commercially issued local currency certified green bond.

Gul Ahmed and Metro Wind Power, Pakistan

- InfraCoAsia achieved its first exit from a utility scale renewable energy project in 2017, selling its stakes in the Gul Ahmed and Metro Wind Power projects to private sector company Daelim Energy.
- InfraCoAsia supported Pakistan's Government's attempt to harness the country's largely untapped wind power resource by bringing to financial close and construction two significant projects that together contribute 100MW renewable energy generation capacity and benefit approximately 700,000 people with improved access to electricity.
- Having worked to support the development of the two ground breaking projects through to operation, InfraCoAsia exited in favour of the private sector, recycling public funds into the early stage development of new infrastructure. Gul Ahmed and Metro Wind Baelim Energy's first projects in Pakistan, bringing key energy and infrastructure expertise to the country.

Coc San Hydro Power, Vietnam

- InfraCoAsia was approached to develop the 29.7MW project when it ran into difficulties in 2011, investing US\$7.5m at the development stage.
- As the majority stakeholder, InfraCoAsia worked with the project's Vietnamese and international backers to ensure that it met stringent environmental standards and was structured to attract further private sector capital to achieve financial close. Coc San began delivering clean and affordable power to the people of Lao Cai province in 2016, under the direction of Nhu Quỳnh Trà—one of the first women to take a lead role in Vietnam's renewable energy sector.
- In November 2018 InfraCoAsia divested its share in the project to Tokyo Electric Power Company Holdings, Inc (TEPCO), making its first hydropower investment outside Japan.

www.pidg.org

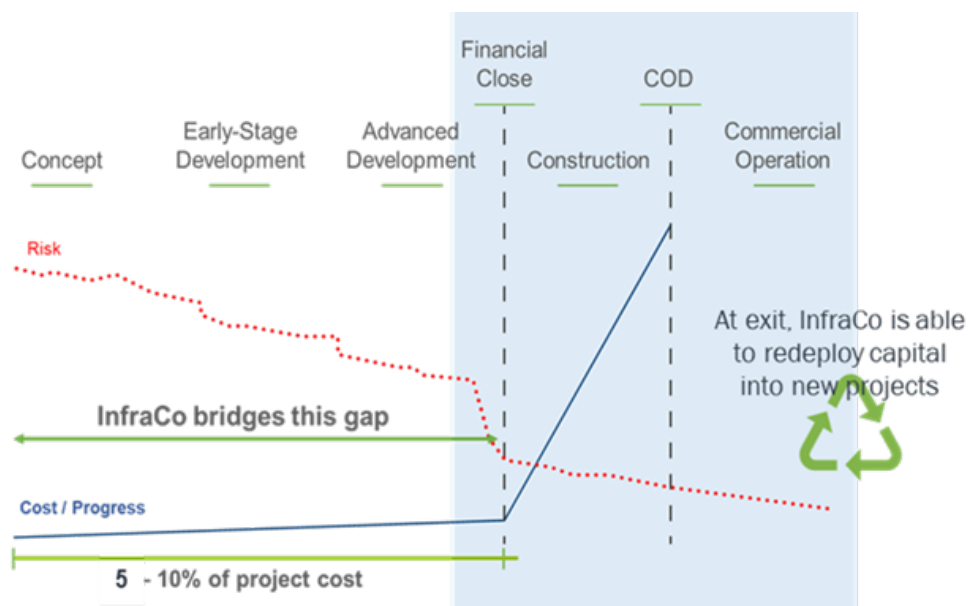
The Private Infrastructure Development Group

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77

Through our investment team, we support those businesses that enable Africa's and Asia's economies to emerge from the COVID-19 crisis in a stronger position. With a focus on developing local capital markets, generating more local jobs, broadening, and deepening local supply chains and capabilities, whilst always championing green growth that supports climate resilience and drives down carbon emissions. Safeguarding workforces, customers, suppliers, and partners is also a critical consideration when selecting investments: we will prioritise investments that seek to engage and empower women and those with disabilities.

Future development plans



Achieving the scale and pace required entails matching risk and cost of capital for the distinct phases of infrastructure development of early-stage project design, development, construction, and operation.

Risks are generally higher at the earlier stage of projects, although the development stage capital is a relatively small proportion of total project costs (usually between 5% and 10% for limited recourse transactions). Given this combination, re-focusing scarce patient catalytic capital and blended finance solutions towards the development stage and associated equity investments can unlock a greater pipeline of bankable projects and large sums of private capital at later stages.

As we launch the new PIDG strategy in June (covering the period 2023-2030), we aim to grow our deployment of capital by doubling our yearly commitments by 2030 (from the 2022 basis). We will introduce more defined Group investment approaches for selected countries, while still responding to market evolution across the regions in our mandate. This will result in combinations of impact objectives, sectors, geography and PIDG solutions / products that will help us prioritise our origination efforts, and coordinate government and market engagement. We will keep these under review so we can stay flexible as the market evolves.

Technical Annex: Sustainability-Linked Sovereign Debt

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Concept Summary

Low-income countries are suffering from a triple crisis of unsustainable debt burdens, escalating costs of climate change mitigation and adaptation, and adverse economic impacts of climate shocks and biodiversity loss. Countries increasingly cannot afford to address nature- and climate-related imperatives due to mounting debt service bills and reduced access to financing amid high market interest rates and constrained development funding. According to the World Bank, [almost 60% of low-income countries](#) are at high risk of or already in debt distress, with most of their external debt owed to private creditors. Of particular concern are the 58 countries of the Vulnerable Twenty (V20) whose economies and 1.5 billion people are especially exposed to climate change while facing [\\$435 billion in debt payments by 2028](#).

Sustainability-linked sovereign debt (SLSD) is a performance-based financial instrument that commits its issuer to achieving certain predefined and forward-looking sustainability targets. Unlike labelled use-of-proceed (UoP) debt instruments (e.g., green, social or blue bonds), SLSD is not project-based, and the issuance proceeds can be used for general budgetary purposes, meaning they need not necessarily be directed towards specific projects. Sustainability performance targets (SPTs) set out the overarching goals that the issuer seeks to achieve, which may already be specified in existing climate or nature conservation policies, or pledges such as the Paris Agreement's Nationally Determined Contributions (NDCs). The targets should be ambitious and represent a material improvement in sustainability performance beyond "business as usual." Progress towards achieving these targets is assessed through select key performance indicators (KPIs), which are relevant, material, quantifiable, externally verifiable metrics that can be benchmarked reliably. Finally, measurement, reporting, and verification (MRV) comprise the data and processes whereby performance is tracked and validated by investors and third parties.

Sustainability-linked sovereign financing can help to address the triple crisis.

Sustainability-linked bonds (SLBs) and debt-for-nature conversions/swaps (DNSs) enhance the credibility of countries' international commitments by embedding material financial incentives to achieve sustainability targets, along with key performance indicators to assess progress. They lower the cost of borrowing by mitigating long-term sources of sovereign default risk and by appealing to the growing base of ESG-oriented (environmental, social, governance) investors.

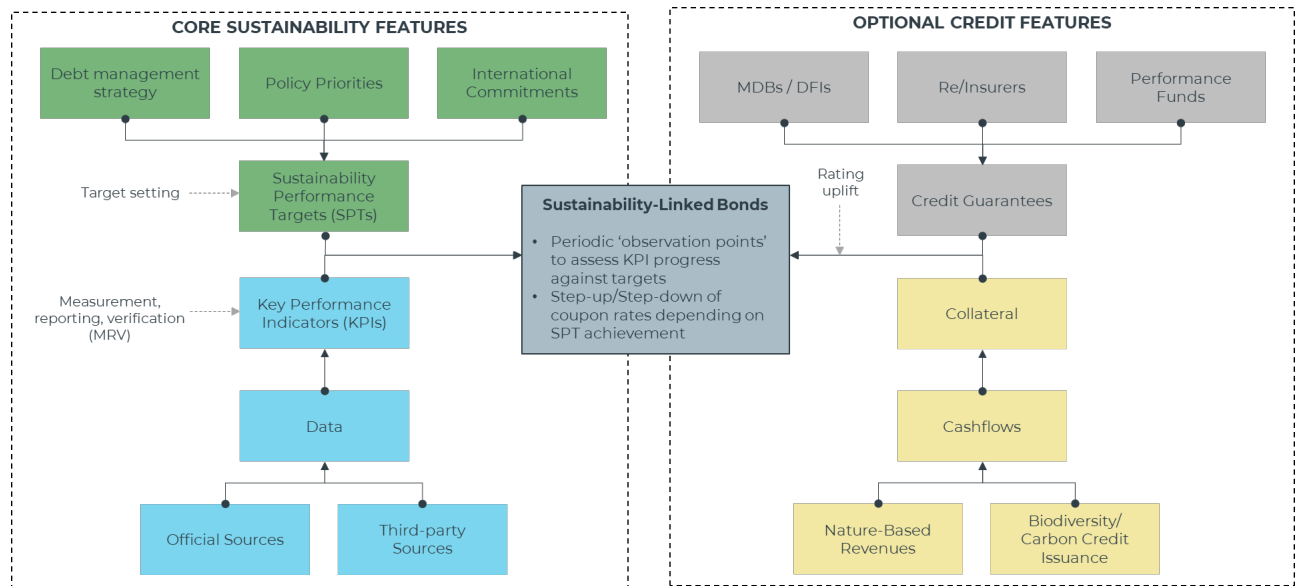
Track Record to Date

The SLSD market is still in its infancy. The inaugural SLB was issued by Chile in March 2022 with a US\$2 billion 20-year offering, followed shortly thereafter by Uruguay in October 2022 with a US\$1.5 billion SLB maturing in 2034. DNS transactions date back to the 1980s, but regained prominence in 2018 with the US\$15m Seychelles DNS, followed in 2021 by the US\$364m Belize DNS, and in 2022 by US\$150m Barbados refinancing operation. In May 2023, Ecuador announced US\$656m DNS that aims to channel at least US\$12m per annum into conservation of the Galapagos Islands.

From the starting point of a mere US\$3.5 billion at the end of 2022, the issuance of SLBs from emerging market and developing economy sovereigns has the potential to reach between US\$250 billion and US\$400 billion by 2030, according to [NatureFinance estimates](#). Coming off a low base, the volume of issuance has the potential to grow approximately 100-fold over this period, driven by an anticipated easing of the demand and supply constraints. Under a baseline scenario, every sovereign with market access presently can be expected to issue at least two bonds during the seven-year forecast horizon. This performance would mirror the trajectory of the sovereign ESG debt issuance more broadly, which grew from under US\$1 billion in 2016 to over US\$120 billion of green, social, sustainable, and sustainability-linked (GSSS) bonds five years later.

Instrument Mechanics

Sustainability-linked sovereign financing can take many forms, but certain core building blocks and add-ons are sketched out below.



Source: SSDH

Scaling pathways

There are at least seven critical pathways to scaling the SLSD market. Modestly scaled deals, including refinancing of the whole debt stock of smaller sovereigns, have been effective in delivering proof of concept and policy engagement. Developing a self-sustaining market for SLSD instruments requires unblocking supply- and demand-side constraints, in particular:

1. **Credit enhancement** stimulates demand for SLSD, and by extension, lowers the borrowing costs of SLSD by de-risking transactions and crowding in private investors to multiply the impact of public funds.
2. **Climate/nature/disaster risk finance** initiatives can incorporate SLSD in their arrangements to strengthen the credibility of commitments and crowd-in private finance.
3. **Standardization** creates a common denominator for market participants to measure and evaluate performance, promote best practices and build trust between the contractual parties.
4. **Capacity building** covers the variety of efforts to make up for shortfall in technical and human capacity needed to structure and launch SLSDs on the issuer side, as well as campaigns to raise awareness and address misconceptions on the investor side.
5. **Enabling regulation and market development** encompasses rules set by financial and monetary authorities that can hinder or support market uptake and liquidity, as well as direct policy interventions to stimulate demand for SLSD instruments.
6. **Fiscal rules and frameworks** can encourage (or hinder) the adoption of SLSD instruments by sovereigns, and so impact the extent to which these instruments can be accommodated within longer-term budget plans and public financial management strategies.
7. **Nature market linkages** both expand the range of KPIs and SPTs available for SLSDs, and connect nature-based revenues that can support performance in pursuit of nature-related goals.



TCX Squared – Creating Currency Risk Markets to Mitigate Currency Risk at Scale

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Unhedged currency risk undermines any serious efforts to deliver SDGs and tackle climate change.

Most low and lower middle-income countries lack deep pools of domestic savings that can help finance the levels of investment spending needed for them to meet the sustainable development goals, mitigate emissions to limit global warming, and adapt to be resilient to the rising risks from climate change. Meeting these goals will require very large amounts of external funding. Without serious institutional reform, and with most external lending to these economies denominated in hard currencies, additional external debt inflows will likely triple the unhedged currency risks borne by these economies from \$2 trillion to \$6 trillion by 2030¹.

This unhedged currency exposure increases economic uncertainty, raises risk premiums for credit and investment, and has been [the most frequent trigger](#) for past and ongoing debt crises faced by developing economies. Unless proactively addressed by hedging at scale and other risk mitigating measures, this currency risk overhang will undermine any serious efforts to deliver the SDGs or climate mitigation and adaptation goals.

The unbearable level of currency risk is the results directly from policy and market failures.

[More than 80% of lending to these economies from MDBs and DFIs is dollar denominated](#). This shifts the exposure to and responsibility for managing currency risk away from sophisticated treasuries of international institutions on to capacity constrained DMOs and central banks of poor economies which also cannot rely on the benefits of diversification that characterize most MDB and DFI portfolios. This practice defies the logic and spirit of the [responsible lending principles](#) that DFIs & MDBs have repeatedly committed to.

The FX market is the largest market in the world registering a daily turnover of \$6.6 trillion, but is very highly concentrated in dollars, euros and a handful of other currencies belonging to rich developed economies. Over 100 low-income economies together [account for less than 0.2% of all currency trading](#), offering little prospect for hedging. It is possible to get a price for a 10-year hedge only for eleven

¹ Authors' calculations based on part of the SDG funding gap being plugged, but mostly in hard currencies

developing economies, all of which are large, and none a low-income country. At a 3-year duration, the private market exists for around 20 developing economies.

The [Bridgetown initiative](#) has showcased that development and climate goals will fall short of the necessary financing if the international community fails to tackle currency risk at scale. However, the problem of currency risk in the financing of low-income countries has been recognized years ago in academic circles under the colorful heading “original sin”. Low-income countries are penalized for not being able to borrow in their own currencies, something mostly only rich economies can do.

To address this, a group of development banks and financial institutions set up TCX in 2007 to allow these lenders to provide (synthetic) local currency loans and hedge the resulting currency risk where no commercial markets existed. Since then, TCX has been offering currency hedges in more than 100 low and lower middle-income countries having executed more than 6,000 hedging transactions worth more than \$11 billion.

In the process, TCX has also demonstrated that by offering transparent and risk sensitive pricing, warehousing, risk pooling, and term-transformation functions, it can catalyze the creation and deepening of currency risk markets by attracting private risk capital. This is significant, but not yet significant enough and needs to be scaled up at great speed, to address the trillions of dollars in additional currency risk that will accompany required growth of development and climate finance absent institutional reform.

A Package of Policy Reforms to Lift Currency Risk from the Shoulders of Low-Income Borrowers

The forthcoming [Summit for a New Global Financial Pact](#) should discuss and agree on a policy reform package which include a new mandate for MDBs and DFIs to provide local currency loans, a gradual shift of donor support away from lowering funding costs in foreign hard currency loans towards lowering the costs of local currency lending, a scaling up of currency hedging markets and scaling the role of TCX as effective and crisis-tested currency risk market creation instrument.

Mitigating currency risk is a prerequisite for both climate resiliency and scaling up finance. That is why in the ongoing [discussions on MDB reform](#), DFIs and MDBs as well as other public lenders should be asked to offer lending in local currency as the default option rather than the current practice of dollar lending, unless the lending is ringfenced for FX generating projects. Yes, this can result in a higher upfront interest burden for borrowers. But, these upfront costs will eventually be more than offset by positive effects on credit risk margins because of more stable cash flows on the micro level, improved risk transparency, better investment decisions, and the overall benefits of operating in a more stable macroeconomic environment with a lower frequency of debt distress and currency shocks.

Nevertheless, cash strapped borrowers in fragile economies may need donor financial support to defray the higher upfront costs of local currency borrowing. Blending support may prove catalytic for the private sector involvement necessary to deepen currency risk markets.

TCX Squared – a business model, governance, and track record to scale up massively.

Through centralization at TCX, currency risk in frontier and emerging markets is pooled, and benefits from scale effects in terms of diversification, market creation networks, and operations. TCX has performed robustly through tumultuous times that include the Global Financial Crisis, the taper tantrum, the Covid crisis and ongoing Fed tightening. It has generated modest profits while continuing to create and deepen currency risk markets, share knowledge, and build currency risk management capacity in an ever-expanding set of countries.²

TCX is perhaps best thought of as a remarkably successful pilot project that must now be scaled up. It has accumulated experience and expertise, earned credibility with donors, counterparties and rating agencies, and demonstrated a consistent track record driven by strong governance and a competent management. TCX is ready to scale, but organic growth alone through accumulated earnings, gradual addition of new shareholders, and new commitments from existing shareholders will not be able to plug the trillion-dollar hedging gap.

Scaling up TCX's capacity can happen gradually to accommodate growing hedging demand grows because of more responsible lending practices by DFIs and MDBs. To begin with, some US\$ 5 billion should be added in some combination of paid-in equity capital, convertible debt and callable capital. This would allow TCX to reach an interim 2025 target of about US\$60 billion in hedging capacity, an ambitious, but achievable 12-fold increase over the current \$5 billion. Over the medium-term, as demand for currency risk grows, additional capital will be needed. Donor support could also take the form of SDR allocations and / or access to IMF SDR liquidity. As the market reaches critical size and expands in scope, it will also attract institutional investors who should find it attractive to build sizeable, diversified portfolios. This crowding in of private risk capital may eventually enable a further increase in TCX leverage in creating & deepening currency risk markets, making a \$1 trillion market for hedging low-income and lower middle income countries' currencies achievable in the foreseeable future.

² Despite operating as a pioneer institution in risky frontier markets, TCX has been assigned a [solid A rating by S&P](#) and [A1 by Moody's](#) earning praise from both for its 1) strong governance, 2) arms-length valuation overseen by a pricing committee of independent emerging market experts, 3) prudent risk management, 4) high levels of transparency, 5) hedging offsets, 6) unique mandate, 7) strong liquidity 8) robust support from shareholders, and 9) consistent track record. It also has minimal overheads and very low operating costs.

Learn more at

[climatepolicyinitiative.org](https://www.climatepolicyinitiative.org)

<https://www.climatepolicyinitiative.org/publication/an-innovative-ifi-operating-model-for-the-21st-century/>