CASE STUDY

GUARANTCO & QUANTUM TERMINALS' CREDIT-ENHANCED CORPORATE BOND

OCTOBER 2019

EXECUTIVE SUMMARY

GuarantCo is a donor-funded entity that was established in 2005 to catalyze local currency investments into infrastructure projects and to develop local capital markets using guarantees. To date, GuarantCo has provided over $1.1 billion in financing alongside $4.3 billion in private sector capital to over 50 projects across Africa and Asia. In 2017, GuarantCo supported Quantum Terminals (QTL), a local fuel and energy infrastructure developer in Ghana that specializes in providing storage solutions for the Liquefied Petroleum Gas (LPG) sector. The company plays a key role in supporting Ghana's mission to provide 50% of its population with access to LPG by 2020.

In 2018, Quantum Terminals issued a credit-enhanced local currency bond for $10 million (GHS 45 million) to expand its operations. The bond received a partial (75%) guarantee from GuarantCo and was fully subscribed by local institutional investors. In 2018, the corporate bond was listed dually on the Ghana Stock Exchange (GSE) and the London Stock Exchange (LSE), representing the first corporate bond from Ghana to list on the LSE. The design and fundraising of Quantum Terminals' corporate bond presents useful insights for others looking to issue or invest in local currency bonds. These include:

- Corporate bonds are a viable path for local companies looking to raise additional financing from new investors
- Guarantees can help reduce local currency risks for projects, crowd-in private sector investors, and develop local capital markets
- Specialized blending vehicles like GuarantCo allow their financiers to achieve greater and more efficient market reach
- Building international appetite for local currency markets in Africa will take time and repetition

SYNOPSIS

Guarantor	GuarantCo
Guarantor Mandate	To provide contingent credit solutions that enhance the availability of local currency finance for infrastructure projects and to develop local capital markets.
Investee Company	Quantum Terminals
Company Profile	Quantum Terminals supports the development of storage and distribution infrastructure for the Liquid Petroleum Gas (LPG) sector in Ghana.
Bond Issuance	Quantum Terminals issued a corporate bond to expand its LPG operations, thereby improving Ghana's fuel infrastructure and enabling greater access to cleaner energy.
Country	Ghana
Issue Date	2018
Bond tenor	10 years
Size	$10 million (GHS 45 million)
Capital Structure	Senior debt: $10 million Partial Guarantee: 75% cover on principal and interest
Target Return	22.25% per annum
Use of Proceeds	•Expansion of the QTL Tank Farm •Repay existing indebtedness

INTRODUCTION

Infrastructure development is a key driver for progress across Africa and a critical enabler for productivity and sustainable development. A lack of adequate infrastructure isolates communities, prevents access to healthcare, education, and jobs, and impedes economic growth. Yet, the infrastructure sector in Africa faces significant financing needs, accounting for $130-170 billion per year, with an estimated gap of $68-108 billion. While Africa's infrastructure sector has been traditionally funded by the public sector, budgetary constraints and inefficient use of resources have limited the number of projects the public sector can fund. As a result, it has been increasingly recognized that government funding will not be sufficient to bridge the infrastructure financing gap, spurring the need for participation from the private sector.

Yet, the private sector faces a number of barriers to investing in infrastructure with considerable differences across countries and within the sector – for example, private financing in Africa has largely been in the telecommunications sector, leaving significant gaps in the energy and transportation sectors. Moreover, African countries have been slow to establish enabling policy and regulatory environments conducive to private sector investments including through public-private partnerships (PPPs), leading to a lack of bankable and implementable projects. High country risk, underdeveloped local capital markets, and a lack of appropriate instruments aligned to both projects' and investors' needs have all deterred private investments. In addition, public and private investors, who are primarily international, are often unwilling to take local currency risks and have frequently participated using foreign (hard) currency financing, unwilling to take local currency risks. As a result, foreign exchange (FX) risks have traditionally been pushed onto local project developers, governments, and ultimately, end-users and taxpayers. Domestic capital providers have played a limited role in financing infrastructure projects to date, constrained by limited funding, an inability to offer longer term financing and a lack of capacity.

Recognizing these challenges, GuarantCo was established by the Private Infrastructure Development Group (PIDG) in 2005 as a blended finance solution to mobilize local currency financing into infrastructure projects using guarantees. This case study will focus on the role of GuarantCo in supporting Quantum Terminals (QTL), a local energy infrastructure developer in Ghana. Quantum Terminals supports the storage, transportation, and use of LPG (liquid petroleum gas) in Ghana, where a historically concentrated energy mix, a lack of adequate alternative fuel supply and associated infrastructure have resulted in chronic power shortages in the past and an over-reliance on liquid and hard fuels with significantly higher greenhouse gas (GHG) emissions. GuarantCo provided a partial (75%) guarantee to Quantum Terminals, who was then able to raise domestic capital from local institutional investors through a credit-enhanced corporate bond. This transaction demonstrates the potential for blended finance to mobilize additional commercial capital at the local level.

BACKGROUND

GuarantCo is one of the six companies within the Private Infrastructure Development Group (PIDG), which collectively aim to prepare, develop, or finance commercially viable and developmentally sound infrastructure projects. GuarantCo was established in 2005 to catalyze local currency investments into infrastructure projects and develop local capital markets using guarantees. GuarantCo's primary objective is to credit enhance infrastructure projects to an acceptable level to enable local currency credit investors (e.g., banks and institutional investors) to extend longer term debt. In addition to helping to align risk appetites of local currency investors with projects, the use of guarantees also allows for efficient leverage of capital – GuarantCo is able to leverage 3x for each $1 of donor capital, in the form of guarantees.

GuarantCo is primarily owned and funded by a sub-set of PIDG shareholders, including United Kingdom Department for International Development (DFID), Swiss State for Secretariat for Economic Affairs (SECO), Australia's Department of Foreign Affairs and Trade (DFAT), and Swedish International Development Coordination Agency (Sida). In addition, the Dutch government is also a shareholder, through its development bank FMO. As of 2019, GuarantCo has received $312 million in shareholder equity, $50 million (GBP 40 million) in callable capital commitments, and $30 million through its leverage facility. In addition, DFID has committed to providing an additional $112 million (GBP 90 million) in callable capital. GuarantCo has consistently maintained a strong credit profile, upholding an AA- rating from Fitch and A1 rating from

Moody's. As of 2016, GuarantCo is managed by GuarantCo Management Company Ltd, a subsidiary of Cardano Development.

Figure 1: GuarantCo Structure

GuarantCo provides credit guarantees that cover debt financing for projects, which amounts to between $5-50 million, provided for a maximum tenor of 15 years. GuarantCo prices its guarantees based on transaction risk, decided on a project-by-project basis. Fees are determined by a number of factors, including GuarantCo's due diligence findings, the transaction's financial structure, as well as country and borrower risk. GuarantCo primarily supports private sector companies undertaking greenfield developments or expanding existing facilities, but also considers public projects that operate on a commercial basis. GuarantCo operates in the following sectors: power / energy supply; gas transportation, distribution, and storage; oil transportation, distribution, and storage; transportation, digital communications infrastructure, social infrastructure, and manufacturing-related infrastructure. GuarantCo projects may also operate across multiple sectors and in special economic zones (*See Figure 2 for portfolio breakdown by sector*). GuarantCo targets the OECD DAC list of "low and lower middle-income countries" for its projects. GuarantCo's country and sector exposure limits are allocated based on PIDG's overall portfolio distribution across its six companies and their relevant pipelines and abide by PIDG's investment policy and risk appetite framework.

As of 2018, GuarantCo's run-rate portfolio size was over $750 million. The organization is active in 17 countries, primarily in Sub-Saharan Africa but also increasingly in South and Southeast Asia. To date, the organization has most frequently supported energy supply projects (31%). In total, GuarantCo has committed over $1.1 billion to infrastructure projects that have mobilized $4.3 billion in private sector financing. These projects have supported the creation of 21,000 jobs and helped 39.5 million people gain greater access to new or improved infrastructure.

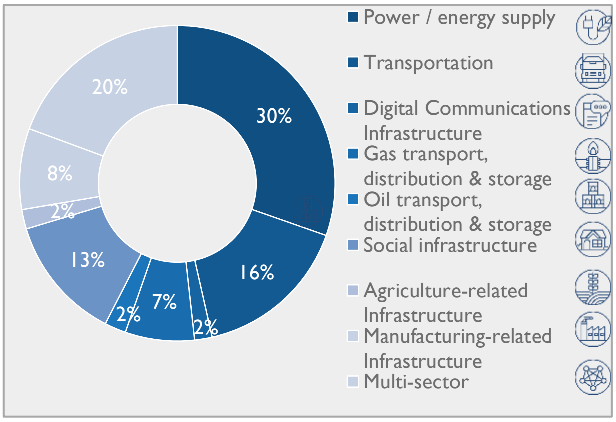

Figure 2: GuarantCo portfolio by sector

DESIGN AND FUNDRAISING

GuarantCo first partnered with Quantum Terminals in 2013. Quantum Terminals is a fuel and energy infrastructure and logistics solutions provider in Ghana that primarily provides storage solutions for the LPG sector. LPG, also known as propane or butane, is commonly used for cooking, rural heating, and in certain cases, generating electricity. In the past decade, Ghana has faced persistent power supply challenges, spurred by an overreliance on hydropower in the face of declining rainfall, and unreliable access to alternative fuel sources (including gas expected from the West Africa Gas Pipeline (WAGP)). Moreover, large areas of the country, particularly rural areas, are still reliant on charcoal and wood, which are associated with higher GHG emissions. While LPG presents a cleaner and more reliable fuel alternative for the country, a lack of adequate infrastructure, including storage facilities, has resulted in a high dependence on limited imports – only 36% of local LPG consumption is produced in Ghana. Quantum Terminals' mission is to fill the fuel infrastructure void in Ghana, thereby providing greater energy security, while contributing to the country's overall economic growth.

GuarantCo initially partnered with Quantum Terminals to support the construction of the company's LPG loading and storage facility (known as the QTL Tank Farm) in Atuabo, Ghana. The QTL Tank Farm was the first storage terminal dedicated to domestic production of LPG, and a key piece of infrastructure in supporting the local economy, as well as fostering greater access to energy and power supply. For this project, Quantum Terminals required both hard and local currency financing to better match its revenue profile. While Quantum Terminals was able to obtain $6 million in hard currency financing from Standard Chartered, the bank was unable to provide the full financing required due to single obligor limits. As a result, GuarantCo provided a guarantee for GHS 12 million (approximately USD $6 million), allowing the company to obtain a local currency loan for GHS 12 million from Standard Chartered Ghana. The mix of hard and local currency financing allowed the company to secure its funding requirements while reducing its currency risks. This was particularly timely; in 2014 the GHS witnessed considerable depreciation against the USD, causing significant stress in the Ghanaian energy sector which had largely borrowed in USD. As a result of the company's currency hedge, Quantum Terminals was able to continue its operations with minimal disruption.

Following completion of the QTL Tank Farm, Quantum Terminals sought financing to grow their operations but was constrained by limited funding options. GuarantCo suggested that the company consider issuing a credit-enhanced bond to raise GHS 45 million (USD 10 million). Capital raised through the credit-enhanced bond would allow Quantum Terminals to (i) expand the QTL Tank Farm, and (ii) raise $10 million in additional hard currency financing from Emerging Africa Infrastructure Fund (EAIF), another PIDG facility, to develop the necessary propane infrastructure to support another greenfield power project, Early Power (also referred to as Bridge Power).

Quantum Terminals initially approached commercial banks to subscribe to the credit-enhanced bond, but the long-term tenor (10 years) of the issuance exceeded commercial bank tenor limits. As a result, Quantum Terminals approached local asset managers and identified interest from Stanlib Ghana, a subsidiary of Stanlib, Africa's largest wealth manager. This investment presented a timely opportunity for Stanlib Ghana, who were i) actively looking for new debt issuances in the corporate bond class for its pension fund clients, given the limited availability on domestic markets, and ii) seeking an opportunity to increase their portfolio presence in the oil and gas sector, to which they had limited exposure. GuarantCo's provision of a partial guarantee adjusted the risk profile of the bond to an acceptable level, allowing Stanlib Ghana to participate.

Quantum Terminals and GuarantCo worked closely together on the design and structuring of the bond. GuarantCo sought to right-size the coverage of the guarantee as required to secure the investment from Stanlib Ghana on behalf of its clients, and ultimately reduced the guarantee from full (100%) to partial (75%) coverage. This was an important achievement, as it demonstrated the willingness of local investors to take on some direct corporate risk in the transaction. Quantum Terminals and GuarantCo coordinated closely with Stanlib Ghana to agree to the terms and pricing of the bond while other documentation was completed. The bond was privately placed in 2018 with Stanlib Ghana on behalf of its clients, which included 37 pension plan investors, and did not require an underwriter or backstop. The corporate bond represents the first tranche in a planned GHS 140 million series.

In 2018, Quantum Terminals completed a dual listing of the bond on both the Ghana Stock Exchange (GSE) in May 2018 and the London Stock Exchange (LSE) in November 2018. This was the first time a corporate bond issued by a non-financial institution was listed on the GSE and the first local currency corporate bond from West Africa to list on the LSE. While the corporate bond has witnessed limited trading to date, the dual listing provided a platform for Quantum Terminals to increase its prominence across local and global markets. As a testament to its achievements, Quantum Terminals' corporate bond was recognized globally as the Best Local Currency Bond for 2018 by EMEA Finance.

STRUCTURE AND GOVERNANCE

CAPITAL STRUCTURE

Quantum Terminals issued GHS 45 million (USD 10 million) to asset manager Stanlib Ghana on behalf of local pension fund clients. The bondholders receive a 22.25% per annum fixed interest rate, paid semi-annually after an initial one-year moratorium on principal repayment. The amortization schedule was attractive to investors as it allowed for reduced exposure over the life of the loan.

The notes are scheduled to amortise over a 10-year tenor, culminating in March 2028. All notes in this first issuance rank pari passu. GuarantCo provided a partial guarantee (75%), priced at ~3.5% per annum, which covered debt servicing amounts owed by Quantum Terminals to the bond investors. The issuance was also secured for the bond investors by a second ranking mortgage on the site for the QTL Tank Farm (QTL Anokyi Land) and a second ranking charge over the issuer's on-site plant and machinery. In addition, a Debt Service Reserve Account (DSRA) and a Debt Service Accruals Account (DSAA) was established with Guarantee Trust Bank Ghana Limited (GT Bank) and Stanbic Bank Ghana Limited, respectively, to further mitigate payment risk for bondholders.

LEGAL STRUCTURE AND GOVERNANCE

The Issuer, Quantum Terminals Plc, was incorporated in Ghana as a private company limited in March 2011, and subsequently converted to a public limited liability company in October 2016, prior to the bond's listing on the GSE. Quantum Terminals is wholly owned by The Quantum Group Limited (TQTG). Through its subsidiaries, the Group supports three main activities: (i) the trading and distribution of petroleum products, (ii) terminals and infrastructure for petroleum products, and (iii) power generation. Quantum Terminals' Board of Directors has four members and two committees: the Audit Committee and the Renumeration Committee. The sound corporate governance structure of the company was highlighted as a motivating factor by the bond's investors.

GuarantCo was advised by the international legal firm Gowlings WLG on the dual listing of the bond on the GSE and LSE. The firm worked to ensure consistency between the English law guarantee and recourse documentation and the local corporate bond documentation (focused on project finance mechanics and protections). Gowlings WLG also supported Quantum Terminals with existing business operations and its equity rights under the Early Power project. This was a key consideration given that the proceeds of the bond were being used in tandem to support the Early Power project.

OPERATIONS

ACTIVITY TO DATE

Since Quantum Terminals began operations in 2011, it has played a key role in supporting the development of the LPG sector in Ghana. The lion's share of the proceeds from the bond issuance were used to expand the storage and distribution capacity of the QTL Tank Farm, construct an improved truck park facility, and improve the loading efficiency of the facility. The Tank Farm currently has a 750Mt LPG storage capacity and can load up to 1500Mt per day. In 2015, the QTL Tank Farm constituted over a third (32%) of LPG sold in the country. A further portion of the proceeds have been earmarked as working capital.

Beyond those directly financed activities, the credit-enhanced bond also supported the refinancing of debt from Standard Chartered UK ($6 million) and Standard Chartered Ghana (GHS 12 million) for the initial construction of the QTL Tank Farm. This refinancing enabled Quantum Terminals to raise the necessary $10 million in capital to invest in the development of infrastructure terminals for the Early Power project. Early Power is a 200MW LPG-fuelled combined cycle power plant, which will supply electricity to the Electricity Corporation of Ghana under a 20-year power purchase agreement. The project, which is set to be the largest LPG-fired plant in the world, will play a significant role in helping the country meet its power requirements as well as reduce the country's reliance on more expensive, less efficient fuels, such as crude oil and diesel. It is anticipated that the plant will begin delivering electricity to the Ghana power grid in early 2020.

IMPACT TO DATE

Quantum Terminals supports the storage, transportation, and use of LPG in Ghana. At present, Ghana suffers from a severe lack of adequate energy infrastructure, strained by increasing population growth and high urbanization rates. Access to modern energy services is key to fulfilling basic social needs and fueling human development, with positive effects on productivity, health, education, safe water, and communication services. While Ghana maintains a high electrification rate (84% of the population has access to electricity) there are large disparities in access to electricity between urban areas (95%) and rural areas (71%). As a result, rural areas rely primarily on biomass fuels (e.g., firewood) for domestic uses, such as household cooking, leading to a variety of adverse environmental, social, and health effects including mass deforestation, higher levels of GHG emissions, and high rates of household air pollution.

In response to these challenges, Ghana has been actively scaling up its use of LPG as part of its Sustainable Energy for All (SE4All) action plan. First launched in 2012, SE4All plans to expand LPG access to 50% of Ghana's population by 2020. LPG is considered to be a favourable alternative to other fossil fuel and biomass sources. As a low-carbon, low-polluting fossil fuel, LPG has a 50% lower carbon footprint compared to coal, which continues to be a dominant, and growing, source of power across the African continent. In Ghana, the uptake of LPG will provide more reliable power generation for the country and reduce its dependence on declining hydropower as well as emergency diesel. In addition, the increased use of LPG will slow the loss of forest land and reduce household air pollution arising from household cooking. This is particularly significant for rural areas, where 90% of households rely on firewood or charcoal for cooking. Moreover, adverse health effects disproportionately affect women and children who spend more time in the house.

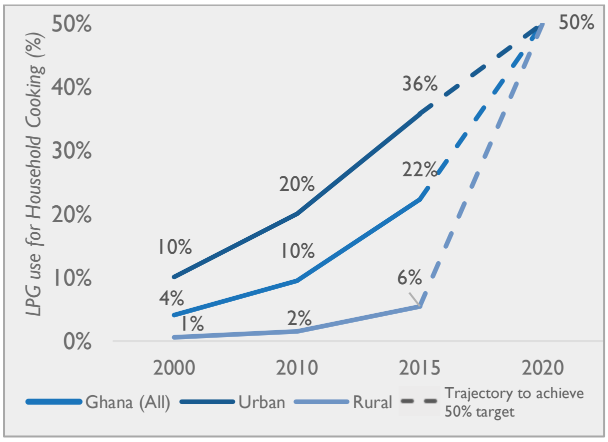

Figure 3: Percentage of population using LPG for cooking in Ghana over time (Source: Ghana Statistical Service)

Ghana's efforts to transition from inefficient fuels, such as coal, to cleaner alternatives, such as LPG, is a process known as "fuel-switching" and has been supported by MDBs, DFIs, and impact investors, as a means to achieve rapid emissions reductions. Still, as fossil fuel projects, LPG ventures receive less support than zero-emissions renewable energy sources. In particular, publicly-funded climate-focused facilities like the Green Climate Fund and Global Environment Facility have supported only a limited number of LPG projects to date, even though these projects are not excluded from their funding criteria.

FOLLOW-ON STRUCTURE

The credit-enhanced bond represents the first in a planned GHS 140 million (approximately USD $25.8 million) series to support Quantum Terminals' growing business activities. GuarantCo intends to provide a guarantee for future tranches and may provide less coverage than on the first issue depending on investor appetite. In keeping with GuarantCo's mission to increase global access to local currency bonds, the second tranche will also be listed dually on the GSE and LSE. This will serve a demonstration effect for future local currency bond listings and increase Quantum Terminals' recognition on global markets.

KEY INSIGHTS

Quantum Terminals provides several useful insights for others looking to issue or invest in local currency bonds, particularly in the infrastructure sector:

- Corporate bonds are a viable path for local companies looking to raise additional financing from new investors: Initially, Quantum Terminals sought debt financing from commercial banks, which remain the primary source of private capital for infrastructure projects in Sub-Saharan Africa. However, the company was unable to secure additional capital due to its long-term debt requirements and funding restrictions faced by banks. As an alternative, Quantum Terminals pursued a 10-year corporate bond that was enhanced by a partial guarantee from GuarantCo. The partial guarantee adjusted the risk-return ratio of the bond, helping the company raise capital from a new investor set – local institutional investors. With the Quantum Terminals transaction as an example, corporate bonds provide a potential vehicle for local companies to tap into new, additional, types of investors. Moreover, the long-term tenor of corporate bonds makes them especially well-aligned to the financing needs of the infrastructure sector. Corporate bonds should be considered by local project developers as an alternative fundraising option.

- Guarantees can help reduce local currency risks for projects, crowd in private sector investors and develop local capital markets: In the case of Quantum Terminals, GuarantCo provided a partial guarantee for the company's initial LPG tank project in 2013, which allowed Quantum Terminals to obtain a local currency loan from Standard Chartered Ghana to supplement its hard currency debt. More recently, GuarantCo provided a partial guarantee (75%) to support Quantum Terminals' corporate bond, enabling the company to raise local currency from domestic institutional investors. Guarantees can therefore play an important role in supporting the growth of capital markets – by absorbing part or all of the common credit risks that domestic capital providers may not have the appetite for, guarantees help to displace the need for hard currency funding for infrastructure projects. While still limited in scale, Quantum Terminals' success in mobilizing local currency financing demonstrates how guarantees can help developing countries reduce their hard currency debt burdens, particularly in the infrastructure sector.

- Specialized blending facilities like GuarantCo allow traditional development financiers to achieve greater and more efficient market reach: As a specialized vehicle, GuarantCo provides an entity for its shareholders (i.e., donor governments) to more efficiently deploy capital. Traditional development financiers including development agencies, development finance institutions (DFIs), and multilateral development banks (MDBs) often prefer larger ticket sizes, which creates a financing gap for companies like Quantum Terminals seeking to raise relatively small amounts of capital (e.g., <$10 million). Moreover, transactions denominated in local currency, such as Quantum Terminals' corporate bond, often exceed the acceptable risk level for traditional development financiers. As a specialized and fit-for-purpose vehicle, GuarantCo is equally equipped to support smaller transactions as well as larger, more complex transactions, thereby having the flexibility to fill critical gaps in the market. GuarantCo has demonstrated its ability to consistently leverage its capital commitments, acting as an efficient and more effective conduit for reaching high-impact projects in the infrastructure sector.

- Building international appetite for local currency markets in Africa will take time and repetition: Despite the potential for local corporate bonds in Africa, there has been little appetite for these instruments from international investors. One challenge is that few corporate bonds from Sub-Saharan Africa have fulfilled the stringent requirements to be listed on the LSE. It is therefore a landmark achievement for Quantum Terminals to be listed on this exchange and sets an important precedent for corporates in Africa looking to raise local currency financing from global investors. While building interest from global investors will take time (there has been little public trading of the bond to-date), dual listings provide an important avenue to access new sources of financing, while building credibility in the market.

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