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Commodity trading firms and Islamic structured trade finance: a contribution to attaining UN's SDGs

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by

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Executive Summary

Over the past decade, some commodity trading firms have increasingly replaced banks in performing financial intermediation across their value chains. Since this role has primarily been fulfilled using prepayment facilities, these financing schemes act as a benchmark to gauge their lending practices. In some countries and commodity markets, prepayment facilities now act as the most readily accessible source of funding for commodity producers and other upstream counterparties. Typically, commodity prepayments are structured in a way which allows the financing commodity trading firms to externalize most of their risk burden and minimize any eventual loss while implicitly exploiting the counterparty's financing requirements to the extent that the latter's own bankruptcy may be a contractually implied consequence for safeguarding the interests of the commodity trading firm. Numerous countries and private sector entities are subjected to this form of debt bondage worldwide. As such, this prevailing way of financing commodity trade flows is inherently skewed in favor of the lender and doomed to suppress the economic growth and development of the financed counterparties, implications which significantly hinder the already lagging attainment of the United Nations' Sustainable Development Goals.

Islamic finance, which is based on risk-sharing ventures and interest-free lending practices correlated to real economic outcomes, is inherently aligned with the UN's SDGs targeted outcomes. Thereby, the United Nations Development Programme (UNDP) committee has been thriving "*to position Islamic finance as one of the leading enablers of SDG implementation around the world*" (UKIFC, 2020).

Considering this effort, an interest-free Shariah-compliant prepayment facility has been suggested to be implemented by commodity trading firms. The facility is based on the *bai al salam* Shariah-compliant conceptual structure, which is similar to a conventional forward contract, except for the price to be paid upfront to the counterparty to facilitate its working-capital financing needs and readily avail the required supply of commodities.

The research performed from a risk management perspective has revealed that the usage of *salam*-based commodity prepayment facilities in financing commodity trade flows could significantly act as an inclusive means to alleviate poverty, support economic development and growth thus increasing the productivity at national levels and curbing the indebtedness of the financed counterparties.

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1. Introduction

The origination of commodities in commodity-export-dependent countries form the starting point of currently globalized value chains. Private and state-owned entities in those countries are permanently in need of selling their raw produce to offshore buyers, sometimes at the expense of accepting disadvantageous sales and/or financing terms, in order to somehow sustain their domestic economies.

Over the past decade, some commodity trading firms have increasingly been financing producers and other upstream counterparties using prepayments. Their role as commodity financiers has significantly increased worldwide. Now, some countries owe a major share of their external debt to a few commodity trading firms as they provide financial resources to their private and governmental sectors in exchange for merchandizing their natural resources overseas. While the state-owned and private sector beneficiaries of such prepayment facilities may benefit from cashflows from period to period, they are surely worse-off during periods of depressed commodity prices as they have to supply exceptionally high quantities to make up for the drop in market value. In turn, those beneficiaries are constantly subjected to commodity price volatilities which in turn impedes on their economic growth. As a result, the debt levels in some commodity-export-dependent countries have reached record highs while an increasing portion of those countries are exhibiting the inability to service those debts. Thereby, the use of such prepayments for originating commodities is inherently not aligned with the United Nations' Sustainable Development Goals which aim to improve the prevailing socio-economical and environmental conditions on our planet.

Islamic finance, also referred to as Shariah-compliant finance, an under-represented but rapidly growing niche of the global financial industry which promotes risk-sharing ventures tied to real economic activities and prohibits interest-based lending, presents a distinct liquidity pool for all investors and lenders to tap into to generate financial returns and simultaneously contribute to the attainment of UN's SDGs by financing commodity trade flows.

Therefore, this thesis aims to explore the role of commodity trading firms in financing commodity trade flows, and suggest an alternative interest-free Shariah-compliant commodity trade financing prepayment facility, explore its key features and illustrate its impactful potential to meet the UN's economic development-related SDGs in the light of prevailing economic dynamics in commodity-export-dependent countries.

2. Literature review

Bhatia (2017) has illustrated the diminishing role of bank-originated trade finance after the 2008 global financial crisis mainly due to Basel III which has prescribed additional liquidity and capital requirements for trade finance assets on banks' balance sheets. This explains why many non-bank trade financiers, which are exempt from such conservative prescriptions, have emerged and are catering to specific markets, among which SMEs are key beneficiaries.

On the one hand, over the past decade, commodity trading firms have increasingly been acting as financiers using prepayment facilities to fill in the gap widened by the decrease of bank-originated trade financing primarily due to the imposition of more stringent regulations on banks (Jacques et Simondet, 2016).

The Committee on the Global Financial System (2014) commissioned by the Bank for International Settlements (BIS) has highlighted that prepayments, supported by working-capital facilities provided by banks and insured by Export Credit Agencies (ECAs), have become the key alternative trade financing solution to bank-originated trade finance products to support trade growth. This trend reveals the structural evolution of the trade finance industry following the 2008 global financial crisis.

On the other hand, the use of Islamic trade financing products is viewed by many as a distinguished but under-addressed equitable solution to finance commodity trade flows (McKenzie, 2019). In a cutting-edge report, the WTO (2016) validly suggests that multilateral development banks should be supported in developing trade financing solutions as they have demonstrated a strong track record of profitably facilitating trade in markets where private lenders are reluctant to operate.

Pirrong (2014) elaborated a conceptual framework describing the economics of commodity trading firms and highlighted that most of them were vertically integrated and/or diversified their business portfolios to some extent so as to benefit from underlying opportunities that pertain to the comparative advantage they possess over trade financing banks. This shows the market proximity to and resulting knowledge of both suppliers and customers which enable commodity trading firms to provide them trade financing services in the form of traditional credit and even more complex structured solutions which encompasses financing, risk management and other marketing services. This concise whitepaper presents the commodity trading business in an unrivalled comprehensive manner.

Beck et al. (2019) have revealed that, although default rates of trade finance applications originated from SMEs have historically been lower than 0.25%, banks continue to either require disproportionate amounts of collateral or charge high interest rates. This indicates that, at least on their proven low-risk track record, equitably financing them is a significant opportunity for commodity trading firms to tap into which would in fact contribute to achieving some of the UN's SDGs.

Jacques and Simondet (2016) have reviewed the role of large commodity trading firms increasingly acting as financiers through the profitable usage of prepayment facilities. They have argued that those prepayments are akin to "*forward purchase*[s] *financed by a series of futures spot sales financed by self-liquidating trade finance loans*" which means that, in times of dropping commodity prices, the exporter's collateralized production devalues as compared to the funds obtained. This is not an insignificant inference pointed towards as it effectively leads to the assumption that prepayments are highly leveraged loans.

Gundogdu (2011) proposed a practical and thorough structured trade finance model for a complete supply chain financing scheme primarily based on the Islamic trade finance instrument known as *bai al salam* to support cotton trade in Sub-Saharan Africa wherein conventional forwards contracts are typically used. It is a significant breakthrough because it demonstrates that a *salam*-based prepayment facility, when structured in a way to specifically mitigate all counterparty-related risks, can provide the likes of security as conventional prepayment facilities to the financier. Ultimately, the successful implementation of such *salam*-based facility primarily relies on rigorous tailoring through the identification of all involved parties' roles, their potential to bear specific risks related to the funding and reimbursement process.

Bacha (2013) conducted a comparative study between forward contracts versus *salam* pointing out two key differences: under a *salam*, the fixed price to be paid upfront is lower than the then spot price to allow the buyer to potentially benefit from the trade whereas under a forward contract the buyer pays the fixed delivery price at contract maturity. This study was significant since it also established that the payoff profile of a *salam* contract is equivalent to forward contracts at the maturity date of the latter.

Kaleem and Wajid (2009) have highlighted the mutual benefits that can be derived by the contracting parties of a *salam* contract: the buyer secures the supply of goods at a price below the market price while the seller obtains funding upfront. Thereby, they argued that price risk can be eliminated and market liquidity can be enhanced if the buyer subsequently enters into parallel *salam* contract. Their study underlines the incompatibility of banks' business models in providing *salam*-based funding due to their inherent nature of dealing with money and documents rather than physical commodities.

Putri, Razia and Muneeza (2016) have explored the potential of the use of *salam*-based financing as a complementary solution to meeting the core purpose of the UN's SDGs, especially for poverty alleviation without compromising economic growth. They proposed a decentralized model wherein the United Nations High Commissioner for Refugees (UNHCR) partners with local agricultural cooperatives using *salam* contracts and mitigates the price risk by entering into parallel *salam* contracts with determined off-takers.

Despite that upfront payment of the determined price is a fundamental requirement in a *salam*-based transaction and a distinguishing feature of it, Suliman (2015) depicted the *salam* contract as ideal alternative to an European option as the former's widespread usage may lead to array of implications which could contribute to economic growth and productivity: receiving of interest-free liquidity to the seller, premium-free hedge against price risk for the buyer, risk-sharing, allocative efficiency and a protection against inflation to the wider economy.

Fijawi (2016) has noted that Islamic financiers and conventional banks operating through Shariah-compliant windows use *salam* contracts in conjunction with other Islamic contracts to mitigate the inherent risks and prevent the misuse of funds advanced upfront to the counterparty. This explains why their usage is gaining ground as an alternative to futures contracts due to the latter's inherent highly speculative nature.

While Muneeza, Yusuf and Hassan (2011) have theoretically suggested the feasibility of a banking product based on a *salam* structure to support agricultural SMEs in Malaysia, Hisham and Jaffar (2019) further discovered that the fundamental attribute of fully paying the mutually agreed price upfront built in a *salam* contract contributes to eliminating price risk entirely from the transaction, a key advantage that none of the conventional hedging tools provide.

The literature reviewed and summarized above has demonstrated that the currently used prepayment facilities by commodity trading firms are not adapted to contributing in attaining the UN's SDGs. Although the purpose of a prepayment is to primarily secure a steady supply of commodities for the financing commodity trading firm, it has been a notable yet unsustainable source of working-capital for many counterparties. Besides, many commodity exporting SMEs are seeking alternative financing solutions as banks and commodity trading firms are increasingly perceiving them as more risky borrowers due to the disproportionate impact of the global COVID-19 health crisis on their trading capabilities (Hoffman, 2020). In that context, evaluating funding solutions based on Islamic trade financing principles, which have benefitted from increasing spotlight lately due to their inherent alignment with the UN's SDGs (African Press Office, 2020), is a tangent worth being explored as it could benefit commodity trading firms in developing mutually beneficial and equitable financing solutions for trading with their upstream counterparties.

Since *salam* contracts seem to hold unequivocal comparative advantages over forward contracts, it raises an undeniable premise of whether the use of *salam*-based prepayments is an inclusive alternative in financing global commodity trade flows. Yet, to the best of the author's knowledge, the increasingly pivotal role of commodity trading firms in financing trade flows remains relatively under-researched and there is no publicly available academic paper that discusses the usage of Islamic trade financing solutions as originated by commodity trading firms.

Therefore, this thesis aims at filling the gap by answering the following research question: how could a *salam*-based prepayment facility act as an alternative to conventional prepayment facilities in enabling commodity trading firms to contribute in attaining United Nations' Sustainable Development Goals?

3. Methodology

This thesis primarily aims to suggest an alternative commodity prepayment facility based on the *salam* conceptual Shariah-compliant trade financing structure practically implementable by commodity trading firms to equitably and inclusively finance commodity producers and other upstream counterparties located in commodity-export-dependent countries and contribute in attaining the UN's SDGs.

The research is based on exploring three axes: the role of commodity trading firms in financing commodity trade flows, key economic development-hindering dynamics in commodity-export-dependent countries and the feasibility of implementing a Shariah-compliant commodity prepayment facility from a risk management perspective, the potential equitable impacts for its beneficiaries and alignment with the UN's SDGs.

Commodity trading and trade finance are highly opaque industries. Over the past years, some large commodity trading firms have begun publishing annual reports providing key insights into their business models, globalized scope of merchandizing activities and financials. Although those few predominantly large commodity trading firms are not necessarily representative of the business dynamics of the overwhelmingly fragmented marketspace, some of them act as key players in their respective commodity markets.

In the absence of an accurate and comprehensive publicly available source of commodity trade finance data evidencing the usage of prepayment facilities in the commodity trading industry, the research has primarily been qualitative in nature and extensively based on secondary data obtained from a wide array of publicly available sources such as academic research, annual reports, research published by international and non-governmental organizations, governance bodies reports, market news and insights publicly shared by practitioners.

Complementarily, primary qualitative data has been provided by a few representatives of both conventional and Islamic commodity trade finance markets through online depth interviews. The valuable insights shared and approved to be disclosed after having omitted sensitive information for confidentiality purposes have contributed to substantiate the findings and are documented in the annexes.

4. The role of commodity trading firms in financing commodity trade flows

Commodity Trading Firms (CTFs) purchase, store, transport and sell commodities primarily using short-term external funding. As they perform these merchandizing activities on a daily basis, while the largest of them execute numerous multimillion-dollar trades in a single business day, their working-capital cycles become cash-intensive.

The commodity trading industry is highly fragmented with countless SMEs focusing on niche areas while a few large CTFs disproportionately trade huge volumes across commodity markets. Two key features distinguish both types of commodity trading firms: asset intensity and integration.

Typically, SME CTFs tend to be privately-owned and are "*asset light*" i.e. they do not own any significant fixed assets as their operations are mainly focused on merchandizing whereas larger ones are integrated to various extents across the value chains of the commodities they trade and thus tend to become publicly listed in order to transfer the additional risk incurred from fixed asset ownership to a broader investor base (Pirrong, 2014).

4.1 Sources of financing

Collectively referred to as commodity trade finance, short-term trade financing arrangements are availed by lenders in the form of credit lines to fund the regular merchandizing operations of CTFs. These financing arrangements are supported by insurance companies which provide risk-absorption services.

Financing commodity trade flows is: transactional i.e. the lender aims to retain the possessory title to the financed commodities throughout in the supply chain, and; self-liquidating i.e. commodities are used as collateral and their sale proceeds constitute the source of repayment of lent funds, and; developing & least developed countries-focused since most commodities originate therefrom. Thereby, country, counterparty and credit risks are the prevailing risks to be managed while trade receivables, inventory and trade payables are the key balance sheet positions to be fueled by the lent funds.

Business integration ventures aimed at mitigating market shocks by gaining the ability to self-hedge across the owned value chain segments and reducing transactional costs, are typically supported by separate long-term credit lines and through the issuance of corporate debt (Buchan and Errington, 2019).

The credit lines act as master loan agreements whereby funds are availed to CTFs subject to strict terms & conditions related to their usage. Most credit lines, also known as facilities, contain sub-limits for specific usage of the availed funds with pertaining terms & conditions. For consideration, lenders charge arrangement fees for establishing the credit lines and other sub-facility and transaction-specific fees pertaining to their utilization and the usage of related trade financing instruments.

Typically, each facility is tailored to the CTF's requirements and their parameters are set up in accordance with the lender's risk appetite. At regular intervals, usually on a weekly basis, the facilities are marked-to-market i.e. they are revalued based on the fluctuating value of the collateralized commodities that are financed therewith (Buchan and Errington, 2019).

4.1.1 Decreasing role of banks in commodity trade finance

The aftermath of the 2008 global financial crisis has caused notable structural changes in the commodity trade finance market. The progressive implementation of the revised Basel III framework along with other regulatory frameworks essentially requiring banks to carry additional liquidity, higher capital requirements for off-balance sheet instruments such as documentary credits which are extensively used in financing commodity trade flows with counterparties located in developing and least developed countries, lowering leverage ratios and more stringent Know-Your-Customer (KYC) and Anti-Money Laundering (AML) control requirements on borrowing counterparties for trade financing purposes has significantly hindered the competitiveness of this asset class in the banking sector (Bhatia, 2017).

While about 80% of the commodity flows were estimated to be directly financed by banks prior to the 2008 global financial crisis, by the end of 2013, "*the aggregate annual revenue from the top 10 banks involved in commodity trading shrank from a peak of 14 billion USD in 2008 to a mere 4.5 billion USD in 2013*" (Kosakih, 2014).

In fact, trade financing has prevailed as a highly paper-intensive business due to the fact that English law, the overwhelmingly governing law in the global commodity trading industry, does not recognizes the validity of several paperless collateral and shipping documents. Also, regular monitoring of collateral, often done on a daily or weekly basis, implies that commodity trade financing is a relatively labor-intensive activity.

Moreover, the fees charged by banks related to processing trade financing instruments are often expressed as a percentage of the commercial transaction value (Ward, 2009).

Thereby, transactions performed by SME CTFs, as compared to their larger counterparties, generate relatively much lower revenues for banks.

Therefore, considering these issues in the light of commodity trading to be a high-volume and razor-thin margin business, some banks which have traditionally widely been financing cross-border commodity trade flows pulled out of the market altogether to focus on financing more lucrative asset classes while others narrowed down their exposure to mostly financing larger CTFs which exhibit relatively lower risks and act as sources of higher return for a given workload related to processing and monitoring activities due the relatively larger deals performed by them (Bousso and Sheppard, 2013).

As a result, commodity producers, processors and traders, especially those located in developing & least developed countries, have suffered from a significant shortage of financing solutions to fuel their operations (Loensetteig, 2017).

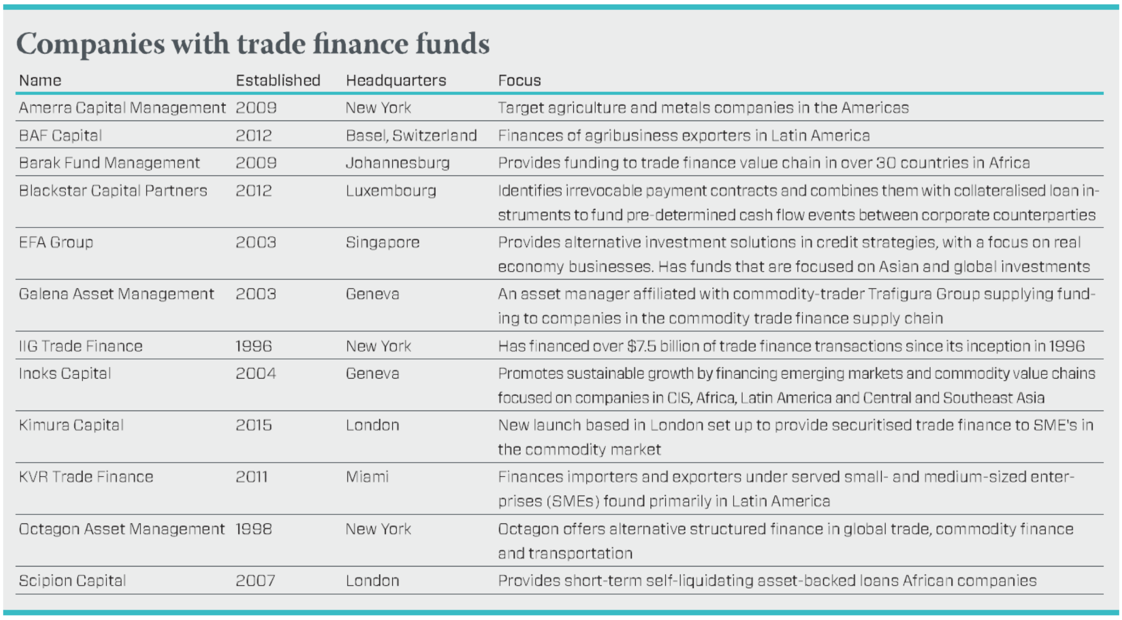
4.1.2 Alternative lenders

The shifting exposure of global banks towards financing larger and well-established CTFs as they represent a higher source of revenue since they trade larger commodity volumes and due to their relatively lower risk profile paved the way for them and other alternative lenders such as asset management firms both of which are "*exposed to the same governance regulations* [as banks but] *not subject to the same capital, leverage and liquidation requirements*" (Loensetteig, 2017) to fill in the gap by extending "*short-term, asset-backed loans and* […] *additional lines of credit to commodity producers, processors and traders*" which represent relatively higher risk and return ventures (Segal, 2016).

A notable feature of commodity trade finance assets is that they have a proven track record of carrying very low risks due to their inherent features: short tenors usually ranging up to 180 days, fully collateralized, mostly fungible underlying commodities and wide usage of insurance & derivatives to hedge related risks (BIS, 2014).

On the one hand, numerous asset management firms have become "*the new banks*" of the trade finance industry as they developed specialized trade finance funds focusing on different segments of the market not catered anymore by global banks and are now perceived as "*a more secure source of trade finance than leveraged banks*" due to their strategy often consisting in holding portfolios of uncorrelated assets which are financed using varying blends of senior, secured and uncommitted short-term loans with tenors ranging up to six months (Lovell, 2020). The features of commodity trade finance make it a perfect alternative lending opportunity for investors willing to diversify their portfolios since it is a means to fund real economic activity and a source of predictable cash-flows which are uncorrelated to financial markets (figure 1).

Figure 1 –Trade finance funds



Companies with trade finance funds

Name	Established	Headquarters	Focus
Amerra Capital Management	2009	New York	Target agriculture and metals companies in the Americas
BAF Capital	2012	Basel, Switzerland	Finances of agribusiness exporters in Latin America
Barak Fund Management	2009	Johannesburg	Provides funding to trade finance value chain in over 30 countries in Africa
Blackstar Capital Partners	2012	Luxembourg	Identifies irrevocable payment contracts and combines them with collateralised loan instruments to fund pre-determined cash flow events between corporate counterparties
EFA Group	2003	Singapore	Provides alternative investment solutions in credit strategies, with a focus on real economy businesses. Has funds that are focused on Asian and global investments
Galena Asset Management	2003	Geneva	An asset manager affiliated with commodity-trader Trafigura Group supplying funding to companies in the commodity trade finance supply chain
IIG Trade Finance	1996	New York	Has financed over $7.5 billion of trade finance transactions since its inception in 1996
Inoks Capital	2004	Geneva	Promotes sustainable growth by financing emerging markets and commodity value chains focused on companies in CIS, Africa, Latin America and Central and Southeast Asia
Kimura Capital	2015	London	New launch based in London set up to provide securitised trade finance to SME's in the commodity market
KVR Trade Finance	2011	Miami	Finances importers and exporters under served small- and medium-sized enterprises (SMEs) found primarily in Latin America
Octagon Asset Management	1998	New York	Octagon offers alternative structured finance in global trade, commodity finance and transportation
Scipion Capital	2007	London	Provides short-term self-liquidating asset-backed loans African companies

Source: Alt Credit Intelligence (2016)

On the other, large CTFs based in Europe have increasingly been leveraging their banking relationships by providing commodity trade financing solutions to their counterparties thus making financial arbitrage a key profit center to the extent that it now represents the second largest source of revenue for numerous such CTFs and provides them a unique opportunity to secure commodity supplies at a discounted price and generate additional margins from subsequent sales revenues (Burroughs, 2017; Loensetteig, 2017). Some CTFs also finance their operations using funds sourced from asset management firms, especially for their relatively riskier ventures which exceed their financing banks' risk appetites (Jacques, 2016).

On the whole, commodity trade finance lenders remain mainly split. While banks primarily focus on financing large CTFs which then lend onwards to their smaller counterparties, asset management firms have developed expertise in financing relatively riskier ventures, SMEs and niches across commodity value chains (Dayan, 2015). Yet, less than 10% of the total worldwide commodity-related trade finance assets are held by asset management firms (Loensetteig, 2017). This estimation implies that the overwhelming commodity trade finance market is now indirectly controlled by a handful of large CTFs mostly based in developed economies.

4.1.3 Uncommitted Revolving Credit Facilities

Whereas a Revolving Credit Facility (RCF) is a credit line wherein the lender binds itself to "*extend or renew a loan – with or without changes in its level or terms – with few, in any, changes to the security or contracts*" (International Trade Centre, 2010), an uncommitted facility is a credit line wherein various forms of trade financing solutions, both secured and unsecured, are potentially availed to the borrower. Thereby, under an RCF, the usage of each potential trade financing solution is subject to specific conditions and pertaining sub-limits but not necessarily time bound.

However, the uncommitted nature of RCFs subject the CTF to the willingness of the lender to lend, even if all the criteria are met pertaining to a given financing solution covered therein (Moles and Terry, 1997). Yet, this flexibility in favor of the lender render RCFs to be a relatively cheap financing source, usually below 100 bps, and relatively easier to arrange since the lender will not have to commit capital for the borrower (Burroughs, 2017; Dempsey et al., 2019).

The relatively lower cost of RCFs is a key criterion which makes them the preferred source of secured financing for large CTFs (Bazin and Marrett, 2020). The downside is that the lender may require the borrower to repay the lent funds within a short notice period or following the occurrence of a certain type of pre-agreed event (Dempsey et al., 2019).

The commercial operations of CTFs vary significantly depending on market dynamics of the traded commodities. Typically, when a certain commodity price drops, CTFs tend to purchase and hoard exceptionally vast quantities and expect to sell them later in the future when the price would be higher. This is known as performing time arbitrage in a contango market. For such short-term unpredictable purposes, the potential availability of funds to be able to tap into is a crucial factor affecting their merchandizing capabilities. To minimize that funding liquidity risk, depending on the scope of their merchandizing activities, CTFs tend to diversify both the sources and the structures of their funding by setting up various types of credit lines subject to different repayment schedules while some CTFs almost exclusively rely on RCFs to fuel their daily operations (Bazin and Marrett, 2020, Burroughs, 2017).

To finance unusually large trades such as developing of production facilities of counterparties and sourcing commodities therefrom over a multiyear period, CTFs utilize specifically dedicated syndicated RCFs wherein multiple lenders jointly and severally undertake to lend an aggregate amount of funds on common terms and conditions (Loan Market Association, 2020).

4.2 *Financing counterparties using prepayment facilities*

CTFs fund the production of commodities and other pre-export activities primarily using prepayment facilities (Bazin and Marett, 2020). A prepayment is tripartite lending structure whereby a CTF, using a loan obtained from a lender, performs an advance payment to a counterparty in order to finance the latter's working-capital needs and take delivery of commodities with which the loan is collateralized. These financing arrangements consist in providing upfront funding to producers and subsequent upstream counterparties in the value chain to fund their operations (Buchan and Errington, 2019).

Over the past decade, the role of CTFs in providing trade financing solutions to their upstream counterparties has been exemplified through the usage of prepayment facilities (Jacques and Simondet, 2016). The growing importance of prepayment facilities across commodity markets is comprehensively captured in the following statement:

> *"A lot of these structured deals are now trader led whereas in the past a bank would lead the financing. The difference in recent years is that it's not only the medium and smaller sized producers who are interested in these deals, larger corporates are also adding prepayments to their range of funding options."*
> *(Stephan JANSMA, 2017)*[1]

4.2.1 Classification of prepayment facilities

The prepayment facilities discussed in this section are generic. Alike most commodity trade financing schemes, these facilities are also highly versatile and mostly private arrangements which implies that little pertaining data is publicly available (Howse, 2020).

While some prepayments may be short-termed and revolving in nature, the tenors of others may span up to five years – often financed by a syndication of lenders – and may also include the possibility of developing the operating infrastructures of the financed

[1] Stephan JANSMA is the current head of structured and trade finance at Trafigura. This quote is extracted from an article written by Callum Burroughs and available online at TXFNews.com

counterparty. And while some prepayment schemes are structured based on the balance sheet of the CTF with full recourse to the latter, others – often the larger ones with tenors lasting more than a year – may be structured using a Special Purpose Vehicle (SPV), the rights of which are assigned to the lender and entailing a full recourse to the SPV but a limited recourse to the CTF (Gianluca, 2017).

In short, prepayment facilities vary significantly in terms of their purpose, size, tenor as well as based on the risk they represent for the lender. In this study, the latter distinction has been focused on. Thereby, prepayments are broadly categorized under two distinct categories: secured versus unsecured prepayments.

4.2.2 Secured prepayment

A secured prepayment is defined as a prepayment arrangement wherein the lender retains full recourse against the CTF i.e. the latter would be required to pay back to the lender the value of the secured loan provided by its proxy to a counterparty regardless of the latter's performance.

Typically, under a secured prepayment facility, the lender would be a bank or a group of syndicated banks which rely on the CTF's expertise, financials and reputation to ensure that the counterparty delivers the contractual quantities of the prepaid commodities in due time (Jacques, 2018).

Since the risk primarily lies with the CTF, the lender usually charges a single digit risk premium for the CTF to perform such credit versus performance arbitrage. Thereby, the CTF often eliminates about 90% of the risk by contracting for a political and trade credit risk insurance policy and retains the remainder.

4.2.3 Unsecured prepayment

An unsecured prepayment is defined as a prepayment arrangement wherein the lender has no or little recourse against the CTF if the counterparty defaults under certain specific circumstances. Generally, these prepayments are used to finance riskier commodity trading ventures such as crude exports from regions wherein the rule of law may particularly be weak due to socio-economic conflicts (Jacques, 2016).

Lenders are often high reward-seeking institutional and private investors who provide the funds through the proxy of asset management firms which are not subjected to deleveraging banking prescriptions. Thereby, the interest rates offered on these prepayments are usually double-digited and a grace period may also be included in favor of the CTF before it starts repaying the periodic annuities to the investors.

Table 1 – Differences between secured versus unsecured prepayments

Features	**Secured prepayment**	**Unsecured prepayment**
Recourse	Full recourse	Limited or no recourse
Lender(s)	Banks	Institutions and private entities
Interest rate range	Single digit percentage	Double digit percentage
Arbitrage structure	Credit versus performance	Risk sophistication
Risk mostly borne by	Commodity trading firm	Lending investors
Risk-reward level	Low to medium	Medium to high
Grace period	None	Possible

Adapted from: Jacques (2016)

Therefore, a prepayment is much more than a mere loan provided to a counterparty. It is a package which comprises financing solutions, risk mitigation tools, shipping and storage services and aimed at ensuring that the counterparty performs the scheduled deliveries of the agreed upon contractual quantity of commodities in accordance with the contractually required quality standards.

4.2.4 Prepayment risk management

Whereas structuring the prepayment arrangement is the first step towards ensuring a complying performance, monitoring the appropriate usage of the lent funds, the production and storage of the goods until monetizing the entire venture through the sales proceeds to avoid the occurrence of any distress events is the key to a complying performance (Melly, 2015).

Prepayment facilities are split into two independent but inter-related undertakings: an off-taker loan agreement and a prepayment facility. They are split so that the lender and the CTF can each bear the risks which they respectively have expertise in managing. While the former primarily deals with risks related to the CTF's ability to pay back the loan which is granted by its proxy to a counterparty, the latter essentially deals with the risks pertaining to that counterparty.

Under a prepayment scheme, the CTF acts as both the lender and the off-taker to the counterparty. Whereas tenors of prepayment facilities usually range from a few weeks up to five years, they are highly customized deals. As such, some prepayment financing lenders may require additional guarantees from CTFs such as political & credit risk insurance to minimize the counterparty's risks.[2]

4.2.4.1 Prepayment risks borne by the lender

4.2.4.1.1 Credit risk of the counterparty

Usually, the lender bears the entire credit risk of the CTF under the off-taker loan agreement and around 85% of the counterparty's credit risk under the prepayment facility.

If the CTF bears the credit risk of the counterparty, the lender may provide financing with full recourse thus at a lower cost. These cost savings may be passed on to the counterparty in the form of a lower discount factor but would entail the latter to provide additional security to the CTF in the form of independent guarantees and/or insurance coverage.

4.2.4.2 Prepayment risks borne by the commodity trading firm

4.2.4.2.1 Basis risk

The basis risk refers to the difference between the spot price of a hedged commodity and the price of the hedging contract. It is commonly mitigated using basis swaps.

4.2.4.2.2 Country risk

The country risk refers to the inability of the borrower to "*fulfil its foreign obligations for country-specific economic or political reasons*" which are beyond that borrower's control (Avdjiev and Wooldridge, 2018). It is mitigated by pledging the sales proceeds to the lender into an offshore escrow account.

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2 Insights shared by interviewee from a large European commodity trade finance bank. See appendix 1

Optionally, a political and credit risk insurance policy covering up to 90% of the prepayment facility value can also be obtained from an Export Credit Agency (ECA) by the CTF at its own expense.

4.2.4.2.3 Credit risk of the counterparty

Although the majority of the credit risk pertaining to the prepayment contract is transferred to the lender, a minor portion of that credit risk, usually ranging up to 10%, is required to be retained by the CTF to avoid the occurrence of a moral hazard. Yet, both undertakings contain matching clauses for a seamless functioning alike under a conventional loan.

4.2.4.2.4 Currency risk

Generally, prepayment contracts are denominated in U.S. Dollars. Any exposure to U.S. Dollars can be hedged using cross-currency swaps.

4.2.4.2.5 Flat price risk

Since commodity prices are highly volatile, flat price and market risks need to be hedged.

While the market risk is primarily mitigated by pre-selling the prepaid commodities, the flat price risk is eliminated by pricing the commodities at a differential to a suitable benchmark index price. The benchmark price is hedged using derivative contracts such as futures and options. Yet, hedging depends on the availability of a suitable hedging instrument, liquidity of that derivative contract’s market and pertaining costs.

Therefore, if the prepayment scheme is not 100% hedged, flat price risk prevails.

4.2.4.2.6 Market risk

Prepaid commodities are often pre-sold to eliminate market risk i.e. the inability to sell the prepaid commodities at a given or higher sales price.

Using a Debt Service Coverage Ratio (DSCR), the value of the loan is set to be lower than the value of the commodities under the purchase contract. The percentage depends on the risk profile of the counterparty and on the price volatility of the commodities to be produced but typically revolves around 25%. It allows the lender to ensure that the counterparty will deliver a quantity of commodities not lower than the outstanding value of the prepayment facility and that the counterparty will not require to set aside a higher quantity than agreed under normal market conditions.

4.2.4.2.7 Performance risk

An undertaking from the counterparty and/or from its parent company, pledging some of their valuable assets is often required by the CTF to mitigate the performance risk of the latter under the purchase contract.

Thereby, if the counterparty fails to perform and does not repay back the prepayment loan, the CTF can seize the pledged assets to liquidate them and recover the outstanding sums due by the counterparty to itself.

4.2.4.3 Prepayment risks borne by the counterparty

Although resorting to those risk mitigants is contractually agreed upon by both parties, most if not all of them are unfavorable to the counterparty and skewed in favor of the lender. Unlike CTFs, commodity producers and other counterparties which are beneficiaries of prepayment funds hedge partially or not at all due to lack of adequate hedging knowledge, propensity to benefit from market upturns or save hedging costs thus creating a moral hazard versus the financing CTF (Carbo, 2017).

In fact, these issues render those counterparties vulnerable to price and market risks, especially during periods of plummeting commodity prices. In the absence of adequate hedging, an exceptionally high quantity of commodities may be required by the financing CTF to offset the drop in the flat price (Jacques, 2017b). The inability to absorb such shocks has caused numerous beneficiaries to either collapse or restructure their debts and allocate unsustainably higher resources to service prepayments. These issues are further discussed in detail in the next chapter.

4.2.5 Advantages of prepayments

Under backward/inverse market conditions or soaring flat price in the short-term, the spot price of a given commodity for an immediate delivery is higher than the price of that commodity for a delivery in the future. This bull market phenomenon can primarily be caused by two factors: a relatively higher demand as compared to prevailing supply or a lower supply as compared to prevailing demand. Thereby, CTFs are incentivized to sell stored or prepaid commodities to profit from the demand premium generated by prevailing market conditions while producers are also motivated to deliver the prepaid commodities in order to cash in the surplus cashflow resulting from the price differential above the determined reference price in the prepayment facility.

Table 2 – Advantages of commodity prepayment facilities

Lender	Commodity trading firm	Counterparty
Relatively less risky lending venture by transferring producer-related risks to CTF	Predictable supply of prepaid commodities at a discounted price	Predictable demand for produced commodities
Assignee of all rights under prepayment and off-taker loan agreement	Revenue generation from lending activity (interest income)	Opportunity to increase revenue through exports
Collateral coverage can be determined at the discretion of the lender using highly conservative price evolution scenarios	Negotiation power of commodity trading firm allows to dictate favorable contractual terms skewed in its favor	Access to working-capital financing not accessible otherwise or highly unaffordable
Ability to indirectly finance real economy related transactions	Possibility to provide embedded ancillary services to counterparty	Transfer of currency risk to commodity trading firm

Adapted from: Akinjide & Bradley (2016) and Melly (2015)

4.2.6 Disadvantages of prepayments

Under contango/normal market conditions or plummeting flat price in the short-term, the price of a given commodity for a delivery in the future is higher than the spot price of that commodity for an immediate delivery. This bear market phenomenon can primarily be caused by two factors: a relatively lower demand as compared to prevailing supply or a higher supply as compared to prevailing demand.

While CTFs are incentivized to perform time arbitrage i.e. purchase commodities and store them for selling in the future, producers are not inclined to deliver the prepaid commodities especially if their prevailing flat price is lower than the reference price determined in the prepayment facility because that would somehow be akin to selling those commodities at a loss. In fact, producers would have to supply higher quantities to meet the reference quantities determined in the delivery schedule in order to comply with the DSCR defined in the prepayment facility.

Therefore, to avoid the development of a wrong-way risk, which is defined by the International Swaps and Derivatives Association (ISDA) as "*an exposure to a counterparty* [which] *is adversely correlated with the credit quality of that counterparty*" (Jacques, 2017a), CTFs determine numerous events of defaults in the prepayment facilities mainly pertaining to the counterparty's inability to service the loan under adverse market conditions thus entitling them to declare a breach of contract and claim an early termination amount topped by accrued interest and expenses.

Table 3 – Disadvantages of commodity prepayment facilities

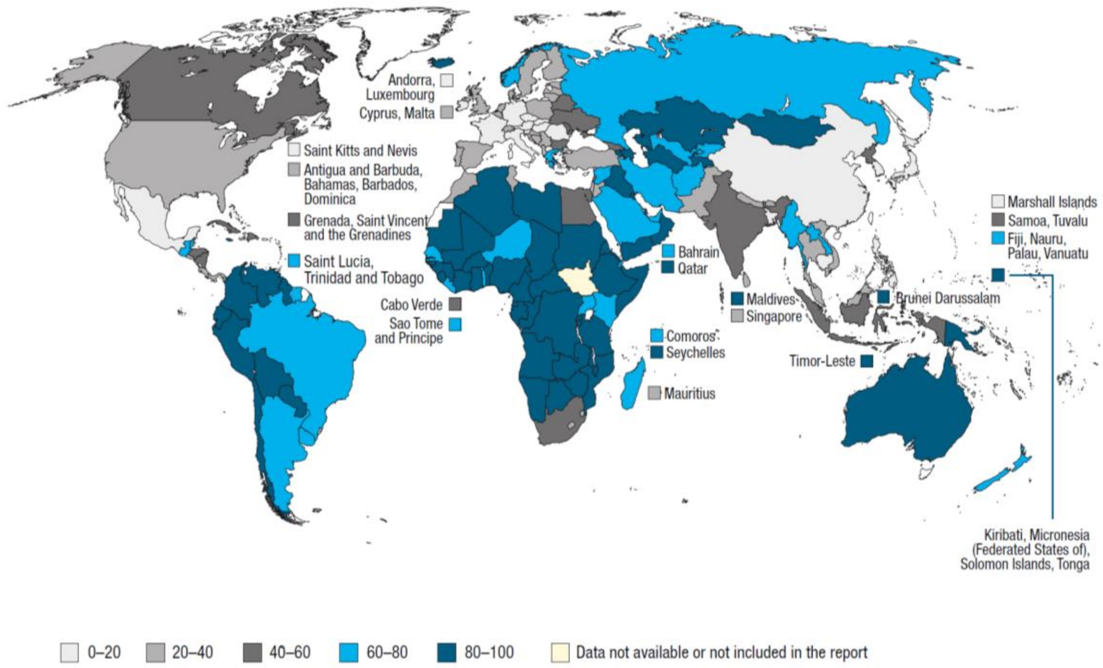
Commodity trading firms	Counterparty
Most risks pertaining to the venture are borne by the commodity trading firm	Primary funding source due to lack of affordable alternatives
Triggered event of default under a prepayment facility can potentially cause a breach of sales contract towards the buyer	Contractual obligation to supply commodities (eventually at a loss) even if prices fall significantly
Lender can exercise its assigned rights	Stringent contractual covenants to abide by in case financial distress and/or market downturn

Adapted from: Akinjide & Bradley (2016) and Melly (2015)

5. Commodity-Export-Dependent countries

Currently, 102 out of the 193 Member States of the United Nations (UN) are considered to be commodity-export-dependent, that is, “*when* [commodities] *account for more than 60% of* [a nation’s] *total merchandise exports in value terms*” (UNCTAD, 2019) (figure 2).

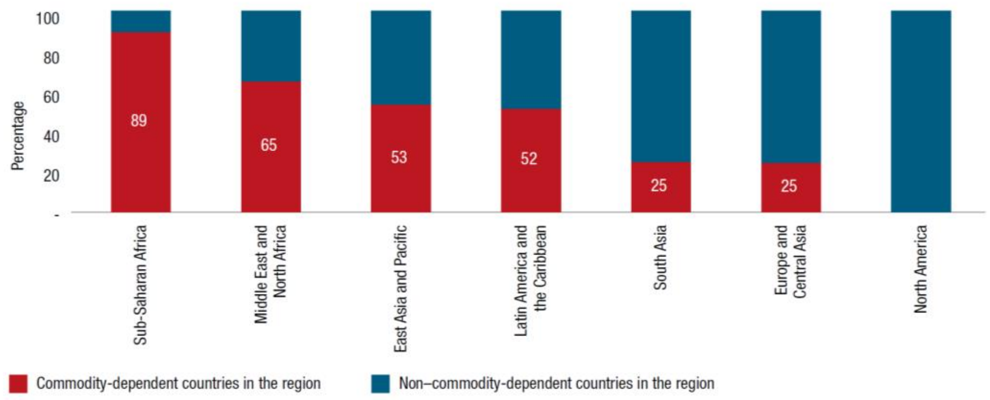
Figure 2 – Degree of commodity export dependence (in percentage)



Source: UNCTAD (2019)

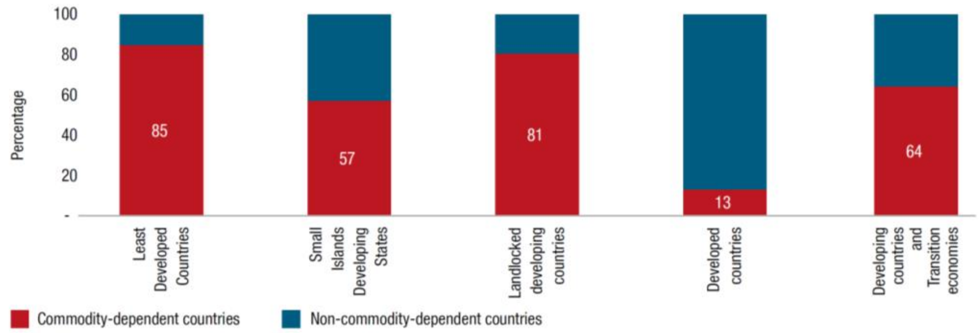
Moreover, as defined by the World Bank country classification index, most least developed and two-thirds of the developing countries or most low income and half of the middle-income countries are highly dependent on external debt to finance the extraction or production and export of their natural resources to generate revenue (figure 3; figure 4; figure 7)

Figure 3 – Regional distribution of commodity-export dependent countries



Source: UNCTAD (2019)

Figure 4 – Distribution of commodity-export dependent countries per development group



Source: UNCTAD (2019)

5.1 *Commodity trade financing dynamics in commodity-export-dependent countries*

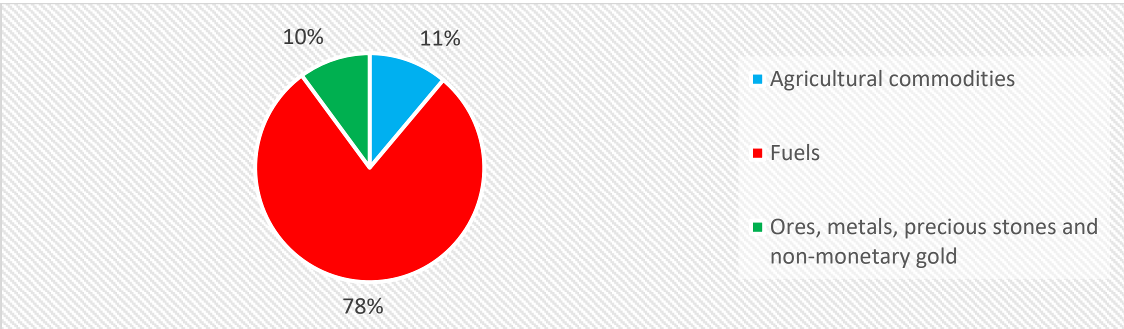
5.1.1 Increasing reliance on commodity trading firms as lenders of last resort

As discussed earlier, a few large CTFs based in Europe have widely replaced banks in providing structured trade financing solutions to producers and other upstream counterparties worldwide (Burroughs, 2017). This trend is of particular significance in commodity-export-dependent countries since the reliance of counterparties therein, especially state-owned entities which generate a notable portion of their countries' GDPs, on those offshore lenders for credit supply make them vulnerable to the occurrence of adverse economic events in the latter's economies (Hardy, 2019).

"Today we continue to warn about the risk of commodity extraction projects becoming enclaves – oriented towards export markets, isolated from the domestic economy, and disassociated from the outcomes for the country's citizens. As many developing countries have experienced, foreign and domestic political interests take root around the rents that flow from extractive projects." (Dr. Mukhisa KITUYI, 2014)[3]

Consider Tchad, one of the lest developed countries on the planet and the economy of which significantly relies on crude exports (figure 5). In 2007, based on a prepayment facility, one of the world's largest CTF in terms of annual revenue, has lent about USD 2 billion to Chad's national oil company, the *Société des Hydrocarbures du Tchad*, for crude oil extraction (Carbo, 2017). In 2016, this amount represented "*98 per cent of Chad's external commercial debt [or] eighty-five per cent of Chad's oil proceeds – its primary source of revenue*" (White, 2018). Since the launch of the lending venture, the country has had to renounce to numerous public infrastructure development projects in order to pay back the national debt, its rank has dropped in the human development index and its debt-to-GDP ratio has almost doubled as a result of complying with the covenants listed in the prepayment arrangements renegotiated with that CTF following the oil price crash in and around 2015 (Payne, 2018).

Figure 5 – Chad's exports by commodity group in 2017 (as a share of merchandise exports)



Source: UNCTAD (2019)

To put this example into perspective, about 32% percent of the combined debt of African commodity-export-dependent nations is owed to large offshore CTFs whereas only 23% percent is owed to China, the major sovereign investor in those nations, while interest

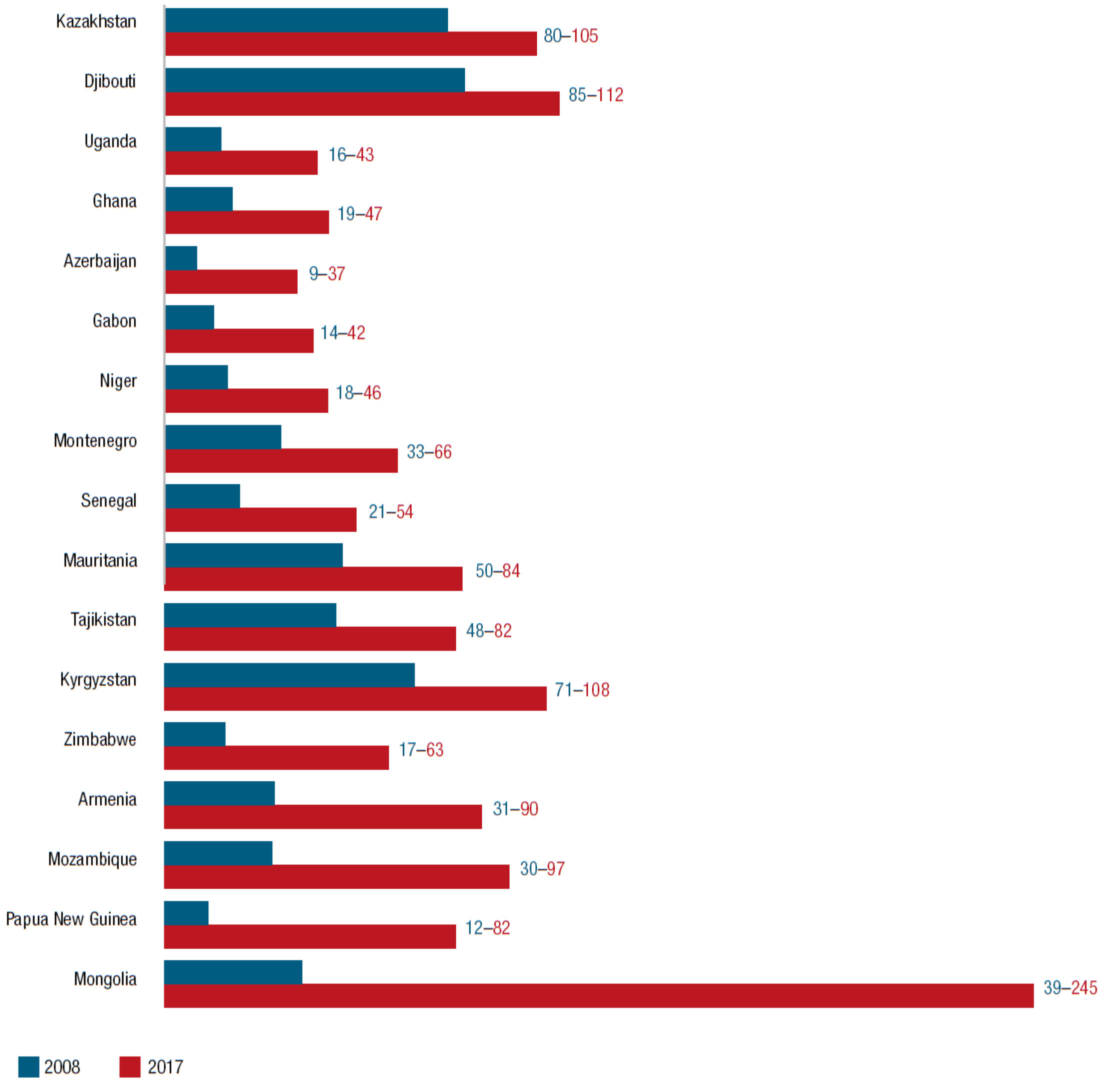
3 Dr. Mukhisa KITUYI is the current Secretary-General of the United Nations Conference on Trade and Development (UNCTAD). This quote is extracted from a speech provided by himself at the 5th Global Commodities Forum held on 7th April 2014 at UNCTAD's headquarters in Geneva, Switzerland, and cited in the article 'Strengthening SME services in the commodity trade' subsequently published by the International Trade Centre (ITC) on its website.

payments owed to those CTFs exceed by 38% those owed to China (Jubilee Debt Campaign UK, 2018).

5.1.2 Increasing debt levels and cost of credit

Over the past decade, the combined debt of commodity-export-dependent countries has almost doubled as cross-border lending activity to their private and state-owned entities has been increasing partly due to a prevailing "*low interest rates environment in most advanced countries*" while interest expenses have also proportionally soared (Valladares, 2019) (figure 6).

Figure 6 – External debt-to-GDP ratio in selected commodity-export dependent countries (in percentage)



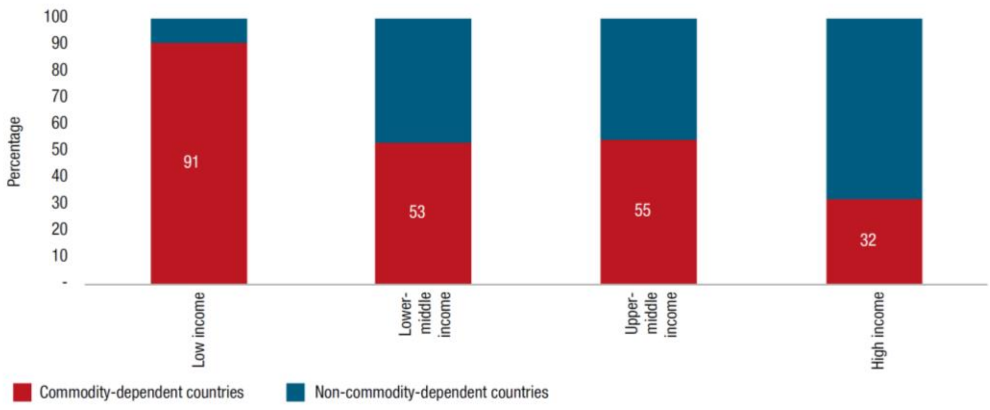
Source: UNCTAD (2019)

The various conventional interest-based lending schemes used to finance commodity origination out of those countries, more often than not, have an adverse impact on the economies of those countries (EITI, 2017). These unstainable debt levels led by such intensive interest-based lending activity increase country and credit risks of counterparties located in those nations thus making it even more challenging for them to access financing and hinders their domestic economic development. For instance, the debt-to-GDP ratio of the Republic of Congo, the third largest African oil exporting nation, soared by more than 50% in August 2017 following the discovery by the IMF of a sovereign debt worth around USD 1.25 billion owed to two large CTFs thus destroying the country's credit rating and hindering access to overseas funds (White, 2019).

Thereby, alike Chad, but to varying extents, more than one-third of commodity-export-dependent countries are now at high risk of debt distress i.e. unable to repay loans on the agreed terms while about two-thirds of them are assessed to be exhibiting moderate risks (IMF, 2018).

The overwhelming dependence on foreign debt as a source of financing in low income countries, most of which if not all are commodity-export-dependent countries (figure 7) subjects their economies and societies to an endless vicious circle wherein constant exports of natural resources at all costs are equated to a necessity in order to pay back the periodic annuities regardless of prevailing market conditions because the burden of first losses are mostly if not always concentrated on those borrowers which paradoxically are the least able to bear them especially during adverse market conditions (Wintermeyer, 2019).

Figure 7 – Distribution of commodity-export dependent countries per income group



Source: UNCTAD (2019)

For example, the 2015 oil price crash caused the Republic of Congo and Chad to restructure their oil-related debts to one large CTF, their major offshore creditor, and allocate significant resources to oil extraction purposes instead of investing in public development projects. In fact, prepayment facilities provided to their respective state-owned oil entities were structured in a way that they could realistically not pay them back in due time (Jacques, 2017b).

Therefore, the overflow of foreign debt in commodity-export-dependent countries does not imply that the economic conditions of the borrowers located therein are necessarily improving, nor are their respective country and counterparty credit risks reducing and nor do they obtain funding on equitable terms.

6. United Nations' Sustainable Development Goals

The United Nations' Sustainable Development Goals (SDGs) are a set of 17 universal objectives adopted by all UN Member States in 2015 and aimed at sustainably improving global socio-economic and environmental conditions by 2030 thus reflecting the worldwide drive for an inclusive development (United Nations, 2019).

> *"The SDGs are the blueprint to achieve a better and more sustainable future for all and in order to drive action and measure impact the 17 high level goals, each have a list of targets which are measured with indicators." (UKIFC, 2020, p.12)*

Figure 8 – UN's SDGs

Source: United Nations (2018)

According to the latest progress report published earlier this year, the overall progress to achieve these goals is lagging. Thereby, following a call made by world leaders at the SDG Summit last year, additional policy measures have been taken by considering inclusive growth, equity and sustainability as the core drivers to accelerate the drive towards the fulfillment of the goals by 2030 (United Nations, 2020).

The lack of financial resources, required at the rate of around USD 5 to 7 trillion per annum over the current decade, is reported to be the key impediment to achieving the SDGs in due time. The magnitude of this financing gap is such that reliance on public sector to bridge the gap would be insufficient and private sector financiers need to massively collaborate in providing responsible financing solutions that would contribute in fulfilling the SDGs by 2030.

7. Islamic Finance

The Holy Book of the Muslim faith – the *Quran* – and the scientifically compiled collection of the prophetic teachings – the *Sunnah* – together form the divine Islamic law – the *Shariah*. Over the centuries, an Islamic jurisprudence – the *Fiqh* – which is based on the objectives of the Shariah – the *Maqasid al Shariah* – has also been developed (appendix 5).

Thereby, while the *Shariah* constitutes the set of defined general principles and commandments contained in the *Quran* and the *Sunnah*, the *Fiqh* refers to all the legal rulings which have been issued pertaining to specific issues. In other words, whereas the *Shariah* cannot be altered, some rulings of *Fiqh* can evolve from one geo-temporal context to another.

Within the commercial and economical scope, Islamic financial practices, which stem from the Islamic commercial jurisprudence – the *Fiqh al Mu'amalaat* – are meant to accomplish the *Maqasid al Shariah* which establish social welfare as the core principle to be upheld by human beings when they perform commercial transactions which in and of themselves must be just, equitable and mutually beneficial for an efficient allocation of resources (Irfan, 2015).

The Islamic finance sector, one of the fastest growing sectors of the global financial industry, has been growing at around 15% per annum over the past decade to reach USD 2.5 trillion, a figure which is expected double over the foreseeable years (Gettu, 2018).

7.1 Key principles of Islamic finance

The essential characteristics which sets Islamic finance apart are:

- The perception of the nature of money which is considered merely as a medium of exchange, a measure of value and a store of value (El-Gamal, 2006). In other words, fiat money does not have any intrinsic value and thus has be traded at par at all material times (Al-Amine, 2008).

- The prohibition of transacting with *riba* and *gharar* which are commonly translated as but not restricted to interest and ambiguity pertaining to the core elements of a contract (Hayat and Malik, 2014).

> *"The unique power of religious injunctions (especially against riba and gharar) is that they protect individuals from temporary greed-driven heightening of their appetites for risk."* *(El-Gamal, 2006, p. 78)*

- The prohibition of *maysir* which is commonly translated as excessively speculative and zero-sum transactions whereby one party wins at the expense of the other (Hayat and Malik, 2014).
- The prohibition of involvement in and financing of industries which are detrimental to the welfare of society.
- The prohibition of selling something that is not in one's possession.
- The prevalence of profit and loss sharing dealings over lending activity in order to reduce mankind's reliance on debt and increase economic inclusiveness. That is why, risk-sharing instead of risk-transferring financial structures prevail in Islamic finance so that financial activities remain correlated to the real economy and wealth may be shared equitably (Iqbal et al., 2016).

  Besides, in accordance with the prohibition of transacting with *riba*, a loan is aimed at fulfilling the needs of the borrower and not to exploit those needs by generating a profit from the lending activity.

Although these prohibitions are universally accepted on a standalone basis, in practice, what constitutes *riba*, *gharar* and *maysir*, especially in complex financial transactions, can be subject to controversy.

Islamic finance manifests through a vast range of conceptual contractual structures which are often combined by financiers to engineer Shariah-compliant financing end-products. The challenge lies in ensuring that such financial engineering does not lead to an Islamic form of the *Contractum Trinius*, the scheme implemented by 12th century European financiers and traders to circumvent the ban on charging interest then applied by the Church (Irfan, 2015).

Within the context of financing commodity trade flows, these injunctions would typically equate to not charging an amount over the principal of a loan, not selling dissociated risk using conventional derivative financial instruments and ensure that price and quantity are fixed in the commodity sales or financing contracts which effectively eliminates the usage of a DSCR. Thereby, lenders cannot merely lend funds, insure themselves and earn an interest over such lending activity but need to participate i.e. risk-taking in the economic venture which they seek to benefit from.

7.2 *Islamic trade finance*

In 2016, international trade was valued at USD 16.4 trillion and out which, about 75% of trade flows were financed using trade financing solutions thus making the global trade finance market to then be valued around USD 12.3 trillion (Salaam Gateway, 2017).

The Islamic trade finance market, currently a burgeoning niche, was then valued at USD 186 billion (CIBAFI, 2018). In other words, less than 1% of global trade was then financed using Islamic trade financing solutions despite a "*rising demand for sharia-compliant instruments*" (Wass, 2018).

> *"Allah created dirhams and dinars so that they may be circulated between hands and act as a fair judge between different commodities and work as a medium to acquire other things….. It becomes easy for [the financier] to earn more money on the basis of interest without bothering himself to take pains in real economic activities..... The interests of humanity cannot be safeguarded without real trade skills, industry and construction."* *Imam Al Ghazali (1058 – 1111 CE)*

Thereby, Islamic structured trade financing solutions are based on Shariah-compliant conceptual contracts which do not entail interest-based lending but risk participation between the financier and its counterparty aimed at generating a profit out of the financing venture (Habibi et al. 2019, Saadallah, 2007).

Lately, the development of such frameworks along with other Shariah-compliant trade financing alternative instruments has fueled interest which is being materialized by a growing amount of investments into financing commodity trade flows using Islamic structured trade financing solutions (Vizcaino, 2018).

7.2.1 Islamic commodity trade finance

Financiers willing to participate in the Islamic commodity trade finance industry cannot charge risk premiums by merely advancing funds for commodity merchandizing activities but use frameworks which entail "*fee-sharing – especially for unfunded transactions and upfront fee for funded – based on certain services to be performed by participants*" (Wass, 2019).

Currently, Shariah-compliant trade financing facilities are availed by financiers based on a vast range of conceptual Islamic financial structures primarily using asset-based solutions (Gundogdu, 2016; Oseni, 2013). Asset-based solutions do not entail the financier taking ownership of the financed goods because it is seamlessly transferred from the seller to the buyer whereby the loan-seeking party effectively becomes a debtor to the financier (Gundogdu, 2016). However, alike to conventional trade financing solutions, the financier would typically retain possessory title to establish control over the goods and may also require additional guarantees from the debtor to ensure an effective repayment of the advanced funds.

As compared to the Islamic trade finance segment, Shariah-compliant commodity trade finance is still a relatively under-developed niche in which the Islamic Development Bank (IDB), through its trade facilitating arm the International Islamic Trade Finance Corporation (ITFC), has now become one of the key players in numerous member countries, most of which are in Africa, in developing their economies by providing Shariah-compliant commodity trade financing (Ignatova, 2019). In fact, the IDB has developed a 10-year strategy aligned with the UN's SDGs, the trade financing part of which is currently being implemented by the ITFC (IDB, 2019). For example, it has particularly been endeavoring in financing and developing commercial partnerships for SMEs involved in the agricultural commodity trade sectors and across their value chains as a means to alleviate poverty and generate inclusive economic growth in IDB member countries in an aligned fashion to each country's national objectives (GTR 2019; ITFC, 2019). Thereby, the ITFC has been a key driver of inclusive growth and commodity-related developmental projects across numerous countries in Africa and has also become a key guarantor to financing counterparties thanks to its long-standing excellent A1 credit rating, primarily equity-based funding structure and strong liquidity profile (Moody's, 2019).

8. Discussion

Equity, inclusive growth and sustainability are the three determined drivers supporting the attainment of the UN's SDGs. Commodity trading being a business inherently dealing with economic development, finance and trade flows, CTFs are ideally positioned to contribute in attaining economic development-related SDGs.

Until now, CTFs have been financing producers and other upstream counterparties mainly using prepayment facilities. Effectively, a prepayment facilities is a disguised interest-based loan which by design is non-inclusive as it mainly benefits the lender in the sense that interest payments are almost guaranteed to be obtained in good and bad economic times detrimentally to the debtor's financial situation (Badreldin, 2019). These inequitable aspects of commodity prepayments have proven their unsustainability from time to time, such as in Chad following the oil price drop five years ago, causing substantial damages to the Chadian economy.

Yet, CTFs which have increasingly been extending such loans to their upstream counterparties remain ideally positioned to link trade financing practices to SDGs using interest-free prepayments and risk-sharing structures whereby they would offer alternative forms of financing that could also create value for their borrowers and generate positive externalities for the society at large.

Therefore, considering the significant alignment of Islamic financial principles with the objectives of the SDGs, a Shariah-compliant prepayment facility based on the *bay al salam* conceptual contract is suggested as an alternative to conventional prepayments.

8.1 Bay al salam

A *bay al salam* is a conceptual contract pertaining to "*the purchase of a commodity for deferred delivery in exchange for immediate payment*" (AAOIFI, 2017, p.289).

Under a *salam* contract, the financier is defined as the *musallim*, the seller is defined as the *musallam alayhi*, the subject matter i.e. the financed commodities are defined as the *musallam fihi* and the consideration paid is defined as the *ra's al maal* (Ajmal et al., 2017).

8.1.1 Key conditions of a salam contract

- The commodities which can form the *musallam fihi* should be fungible, quantifiable, specifiable and commonly available in their respective markets (AAOIFI, 2017, p.275).

- The *ra's al maal* should be a mutually determined price to be paid upfront at or around the date of contracting for a given quantity of a specified commodity (AAOIFI, 2017, p.273).

- The *musallim* can require the *musallam alayhi* to pledge guarantees aimed at securing the transaction to ensure that the latter complies with the *salam* contract (AAOIFI, 2017, p.276).

- The *musallim* cannot sell the *musallam fihi* before having taken actual or constructive possession (AAOIFI, 2017, p.276)

- The *musallim* and the *musallam alayhi* cannot unilaterally cancel the *salam* contract (AAOIFI, 2017, p. 276)

All the specifications pertaining to the above-listed conditions along with delivery conditions should clearly be stated in the *salam* contract in order to eliminate *gharar*.

8.1.2 Equitable and inclusive aspects of *salam* contracts

Salam contracts are regarded to be significantly akin conventional forward sale contracts (Amine, 2008). The key difference between both types of contracts lies in the payment timing: while the payment is required to be performed upfront under a *salam* contract, a conventional forward contract allows the payment to be postponed until delivery or even later if the contracting parties may wish so (Hisham and Jaffar, 2017).

In practice, the *ra's al maal* is set at a negative differential to the spot price of the commodity. This differential acts as a discount to the *musallim* for having prepaid the production or supply of the *musallam fihi* and provide the potentiality to sell it onwards at a profit (Bacha, 1999). The *musallam alayhi* receives an interest-free funding upfront which provides the ability to utilize that amount for working-capital purposes pertaining to the production or sourcing of the *musallam fihi*. The upfront fixed payment acts as an equitable self-hedge against the flat price risk for both contracting parties as it eliminates the *gharar* that may result from the evolution in the spot price of the commodity over the tenor of the *salam*. Thereby, a *salam* is a risk-sharing venture tied to real economic activity and aimed at contributing to the inclusive economic growth of producers (Suliman, 2015).

Unlike in most other Shariah-compliant conceptual financing structures, *gharar* pertaining to the *musallam fihi* – the uncertainty about the coming into existence of the contractual subject matter if the commodities are to be produced or the uncertainty related to sourcing commodities – is fundamentally present in a *salam* contract. Yet, since the prophetic period, its usage has exceptionally been permitted as a key alternative to interest-based lending for the production and trade of agricultural commodities because the usage of those commodities is inherently required by mankind (Billah, 2019; Ehsan and Shahzad, 2015; Moghul and Safar-Aly, 2015).

Yet, *salam*-based commodity trade financing solutions are still relatively rare in the Islamic commodity trade finance segment even though Shariah scholars authorize the financial engineering of *salam* contracts with other Shariah-compliant modes of financing, provided the end structure does not form a prohibited transaction (Fijawi, 2016; Ehsan and Shahzad, 2015).

8.2 Shariah-compliant prepayment facility based on bay al salam

In the suggested facility, liquidity can be obtained from Shariah-compliant trade financiers willing to invest in commodity trade financing solutions on a restricted *wakalah* contractual basis. A restricted *wakalah* is an agency contract whereby an entity appoints an agent to fructify a given capital subject to the former's conditions (AAOIFI, 2017, p.1121). The restriction allows the investing entity to determine the parameters such as Shariah-compliance and other contingency conditions such as the geographic region and types of counterparties that may benefit from the capital allocation. The CTF acting as the agent can negotiate a remuneration fee with the investing entity. That fee may be a lump sum amount, a percentage based on the invested amount or even linked to an established index/benchmark provided that it is "*capped and floored*" to minimize *gharar* (AAOIFI, 2017, p. 1122). These key features of a restricted *wakalah* contract highlight its similarity with a conventional agency contract and underline its potential to be used as an interest-free Shariah-compliant committed, secured revolving or term-based working-capital financing facility.

Using *salam* contracts, the funds obtained from the Wakalah-based financing scheme can be invested in counterparties provided that each counterparty scores a satisfactory result on all the due diligence metrics and complies with the investment criteria of the

CTF and the investing entity. The *ra’s al maal* can be determined by the CTF acting as the *musallim* and by the financed counterparty, the *musallam alayhi,* through negotiation and should not be exploitatively low. A political and credit risk insurance policy underwritten by a *takaful* insurance company, supplemented by an additional guarantee from a development institution such as the ITFC to cover the performance of the *musallam alayhi,* and the appointment of a collateral manager to cover the risks related to the *musallam fihi* can lower the risks entailed and thus reduce the discount rate of the *ra’s al maal* and enhance the robustness of the *salam* structure. A *takaful* is a mutual risk-sharing-based insurance system wherein a group of insured entities periodically contribute to a pool of funds which may be used by any member of the group to cover an insured loss subject to contractual conditions.

Simultaneously, the CTF would also determine a suitable buyer willing to subsequently purchase the financed commodities based on a bilateral promise to sell (*wa’d*) structure.[4] The promise to sell would act as a put option whereby the buyer would be obligated to purchase the commodities provided the seller – the CTF – exercises its option by presenting the commodities in conformity with the contractual terms.

Combined, the additional guarantee obtained from a third-party guarantor and the *wa’d* undertaking transfers the cost of funding to the *ra’s al maal*. Thereby, the CTF merely requires to perform a credit arbitrage between the cost of funding related to the *wakalah* contract and the *ra’s al maal*.

Finally, subsequent to the delivery of the *musallam fihi* through the collateral manager, the sales proceeds resulting from the onwards sale would be used to repay the funds provided by the investing entity under the *wakalah* contract by channeling them through an offshore escrow account to offload the CTF’s country risk.

8.3 Suggested risk management approach

Risk identification and their adequate management are the core factors which contribute to the successful implementation of structured trade financing facilities (MacNamara, 2001).

The *bay al salam* is an asset-based debt contract aimed at financing the flow of commodities across their value chain. As discussed earlier, under a Shariah-compliant asset-based financing solution, the ownership of the financed goods is seamlessly

[4] Insights shared by interviewee from a consulting firm specialized in Islamic finance. See Appendix 2

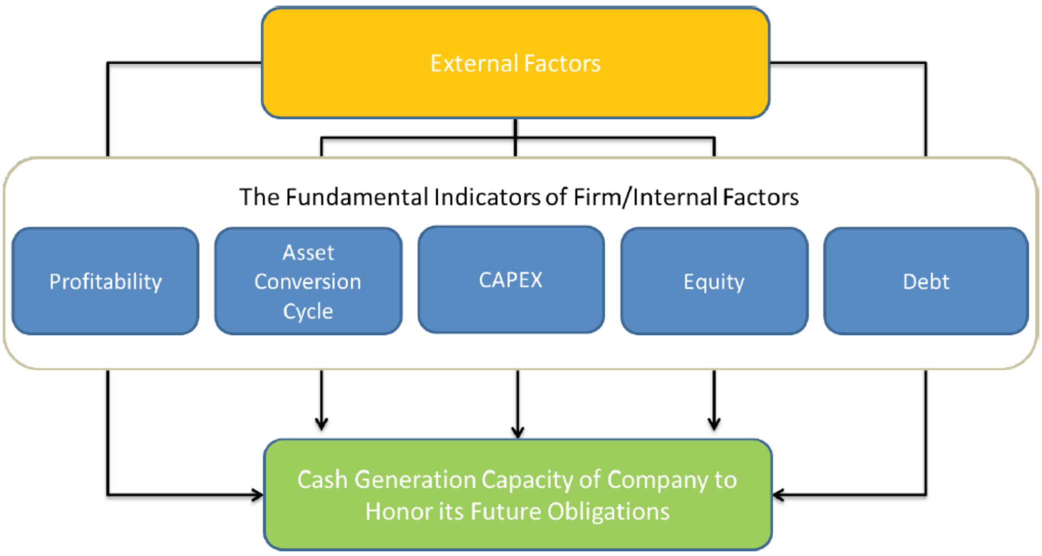
transferred from the seller to the buyer thus merely requiring the financier to retain possession over the goods during the financing period.

Since most conventional risk management techniques can be applied to Shariah-compliant trade financing structures (Gundogdu, 2016), a similar approach to the conventional interest-based commodity prepayment facility management approach has been developed henceforth for analyzing the qualitative risk aspects pertaining to the suggested *salam*-based commodity prepayment facility though with a differing approach to managing the credit risk of the financed counterparty. A generic summary post implementation of the suggested risk management techniques hereafter is available in appendix 6.

8.3.1 Credit risk

The creditworthiness of the *musallam alayhi* is analyzed in the light of its governance structure's ability to withstand prevailing local macroenvironmental factors due to the prohibition on charging late payment fees and a *pari-passu* clause can be inserted in the *salam* contract to prevent debt subordination (Gundogdu, 2016).

Figure 9 – Risks of *mussallam alayhi* in asset-based *salam* prepayments



Source: Gundogdu (2016)

Additionally, seeking a political and trade credit risk insurance policy from a *takaful* company can offload country and credit risk of the *musallam alayhi*. Yet, the insurance policies provided by Islamic underwriters i.e. takaful companies mostly if not always do not entirely cover the full value of the goods (Gundogdu, 2016).

Therefore, the credit risk of the *musallam alayhi* can be further mitigated by requiring the former to mortgage and pledge assets worth at least 110% of the *salam* contract value to the *musallim*.

8.3.2 Country risk

Under a conventional prepayment, the funds are directly disbursed to the financed counterparty whereby the CTF somehow cedes control over the lent funds. Since the financed counterparties are typically located in countries wherein the rule of law is relatively weak, the corruption risk remains relatively unmanaged at the expense of charging risk premiums (Chene, 2016). In fact, numerous large CTFs are currently under investigation in the U.S. and in Switzerland on grounds of corruption in exporting countries (Blas et al., 2019). For instance, one large Switzerland-based CTF is currently under investigation by Swiss authorities for "*failure to have the organizational measures in place to prevent alleged corruption in the Democratic Republic of Congo*" before previously having been investigated by the U.S. Department of Justice on similar grounds related to its operations in Venezuela and Nigeria (Fox, 2020).

As such, the disbursement of the *salam* funds is suggested to be channeled through an elected guarantor acting as a sub-agent, which in addition to overseeing the adequate utilization of the funds, provides a guarantee in the form of a letter of comfort to the CTF to mitigate country risks. The guarantor can be an acceptable development-oriented international entity such as the ITFC or a regional entity having a demonstrated experience and knowledge in managing the production, storage and transportation of the financed commodities up to a nearby deep sea port for exportation. Thereby, the *musallam alayhi* is prevented from allocating the funds in ways other than the purpose for which they have been provided.

8.3.3 Performance risk

The performance risk refers to the potential inability of a counterparty to perform its contractual obligations. Under the suggested *salam*-based prepayment facility, the performance risks of three counterparties need to be managed: the *musallam alayhi*, the collateral manager and the guarantor.

The performance risk of the *musallam alayhi* specifically refers to its potential inability to deliver the commodities in accordance with the contractual quantity and quality in due time. Thereby, as a prerequisite, conducting a formal survey of the macro and microenvironments by involving third-party experts would allow the CTF to adequately assess its performance capabilities. As such, the corporate governance structure of the *musallam alayhi* must thoroughly be assessed because it acts as a key indicator of its ability to withstand both internal and external risks (Gundogdu, 2016).

The performance risks of the collateral manager and guarantor can also be assessed using similar methods. Additionally, they should exhibit expertise in their respective fields, be totally independent from each other to prevent conflicts of interest and, if possible, be internationally recognized in their fields of expertise.

8.3.4 Fraud risk

The fraud risk refers to a counterparty knowingly misrepresenting facts to deceivingly obtain funds. In commodity trade finance, fraud particularly manifests in the form of fake or duplicate security documents and the inexistence of a mortgaged or pledged collateral.

Thereby, although documentary evidence provided by counterparties is a must but cannot solely be relied upon, punctual site visits remain the safest means to ensure the adequate utility of the *ra's al maal* and the effectiveness of the guarantees provided by the counterparties.

8.3.5 Legal risk

The legal risk refers to the CTF's inability to enforce any of its contractual rights as evidenced under the financing contracts and the security documents provided by the counterparties due to regulatory issues. Conducting cross-border trade activity can also expose the CTF to significant legal risks which can hinder the effectiveness of measures undertaken to secure the transaction.

For instance, *pari-passu* clauses, mortgages and pledges can be rendered "*null and void ab initio*", i.e. inexistent, which in turn may invalidate any fraud exception clause contained in the pertaining contracts (MeesPierson NV v Bay Pacific and others, 2000). Moreover, those security measures can also become ineffective if the legal system of the jurisdiction in which the counterparty is established *de facto* subordinates cross-border obligations to domestic ones (Olivares-Caminal, 2009).

Therefore, while the due diligence process may be conducted by an inhouse counsel in accordance with prevailing regulations of the jurisdiction in which the *musallim* is established, seeking "*a legal opinion from an independent legal counsel […] confirming enforceability and priority under all applicable laws*" for all security interests intended to be taken is primordial to ensure the performance of pertaining implemented risk mitigants (Gundogdu, 2009).

8.3.6 Flat price and market risks

The flat price risk refers to "*the risk to an investment one takes without taking an offsetting position*" (Farlex Financial Dictionary, 2012).

Typically, in the conventional sphere, flat price risk is mitigated by hedging using futures, options and swaps. Their usage entails costs in the form of margin requirements which may be both expected and unexpected, the latter form being of significant importance when markets reverse. In fact, it is not infrequent that CTFs are coerced to debt restructuring triggered by hedging losses (Anshuman et al. 2020, Hume et al., 2020).

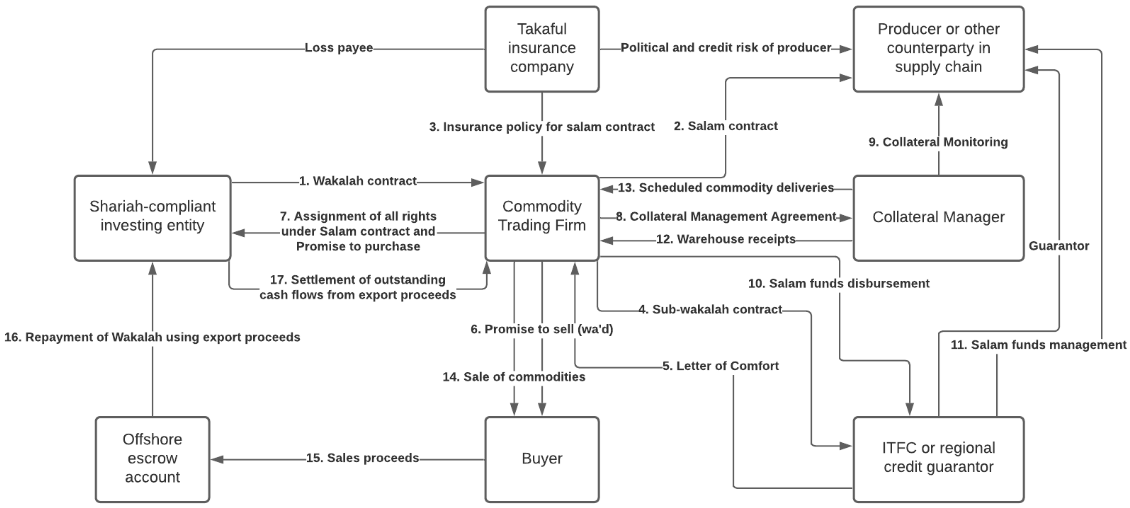
Whereas the usage of such financial derivative contracts is prohibited since trading them entails *gharar*, *maysir* and selling "*what one does not possess*" (Al-Amine, 2008, p.159), the usage of forward contracts such as b*ay al salam* and w*a'd* – promise to sale or purchase – are conditionally permitted for hedging purposes as they are void of speculative features of most conventional derivatives contracts and do not lead to market instability (Fijawi, 2016; Billah, 2019; Haron and Shanmugan, 1997, p.180).

Using the *wa'd* structure, the CTF can enter into a promise to sell the commodities at a future date with a third-party buyer which effectively acts as a put option. Alike the bay al *salam* contract, the *wa'd* undertaking should also contain all the specifications pertaining to the commodities undertaken to be sold and the delivery conditions. Hence, this undertaking eliminates the flat price and market risks as the third-party buyer is obligated to purchase the commodities to be obtained through the *salam*-based financing structure provided the CTF exercises its option to sell in due time.[5]

Thereby, the CTF does not require to set up a DSCR because the quantity and price are fixed thus exempting the *mussallam alayhi* from any price and market related uncertainties.

[5] Insights shared by interviewee from a consulting firm specialized in Islamic finance. See Appendix 2

Figure 10 – Shariah-compliant prepayment facility transaction diagram



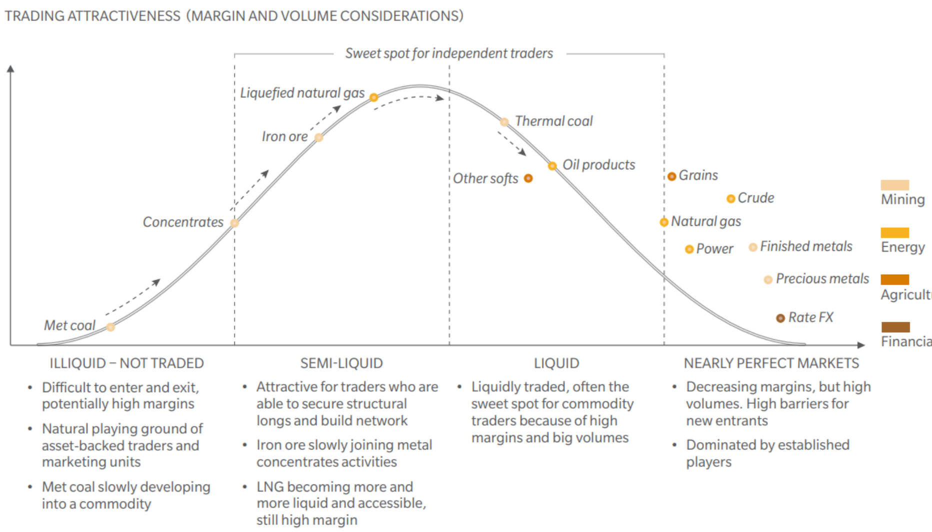
Source: author (based on interview with a consulting firm specialized in Islamic finance, see appendix 2)

8.4 *Complementary considerations*

8.4.1 Potentially suitable commodities for *salam*-based prepayments

Considering the commodity market from a life cycle perspective, the respective futures markets of most commodities which can be hedged are highly liquid (figure 11). Undoubtedly, this liquidity acts as a cost-effective and leverageable incentive for CTFs to use those derivatives product in conjunction with their physical trades to hedge the market and price risks arising from the latter. In fact, they act as key risk mitigants along with the DSCR in conventional commodity prepayment arrangements.

Figure 11 – Commodity markets life cycle



Source: Franke et al. (2014)

However, conventional financial derivatives instruments used for hedging purposes may not sufficiently mitigate risks especially if those are related to factors which go beyond flat prices such as market illiquidity or excessive volatility while the futures market of many commodities are not sufficiently developed (Sinos, 2020).

Table 4 – Types of commodities

Hard commodities	Soft commodities	Energy commodities
Ferrous metals (iron, steel)	Grains (cocoa, coffee, corn, maize, nuts, oats, pulses, rice, sugar, wheat)	Fuels (crude, diesel, ethanol, gasoil, kerosene, natural gas, …)
Precious metals (gold, silver, platinum, palladium)	Fiber (amber, cotton, rubber, wool, …)	Coal
Non-ferrous metals (aluminum, cobalt, copper, lead, tin, zinc,…)	Byproducts (seeds, oils, …)	Metallurgical coal

Adapted from: The Handbook of International Financial Terms (1997, p. 94)

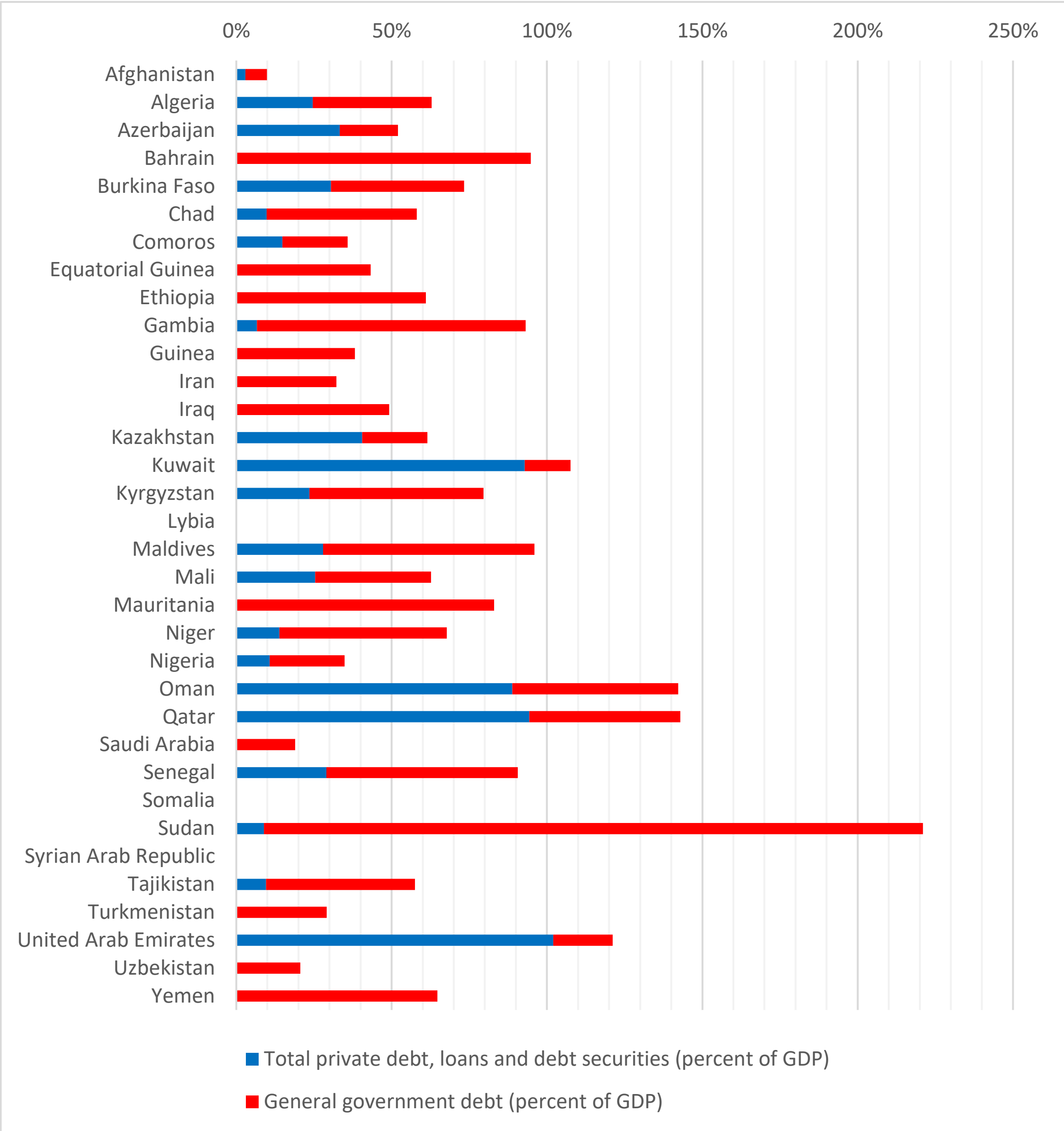
Therefore, the usage of *salam*-based prepayment facilities may be a feasible inclusive financing alternative for the production and trade flows of soft commodities and others which are primarily traded on bilateral forward basis, niche products such as nuts and byproducts such as cotton oil and commodities unusually sourced from specific areas due their inherent characteristics (table 4).[6]

8.4.2 Regional relevance for *salam*-based prepayments

About one-third of commodity-export-dependent countries have a Muslim-majority population, an amount which represents 30% of the aggregate population of commodity-export-dependent nations. While most of them exhibit high debt-to-GDP ratios (figure 12), almost half of them are categorized as Least Developed Countries (LDCs) based on the World Bank country classification index (figure 13).

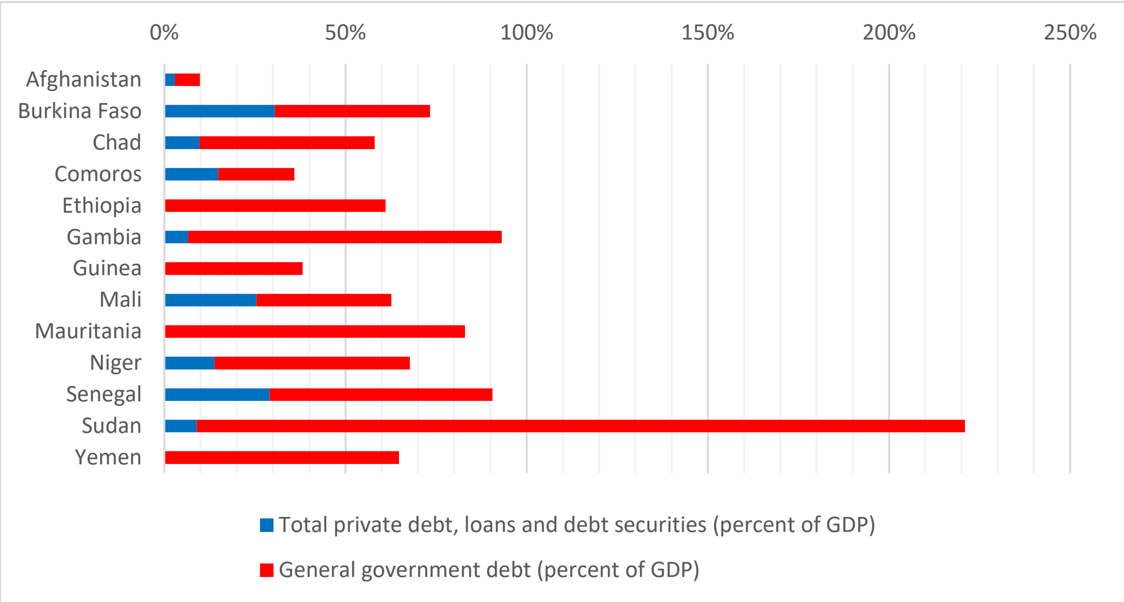
6 Complementary insights shared by interviewee from a consulting firm specialized in Islamic finance. See Appendix 2

Figure 12 – Debt-to-GDP ratios of Muslim-majority commodity-export-dependent countries (in 2018)



Source: author's calculation based on data provided by World Bank (2019)

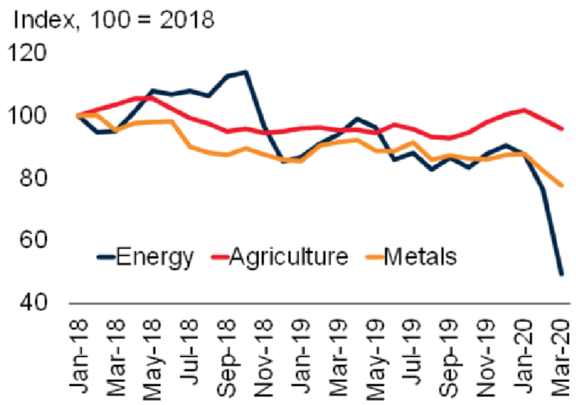
Figure 13 – Debt-to-GDP ratios of LDC Muslim-majority commodity-export-dependent countries (in 2018)



Source: author's calculation based on data provided by World Bank (2019)

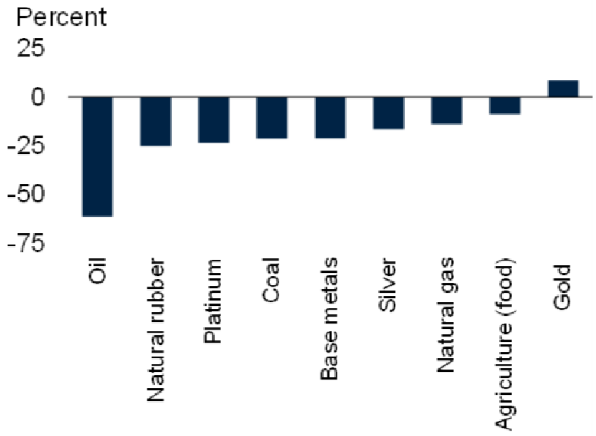
At the time of writing, in the light of the current COVID-19 global pandemic crisis, LDCs are going through "*the worst economic crisis since the Great Depression*" amid already prevailing unfavorable economic conditions as most commodity prices plummeted (figure 14; figure 15) and due to which the International Labor Organization (ILO) estimates that there will be "*a devastating impact on global unemployment*" pushing millions of workers towards the informal economy as SMEs are particularly hit due to their inherent incapacity to withstand severe economic shocks (United Nations, 2020).

Figure 14 – Monthly commodity price index



Source: World Bank (2020)

Figure 15 – Commodity price changes from January to March 2020



Source: World Bank (2020)

Indebtedness when it exceeds the GDP of the private sector of an economy impedes on its economic growth because a significant amount of the output goes in servicing the debt and related interest expenses rather than being reinjected in the real economy (Cecchetti et al. 2011).

That is why, financing the production of commodities and exports out of those countries may represent an ideal potential to inclusively finance economic development and leverage the liquidity in the underexploited Islamic commodity trade finance market due to the prevailing inherent convictional alignment.[7] In fact, many out of those countries have strong trade relationships with other Muslim-majority prevailingly commodity-import-dependent countries such as Turkey, Indonesia, Malaysia, Qatar, etc. (Sophia, 2014).

Besides, although trade flows across these countries pertaining to other types of goods are increasingly being funded using Shariah-compliant financing arrangements (BNM, 2015), there is a considerable potential for large CTFs in equitably financing their commodity trade flows using *salam*-based prepayments with countries such as Chad which exports majority of its crude based on conventional interest-based prepayment structures to large Europe-based CTFs.

[7] Insights shared by interviewee from a Shariah-compliant asset management firm. See Appendix 3

8.4.3 Tenor appropriateness for *salam*-based prepayments

The inability to alter the fixed pricing and quantity determined for the financed commodities under a *salam*-based prepayment may impede on the viability of using such Shariah-compliant schemes as it could subject the CTF to significant price and market risks primarily caused by the inherent volatility in commodity prices.

Alternatively, instead of contracting for a single *salam*-based prepayment, a CTF may sign a Memorandum of Understanding (MoU) with a given counterparty to finance the production or flow of commodities using independent *salam* contracts for each delivery period. This effective splitting of the *salam* tenors into short-term multiple independent undertakings allows the CTF to reassess the contractual relationship, market and price evolutions by entailing minimal flat price risk while the counterparty is able to supply its commodities at the market rate without entailing the uncertainty to top up an additional quantity if the flat price were to reverse.[8]

8.4.4 Financing partners for *salam*-based prepayments

Currently, the commodity trading market is undergoing one of its toughest crises.

One the one hand, following a series of multimillion fraud scandals in Asia which have caused hefty losses to lenders earlier this year, amid a depressed demand across commodity classes, upcoming Basel IV framework which is expected to increase regulatory costs and decrease profitability due to higher capital requirements, the bank-intermediated commodity trade finance supply is now expected to be focused primarily on the largest and most creditworthy CTFs as several prominent European lenders such as Société Générale have opted to significantly reduce their commodity trade flows financing operations while others in the likes of ABN Amro and BNP Paribas are exiting the marketspace altogether (Megaw et al., 2020).[9]

On the other, asset management firms specializing in financing trade flows are on the rise, some of which are increasingly taking over banks' financing market share including in Shariah-compliant segments due increasing liquidity therein and the potential to generate decent yields using relatively low risk impactful financing structures.

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8 Insights shared by interviewee from a consulting firm specialized in Islamic finance. See Appendix 2

9 Insights shared by interviewee from a large European commodity trade finance bank. See Appendix 1

Therefore, specialized conventional asset management firms, some of which provide Shariah-compliant funding, Islamic trade financing funds and the ITFC are some of the most suitable financing partners which may be interested in generating returns by financing trade flows using *salam*-based prepayment facilities through CTFs as their proximity to counterparties and commodity trade finance expertise effectively acts as a risk-mitigant.[10]

8.4.5 Key advancements in the Islamic trade finance industry

Lately, significant developments have occurred in the Islamic trade finance market.

In 2018, Factors Chain International (FCI), the global representative body of the factoring and trade receivables market, has added a chapter to its 'General Rules of International Factoring' pertaining to Shariah-compliant trading of receivables-related risk in order to support the growth of the Islamic trade finance segment worldwide which now represents a "*huge potential for growth*" as illustrated by "*the rise in the amount of new companies now tapping into Islamic trade finance products as a new means of funding*" (Wass, 2018).

During the same year, conventional insurance underwriters such as Euler Hermes have also developing Shariah-compliant takaful products for receivables financing and (Wass, 2018) and digital blockchain-based trade finance platforms such as LiquidX, "*the world's largest electronic platform for illiquid assets*", which has developed products for Shariah-compliant transactions (Wass, 2018).

Last year, the Bankers Association for Finance & Trade (BAFT) and the International Islamic Trade Finance Market (IIFM) released a jointly developed Master Risk Participation Agreement (MRPA) consisting of "*two separate standardized framework documentation to cater for Shari'ah-compliant Unfunded and Funded participation arrangements*" to enable the sale of Islamic trade finance receivables into secondary markets (BAFT, 2019). Market participants across the industry consider it to be a ground-breaking milestone in the fostering of economic growth especially in markets where Islamic trade financing has been increasingly sought but shunned as the value of perspective transactions exceeded the exposure limits on the balance sheets of financiers.

10 Insights shared by interviewees from a consulting firm specialized in Islamic finance (see appendix 2) and a Shariah-compliant asset management firm (see appendix 3)

As such, Shariah-compliant alternatives based on risk-sharing principles are now available for most if not all trade finance instruments thus encompassing the entire working-capital cycle requirements (table 5). These product developments are bridging the gap between conventional trade finance and Islamic trade finance marketspaces, fueled by the growth in the latter as a result of prevailing high demand from entities based in the Middle-East and South-East Asia which in turn is expected to increase the attractiveness of this equitable trade finance product class in the foreseeable future as the pertaining frictional costs will decrease following the adherence of subsequent counterparties (Wass, 2018).

Table 5 – Conventional versus Islamic trade finance instruments

Conventional trade financing	Islamic trade financing
1. LC (fee-based)	All LC (profit-based)
2. Default of payment on LC (interest-based)	*Ta'widh* compensation or damages (fixed fee)
3. Percentage-based fee for LC (fee-based and interest-based)	*Ujrah* (fee-based)
4. Letter of guarantee (fee-based)	*Kafalah* LC (not fee-based)
5. Export credit refinancing (interest-based)	*Murabaha* export credit refinancing (profit-based)

Source: Oseni (2013)

Conclusion

This thesis highlights the inequitable features of conventional interest-based commodity prepayment facilities, factually illustrate their economically adverse effects on beneficiaries during economic downturns and suggests a paradigm change in financing commodity trade flows in the light of Shariah objectives which focus on equitably involving in commercial and financial ventures using risk-sharing and interest-free lending structures to generate inclusively profitable returns.

While commodity trade is a key if not the most important factor of economic growth in commodity-export-dependent countries, CTFs have proven to play a central role in the economic development of those countries by providing state-owned and private entities with conventional commodity prepayment facilities to offtake their produce and merchandize it overseas. Yet, the usage of such commodity prepayment facilities has proven numerous times to be primarily one-sided, especially during economic downturns, as their inherent features entail significant amount of uncertainty, debt burden topped by interest payments which are skewed in favor of the lenders.

Nonetheless, CTFs can still play a pivotal role in contributing to achieving economic development-related SDGs using equitable financing arrangements.

The suggested interest-free, Shariah-compliant, *salam*-based prepayment facility is one such arrangement which may have a strong potential to inclusively generate returns, sustainably contribute to poverty alleviation of the financed counterparties by focusing on improving the work conditions and support real economic growth in regions wherefrom they originate commodity supplies. Undoubtedly, as compared to many countries' legal regimes, the Shariah imposes some additional commercial restrictions, abiding by which may seem as missing on some profitable trade financing ventures. Yet, whereas compliance with those legal regimes has proven time and again to be an insufficient means to promote inclusive financing ventures in the commodity trading industry, implementing Shariah-compliant trade financing solutions may act as a *de facto* alternative means to abide by a relatively more equitable framework to generate inclusively profitable rather than creditworthy returns.

Amid a tightening bank-intermediated liquidity supply for financing commodity trade flows, relatively depressed commodity prices and soaring demand for impactful trade financing solutions, it may be the right time for CTFs to establish a first mover advantage in contributing to the UN's SDGs by implementing the suggested Shariah-compliant commodity prepayment facility, an equitable innovative real economic activity-related financing arrangement, and benefit from two increasing pools of liquidity: the Islamic trade finance market and the rapidly growing liquidity in the overlapping impactful investment and Shariah-compliant trade finance market. Once successfully implemented on a considerable scale, the first moving CTFs may incentivize counterparties to follow in their footsteps, become key trade financing proxies for trade financiers seeking inclusively generated impact-driven equitable yields and thus collectively become a key driver to attaining UN's economic development-related SDGs.

Further research is suggested to be conducted pertaining to the effective Shariah-compliance of the suggested interest-free commodity prepayment facility, its financial profitability and feasibility in specific commodity markets.

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Appendix 1: Interview transcript – Trade finance bank

Interview date:	August 3rd, 2020
Name of institution:	Confidential
Type of institution:	Large European commodity trade finance bank
Interviewee:	Confidential
Interviewer:	Walid Hassan NAGI
Interview conditions:	Phone call

How is the commodity trade finance market?

Over the past months, the discovery of the big fraud cases in Asia which have placed several big commodity traders under administration has shook the commodity trade finance industry. Here, we are talking about exposures worth in billions of U.S. Dollars to commodity trade finance banks which are likely to unrecoverable. In fact, it is the biggest crisis that has hit the commodity trade financing industry and much bigger than the 2008 global financial crisis because the latter was not focused on segment.

Thereby, numerous lenders, banks and commodity trade finance funds alike, active there have been considering ceasing or significantly restricting the financing of commodity trade flows in those regions due to the magnitude of the expected losses.

In the light of prevailing banking regulations, how would this crisis affect banks which would still continue to finance commodity trade flows in those markets?

The discovery of those massive fraud cases has certainly increased the risk perception of financing counterparties located in those regions.

Unlike corporate finance which is focused on the balance sheet of the borrower, commodity trade finance is primarily transactional in nature. Thereby, the lender focuses more on the control it can establish on the flow of the collateralized goods. If that control becomes questionable due to revealed systemic flaws or weaknesses in the economic and regulatory frameworks in a given region, banks would certainly take a more conservative approach for dealing with counterparties located therein.

The capital relief ratio related to trade finance assets required by the Basel frameworks is really key to understanding banks' behavior of financing trade flows. Since the capital relief ratio has progressively increased over the past years, banks have been required to proportionally increase their capital reserves for trade financing products thus reducing their profitability of financing trade flows. Thereby, banks have been facing the trade-off between focusing on generating higher margins by taking relatively more risks and requiring the financed trade flows to be more secured. This trade-off plays a key in role in defining their risk appetite.

Now, the fraud cases which have been revealed earlier this year have coerced the banks to require more security for financing trade flows in those regions. And that level of security can mainly be provided by large and Western commodity trading firms. Therefore, banks are now expected to focus even more on such clients.

Also, jurisdiction in which the counterparties and their guarantors are established also play a key role in securing transactions as they provide certainty about the enforceability of legal action if things were to go wrong.

How about financing SME commodity trading firms located in Switzerland?

Generally, counterparties generating annual turnovers less than CHF 100 million would not really be worth working with because the return obtained from working with such counterparties would be too insignificant compared to the risk and workload the bank would have to commit for processing and monitoring the lending operations.

A few years ago, SME commodity trading firms could have credit lines worth tens of times more than their annual revenues. Financing such entities is no more sustainable for large commodity trade finance banks. Thereby, private commodity trade finance funds which are not subject to banking regulations have taken over the financing of those firms but they also require high margins for the risks they bear.

What is the role of large commodity trade finance banks in pre-export financing?

In the soft commodities sector, banks usually do not directly finance the production of commodities. This is prevalently done by large commodity trading firms.

In principle, European banks avoid financing the production of commodities and their trade flows inside countries. They focus on large volumes of cross-border trade evidenced by letters of credit. Local regional and development banks tend to support the financing provided by commodity trading firms inside the producing countries.

However, banks may be interested in financing the extraction and exports of commodities in the energy and mining sector provided the producer and its guarantors are creditworthy and that there is potentially enough quantity of commodity available in the mines based on extensive expertise and due diligence reports issued by independent inspection agencies, etc.

Appendix 2: Interview transcript – Consulting firm

Interview date:	August 5th, 2020
Name of institution:	Confidential
Type of institution:	Consulting firm specialized in Islamic finance
Interviewee:	Confidential
Interviewer:	Walid Hassan NAGI
Interview conditions:	Zoom meeting

In practice, what purposes are *Salam* contracts used for in Islamic finance?

Currently, *salam* contracts are primarily used for fulfilling two keys purposes: central bank monetary operations which are somewhat irrelevant to trade finance and occasionally for import/export operations.

Actually, the industry really needs this type of contract to be availed and in a number of cases where member countries of the Islamic Development Bank or other Emerging markets are lacking the availability of cash for pre-harvest and pre-export activities.

The tenors of conventional commodity prepayment financing contracts can reach up to five years. The pricing therein is usually floating i.e. benchmark price +/- differential. Thereby, while the producer receives a forward principal amount, the actual repayment price remains subject to the price of the benchmark on the delivery date. If the market drops, the producer will need to deliver additional quantities of the commodity to make up for the drop in value and vice-versa. Since, the price and the quantity are fixed *ab initio* under *salam* contracts, how is the price risk managed therein?

Most commodity trading firms are primarily short-term focused. Thereby, price risk is a substantial concern for them. Other financiers such as the Islamic Development Bank are more long-term focused thus potentially willing to finance commodity flows over longer tenors. Having said that, there are some general alternatives to multiyear tenors.

First, instead of entering into a single pre-export or pre-harvest financing contract with a long tenor, a financier can enter into multiple periodic *salam* contracts. In that way, the financier can have better control over the issues that may subsequently arise.

Second, every off-taker/buyer would need to hedge to some extent. To do so, development banks such as the International Islamic Trade Finance Corporation can be involved. If you know the beneficiary of the *salam* is producer x which can produce commodity y in country z, and you also know who needs that commodity on a sustained basis for considerably long period of time, provided that the all production of that commodity goes through a common board in that country z, i.e. only one point of acquisition, a development agency may be willing to enter into a *salam* contract or many *salam* contracts with that country z for a staged delivery over an extended period of time. Thereby, country z would have inflows of cash that they can use for developing the infrastructure for that commodity deliveries and for improving agricultural methods where the commodity is produced.

Simultaneously, if you can find a buyer who is willing to purchase that commodity from you at a price that is profitable to you, you can enter into a promise to sell (*wa'd*) which effectively is a put option. Provided you have the determined quantity and quality of that good on the date of delivery, the buyer would have to purchase it from you.

This type of deals related to cotton supply have successfully been performed with some European clothing manufacturers. You can actually find European producers of clothing that may be looking for a particular quality of a given commodity. If it is a very high quality which is not produced in many other countries, a high-end manufacturer of certain products could be happy to sign up with you as a partial hedge.

Apart from development agencies, what type of entities may be interested in financing commodity production using *salam* contracts?

Hedge funds. Part of the hedge fund strategy is to generate high margin by taking high risks. So, financing the production of commodities using *salam* contracts because it is not well-known or easily financed by conventional lenders might be of interest to them. If it is not a readily available commodity or quality from a given place, they get better return as the buyers would be willing to pay more.

What makes a *salam* contract competitive to a conventional commodity prepayment and in which circumstances may it be more appealing?

Let us consider it from a different angle. In Sudan, the *salam* contract has been widely used for domestic agriculture but the farmers dislike it because the Sudanese banks need to hedge their risks. The Sudanese model is that the banks provide *salam*-based financing on a standalone basis and thus take absolute market risk for the prepaid commodities. Thereby, these banks take full ownership of the prepaid commodities and bear the market risk. To hedge themselves against adverse market movements, they use very high discount factors in *salam* contracts. In fact, those discount factors are so deep that it is not a viable financing solution for Sudanese farmers. Yet, due to lack of any alternative funding, they still rely on them. That is why, it has been the view of most people involved in Islamic finance that you cannot do *salam* contracts on a standalone basis because the discounts would have to be too deep to offset the incurred risks.

So, to get to a place where discounts are not deep, you need to prearrange a buyer who actually needs that commodity at the given price and knows that there is a price volatility which can actually be managed through a promise to sell undertaking.

Therefore, the main way to get *salam* contracts to be for financially competitive to conventional prepayments is by prearranging a buyer.

What about the usage of parallel *salam* contracts?

Currently, parallel *salam* has not really been viewed as a feasible solution because it's too much cash out the door.

Consider two common soft commodities that you might find in West Africa and for which you have a buying base in India and Pakistan. Most of those commodities go into two industries which are highly margin sensitive. Either, the food processing industry or the clothing industry. So, anybody who is your off-taker in those industries would have very limited cash that they want to put out today and wait. It just cannot work.

However, if you are producer x willing to produce coffee of grade y in country z and want Nestle to buy it. Nestle would not want to pay you upfront. Now, if you are able to obtain *salam*-based financing from a development organization, or a forward-thinking Islamic bank, or hedge fund, you might have a deal. This would mitigate the otherwise total market risk that Nestlé would have to bear.

And since Nestle is used to calls and puts due to their hedging strategy, here what effectively Nestle is doing is that they are giving you a put. You can put to us X percent of your production or our requirement and we promise to buy that percentage in the future. Such partial hedge might be feasible for Nestlé or other companies alike.

How effective are promises to purchase (*wa'd*) for off-takers since it seems to not be a proper undertaking?

Actually, it is a proper undertaking provided it is documented correctly. Thereby, the off-taker is completely obligated to buy if you produce.

For it to be effective, structuring the transaction subject to English law would be ideal because if you produced the commodity according to the right parameters, the buyer has to purchase it. If it does not, you will get a judgement pretty quickly in London.

How the producer's performance can be mitigated?

You need an undertaking from a national bank or development agency to guarantee the performance of the producer. Effectively, it transforms the lender's market risk to credit risk by setting up an off-taker akin to a conventional entity. This is transferring cost of borrowing to price discount of that commodity.

In conventional commodity prepayments, debt service coverage ratios are a key contractual element with which the borrower/off-taker ensures that the producer will deliver the required quantity of the commodity pertaining to the market price at the given time of delivery. Since this entails significant amount of *gharar* for the producer and thus is not Shariah-compliant, how could the borrower/off-taker hedge himself alternatively?

There is one solution. And that is, instead of having a single contract to deal with, enter into multiple contracts in different times as a transaction. That is shorter periods. This also provides the opportunity for the producer and the seller to reassess the monetary requirements because that would be a new transaction.

Why are conventional hedge funds interested in taking such risk in Emerging Markets?

There are three reasons. The first is that they want a high margin. The second is by dealing with a development organization or a national bank, they feel comfortable that that entity is also watching out for the transactions and they feel that they deal with a regulated institution which directly deals with that third party. And then lastly, having performed their due diligence on the cooperatives, they are actually comfortable that the long-term capacity to produce and performance would be available. Thereby, they have a different view than maybe a lot of other lenders right now.

Also, since they are not regulated like banks, they have more flexibility because there is not any regulator saying somebody went 90 days past due on you.

What is the outlook for the usage of *salam* contracts?

Currently, there are not many financiers willing to do *salam*. Banks, traders etc. wants to do what they have always done. So, someone needs to do the first mover step.

Yet, *salam* is a good tool for extending funding portfolio of development banks such as the ITFC, for regional banks to mobilize cash from multilateral sources.

Appendix 3: Interview transcript – Shariah-compliant asset management firm

Interview date:	August 10th, 2020
Name of institution:	Confidential
Type of institution:	Shariah-compliant asset management firm
Interviewee:	Confidential
Interviewer:	Walid Hassan NAGI
Interview conditions:	Phone call

Which types of entities do you finance and using which types of Shariah-compliant conceptual structures?

Our trade finance funds invest in SME producers, processors and major players across value chains in Emerging Markets, primarily in Africa and Asia. We mainly finance the flow of already produced commodities using contracts based on *Istisna* and *Mudarabah* conceptual structures.

On what aspects could Shariah-compliant trade financing solutions be a competitive alternative to conventional ones?

Pricing is the key aspect. Fundamentally, the underlying conceptual structures in Islamic finance serve the purpose of dealing commercially in compliance with the Shariah. So, when you are lending to anyone in a global supply chain, the counterparties essentially look at the pricing. They are not necessarily concerned if the financing is Islamic or not.

Shariah-compliant trade finance solutions are to some extent similar to conventional ones. In fact, most prescriptions framing the trading and financing aspects under the Shariah are very much akin the restrictions found in socially responsible investing practices in the conventional sector.

How competitive can the returns of Shariah-compliant trade financing solutions be as compared to conventional ones?

From an asset management point of view, we have investors who invest with us and we finance transactions which provide x returns. Most of our investors are from the Gulf Cooperation Council (GCC) countries and look for Islamic solutions. That is why, we do Shariah-compliant lending and the returns are not comparable.

Our non-Muslim investors do not invest in us based on the fact that we provide Islamic financing solutions. They primarily consider the composition, structure and functioning of the underlying transactions which fund and the degree of diversification.

How are risks managed under Islamic trade financing solutions?

There are different risk management approaches depending on the types of funding. In all cases, we conduct extensive research on counterparties which we consider to fund to determine supply/demand mismatches, collateral management solutions, etc.

In some cases, we take ownership of the commodities when financing commodity flows. Actually, that ownership provides us our haircut. Thereby, the return on the capital that we may apply on such transactions is predictable.

We may also act as facilitators in transactions wherein a seller and a buyer are already determined but require financing and risk mitigation solutions to actually perform their deal. In such circumstances, hedging may not be required for because we do not take any price risk.

For example, if a seller and a buyer have contracted for a shipment of commodities on a fixed price basis but the latter cannot provide the payment on the terms required by the seller, we can step in to provide financing and risk management solutions. Typically, we would take acceptance, inventory, delivery and credit risks of the buyer and release payment to the seller upon acceptance of the cargo by that buyer. In such scenarios, collateral monitoring and extensive due diligence is key for us to ensure that the buyer will accept the shipment and subsequently repay us by the end of the payment cycle. Thereby, no price risk is taken since they are already matched on both sides. Hence, our return would depend on the bid/offer spreads for the fixed price effectively determined between the buyer and the seller. Those risks are further mitigated by contracting for credit default insurance policies which adds in another layer of robustness to the deal.

In which markets would such financing solutions be a viable alternative?

These financing solutions are typically effective in some Emerging Markets wherein high-quality natural resources are readily available and for which there is a sustained market demand but buyers cannot work with the payment terms required by the seller primarily due to the fact that those societies are more cash-based and/or the banking infrastructure is not substantially relied upon for commercial dealings.

Whereas sellers may require spot payments, the buyers are unwilling to pay upfront and wait for several weeks in order to receive the goods. So, sellers are coerced to supply small batches which can be paid for on a spot basis by the buyer. This situation presents an arbitrage opportunity for us.

Of course, the buyers we fund are entities which have a strong track record of creditworthiness and key players in their respective industries.

Appendix 4: Interview transcript – Hedge fund

Interview date:	August 14th, 2020
Name of institution:	Confidential
Type of institution:	Conventional hedge fund offering Shariah-compliant trade financing and private debt solutions to SMEs in Africa
Interviewee:	Confidential
Interviewer:	Walid Hassan NAGI
Interview conditions:	Phone call

What are the various investment solutions sought by your Shariah-compliant investor base?

Our Shariah-compliant investor base is primarily composed of GCC-based private investors seeking profitable returns based on our well-established impactful investment expertise and short-term trade financing practices in Africa.

The Shariah compliance level varies across investors. To satisfy those requirements, we offer the possibility to set up segregated SPVs to ensure that their funds are not comingled so that they could invest and by staying true to all their investment criteria.

Which types of Islamic conceptual financing structures are used in your Shariah-compliant offering?

We offer Islamic trade financing solutions focused on the investors side using Murabahah and Sukuk structures. Thereby, while the investing structure is Shariah-compliant certified, a conventional lending approach is used for lending the funds onwards to the borrowers.

There are four key factors which underpin our approach to generate Shariah-compliant investments using conventional loans: the inability under Islamic financing structures to charge late payment fees from borrowers, the lack of sufficient Shariah-compliant financing demand therefrom to justify investing significant resources in establishing a borrower facing product, the absence of non-Shariah-compliant activities across our portfolio and the comingling of our conventional and Shariah-compliant funds. Also, providing Shariah-compliant loans to Emerging Market based borrowers would add a significant layer of risk to the lending.

These structures are to be approved by our external Shariah council which is composed of a wide panel of Shariah scholars ranging from different cultural backgrounds.

How are your Murabahah-based Shariah-compliant solutions structured?

Our Murabahah structures are asset-based i.e. we do not retain ownership of the financed commodities but simultaneously transfer it to the borrowers due the inherent risks entailed by ownership which are not suitable to our business model.

In the absence of the required product range in the Islamic insurance market, we rely on insurance coverage policies provided by conventional underwriters to make our lending structures more robust.

Most of our investments are in the agri-businesses. The reason behind not willing to take ownership i.e. doing asset-backed Murabahah financing deals is the prevailing high risk levels pertaining to ownership across all commodity classes, especially in African Emerging Markets.

Let us simply consider the example of the Japanese tanker which recently went aground off the coast of Mauritius and has triggered an environmental catastrophe due to oil leakage into the ocean. If that oil was financed using a fully Shariah-compliant structure wherein the financier would have taken ownership of that cargo, he would be in a critical position now. As a lender, taking ownership of the financed goods entails bearing significant liability without any revenue generation related to risks which are not manageable by financiers in the first place. Another key aspect is that the financier having money then becomes an easy target to seek damages from.

How suitable are conceptual Islamic financing structures for trade financing?

Broadly speaking, there are several hurdles to overcome for financing trade flows using Shariah-compliant solutions if one's *modus operandi* is using a Western interest generating model. For example, unlike in conventional finance, a lender cannot charge late payment fees. But, there are always ways to adapt the structures.

Thereby, one risk mitigant that we use is structuring the lending side as a conventional loan with recourse to the borrowing counterparty while the investment side is provided without recourse to us. Thereby, if things were to go south, there would be no return for the investors and pure capital loss. However, the usage of political and credit risk coverage as well as the inherent of trade finance collateralized by physical commodities absorbs a major portion of those risks which also provides comfort to investors.

Following the 2008 global financial crisis, there was a significant inflow of investments into Islamic finance assets due to their relative uncorrelatedness to other financial asset-classes. In the light of the fraud crisis in Asia earlier this year which has specifically hit the commodity trade finance industry, how do you perceive the outlook for the Islamic structured trade finance segment?

The high-profile fraud cases which have lately occurred across Asia have revealed several weaknesses of commodity trade financing therein which in and of itself, as an asset-class, has historically been perceived as a low risk investment. The discovered frauds revealed a relatively paper-focused way of doing business in that region. So, this mismatch of financing real commodity trade flows by primarily relying on paper documents without conducting sufficient collateral monitoring has increased the risk perception of investors and lenders towards borrowing counterparties located in those regions. We should also keep in mind that although Dubai and Singapore have had the spotlight, fraud risks exist across the commodity trading industry. So, the key is to adequately manage them and prevent the occurrence of any loopholes in the financing structures.

Now, trade finance is gaining interest among Islamic investors because, if done properly with all the risk mitigants and adequate collateral monitoring on an ongoing basis, it is a secure lending strategy which generates relatively higher yields and low volatility.

Part of the asset allocation of any sensible asset manager is to provide stable returns over considerable time periods. Over the past decade, broadly speaking, annual returns provided to our investors are around the 10% mark.

Besides, the quantitative easing extensively conducted by central banks to restart their economies amid the COVID-19 crisis have pushed yield rates of ‘risk-free’ assets to record lows. It would not be surprising to see the 10-year U.S. Treasury bonds becoming ‘Shariah-compliant’ i.e. 0% interest rate in the foreseeable future. This has triggered a massive hunt for return. So, I think that we are in an industry which is very compatible with Shariah-compliant funding. Therefore, Islamic structured trade financing solutions are likely to become a very attractive diversification proposition providing stable returns in the foreseeable future.

Would you consider using other Islamic conceptual structures than Murabahah?

It would be more an investor-led than a borrower-driven approach. Another thing to be said is that our business strategy is not driven by cultural appropriations and it has been the Islamic community which approached us because they seemingly considered us to be a suitable investment partner and wanted to gain access to commodity trade finance which is an asset class that they deem to be of interest for its potential for yield and low volatility. Therefore, it has been a slow but organic process.

How related are your impactful investment strategies with the UN's SDGs?

The ILO has lately recognized trade finance as a key asset-class having significant impact on people's lives, on businesses and on the economies of emerging markets and less developed countries. SMEs are key job creators in both urban and rural areas.

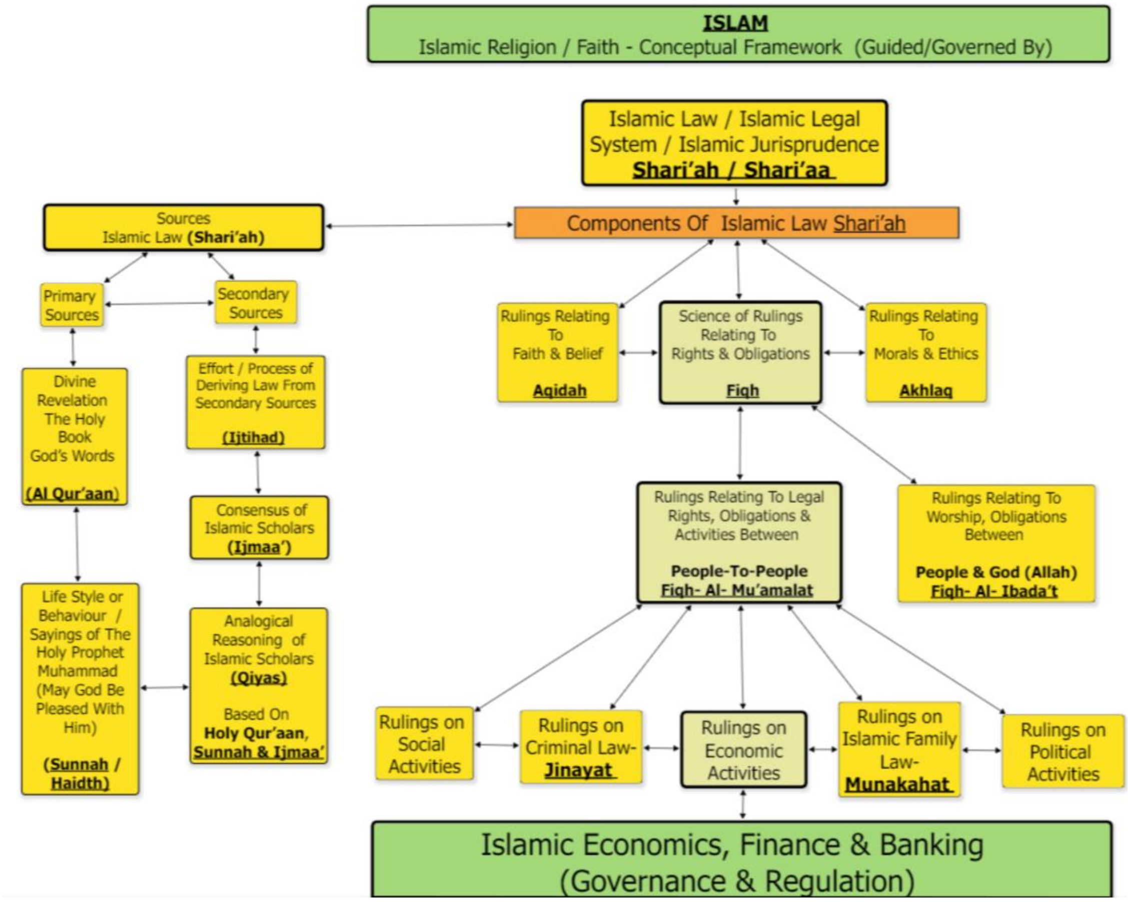
Over the past months, there has been an increasing interest from impact investors in generating returns tied to the UN's SDGs. Thereby, we have increasingly been developing UN's SDG-related impactful solutions such as improving the ESG frameworks of our borrowing counterparties. The impact of trade finance definitely goes beyond the mere economic aspect.

Are impactful investment strategies aligned with Shariah-compliant investing?

Paradoxically, we have not seen Islamic investors focusing greatly on impact-driven metrics in our discussions with them which tend to focus more on Shariah-compliance, although Islamic financial practices are very much aligned with the UN's.

Thereby, we are working on raising awareness about the inter-relatedness between impact investing and Shariah-compliant investing as it could be a mutually beneficial added value for all our investors.

Appendix 5: Sources of Shariah-compliant finance



Source: Zaman (2019)

Appendix 6: Shariah-compliant prepayment facility risk management framework

Risk areas	Risks	Factors	Mitigants	Likelihood of occurrence
Country	Political	Corruption	Letter of comfort provided by an independent third-party Political risk insurance coverage	Medium
	Economic	Drop in commodity prices	Channeling of ra’s al maal funds through third-party guarantor	Low
	Legal	Jurisdictional frameworks	Legal advice from third-party counsels	Low
Musalllam alayhi	Performance	Commodity production capacity and governance structure	Due diligence Pari-passu clause Mortgages and pledges	Medium
	Credit	Internal factors	Credit risk insurance coverage	Low

Collateral manager	Fraud	Corruption	Check international recognition Tight monitoring and reporting process	Medium
	Legal	Enforceability of warehouse receipts	Legal advice from third-party counsels	Low
	Storage	Conditions	Independent inspection company	Medium
Takaful company	Reliability	Default on insurance policy coverage	Check international reputation and track record	Low
Buyer	Performance	Breach of *wa'd*	Check trading track record & country factors	Low
Collateral	Legal	Title	Legal advice from third-party counsels	Low
Musallam fihi	Flat price	Adverse price movements	*Wa'd* undertaking	Low
	Quality and Quantity	Corruption and weather	Appointment of guarantor	Low

Source: Gundogdu (2014) and Gundogdu (2016)