



GREEN GUARANTEE COMPANY

INSTRUMENT ANALYSIS
SEPTEMBER 2022

Green Guarantee Company

LAB INSTRUMENT ANALYSIS

September 2022

DESCRIPTION & GOAL —

The Green Guarantee Company is a specialist guarantor for climate adaptation and mitigation projects in developing countries. It aims to help public and private sector borrowers access long-term debt from global credit and capital markets.

SECTOR —

Energy, Transport, Water, Buildings, Waste

FINANCE TARGET —

Patient institutional investors in developed markets with mandates to invest in green bonds and loans from emerging markets.

GEOGRAPHY —

For pilot phase: South Africa

In the future: All emerging and frontier markets except China. Target markets are Bangladesh, Brazil, Cambodia, Cote d'Ivoire, Egypt, Gabon, India, Indonesia, Kenya, Laos, Morocco, Pakistan, Philippines, Rwanda, Senegal, Tanzania, Trinidad & Tobago, Uganda, Vietnam.

The Lab identifies, develops, and launches sustainable finance instruments that can drive billions to a low-carbon economy. The 2022 Lab cycle targets four thematic areas: sustainable food systems, nature-based solutions, zero-carbon buildings, and adaptation, in addition to three geographic regions: Brazil, India and Southern Africa.

AUTHORS AND ACKNOWLEDGEMENTS

The authors of this brief are Megan Sager, Elvis Wakaba, David Hazell and Lara Rabinowitz.

The authors would like to acknowledge the following professionals for their cooperation and valued contributions, including the proponents: Lasitha Perera (Development Guarantee Group), Dale Petrie and Fawad Hussain (Development Guarantee Group); and the working group members: Alexander Lubeck (ACTIAM), Alfred Helm and Michael Mills (BEIS), Amanda Lonsdale (CPI), Andreas Koall (Independent Consultant), Andrew Gisselquist and Jacob Flewelling (DFC), Arvana Singh (Nedbank), Claire Coustar (Deutsche Bank), Daniel Ogbonnaya (Global Green Growth Institute), Debra-Lee Swanepoel (South African National Treasury), Fabrizio Palmucci and Zalina Shamsudin (Climate Bonds Initiative), (DFC), Jonathan First (CPI), Heidi Barends (ABSA), Mike Muldoon (Rockefeller Foundation), Olympus Manthata (DBSA), Sarah McPhail (South African National Treasury), Shakira Parker (Department of Forestry, Fisheries and Environment - South Africa), Tara Sabre Collier (FCDO). The authors are grateful for the contribution of the experts interviewed: Ann Hunter and Anneke Lund (Standard Bank), Claire Berson (Climate Bonds Initiative), Dipak Patel (Presidential Climate Commission), Faruq Muhammed (Standard Chartered Bank), Hamid Asseffar (Invesco), Harold Mogale, Vukosi Maluleke and Craig Bezuidenhout (DBSA), Luke Davies (Barclays), Sidonie Kouan (Global Green Growth Institute) and Vito Dellerba (CDPQ).

The authors would also like to thank Ben Broche, Barbara Buchner, Rob Kahn, Júlio Lubianco, Anna Balm, Felipe Borschiver, Josh Wheeling, and Elana Fortin for their continuous advice, support, comments, design, and internal review.

The Lab's 2022 programs have been funded by the German, Swedish, US, and UK governments. [Climate Policy Initiative](#) (CPI) serves as Secretariat and analytical provider.



SUMMARY

Addressing climate change in line with the Paris Agreement requires annual mobilization of USD 100 billion from developed countries towards climate action in emerging and frontier markets. Yet only a fraction of the required climate finance has flowed to date, largely from public sources. General interest in climate finance innovation is focused mainly on the most attractive investment destinations, like China.

Green bonds and loans raised USD 523 billion for green projects and activities in 2021, many of which target climate mitigation and adaptation (CBI, 2022). Only 7%, or USD 36 billion, trickled into emerging markets outside China, owing to investment risks associated with local currency volatility and sovereign risk. Gaps in climate policy and regulatory frameworks as well as stakeholder capabilities could further undermine the credibility of issuer claims, casting reputational risk for investors as well as uncertainties over environmental integrity of the underlying projects.

The Green Guarantee Company (GGC) is an essential addition to the global climate finance ecosystem, unlocking access to the expanding base of green investors in an accessible and affordable way. It provides credible borrowers with a full guarantee anchored in hard currency and aligned with the international Climate Bond Standard (CBS) to support bonds and loans of up to 20 years. An associated technical assistance (TA) facility will address technical barriers to uptake in emerging markets through raising market awareness, building issuer capabilities, and preparing pipeline for support.

This instrument meets all four of the Lab endorsement criteria:

Innovative: Unique in institutionalizing credit enhancement to attract global green bond investors into quality climate projects across the Global South, spanning a wide range of infrastructure sectors and transaction structures, resolving information asymmetries over time.

Financially Sustainable: The GGC will achieve commercial maturity within 10 years by scaling and diversifying the portfolio, with effective credit risk management ensured both by the payment profile and experience of the management team.

Catalytic: The first 10 years could catalyze almost USD 10 billion in commercial term debt, decarbonizing large emitters and building resilience in vulnerable LDCs and island economies through supporting critical climate projects.

Actionable: Progress has been made towards raising the first tranche of equity and concluding banking origination partnerships, leveraging the credentials of an experienced management team with broad financial sector networks.

Following Lab endorsement, firm commitments will be sought for the required initial investment of USD 110 million from anchor DFIs and donors, enabling the GGC and its TA facility to be legally established and contracts concluded with partners and service providers.

TABLE OF CONTENTS

SUMMARY	3
ACRONYMS	5
CONTEXT	6
CONCEPT.....	7
1. Instrument Mechanics	7
2. Innovation	9
2.1. Barriers Addressed: Lack of Access to Global Green Bond Investors.....	9
2.2. Innovation: Unique Institutional Solution to Investment Barriers for Climate Projects.....	10
2.3. Challenges to Instrument Success	11
MARKET TEST AND BEYOND	13
3. Implementation Pathway and Replication.....	13
4. Financial Impact and Sustainability	15
4.1. Quantitative Modeling.....	15
4.2. Private Finance Mobilization and Replication Potential	16
5. Environmental and Socio-Economic Impact	17
5.1. Environmental Impact.....	17
5.2. Social and Economic impact	18
NEXT STEPS	18
REFERENCES.....	20
ANNEX 1: TECHNICAL ASSISTANCE FACILITY OVERVIEW	21
ANNEX 2: FINANCIAL MODELLING	22
Model mechanics and key assumptions	22
Scenario modelling	23
ANNEX 3: FINANCIAL MODELLING RESULTS	26
ANNEX 4: INDICATIVE GGC PORTFOLIO PIPELINE.....	28
ANNEX 5: GUARANTEE POLICY (DRAFT).....	29
ANNEX 6: TRANSACTION SELECTION PROCESS	36
ANNEX 7: COMPARABLE INSTRUMENTS ANALYSIS	39

ACRONYMS

CBS	Climate Bond Standards	LGD	Loss Given Default
CO₂	Carbon Dioxide	Mt	Million tons
COP26	26th UN Climate Change Conference of the Parties	MUFG	Mitsubishi UFJ Financial Group
CPI	Climate Policy Initiative	MW	Megawatt
CSIR	Council of Scientific and Industrial Research	NBI	National Business Initiative
DFI	Development Finance Institution	NDC	Nationally Determined Contributions
DGG	Development Guarantee Group	NOL	No-Objection Letter
EMs	Emerging Markets	NZC	Net Zero Carbon
ESG	Environment, Social and Governance	PD	Probability of Default
EV	Electric Vehicle	PP	Private Placement
FCDO	Foreign, Commonwealth & Development Office	RE	Renewable Energy
GCF	Green Climate Fund	ROE	Return on Equity
GGC	Green Guarantee Company	SA	South Africa
GHG	Greenhouse Gas	SDG	Sustainable Development Goal
GW	Gigawatt	SOE	State-owned Enterprise
ICMA	International Capital Market Association	SSA	Sub-Saharan Africa
IFC	International Finance Corporation	TA	Technical Assistance
IRR	Internal Rate of Return	tCO₂e	Tons (t) of carbon dioxide (CO ₂) equivalent (e)
KYC	Know Your Customer	UN	United Nations
LDC	Least Developed Countries	USD	United States Dollars

CONTEXT

Whilst green bond markets are growing exponentially, emerging and frontier markets are being left behind due to lack of appeal to investors in the Global North

Whilst green bond issuance is expected to range between USD 500 billion to 1 trillion in 2022 (SEB, 2021; Kuchtyak & Bruce, 2022), only USD 40-80 billion will flow to emerging markets (EMs) outside China (IFC & Amundi, 2022). Lack of access can be traced to investment risks associated with currency and sovereign risks as well as gaps in climate finance and capital markets capability.

Outside global capital markets, large climate infrastructure projects struggle to raise patient debt capital required at scale, other than via limited public finance. Emerging capital markets are underdeveloped, with green bonds delivering little benefit in terms of scale or horizon. Only 5% of green bonds issued over the past 5 years in EMs outside China were larger than USD 200 million. Average maturity of EM green bonds issued in local currency was below 6 years, substantially below the 10-year maturity average for hard currency bonds¹.

Many developing country fiscal budgets are under tremendous pressure, limiting support for new infrastructure projects. Without solutions to unlock private climate capital, EMs cannot mobilize the capital required to deliver on climate change mitigation obligations under the Paris Agreement and build resilience domestically against physical climate risks.

South Africa (SA) is a case in point. At least USD 250 billion will be required over the next three decades to transform its coal-based energy sector, necessitated by ever more unstable generation capacity throttling growth (Blended Finance Taskforce & Centre for Sustainability Transitions, 2022). The Just Energy Transition Partnership, announced at COP26, should meaningfully enable this transformation. Yet the USD 8.5 billion pledged by public sources represents just 3.5% of the energy transition requirement, underscoring the criticality of private capital participation.

¹ Analysis conducted on data for 2017-2021 from the Green Bonds Database, Environmental Finance

CONCEPT

1. INSTRUMENT MECHANICS

The GGC unlocks access to global investors by derisking green bonds and loans from emerging and frontier markets, adopting the internationally respected CBS, and equipping borrowers to transact internationally

As a specialist guarantor, the Green Guarantee Company (GGC) tackles barriers to institutional investment in climate bonds and loans in emerging and frontier markets.

The GGC overcomes investment risks by leveraging an investment grade rating to offer full guarantees for medium to long-term institutional debt (5-20 years) issued in hard currency, whether listed instruments, private placements, or syndicated loans. In the event of a non-payment default, GGC steps into the shoes of the borrower, with investors receiving all payments per the original repayment schedule. Drawing on considerable experience, the Development Guarantee Group (DGG) – the manager of the GGC – will work with defaulting borrowers to restructure non-performing debt, eventually recovering a large portion. The guarantee targets debut² global climate bond or loan issuance by corporates, parastatals and subnationals, whilst enabling the use of more sophisticated ringfenced structures (e.g., asset-backed securities, project bonds) especially suited to infrastructure project financing.

The GGC also addresses technical barriers to green bond uptake in developing markets through offering a technical assistance (TA) facility and a reporting service. The TA facility accelerates market readiness through building local knowledge and capabilities, while developing pipeline through offering borrowers structuring and certification support³. The post-issuance monitoring and reporting service provides investors with comfort regarding management and use of proceeds, following ICMA guidance and aligning to best practice.

The GGC guarantee facility will be capitalized by paid-in equity and callable capital facilities arranged in advance of new business to ensure adequate capital provisioning. The Development Guarantee Group (DGG) will manage the GGC, accounting to the Board. Surplus capital will be invested by an investment manager in low to moderate risk strategies targeting capital preservation, generating additional income. This set of institutional arrangements will ensure the GGC has an investment grade rating from a highly regarded rating agency from Day 1, leveraging initial capitalization of USD 100 million in equity from public investors. Separately, a TA facility will be capitalized with USD 10 million of grant funding from donors.

Business will be originated in one of three ways, aligned to the guarantee policy provided in Annex 5:

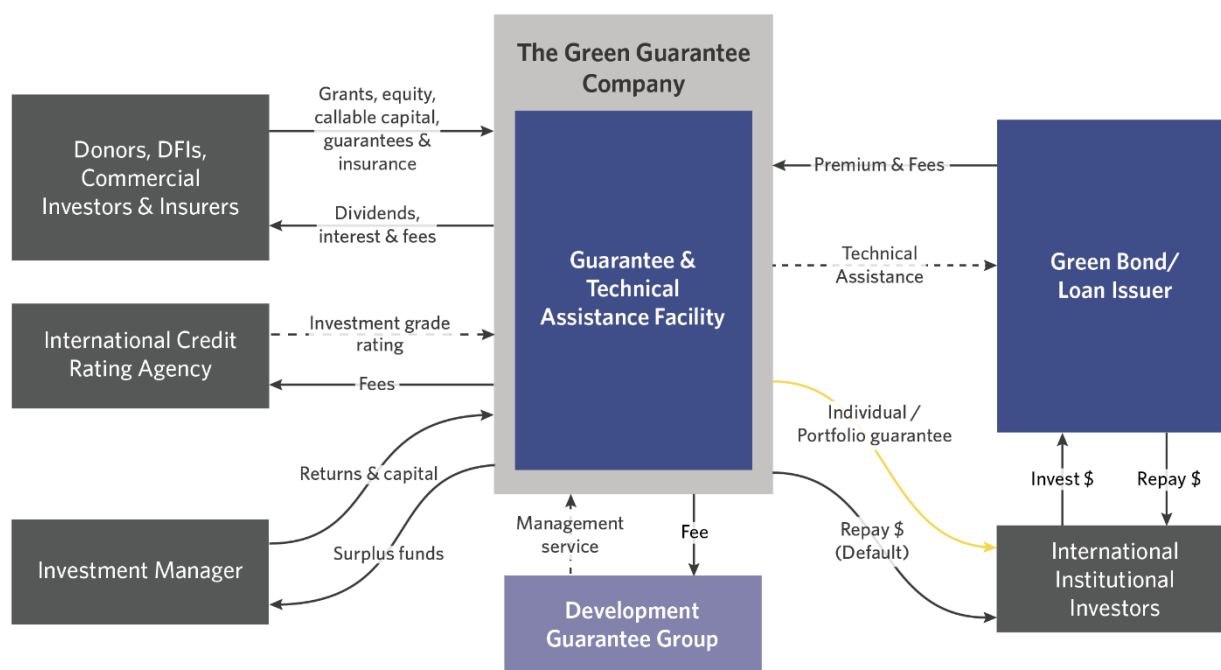
1. Via banking origination partners with licenses to distribute debt on global markets, acting either as debt arrangers or aggregators. Existing partners include global heavyweights Standard Chartered, Deutsche Bank, Shinhan Bank, DBS and MUFG;

² Debut issuance refers to first bond issuance.

³ More details can be found in Annex 1

2. Via referrals from strategic partners active in the climate finance space. These may include green bond/loan advisors, external reviewers like certification bodies and verifiers, and others;
3. Directly, via the DGG's network of relationships, gained over more than a decade of operating guarantee facilities in EMs internationally.

Figure 1: The Green Guarantee Company – Instrument mechanics



To qualify, the debt instrument must meet several criteria:

1. Issued by an eligible entity (i.e., corporate, parastatal or subnational) for application in an eligible country (see below);
2. Denomination in hard currency;
3. Investment grade on national scale;
4. A guarantee of USD 50-200 million on debt with maturity of 5-20 years;
5. Be in an eligible sector: currently energy, transport, buildings, water, waste and pollution control, and land use and marine resources;
6. Achieve certification against the CBS.

The instrument will be available to issuers from all emerging and frontier markets excluding China. Target markets have been selected based on three criteria, as follows:

- Need for credit enhancement solutions (i.e., sub-investment grade);
- Responsible for large emissions, and/or
- Vulnerable to the impacts of climate change.

Target countries include South Africa (pilot), Bangladesh, Brazil, Cambodia, Cote d'Ivoire, Egypt, Gabon, India, Indonesia, Kenya, Laos, Morocco, Pakistan, Philippines, Rwanda, Senegal, Tanzania, Trinidad & Tobago, Uganda, Vietnam.

To level the playing field and provide all issuers with equal access to investors, the GGC requires certification against the CBS. This is an internationally respected taxonomy building upon the ICMA Green Bond Principles, interpreting science-based climate targets to define project eligibility across a wide range of sectors. Prior to receiving certification from the CBS, instruments must undergo verification by an approved independent verifier, testing conformity against ICMA-aligned stipulations for use and management of proceeds. This provides investors with assurance regarding governance. Certified bonds account for approximately a quarter of green bond volumes, with higher uptake across hard currency instruments from EMs than local currency debt, reflecting the more stringent technical requirements imposed by international investors.

Actively managed dollar and euro green bond funds comprise the target investor segment for GGC-guaranteed instruments⁴. By 2021, green bond funds held more than USD 33 billion assets, growing at around 30% annually (Smith & Cooper, 2020). Active dollar and euro funds currently account for an 80% share of assets, although total allocation to EMs is unknown: risk appetite varies considerably. If this investor category continues to grow at 25% annually, it is expected it could allocate USD 13 to 40 billion to EMs green debt over GGC's first decade (based on 5-15% EM ex China allocation). This represents a multiple of 1.3-4 times the business GGC plans to do over this period, comfortably accommodating deal flow.

For the instrument to be successful, it will need to identify high quality EM borrowers standing to benefit from accessing long-term debt in hard currency. These issuers include stable institutions with natural hedges such as exports (e.g., electric vehicle sales, cross-border energy exports) and dollar-based assets (e.g., in less developed countries where the dollar serves as a parallel currency), and those with the sophistication to deploy synthetic hedges to manage currency risk. The need for this product would depend both upon the development of a pipeline of large climate projects compatible with the CBS and the persistence of interest rate differentials between developed and EMs sufficient to justify additional transaction costs, including the guarantee fee and green bond labelling and reporting costs.

2. INNOVATION

The GGC is the only guarantee facility to offer non-sovereign EM issuers programmatic access to global private climate investors

2.1. BARRIERS ADDRESSED: LACK OF ACCESS TO GLOBAL GREEN BOND INVESTORS

The GGC effectively addresses both general barriers to mobilizing finance for low-carbon, climate-resilient infrastructure, and specific climate investment barriers, considering that cross-border investment is necessary to match climate finance demand with supply.

The provision of a hard currency credit guarantee significantly mitigates traditional barriers to international investment in infrastructure debt in EMs. Here capital markets tend to be shallow, rendering it challenging to raise long-dated debt for infrastructure projects using conventional

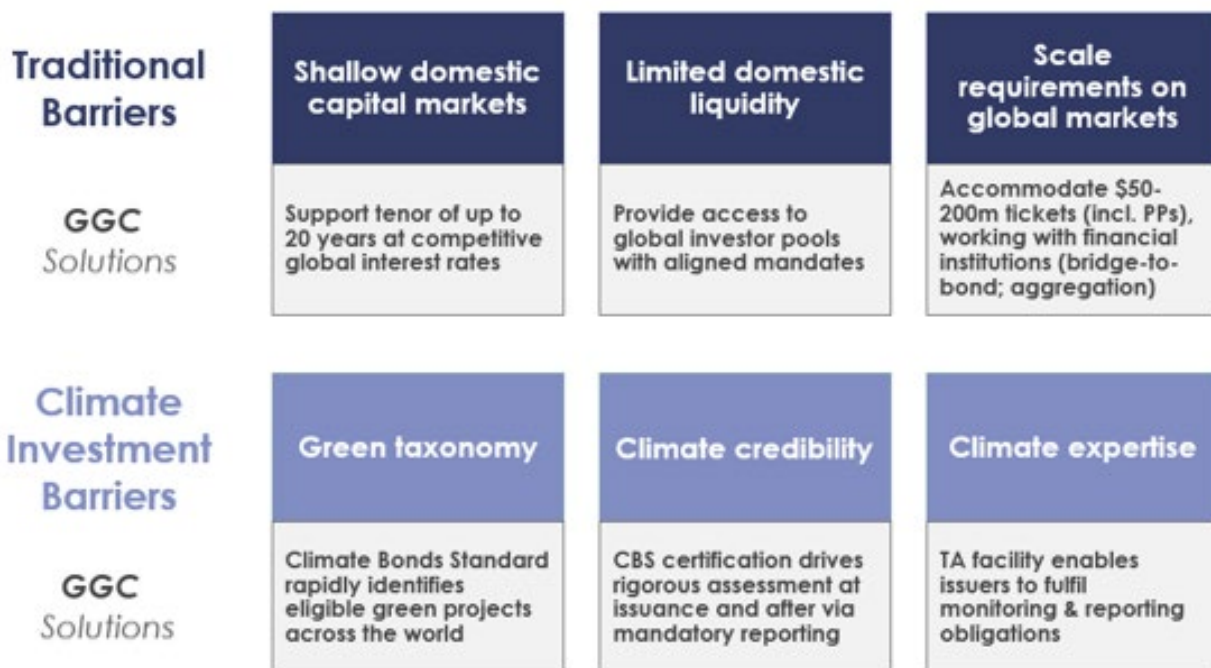
⁴ Passive funds usually require larger ticket sizes approaching the benchmark size of USD 500 million.

instruments. At the same time, limited ESG investor mandates limit domestic liquidity for thematic instruments, curtailing the benefits of green labelling.

This mismatch between capital demand and supply creates a case for project developers and asset owners to seek out patient climate investors abroad. However, even large borrowers able to issue debt in hard currency cannot escape the restriction imposed by a low sovereign risk rating unless they have parent companies elsewhere. Fixed income investors are more risk-averse than equity investors, with few willing to move down the credit quality spectrum even if yield compensates, causing capital rationing. This is reflected in mandates which either exclude or severely limit sub investment grade holdings.

The GGC also addresses technical climate finance barriers to investing in developing markets. These include gaps in credibility from less well-developed national climate policy and regulatory environments which raise ESG and reputational risks for investors, and local shortages in climate instrument structuring and global markets transacting expertise (Banga, 2019; Amacker & Donovan, 2021).

Figure 2: GGC solutions to overcoming barriers to investing in climate projects in EMs



2.2. INNOVATION: UNIQUE INSTITUTIONAL SOLUTION TO INVESTMENT BARRIERS FOR CLIMATE PROJECTS

Whilst use of guarantees for climate financing remains limited, recent evidence shows that they have been more effective in catalyzing private finance for developmental uses than any other instrument (Garbacz, Vilalta, & Moller, 2021).

To date, guarantees for green bonds have been offered on an ad hoc basis, generally by DFIs. Several factors including punitive risk pricing, substantial transaction costs and complexity have deterred EM issuers from embarking on lengthy application processes. Further, DFIs are not incentivized to expand their capital markets guarantee offerings where they also undertake direct lending which generates more revenue.

A market scan reveals that comparable instruments focus primarily on: -

- local currency issuance, which mobilizes domestic but not international capital;
- credit risks from public sector offtake (e.g., sovereigns, SOEs) or political risk only; and/or
- single sectors e.g., renewable energy.

More details of this analysis can be found in Annex 7.

To expand uptake of guarantees, facility design must address potential deterrents to market participants. A typical feature is partial cover⁵, leaving investors exposed to residual credit risks they cannot take. Further, the ability of investors to exercise their rights under guarantees is often restricted by the onerous conditions and lengthy processes imposed by DFIs and other public sector issuers.

By contrast, GGC offers a flexible and affordably priced hard currency guarantee for debt issued by a broad range of climate mitigation and adaptation project types across the developing world, whilst ensuring investors receive full payment timeously regardless of cause of default.

2.3. CHALLENGES TO INSTRUMENT SUCCESS

The key challenge to establishing the GGC will be generating market demand given limited use of guarantees, lack of familiarity with the CBS, and additional transaction costs. This will be dealt with through competitive and flexible product terms, institutionalized offering, a wide network of partners, and a TA facility to drive demand.

Credit risk is an inherent challenge, considering the nature of the instrument. Whilst it appears lower for priority transactions (i.e., climate infrastructure in EMs), inclusions like nature-based solutions and issuance from lower-rated frontier markets heightens the risk of loss. To manage it, the GGC will cap exposures to B rated countries to 20% and will seek to use the private insurance market to offset risk where possible.

Liquidity risk relates to the ability of the instrument to manage the cash flow impact of claims, which are difficult to predict with any certainty. This risk is greatest at the beginning, when more portfolio risk exists, and later, when leverage rises. Risk is managed initially by a combination of paid in equity and maintaining low leverage multiples (2x) and later, by portfolio diversification effects. Throughout, GGC's payout profile mitigates this risk.

The tables below describe key risks GGC will face in target markets (Table 1) and those under its own control as a guarantee facility (Table 2), with risk response strategies.

Table 1: Risks arising in GGC target markets

Risk Name	Description	Risk Response Strategy
Demand Risk	Risk that insufficient or low-quality demand will materialize in eligible universe	<ul style="list-style-type: none"> • Very large eligible universe • TA facility expands market awareness • Wide network of credible banking origination and referral partners casts a broad net • In-time, selectively accept local currency risk

⁵ This feature is included with the intent to avoid moral hazards, whereby borrowers take excessive risk as a result of being insulated against consequent financial losses.

Credit Risk	Loss may exceed outlook due to: <ul style="list-style-type: none"> Declining sponsor creditworthiness Project risks in non-recourse structure Lower recoveries 	<ul style="list-style-type: none"> Align with national policy priorities, especially in respect of non-recourse structures applying for full cover Restrict eligibility to issuers of investment grade on national scale Undertake project level credit rating (external or internal)
Reputational and ESG Risks	Risk of reputational damage due to exposure to material governance, environmental and social risks via business activities	<ul style="list-style-type: none"> Use of internationally accepted CBS taxonomy, Undertake KYC and rigorous environmental and social risk screening Implement exclusions per IFC Category A list and GCF requirements
Contract Risk	Difficulty enforcing contracts among parties to contracts due to limited oversight, weaknesses in financial regulatory framework and law enforcement systems.	<ul style="list-style-type: none"> English law governs guarantee contract In-country legal due diligence is undertaken in each GGC country Utilize in-country partners / external legal firms / safeguards Political risk and quota share credit loss insurance in B rated markets Implement watching brief

Table 2: Risks under GGC's control

Risk Name	Description	Risk Response Strategy
Credit Rating Risk	Inability to achieve or maintain target credit rating. This will directly impact GGC's ability to generate business - drives the value proposition.	<ul style="list-style-type: none"> DGG is an experienced manager Initial rating is investment grade, with indication of potential to receive >A Managed portfolio growth / cap leverage at 5x in first 5 years of operations Control acceleration.
Operational Risks	Fully outsourced model. Resource constraints could hamper GGC's ability to deliver on its strategy	<ul style="list-style-type: none"> DGG team delivers core skills and has effectively operated a guarantee facility focused on similar countries, Guarantco
Concentration Risk	Risk associated with insufficient portfolio diversification, exposing GGC to excessive credit risk associated with bulky exposures	<ul style="list-style-type: none"> Prudential limits on countries (20%), sectors (40%), transactions (USD200m) Managed portfolio growth / cap leverage at 5x in first 5 years of operations Political risk and quota share credit loss insurance in B rated markets
Liquidity Risk	Higher claims levels may exceed available liquidity, especially very early and later at high leverage. This could cause insolvency.	<ul style="list-style-type: none"> Capitalization ahead of underwriting, including callable capital facilities Redemption of claims according to original amortization schedule Sound treasury management targeting capital preservation
Operating Risk	Fixed costs may be disproportionately large, delaying break even	<ul style="list-style-type: none"> Rationalize cost base and explore alternative revenue streams.

Reputational and ESG Risks	Portfolio fails to deliver expected climate or mitigation or adaptation impact	<ul style="list-style-type: none"> • Policy requires all projects to receive Climate Bonds certification • GGC monitoring & reporting service tracks impact • Transaction Scorecard carefully assesses impact case pre underwriting (overview in Annex 6)
-----------------------------------	--	--

MARKET TEST AND BEYOND

3. IMPLEMENTATION PATHWAY AND REPLICATION

The GGC will target 20 emerging and frontier markets with green bond potential exceeding USD 30 billion, starting with a prolific large emitter: South Africa

GGC will pilot its offering in SA: one of the world's most carbon-intensive emerging economies. Whilst the full extent of the investment requirement associated with a just transition is still being debated and mapped out, at least three large infrastructure sectoral investment priorities have been identified:

Table 4: SA's major transition capital expenditure priorities

Sector	Capital requirement	Climate mitigation impact
Energy	USD 250 billion enabling an accelerated nationwide switch from coal reliance to renewable energy, transmission and distribution system upgrades, and grid balancing systems and technologies	75% from 200 Mt a year today to 50 Mt by 2050 (Blended Finance Task Force & Centre for Sustainability Transitions, 2022)
Transport	Unknown, relating to switch to electric vehicles and low-carbon public transport	~70% in the transport sector by 2050 (F, Ahjum et al., 2020)
Green hydrogen	Upwards of USD 14 billion to develop a strategic green industrialization opportunity. SA could become one of the largest global exporters, aiming to deploy 10 GW of hydrogen capacity by 2030, creating 20,000 jobs annually and adding USD 4-9 billion to GDP by 2050	Work underway to estimate impact (NBI, 2021; IASS & CSIR, 2019)

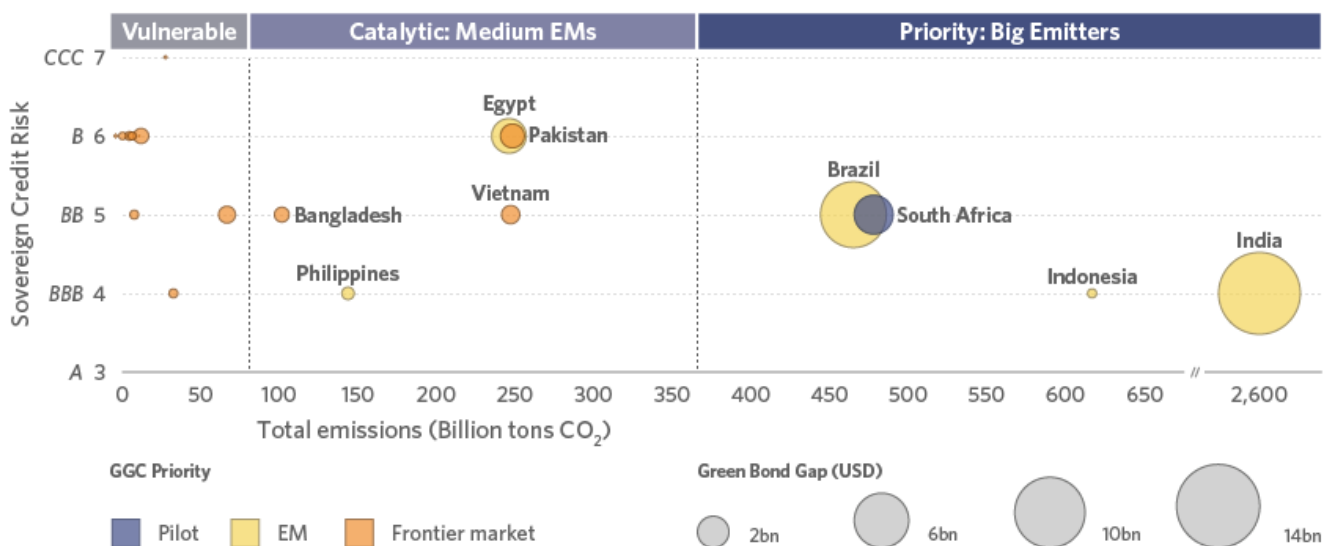
Domestic investment will not be sufficient to deliver a just transition at the required scale and speed. To date, approximately USD 15 billion has been invested by local institutions, principally in low-risk utility scale renewable energy projects (CPI, 2021; CIF 2020). For entities able to borrow in hard currency, the GGC could be a critical investment enabler.

Upon establishing in SA (Phase 1a), the GGC will expand to other EMs. Markets are targeted based on (a) need for decarbonization, b) need for robust credit enhancement strategies and c) vulnerability to climate change. Phase 1b covers other large emitters, being Brazil, India and Indonesia. Together with SA, these countries are where the largest mitigation impact

potential lies. In Phase 2, GGC will prioritize medium sized economies, including Egypt, Philippines and Bangladesh. Private placements may feature prominently as level of capital markets development reduces. Finally, in Phase 3, the smaller markets with heightened climate vulnerability will feature, including island states and LDCs.

The phasing is reflected in Figure 3 below. The size of the bubble reflects the estimated green bond gap for per country, in total representing more than USD 30 billion issuance⁶. This amounts to 3 times the volume of business GGC expects to write in its first 10 years.

Figure 3: GGC target markets and phasing



Notes: Vulnerable countries: Laos, Senegal, Tanzania, Cambodia, Kenya, Rwanda, Uganda, Morocco, Cote D'Ivoire, Trinidad & Tobago

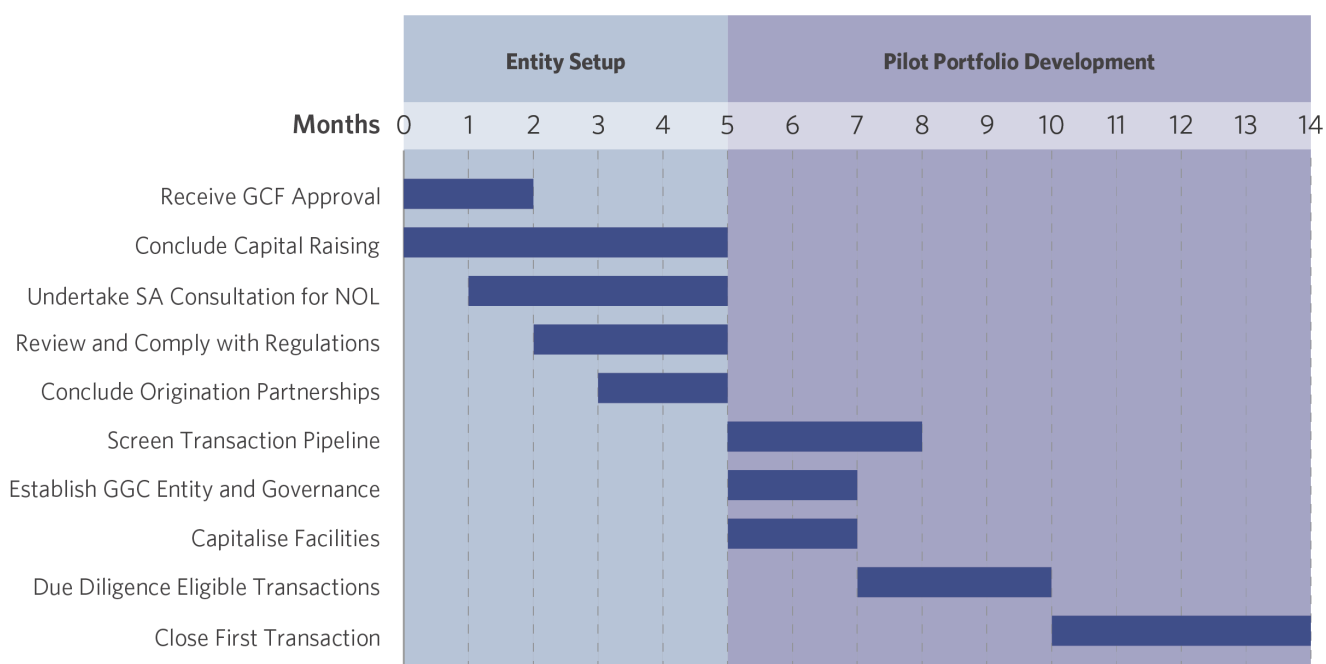
Gabon is not reflected on this graph: it is included on the left with the other vulnerable markets.

All data is at April 2022.

Sources: Sovereign ratings: Standard & Poor; National greenhouse gas emissions: World Economics database; Country vulnerability to climate change: ND Gain Vulnerability Index

Figure 4: GGC implementation plan

⁶ Measured as the volume of issuance required to close the gap to G7 green bond market penetration levels, i.e. 1.6% outstanding issuance (April 2022).



Note: month 1 is November 2022

To launch the GGC, the first set of milestones relate to establishing the entity: legally, financially and operationally. Receiving anchor investor commitments in respect of the first USD 100m capital is central, expected to finalize by the end of 2022. As funding is committed, the governance structures can be finalized, and key appointments made.

The next set of milestones relate to market entry, including the pilot in SA. Consultation will be undertaken to obtain the No-Objection Letter (NOL) for GCF, while SA financial services regulation is reviewed for compliance requirements. GGC will work with origination partners and borrowers to develop a pipeline of deals. Finally, the first set of transactions will be screened, diligenced and negotiated.

4. FINANCIAL IMPACT AND SUSTAINABILITY

4.1. QUANTITATIVE MODELING

To test the financial feasibility and impact of the Fund, modelling over a 20-year horizon was undertaken, using conservative assumptions throughout. The methodology selected for financial modeling was scenario-driven cash flow forecasting, checking the sensitivity of financial outcomes to changes in key variables and assumptions, particularly those that are subject to a high level of uncertainty, namely:

1. Loan size;
2. Loan tenor;
3. Credit losses;
4. GGC's obligations and payment structure under a default scenario;
5. Guarantee pricing.

Four scenarios were modelled, with all but one based on an assumption of restructuring defaulting debt, based on the proponent's prior experience. In the "worst case" scenario, this

assumption was released, with losses realizing at the most severe level plausible, to test the robustness of the facility to adverse events. The scenario modelling assumptions can be found in Annex 2.

Table 3: Summary of financial modelling results

Financial Indicator	Up-side	Base Case	Down-side	Worst Case
Financial Performance				
ROE, Year 10 (%)	24.8%	12.3%	4.5%	0.9%
Operating breakeven (year)	2	3	5	7
20-year Equity IRR (%)	12.2%	5.7%	2.6%	1.2%

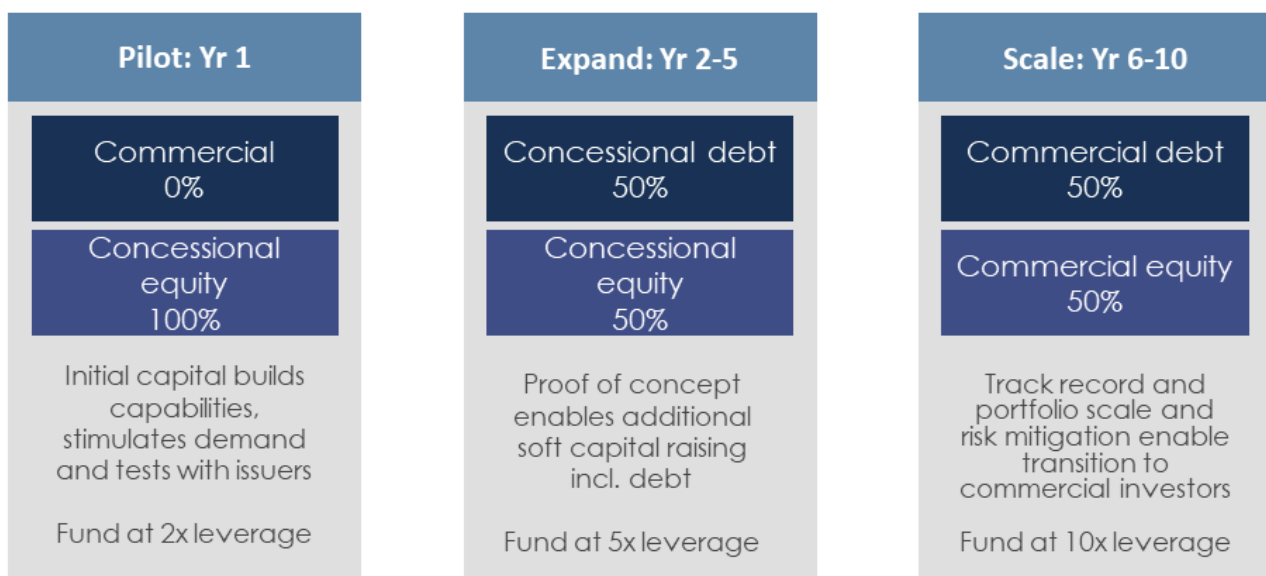
Source: Lab analysis

Across all four scenarios, the GGC underwrites a total of USD 10.6 billion climate debt and achieves operating breakeven within 10 years. Over this period, the leverage multiple will increase from 2 to 10, remaining within the Fitch ratings cap⁷. A positive equity IRR is achieved under all scenarios, even with conservative assumptions for a new instrument, providing a very positive indication of GGC's financial sustainability. More detailed results of modelling can be found in Annex 3.

4.2. PRIVATE FINANCE MOBILIZATION AND REPLICATION POTENTIAL

To establish GGC and prove concept, anchor equity investors will be sourced from DFIs, including the GCF and FCDO. Once the instrument has reached scale, portfolio diversification and profitability will enable it to attract commercial investors, exiting public investors. This will occur at a listing, through private sale, or via leveraged management buyout, forecast between year 5 and 10.

Figure 5: Evolution of GGC



⁷ Fitch ratings have stipulated that if GGC's fund is to maintain its investment grade rating, GGC's leverage multiple i.e. the ratio of outstanding portfolio balance to capital may not exceed 10.

As a guarantee facility, GGC catalyzes private capital very efficiently at the climate project level as it can be leveraged up to 10 times. Its broad mandate and reach contribute to scaling across emerging and frontier markets, provided key risks are managed sensibly and specialist resources are built in step with portfolio growth.

5. ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACT

Through USD 10 billion in climate investment, the GGC will enable swift progress towards national mitigation goals and spurring economic development

As a guarantee facility, the GGC will not make direct project investments, but rather enable such projects. Many of these projects would otherwise have been delayed or even cancelled due to lack of financing. Thus, impact is measured as the set of sustainable development outputs and outcomes delivered across the portfolio GGC underwrites.

The following SDGs are expected to be addressed by the GGC:



Five key indicators have been identified to describe GGC impact, before taking into account the general infrastructure investment co-benefits, for example economic growth and employment multipliers. Table 5 summarizes the expected impact for a model portfolio based on current pipeline, modelled over a 20-year horizon. Details can be found in Annex 4.

Table 5: Summary of portfolio impacts

Impact	Measure	Portfolio Impact
Renewable energy capacity added	GW Installed	7.97
Carbon abatement	Emissions avoided (MtCO ₂ e p.a.)	74.89
Clean water supplied	MI	1,718,484
Vulnerable households made more resilient to climate change	No. of households	13,086
Low-carbon transport investments enabled	USD (billion)	3.14
Finance catalyzed for women-owned initiatives	USD (billion)	2.65

5.1. ENVIRONMENTAL IMPACT

The GGC has the potential for significant climate mitigation impact as it helps catalyze additional investments for climate-resilient projects in a variety of sectors. Initial estimates suggest that guarantees pledged by the fund have the capacity to avoid approximately 75 Mt carbon dioxide equivalent over a 20-year horizon.

Whilst mitigation projects are expected to comprise the bulk of GGC's portfolio, it is targeting a minimum of 20% adaptation investment. On current outlook, GGC is expected to support projects delivering 1.7 megaliters of clean water.

5.2. SOCIAL AND ECONOMIC IMPACT

The GGC has the potential to contribute towards sustainable development in a meaningful way. The impacts are elaborated on in Table 6 below.

The GGC has a particularly targeted gender approach, aligned to the 2X Challenge. It is expected that some USD 2.65 billion will be unlocked for projects or initiatives owned or driven by women.

Table 6: Summary of financial modelling results

SDG Impacted	Description of Impact
SDG 1: No Poverty	The delivery of climate resilient projects and infrastructure has the potential to improve the quality of life of communities in surrounding areas and catalyze economic growth.
SDG 5: Gender equality	GGC has made specific commitments with regard to gender parity and its Gender Action Plan prescribes that equal benefits will accrue to women and men from the GGC activities.
SDG 6: Clean water and Sanitation	With water being a key target sector of the fund, projects financed will provide clean water for residential and commercial use for thousands of people.
SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all	The GGC will finance substantial investments in renewable energy, currently projected at 8 GW. In many cases, this will represent growth in generation capacity, which supports sustainable development as well as helping deliver on the Nationally Determined Contributions (NDCs).
SDG 8: Decent work and economic growth	A significant number of jobs stand to be created across a 20-year horizon, at all skill levels, directly on site, indirectly in the project value chains, and elsewhere in the economy, contributing to a just transition.
SDG 9: Industry, Innovation and Infrastructure	GGC will promote new, climate-adaptive infrastructure and making existing infrastructure more resilient. Examples include low-carbon transport infrastructure and green hydrogen.
SDG 10: Reduced Inequality	Increasing access to clean water, sanitation and energy will reduce the inequalities in health and well-being faced in many of the target regions.
SDG 11: Sustainable Cities and Communities	By enabling financing for climate-adaptive infrastructure, GGC will improve urban sustainability and community resilience. This includes low-carbon, climate-resilient, hazard-proof affordable housing.
SDG 12: Responsible Consumption and Production	Through its financing activities and collaboration with the Climate Bonds Standard, GGC will encourage resource efficiency in various sectors including buildings, industry, and agriculture.
SDG 13: Climate Action	The GGC is a tool to support climate action in countries that most need to take it, both in terms of climate mitigation and adaptation.

NEXT STEPS

Following Lab endorsement, the most immediate priority will be to conclude the first round of capital raising, enabling the establishment of the GGC and setting in motion its market entry.

REFERENCES

- Ahjum, F., Godinho, C., Burton, J., McCall, B., & Marquard, A. (2020). *A Low-Carbon Transport Future for South Africa: Technical, Economic and Policy Considerations*. Climate Transparency.
- Amacker, J., & Donovan, C. (2021). *Marathon or Sprint? The Race for Green Capital in Emerging Markets*. London: Imperial College Business School: Centre for Climate Finance & Investment.
- Banga, J. (2019). The green bond market: a potential source of climate finance for developing countries. *Journal of Sustainable Finance & Investment, Vol 9(1)*, 17-32.
- Blended Finance Taskforce & Centre for Sustainability Transitions. (2022). *Making Climate Capital Work: Unlocking USD 8.5 Bn for South Africa's Just Energy Transition*.
- Climate Bonds Initiative (CBI). (2022). *Sustainable Debt Global State of the Market 2021*.
- Climate Investment Funds (CIF). (2020). *Supporting Just Transitions in South Africa*.
- Climate Policy Initiative (CPI). (2021). *South African Climate Finance Landscape 2020*.
- Garbacz, W., Vilalta, D., & Moller, L. (2021). "The Role of Guarantees in Blended Finance", *OECD Development Co-operation Working Paper No 97*. Paris: OECD Publishing.
- IASS & CSIR. (2019). *Future skills and job creation through renewable energy in South Africa: Assessing the co-benefits of decarbonising the power sector*. Potsdam/Pretoria. doi:doi:10.2312/iass.2019.009
- International Finance Corporation (IFC) & Amundi Asset Management (Amundi). (2022). *Emerging Market Green Bonds Report 2021*.
- Kuchtyak, M., & Bruce, E. (2022). *Sustainable bond issuance to be flat in 2022 amid market headwinds*. Moody's.
- National Business Initiative (NBI). (2021). *Just Transition and Climate Pathways Study for South Africa: Decarbonising South Africa's Power System*.
- SEB. (2021). *The Green Bond: Your insight into sustainable finance*.
- Smith, B., & Cooper, G. (2020). *Green Bond Funds: Impact Reporting Practices, 2020*. London: Environmental Finance.

ANNEX 1: TECHNICAL ASSISTANCE FACILITY OVERVIEW

The GGC's Technical Assistance (TA) facility is envisioned as a useful mechanism to stimulate market demand, through engaging with local stakeholders, building green bond and loan issuer capabilities, and preparing transactions for underwriting by the GGC. The TA facility will be implemented over 20 years and is projected to be USD 15 million in size, of which USD 10 million will be sourced from donors in the form of grant funding. The balance will be contributed by the parties deriving financial benefit from the facility, namely the GGC – which sees augmentation of deal flow – and borrowers able to access global climate investors through a guarantee provided by the GGC.

The TA facility is broken down into three main components, namely:

- TA 1: Project Preparation Facility
- TA 2: Capacity building
- TA 3: Market engagement.

The largest component, TA 1, supports borrowers by supporting structuring and certification against the CBS, overcoming additional upfront costs which may serve as a hurdle to green labelling in line with international investor requirements. Examples of support to provided include technical due diligence to confirm conformity to GGC and CBS requirements, advice on green structuring to meet climate investor requirements, assistance with pre-issuance requirements including green bond framework development and documentation collation for verification and certification, and support with covering third party costs. Recoupment of costs is applicable only in respect of TA 1, in respect of transactions which have closed (assumed 50/50 borrower and GGC).

Low levels of market awareness are described as a significant barrier to green bond uptake, especially in frontier markets. TA 2 focuses on capacity building and training, equipping market participants with the knowledge required to engage with the global opportunity. This includes workshops being conducted with originators and other stakeholders to build understanding about climate debt instruments and global capital markets, development of knowledge products, and training for potential GGC clients to help them design, develop and implement quality climate projects which contribute to NDCs.

TA 3 involves engagement with key local stakeholders, implemented through establishing working groups in all the target countries to identify priority climate transactions, facilitate knowledge-sharing (e.g., lessons learned from successful and/or failed transactions), and support institutional development by offering access to international best practice in global capital markets.

ANNEX 2: FINANCIAL MODELLING

MODEL MECHANICS AND KEY ASSUMPTIONS

GGC's main revenues stem from:

1. Interest on its cash position,
2. Upfront raising fees being a one-off fee (normally a percentage of the value of the guarantee) paid upon each newly pledged guarantee, and
3. Ongoing guarantee fees (normally a percentage of the value of the guarantee) payable throughout the life of the guarantee, typically on a quarterly basis in advance.

Its main costs consist of:

1. DGG's management fee;
2. investment manager and custodian fees relating to the investment of GGC's surplus cash (i.e., cash in excess of working capital needs),
3. rating agency fees;
4. the costs of the GGC Board which would include director's fees and reimbursements of reasonable costs incurred by the members of the Board;
5. bad debts; and
6. financing costs including commitment fees (paid for access to a callable capital / debt facility).

Fundamental assumptions made to model the costs, revenues and capital structure of the Fund are included in Table 7 below:

Table 7: Key assumptions

Category	Dimension	Description
Fund structure and capitalization	Fund type	Perpetual
	Capital structure	Equity funding of USD 250 million in all scenarios; callable capital / debt facility (amounts varied per scenario due to leverage multiple cap)
	Fundraising sequencing	Equity injections followed by access to the callable debt facility
	Timing of capital injections	Equity injections in Years 1 and 3. Access to callable debt facility is adjusted in line with leverage multiple cap
Equity terms	Instrument type	Equity (cash injection)
	Instrument maturity	20 years
	Investor return	Dividends and repayment of initial contribution (where feasible)
	Timing of investor payments	Payment of dividends is subject to available cash flow. The principal investment is redeemed upon maturity (dependent on available cash position).
Default and Restructuring Terms	Restructuring Period	This is assumed to be 2 years under all scenarios except the worst-case scenarios.

	GGC payment obligations	<p>GGC's guarantee commitment is assumed to only relate to payments on the outstanding debt for the 2-year restructuring period under the upside, base, and downside scenarios. In other words, GGC is not liable for any further debt payments post restructuring i.e., the original debt issuer will once again assume responsibility for the remaining debt payments at this point.</p> <p>Under the worst-case scenario the assumption is that GGC will guarantee and make payments relating to the full defaulted loan i.e., GGC is responsible to service the full defaulted amount until maturity.</p>
Revenue Structure	Upfront Fee	An upfront fee of 1% to 1.3% has been assumed based on the proponent's extensive experience in setting up and running guarantee companies and further enhanced through market research.
	Guarantee Premium	A premium of 1.25% to 1.75% has been assumed based on the proponent's extensive experience in setting up and running guarantee companies and further enhanced through market research.
Management Fee Structure	Management Fee Costs	<p>A consistent management fee structure has been assumed under all scenarios. This assumed a fixed fee of USD 4 million in Year 1 and USD 5.2 million in year 2.</p> <p>From year 3 onwards the management fee is assumed to be a share of the outstanding guaranteed balance, starting at 0.9% in year 3 and ratcheting down to 0.5% over time.</p>

SCENARIO MODELLING

To understand GGC's initial capital needs and its long-term financial sustainability, four growth pathways were modelled for GGC. These tested the sensitivity of the viability of the Fund to both favorable and less favorable market conditions. Under favorable conditions, guarantee and upfront fees were adjusted upwards coupled with longer tenors and more favorable default terms. Under less favorable conditions, downward pressure was placed on upfront and guarantee fees, the average tenor was shortened, and more conservative default assumptions were applied. See Table 8 for a summary of key scenario parameterization assumptions.

The profile and amounts of the cash equity injections have been kept constant across all the modelled scenarios, with an initial USD 125 million in Year 1 and a further USD 125 million in Year 2. A callable debt facility is assumed to be available for GGC's use from year 3 onwards in all scenarios. The callable amounts available to GGC differ within each scenario to meet the Fitch ratings leverage cap.

The Lab's financial modeling outputs relied on discounted cash flow modeling of the Fund economics. The model tested how underlying guarantee fees, outcomes, and costs affect returns and how different default scenarios and sensitivities impact returns and cash flow positions. The fee assumptions were provided by the proponents and further enhanced

through market research. The assumptions on Fund costs were collected via conversations with the proponents and enhanced through additional desktop research and interviews.

For the proof-of-concept Fund scenario, the analysis considered a fund which supported a guaranteed portfolio of USD 10.6 billion in onboarded deals. The capital structure is comprised of a set concessional equity contribution totaling USD 250 million, received in two separate instalments in years 1 and 3.

The analysis undertaken by the Lab Secretariat focused on the impact that the following variables have on fund viability and cash flows.

Transaction scale. Smaller transactions are less profitable due to relatively larger transaction costs.

Average Tenor of Guaranteed Debt. This is an important component of the model as it drives the amortization profile of the guaranteed debt and as a result impacts the outstanding balance guaranteed at the end of each year. As noted above, the funds key revenue and cost drivers are derived from this balance and as such changes in tenor shift the model outcomes significantly. A longer tenor results in a longer amortization profile and as such allow for higher annual guaranteed revenue over this model horizon.

Note: A higher tenor is also beneficial when looking at a default scenario under the upside, base and worst-case scenarios. Under the default structure in these scenarios (discussed below), it is assumed that the restructuring period is constant at 2 years. In a default scenario under higher tenors, GGC will be covering smaller payment amounts given the extended amortization profile of the debt, resulting in less cash outflow and inherently reduced losses.

Expected Credit Loss, modelled through probability of default (PD) and the loss given default (LGD). These variables determine the annual charge and ECL provision raised in the model and are also the key determinants of the actual losses GGC incurs in a default scenario. As would be expected, higher PD and LGD result in higher default values and ultimately have a negative impact on the financial viability of the fund.

Default scenario obligations and payment structure. All scenarios (excluding the worst-case scenario) assume that under a default scenario GGC will step into the issues of the debt issuer and cover their debt payment obligations for the 2-year restructuring period. In essence, GGC is only obligated to cover the payments for this 2-year period whereafter should the original debt issuer will once again be obligated to service the debt for its remaining maturity. Under this structure, it is also assumed that GGC will recover a portion of the full payments made over this two-year period with the unrecovered cash flow ultimately recorded as a loss to GGC.

The worst-case scenario differs in that it assumes that in a default scenario GGC is liable for all debt servicing over the remaining maturity of the debt. As expected, under this scenario, the cash outflows and associated losses are higher for GGC.

The Fund scenario modelling examined cash flow patterns, cost drivers, and financial sensitivities. General model assumptions are set out below.

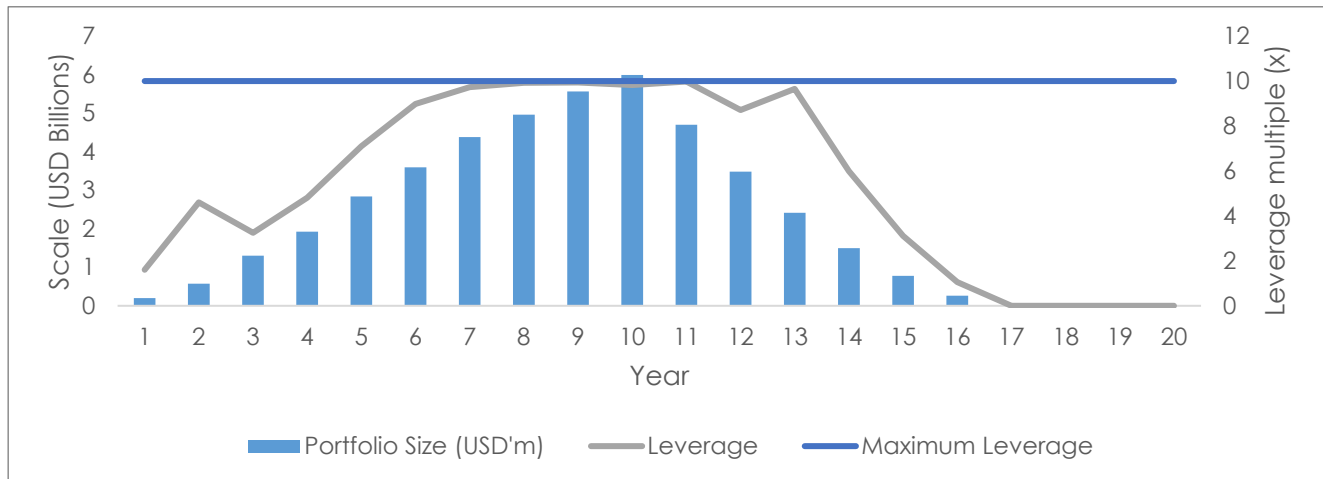
Table 8: Scenario Modelling Assumptions

Variable	Upside	Base	Downside	Worst Case
Average deal Size (USD)	200,000,000	200,000,000	100,000,000	100,000,000
Interest rate payable on debt instruments (%)	5%	5%	5%	5%
Tenor (years)	10	7	5	5
Upfront fee (%)	1.3%	1.0%	1.0%	1.0%
Average ongoing fee (%)	1.75%	1.5%	1.3%	1.3%
Probability of default (%)	1.00%	1.20%	1.5%	1.5%
Loss given default (%)	25% (Balance payable in Restructuring Period only)	28% (Balance payable in Restructuring Period only)	45% (Balance payable in Restructuring Period only)	45% (Full balance at Default)
Discount rate (%)	10.00%	12.5%	15%	15%
DGG management fee (%)	Fixed across all scenarios			
Commitment fee on callable capital facility (%)	1.5%	3.0%	3.0%	3.0%

ANNEX 3: FINANCIAL MODELLING RESULTS

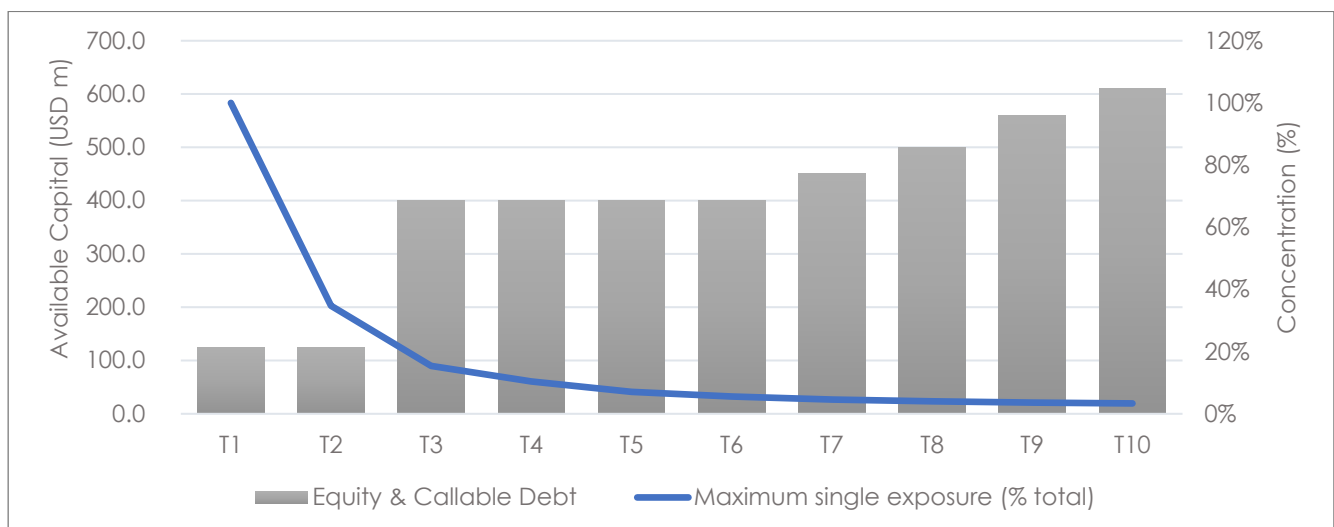
The GGC is expected to reach commercial sustainability within 5-10 years of inception as the portfolio scales up. This scaling effect can be seen in Figure 6 below, showing how the leverage multiple gradually increases from 5-10x during this period, never breaching the limit put in place by the ratings agency. At its peak, the guaranteed portfolio is expected to reach about USD 6 billion. Since further transactions have not been allowed for at this stage, the portfolio scale reduces thereafter, as guaranteed debt slowly amortizes to zero. There is no reason the business should wind down: this is a simplifying assumption.

Figure 6: GGC portfolio build-up



From a financial risk perspective, Figure 7 below demonstrates how portfolio concentration is managed in early years by having USD 125 million paid in equity on hand to service any claims. Assuming the worst-case scenario, where the portfolio comprises a single exposure of USD 200 million amortizing to zero over the minimum anticipated maturity of 5 years, annual claims on the GGC amount to USD 45.3 million. Thus, from inception, the GGC can absorb highly adverse events. By year 3, average exposure is expected to fall to 15% of the total, dropping to 5% by year 7.

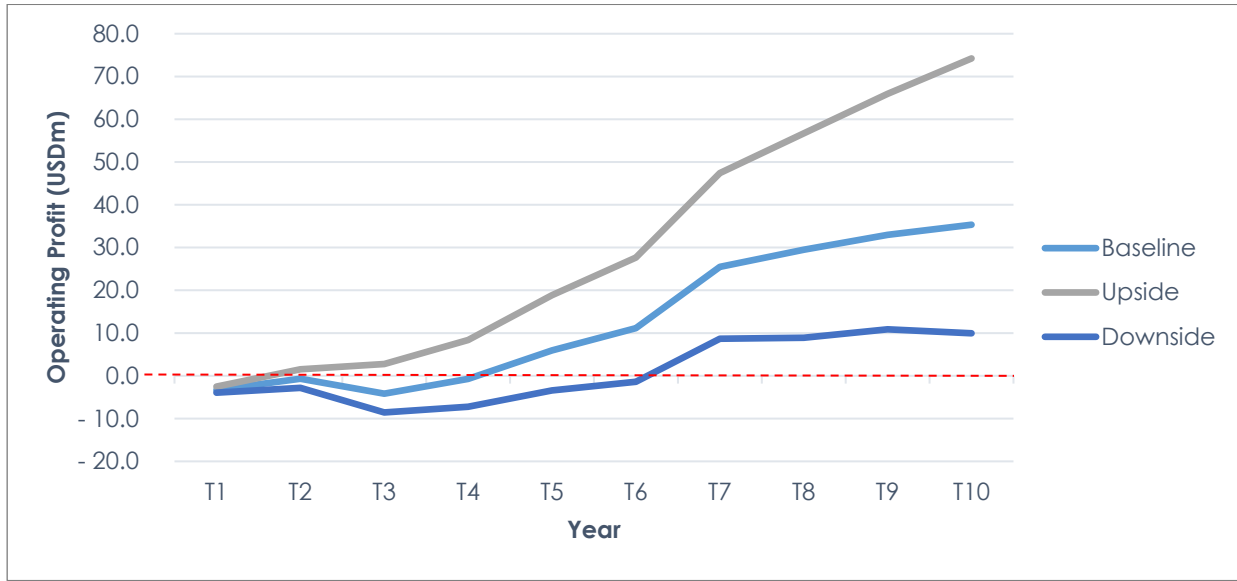
Figure 7: GGC financial risk trajectory



Turning to financial sustainability, Figure 8 below shows the pathway to operating breakeven across the three modelled scenarios. In the baseline scenario, breakeven occurs between

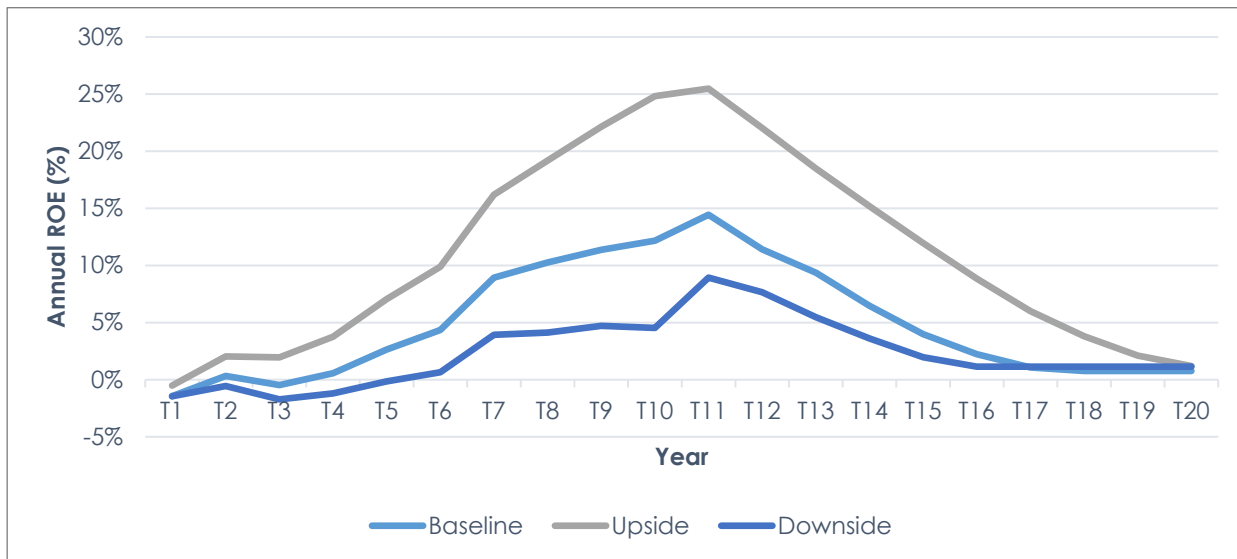
year 4 and 5, whilst in the upside scenario it could be as soon as year 2. Even in the downside, it takes place before year 7: an acceptable result.

Figure 8: Route to financial sustainability



Finally, investor profitability is reflected in Figure 9 below, expressed on an annual RoE (Return on Equity) basis. Once again, the same caveat applies in interpreting results: tailing off after year 10 is only a function of the assumption that no new deals are originated thereafter. Notably, in the upside scenario, RoE could exceed 25% by year 10: a remarkable result for a new guarantee instrument. This is predominantly driven by the relationship between tenor and income. The longer tenor (10 vs 7 years) results in a longer amortization profile and hence leads to higher outstanding debt balances from which guarantee income is calculated. This higher guaranteed income coupled with lower default and loss assumptions underpins the strong financial performance.

Figure 9: Annual returns to GGC equity investors



ANNEX 4: INDICATIVE GGC PORTFOLIO PIPELINE

Nature of Borrower	Geography	Sector	Debt Instrument	Guarantee Potential (USD m)	Project Description
Sub-National	Laos	Energy	Bond/Syndicated Loan	200	240 MW floating solar project
Sub-National	Laos	Transport	Bond/Syndicated Loan	200	Installation of EV charging stations
Private Sector	Indonesia	Energy	Bond/Syndicated Loan	200	1 GW of integrated solar and energy projects in Batam, Bintan and Karimun regions.
Private Sector	Indonesia	Buildings	Syndicated Loan	50	Bond raised by local financial institution to fund construction of earthquake resistant low-income housing projects
Private Sector	Philippines	Energy	Bond/Syndicated Loan	200	Energy efficiency and conservation (EE&C) projects in the country for commercial and industrial companies which will reduce their power use by about 1 TWh up to 2040
Private Sector	Philippines	Water	Bond/Syndicated Loan	100	Bulk water supply project in Luzon Island to provide up to 200 million liters per day
Private Sector	Philippines	Energy	Bond/Syndicated Loan	100	Construction of 110MW of solar plants on Luzon Island
Private Sector	India	Transport	Bond/Syndicated Loan	200	Construction of more than 100,000 EV charging points for two-wheeler electric vehicles
Sub-National	Rwanda	Energy/Buildings	Bond/Syndicated Loan	50	Green bond/loan raised by a sub-national financial institution to finance a pipeline of small scale distributed renewable energy projects
Sub-National	Rwanda	Energy/Buildings	Bond/Syndicated Loan	50	Green bond/loan raised by a sub-national financial institution to finance a pipeline of small-scale mitigation and adaption projects encompassing water, climate-smart agriculture, sustainable transport, biomass replacements and green cities

ANNEX 5: GUARANTEE POLICY (DRAFT)

MISSION

The Green Guarantee Company ("GGC") has been created with the mission of enabling debt transactions that mobilize the significant volumes of private institutional capital present in global credit and capital markets for developing countries to finance new climate adaptation and mitigation projects.

GGC's purpose is to ensure that the effect of all our guarantees and activities, taken together, will (or is reasonably likely to) contribute to the following outcomes:

- The reduction of greenhouse gas emissions.
- A positive influence on the expected change in loss of lives, value of physical assets, livelihoods, and/or environmental or social losses due to the impact of extreme climate-related disasters and climate change.
- An evolution in the deployment of private institutional capital, which supports the ongoing transformation of capital markets to increasingly respond to global climate change impacts.

GGC provides investment grade guarantees that help mobilize climate finance at scale from global credit and capital markets into new climate mitigation or adaption projects in sub-investment grade developing countries, reducing the risk of non-payment, and thereby enhancing the credit rating of the project.

In pursuit of achieving its mission GGC will prioritize the climate and social impacts of the transactions to which it seeks to provide a credit guarantee. Specific consideration will be given to understanding, measuring and managing a transaction's impact based on the following five core elements:



**Climate:
Adaptation**

The positive impact a borrower has on Adaptation impact beyond the transaction: being replicable, establishing precedents or addressing information asymmetry and thereby building a pathway for greater climate financing from global capital markets.



**Climate:
Mitigation**

The positive impact a borrower has on Mitigation impact and will reduce GHG emissions. Beyond the transaction, its impact will be replicable, establishing precedents or addressing information asymmetry and thereby building a pathway for greater climate financing from global capital markets.



**Climate
Certification**

The determination of whether the investment is aligned with the Climate Bond Initiative Standard. The Climate Bond Initiative, provides clear, sector-specific eligibility criteria for assets and projects that can be used for Climate Bonds.



**Gender and social
inclusion**

The positive and negative impact a borrower has on its most important stakeholders. These include employees, families, customers, suppliers, communities, and any other person influencing or being affected by the borrower.



**Environment and
social**

The positive and negative impact a borrower has on its natural environment. This includes usage of natural resources, toxic materials and active removal of waste, reforestation and restoration of natural harm done.

ABOUT THIS POLICY

This Guarantee Policy (the "Policy") sets out GGC's approach to providing guarantees to support new climate adaptation and mitigation projects in developing countries, as detailed in the pages that follow.

The operation and implementation of this Policy is supported by GGC's Transaction Scorecard, which provides a common methodology for evaluating the quantitative and qualitative impact of a potential guarantee transaction. The Board of GGC will remain responsible for this Policy while the day-to-day operation and implementation of this Policy will be undertaken by the Manager of GGC.

The Policy will be reviewed at least annually by the GGC Board and will be subject to a process of continuous incremental improvement, reflecting changes in market opportunities, evaluation methodologies, scientific knowledge, and technological approaches. Changes to the Policy will require the agreement and consent of GGC's Shareholders, Board and Manager.

GUARANTEE CRITERIA

GGC's guarantee criteria is aligned with the Climate Bond Initiative's Climate Bonds Standard and Certification Scheme ("Scheme"), a labelling scheme for bonds, loans and other debt instruments. Rigorous scientific criteria ensure that the Scheme is consistent with the goals of the Paris Climate Agreement to limit warming to under 2 degrees. The Scheme is used by global credit and capital markets to prioritize investments which genuinely contribute to addressing climate change. GGC will seek to have all the debt instruments it guarantees certified by the Scheme.

GGC can guarantee the following list of Eligible Debt Instruments which can be certified under the Scheme.

Eligible Debt Instrument	Description
Use Proceeds Bond	A "climate use of proceeds bond" is a standard recourse-to-the-issuer debt obligation for which the proceeds are held in a sub-portfolio or otherwise tracked by the issuer and attested to by a formal internal process that is linked to the issuer's lending and investment operations for Eligible Climate Projects.
Revenue Bond	A non-recourse debt obligation in which the credit exposure in the bond is to the pledged cash flows of the revenue streams, fees, taxes etc., and the use of proceeds of the bond goes to related or unrelated Eligible Climate Projects.
Project Bond	A project bond for a single or multiple Eligible Climate Projects for which the investor has direct exposure to the risk of the project(s) with or without potential recourse to the issuer.
Securitization (ABS) Bond	A bond collateralized by one or more specific Eligible Projects & Assets, including Asset Backed Securities ("ABS"). The only source of repayment is the cash flows of the Eligible Climate Projects.
Covered Bond	A dual recourse bond which relies primarily on repayment from the issuer, but also has access to a pool of assets (the cover pool) from Eligible Climate Projects.
Sukuk	"Sukuk" is a term referring to various types of quasi-debt securities that have been developed to meet the strictures of Islamic finance. One of the core principals underlying Islamic finance is avoiding the payment or collecting of interest. A variety of financial instruments have been created that serve the same purpose as bonds and other debt securities, but on which interest technically is not paid.
Syndicated /Club Loan	A loan from several different lenders acting together. The lenders form a syndicate, and the borrower borrows from the syndicate. Common types of syndicated loans are underwritten deals, best-effort deals, and club deals. Usually structured by one of several commercial banks or investment banks, can also include non-bank/institutional lenders such as debt funds, insurance companies, hedge funds or pension funds.

Private Placement	A private placement is a type of unregistered securities offering, typically to a relatively small number of investors. It is an offer and sale of securities by an issuer (as opposed to through a broker, dealer, or other intermediary) that does not involve a public offering and is conducted under an exemption from the registration requirements of the Securities Act.
-------------------	--

GGC can provide guarantees to cover the following list of Eligible Beneficiaries.

Eligible Beneficiary	Description
Bond/Note Trustee	Acting in both public and private debt transactions, the Bond/Note Trustee represents the interests of the bondholder/investor during the life of the transaction, enforcing the terms of the bond where required and acting as a link between the investor and bond issuer.
Institutional Investor	An eligible institutional investor will be a corporate, financial institution, asset manager or fund that is regulated, licensed and/or lawfully allowed to invest in global credit and capital markets.

GGC can provide a guarantee to support an Eligible Climate Project (list available on request) in any developing country that is listed on the Development Assistance Committee ("DAC") List of Official Development Assistance ("ODA") Recipients published by the Organization for Economic Co-operation and Development ("OECD") and is not listed as an Exclusion Country in Appendix II of this Policy.

GGC can provide guarantees on behalf of the following types of Borrowers.

Eligible Borrower	Description
Start-up Companies & Greenfield Developments	Borrowers that have no operating track record but have strong credit mitigating factors (e.g., strong creditworthy sponsor) and have received (or will have received prior to effectiveness of GGC's guarantee) the relevant permits, licenses and concessions from governmental entities, and that are seeking medium to long term finance for an Eligible Climate Project.
Private Sector Companies	Borrowers that are solvent and have a proven track record that require medium to long term finance for the creation, upgrade or expansion of an Eligible Climate Project.
Parastatals, Municipals or Public Corporations	Borrowers that are public entities and have a demonstrable track record of conducting operations along regular commercial principles and without undue political interference.

GGC will work with Origination Partners which have the following characteristics and capabilities:

Characteristic/Capability	Description
Access to Institutional Investors in Global Credit and Capital Markets	Origination Partners need to either: <ul style="list-style-type: none"> • Have in-house expertise, capability as well as the necessary regulatory approvals and licenses to market to and distribute Eligible Debt Instruments to Institutional Investors in Global Credit and Capital Markets; or • Have access to a strategic partner who has the characteristics and capability described.
Access to a pipeline of Eligible Climate Projects in ODA Countries	GGC will rely on its Origination Partners to identify and introduce suitable guarantee opportunities and so access to a pipeline of Eligible Climate Projects in ODA Countries is of paramount importance.
Committed to GGC Climate Finance Training Program	Origination Partners will benefit from training (via workshops and webinars) from GGC on its Transaction Selection Process and the key elements which inform its decision-making: <ul style="list-style-type: none"> • Guarantee Policy • Transaction Scorecard • CBS and Certification Process • Environmental & Social Management System • Gender Framework • Stakeholder Engagement

All Origination Partners will go through a Know Your Customer screening process to ensure that there are no reputational risks identified.

Origination Partners that are believed to present greater risks will be subject to an enhanced due diligence process which involves further consideration of the following elements:

- Ownership and Management
- Involvement of Politically Exposed Persons
- Quality of the Anti-Money Laundering Controls

EXPOSURE LIMITS

No single credit risk exposure will be allowed to account for more than the greater of:

- USD 200 million; or
- otherwise as may be agreed by the GGC Board.

GGC's country exposure will be subject to the conditions presented in Appendix I. GGC may not have aggregate exposure to any single country greater than 40% of its total guaranteed portfolio

GGC may not have aggregate exposure to any single sector greater than 40% of its total guaranteed portfolio.

KEY GUARANTEE TERMS

GGC must be a secured creditor of a Borrower with rank and voting rights commensurate with the risk being taken including controlling creditor rights as applicable.

GGC's exposure to a potential claim from a beneficiary needs to be clearly and unambiguously capped at a maximum level in its guarantee documentation. GGC should avoid exposing itself to uncapped liability.

GGC must have the option to pay a beneficiary in instalments or as per the original payment schedule on the occurrence of a Borrower payment default that is covered under its guarantee. GGC should avoid losing control of the beneficiary's ability to accelerate payment of GGC's full outstanding exposure to a Borrower.

GGC's guarantees shall be governed by English law.

KNOW YOUR CUSTOMER

GGC shall undertake appropriate measures to protect itself from exposures to risks associated with corruption, money-laundering and terrorist financing when it deploys its guarantees

These measures included undertaking Know Your Customer ("KYC") due diligence. KYC due diligence is the process of identifying the proposed customer and other partners (as applicable) and verifying that they are who they say they are. These checks must be completed in accordance GGC's Anti-money Laundering Policy and related policies.

EXCLUSION LIST

GGC will avoid providing guarantees in the following circumstances. These exclusions are included in the Transaction Scorecard which forms part of GGC's Transaction Selection Process.

Exclusion	Description
Transactions that are categorized by GGC as being Category A projects.	Category A projects may have significant adverse environmental and/or social impacts that are irreversible, sensitive, diverse, or unprecedented in the absence of adequate mitigation measures. Category A projects are considered high risk.
Projects that impact certain socio-cultural groups.	There are certain socio-cultural groups present in or use the project area who may be considered as "tribes" (hill tribes, schedules tribes, tribal peoples), "minorities" (ethnic or national minorities), or "indigenous communities" that are impacted by the project.
Transactions that are with Borrowers where the primary business activities are in prohibited sectors.	<p>The following are prohibited sectors:</p> <ul style="list-style-type: none"> • gambling; • media communications of an adult or political nature; • military production or sales; • alcoholic beverages; • tobacco and related products; • Production or trade in radioactive materials; • Production or trade in unbonded asbestos fibers. This does not apply to purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%; • Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements, or subject to international bans, such as pharmaceuticals, pesticides/herbicides, ozone depleting substances, PCB's, wildlife or products regulated under CITES. • Production, trade or use of ozone depletion potential (ODP) refrigerants.

<p>Transactions where a Multilateral Development Bank will be the beneficiary of GGC's guarantee.</p>	<p>GGC will avoid providing guarantees to Multilateral Development Banks. The GGC Board may consider and approve exceptions where GGC providing a guarantee to a Multilateral Development Bank is necessary to enable a financial structure which will ultimately de-risk and mobilize climate finance from private sector institutional capital into developing countries.</p>
<p>Transactions involving separate funding from the Green Climate Fund.</p>	<p>GGC will avoid providing guarantees involving separate funding from the Green Climate Fund without its consent to do so. This is to avoid the potential for double counting of climate impact.</p>
<p>Transactions refinancing existing climate adaptation or mitigation projects (subject to specific exceptions).</p>	<p>GGC will avoid providing guarantees that solely refinance the debt of existing climate adaptation and/or mitigation projects. Refinancing can be considered in the following specific instances.</p> <p>Refinancing results in mobilizing an equivalent amount of climate finance for a new Eligible Climate Project.</p> <p>The above exception recognizes that in developing countries that climate infrastructure may be constructed in several stages and consequently GGC support for refinancing of an earlier stage of construction to enable the next stage of construction for an Eligible Climate Project can be considered within scope provided that, for the avoidance of doubt, one USD of GGC Guarantee will be linked to one USD of financing for new Eligible Climate Projects.</p> <p>Refinancing agreement with GGC is signed before the construction of an Eligible Climate Project has commenced.</p> <p>The above exception recognizes that global institutional investors may not wish to take construction risk in developing countries but are willing to invest once an Eligible Climate Project is operational. The exception envisages a scenario where, with the presence of a pre-agreed refinancing supported by GGC, commercial banks provide short-term construction finance to the Eligible Climate Project with the refinancing occurring within 2 years of commercial operations commencing.</p>
<p>Bioenergy (including biofuels) transactions with the following characteristics.</p>	<p>The following are prohibited characteristics for bioenergy transactions:</p> <ul style="list-style-type: none"> • First generation biofuels that are produced from edible energy crops regardless of the Global Hunger Index and food security assessment of the host countries. • Biofuels grown in areas converted after 2015 from land with previously high carbon stock, such as wetlands or forests. • Biofuels produced from raw materials obtained from land with high biodiversity, such as primary forests or highly biodiverse grasslands.
<p>Hydrogen transactions with the following characteristics.</p>	<p>Any hydrogen other than produced from water electrolysis powered by 100% renewable energy.</p>

<p>Transportation transactions with the following prohibited characteristics.</p>	<p>The following are prohibited characteristics for transportation transactions:</p> <ul style="list-style-type: none"> Deployment of any type of fossil fuel-based vehicles and vessels including hybrids. Deployment of CNG buses, the fuel supply of which cannot be 100% secured by locally sourced renewables during the lifetime of the buses. Any form of financial support to promote ownership of private vehicles including electric vehicles. Any road construction.
---	---

RISK-SHARING

GCC can consider using political risk insurance and other risk-sharing products/arrangements (e.g., counter-guarantees) to assist managing its guarantee portfolio risk.

GGC prioritizes risk-sharing counterparties that have a minimum investment grade rating of [A] by an internationally recognized credit rating agency.

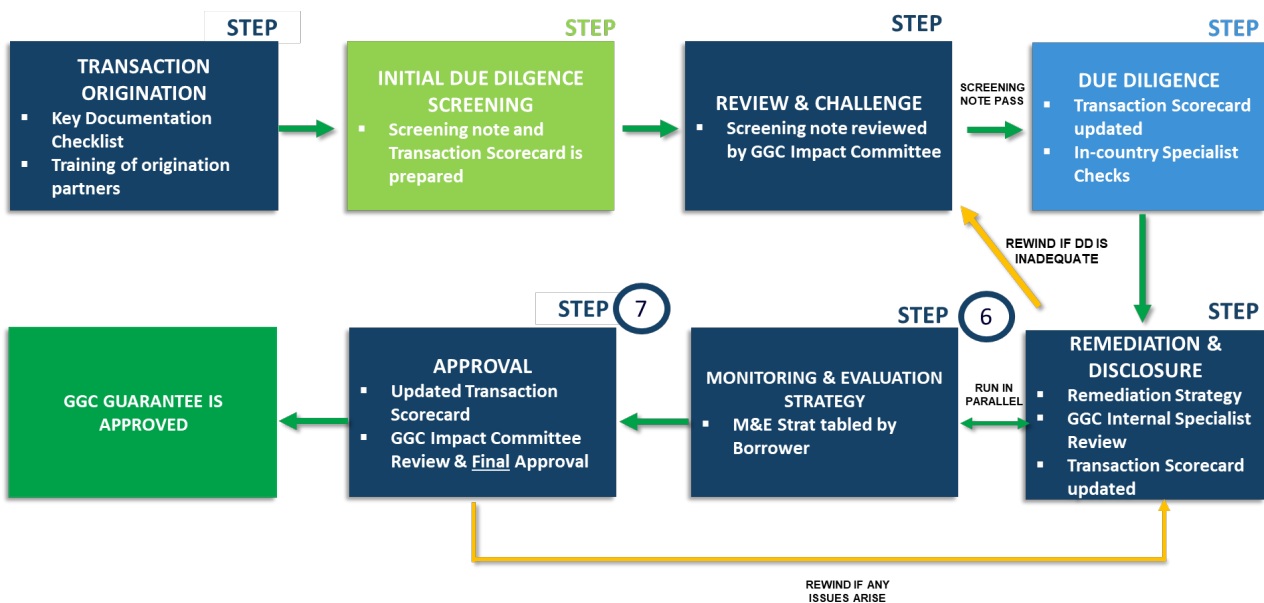
ANNEX 6: TRANSACTION SELECTION PROCESS

The summary of the steps is as follows:

1. **Transaction Origination:** The Origination Partner submits their documentation
2. **Initial due diligence screening:** screening note is prepared for assessment based on submitted documentation
3. **Review and Challenge:** screening note is assessed and determined if all 7 requirements are met by in-house and external specialists as well as the GGC Impact Committee
4. **Due Diligence:** deep dive due diligence is conducted by the specialist and in-country specialists
5. **Remediation and Disclosure:** gaps and/or deviations are outlined, and E&S documents are disclosed
6. **Monitoring and Evaluation Strategy of the proposal:** The M&E Strategy details activities, outputs, outcomes and the ultimate goal, which is expounded upon with clear actions as to how, and by whom, data and information is collected, assessed and reported.
7. **Approval:** the documentation including the M&E strategy, remediation strategy and transaction scorecard, among other documents, is approved by GGC's Impact Committee.
8. **Guarantee is issued.**

This process is diagrammatically depicted in the process flow diagram below.

Figure 10: Transaction selection process flow



Critically, consideration of climate and social impact forms an integral part of GGC's Transaction Scorecard which is used to select transactions that ensure that both potential key risks and positive impacts have been identified and are effectively monitored and managed throughout the transaction lifecycle. The table below provides an overview of the climate impact dimensions on which transactions are evaluated as early as step 2 of the transaction selection process, ensuring that only quality projects proceed to due diligence.

Table 9: Overview of Transaction Selection Scorecard climate criteria

NO.	CLIMATE ADAPTATION IMPACT	CLIMATE MITIGATION IMPACT
1	<p>Identification of Hazard: project or program conceptualization and origination documents and due diligence materials clearly identify and quantify climate change-driven shift in a climatological hazard that the proposed investment is designed to be responsive to.</p>	N/A
2	<p>Identification of Impact: project or program conceptualization and origination documents and due diligence materials clearly identify and quantify the impact (on people, property, landscapes, social systems, economic systems, ecosystems), including loss and damages, from the climatological hazard, which the proposed investment is designed to ameliorate or eliminate.</p>	<p>Identification of Impact: There is a robust estimate of the amount CO2e emitted by the project provided (this includes emissions generated and induced by the project e.g., emissions from the use of efficient electric equipment, emissions from construction of power plant, emissions from operations, emissions generated elsewhere due to leakage)?</p>
3	<p>Effectiveness of Response: Project or program conceptualization and origination documents and due diligence materials clearly identify and quantify the manner in which the proposed adaptation investment intends to reduce the climate change risk (e.g., ameliorating or eliminating exposure or vulnerability), and the extent by which it will reduce the impacts. Furthermore, adaptation benefits are clearly linked to the identified adaptation beneficiaries, and a clear methodological approach is provided.</p>	<p>Effectiveness of Response: There is alignment with nationally determined contributions (NDCs) mitigation component and/or the Long Term Strategy (LTS) of the host country, relevant national plans, and/or enabling policy and institutional frameworks.</p> <p>The proposed investment introduces a technical innovation that did not previously exist in the region/market</p> <p>Project lifecycle carbon emission reductions (t.CO2eq.) are above the required benchmark* selected by Impact Committee based on baseline data (benchmark* to be approved by Impact Committee)</p>
4	<p>Scale of Benefits: Expected change (reduction) in economic loss due to climate-related hazards in the geographic area served by the investment, over its operational lifetime. These adaptation benefits are also clearly linked to the identified adaptation beneficiaries, based on the clear methodological approach provided.</p>	<p>Scale of Benefits: The cost per ton of carbon dioxide equivalent avoided is competitive in comparison to appropriate benchmarks.</p>
5	<p>Alignment: There is alignment with nationally determined contributions (NDCs), National Adaptation Plan (NAP) and/or the GCF country program of the host country, relevant national plans, and/or enabling policy and institutional frameworks, reinforced by supportive engagement with national stakeholders.</p>	

6	<p>National Ownership: The borrower has ensured that the investment is reflective of the country's climate policies, strategies, and plans, e.g., NDC, NAP and GCF country program, signaling ownership; is aligned with the country's institutional, governance, and operational capacity; and engagement with national stakeholders has taken place.</p>	
7	<p>Project beneficiaries (direct and indirect) over the investment's operational lifetime are above the required threshold (with the threshold calculated as a median value of beneficiaries from comparable GCF projects), and the projected adaptation benefits are linked to the project beneficiaries, based on the clear methodological approach provided.</p>	N/A
8	<p>Alignment with Rio Marker for adaptation: intent to reduce the vulnerability of human or natural systems to the current and expected impacts of climate change, including climate variability, by maintaining or increasing resilience, through increased ability to adapt to, or absorb, climate change stresses, shocks and variability and/or by helping reduce exposure to them.</p>	<p>Alignment with Rio Marker for mitigation: degree of contribution to the objective of stabilization of greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system by promoting efforts to reduce or limit GHG emissions or to enhance GHG sequestration.</p>
9	<p>Replicability: There is evidence that the investment is likely to have a beneficial climate change impact beyond a one-off project or program investment considering replicability / paradigm shift and stability</p>	
10	<p>Scale-up of Adaptation Finance: There is evidence that the that the investment is financially and economic sound including whether the project or program funding model fosters an increase in climate change adaptation co-finance, in cost-effectiveness of adaptation investments, and mobilizes private sector funding for climate change adaptation.</p>	<p>Scale-up of Mitigation Finance: There is evidence that the that the investment is financially and economic sound including whether the project or program funding model fosters an increase in climate change mitigation co-finance, in cost-effectiveness of adaptation investments, and mobilizes private sector funding for climate change mitigation.</p>

ANNEX 7: COMPARABLE INSTRUMENTS ANALYSIS

Similar Instruments	Description	GGC differentiation
GuarantCo	Local currency credit solutions for low- and middle-income countries, focusing on developmental outcomes.	GGC unlocks access to global investors and capital markets for credible issuers.
Development Finance Corporation (DFC)	Partial credit loan guarantees of up to USD 8 million, with up to 50% allowed in local currency.	Full cover in hard currency on credit up to USD 200m, expanding scale and investor access.
African Development Fund Partial Credit Guarantee	Partially guarantees debt-service obligations of LIC governments and well-performing SOEs in LICs.	Full cover regardless of source of project revenue, provided issuer is creditworthy.
African Energy Guarantee Facility (AEGF)	Supports primary insurers in the provision of offtake, transfer and inconvertibility, and political risk insurance for eligible energy projects.	Covers default regardless of cause in respect of a broad range of climate projects, mitigation and adaptation. Does not rely upon insurers.
Assured Guaranty	Capital markets guarantee focused on developed countries with investment-grade sovereign ratings. Focus on renewable energy.	GGC's geographic coverage is purely on developing countries, focused on a range of green sectors.