

Traxia TM2

USING BLOCKCHAIN TO DISRUPT SME DEBT FINANCE

V1

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ABSTRACT

There are over \$43 trillion of invoices sitting in companies' balance sheets waiting to be paid. The Traxia ecosystem allows those short-term assets to be digitized, tokenized and ultimately to be tradeable on a (de-)centralized market. Traxia envisions a system where Sellers upload their invoice, Buyers approve it with their private keys, Issuing Providers write it into a smart contract, Liquidity Providers distribute cash liquidity, Listing providers manage the marketplace and Investors trade the newly created digital assets. Think of it as factoring on a blockchain. We have built first use cases using Liquease Ltd. Going forward the foundation will support the Dept Exchange, a listing provider for the ecosystem that is focusing on creating a liquid debt market for SME-related debt securities. The existing decentralized exchange is built on the Ethereum blockchain and the Traxia foundation intends to support its technological improvement, as well as licensing offshore and in the EU for dealing regulated securities. After being the first investment of Cardano through their investment arm Emurgo, we are now among the first to move to the Binance Chain.

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Background

On any given day around the world there are around \$43 trillion of accounts receivable or accounts payable on the books of businesses, of which, banks only finance around \$3 trillion of the total (Kemper, 2016). On a more granular level, there is a gap in global trade finance of around \$1.6 trillion, most arising from Asian companies (Asian Development Bank, 2016). The International Chamber of Commerce refers to trade financing as the 'oil' in the engine of international commerce and highlights the unmet demand for such financing (International Chamber of Commerce, 2017).

This gap is a result of a misalignment in terms of the demand for trade related credit and the liquidity of funds provided. It is disproportionately available to multinationals and large corporates – the top end of the market – and consistently absent in the SME segment (International Chamber of Commerce, 2017). Simply said, SMEs are faced with little choice but to accept their large customer's payment terms, no matter how onerous they may be.

Financial Technology (FinTech) companies have come up with solutions to this gap in global trade finance. However, in the absence of new instruments and marketplaces that connect and bring together different trade actors, new ventures have been unable to make a major difference, yet.

The current trade finance gap is due to the following major issues (International Monetary Fund, 2016):

- 1. Absence of trust and cooperation between banks**
A continuous decline in correspondent banking relationships has led to an economic fragility that has not been compensated by the limited growth in open account financing or Letters of Credit (L/C).
- 2. Limited transparency due to a lack of reliable data points along the trade finance value chain**
In periods shaped by a lack of trust and transparency, trade finance actors (private banks, export credit agencies, and regional development banks) seem to pool their resources (World Trade Organization, 2008) which creates difficulties in terms of obtaining comprehensive and reliable data on those trade finance transactions.
- 3. Limited Cash Liquidity in the markets and higher spreads**
Large banks have been reporting on several occasions that the lack of access to competitive funding has made them to drop out of several finance trade operations.
- 4. Bureaucracy and endless paperwork**
Digitalisation in trade finance is far from being mainstream. Providers have been promising digital letters of credit and bills of lading for years,

yet most corporates and banks still routinely exchange paper documents (International Chamber of Commerce, 2017)

SMEs account for more than one-half of the world's GDP and employ two-thirds of the global workforce (World Economic Forum, 2015). The number one barrier to growth faced by SMEs around the globe is access to financing (International Labour Office, 2015). This is not a new issue and the 2008 financial crisis only worsened the problem. Many local retail banks, who are often the primary and only providers of SME financing, have lost their appetite for taking on higher-risk SME loans. It is estimated that SMEs faced in 2015 a \$2 trillion USD global credit gap (World Economic Forum, 2015).

What is Trade Finance?

Global and local banks support international trade through a wide range of products that help their customers manage their international payments and associated risks, and provide needed working capital. The term "trade finance" is generally reserved for bank products that are specifically linked to underlying international trade transactions (exports or imports). As such, a working capital loan not specifically tied to trade is generally not included in this definition. Trade finance products typically carry short-term maturities which reflect the typical shipping times and payment terms of 30, 60 or 90 days or more. (Bank for International Settlement, 2014).

Actors

For the purpose of this whitepaper, we will solely focus on the actors of the 'financial supply chain'. Financial intermediaries, in a broader sense, offer services that allows an easier, faster, and cheaper execution of financial contracts between originators and acceptors.

This comprises the gathering, for example via brokers, rating agencies, or stock markets, of information to inform investors about borrower quality and/or risk. In general, disintermediation in trade denotes the omission of actors within a supply chain, as e.g. intermediary distributors or retail sellers. But, disintermediation in financing is the substitution of the traditional bank intermediation by the means of alternative forms of intermediation with regards to liquidity between investors and parties seeking capital.

Objects

Objects of finance include fixed assets, i.e. those assets that permanently provide a basis for the business operations, and working capital, which is variable on a day-to-day basis.

Production facilities, which provide the underlying logistic networks, as well as the equipment needed for customs clearance and the transport within the network are considered fixed assets within a supply chain. The term working capital comprises all current assets transformable into liquid assets within one production cycle or at least within one year. Circulating assets minus the short-term liabilities are called net working capital. A key figure which, in this context, is suited for an examination of the cash flow is the cash-to-cash-cycle. The latter is calculated as follows:

$$\text{Cash-to-cash-cycle} = \text{average turnover period} + \text{period of receivables} - \text{period of payables}$$

The cash-to-cash-cycle is the period of time needed for a company to transform the cash drain resulting from paying the suppliers into cash inflow from customers again. The cash-to-cash-cycle thus is a key figure to a dynamic and holistic treatment of the net working capital performance both within the company and within the supply chain.

Terms

Supply chain finance has three dimensions: 1. The amount of assets to be financed (volume of financing), 2. The duration of the financing and 3., the capital cost rate (financing cost). Multiplying these three factors together gives the total capital cost that a company has to generate at least for an investment to be profitable:

$$\text{Capital costs} = \text{Volume} * \text{duration time} * \text{capital cost rate}$$

The most important starting point for the optimization of the financing within a supply chain beyond classical logistics measures is thus the capital cost rate.

Traditional Trade Finance Products

Many SMEs find it difficult to finance their production cycle, as most buyers demand around 60 days to pay for goods from the date of delivery. In any transaction, a seller will issue an invoice, which they account for as an account receivable. The buyer then accounts for the invoice in their accounts payable. Accounts receivables are illiquid assets until payment is received.

Factoring

Factoring is a type of supplier financing, in which firms sell their credit-worthy accounts receivables at a discount (generally equal to interest rates plus service fees) and receive immediate cash. Factoring is not a loan and there are no additional liabilities on the firm's balance sheet, although it provides working capital financing. In addition, factoring is often done "without recourse", meaning that the factor purchasing the receivables assumes the credit risk for the buyer's ability to pay. Factoring is a comprehensive financial service that includes credit protection, accounts receivable bookkeeping, collection services and financing.

Letter of Credit

One of the most common and standardized forms of bank-intermediated trade finance is a letter of credit (L/C). L/Cs reduce payment risk by providing a framework under which a bank makes (or guarantees) the payment to an exporter on behalf of an importer once delivery of goods is confirmed through the presentation of the appropriate documents.

For the most part, L/Cs represent off-balance sheet commitments, though they may at times be associated with an extension of credit. This can occur, for example, if an import L/C is structured to allow the importer a period of time (known as “usance”) before repaying the bank for the payment it made on the importer’s behalf. Banks may also help meet working capital needs by providing trade finance loans to exporters or importers. In this case, the loan documentation is linked either to an L/C or to other forms of documentation related to the underlying trade transaction.

Supply Chain Finance (SCF)

To avoid confusion, it should be mentioned that supply chain finance is only a subset of trade finance and has been defined by the International Chamber of Commerce (ICC) as ‘the use of financing and risk mitigation practices and techniques to optimize the management of the working capital and liquidity invested in supply chain processes and transactions. [Supply chain finance] is typically applied to open account trade and is triggered by supply chain events. Visibility of underlying trade flows by the finance provider(s) is a necessary component of such financing arrangements which can be enabled by a technology platform.’

Reverse factoring is the most widely used form of financing under this category (PwC, 2017). In contrast to traditional factoring as described above, reverse factoring is initiated by the buyer and not by the seller. The ‘factor’ is a financial intermediary and in more detail the entity that is providing short-term cash liquidity. The factor acts on its own economic risk and advances a payment to the supplier and then, at the invoice payment due date, a transaction from the buyer to the factor is initiated.

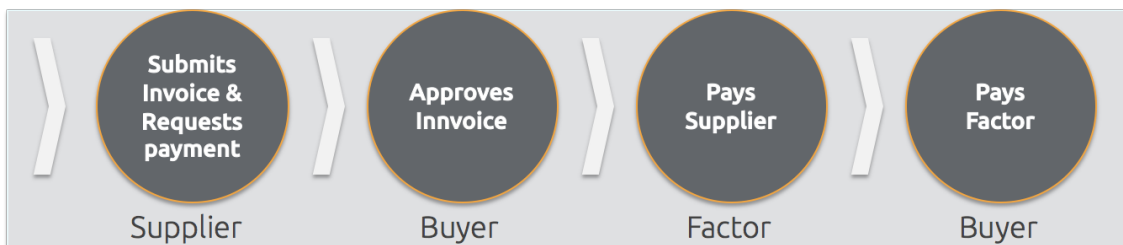


Figure 1 – The reverse factoring process

According to the paper ‘A study of the business case for supply chain finance published by the Association of Chartered Certified Accountants in June 2014, the advantages of a Reverse Factoring Program for Buyers are mainly that costs are reduced across the supply chain. This is due to letting suppliers ‘borrow’ against their customers’ creditworthiness instead of their own. On average, 80% of the resulting value is shared between the suppliers and the buyer, with varying degrees of allocation depending on whether the buyer wants to facilitate its key suppliers’ financials (i.e. the largest share goes to supplier) or, instead, take all the benefits by extending payment terms. Typically, the buyer will capture 35% to 50% of all savings, while suppliers will get 25% to 45%. Another 15% goes to the financial intermediary while the remaining 5% is for the service provider.

Securitization

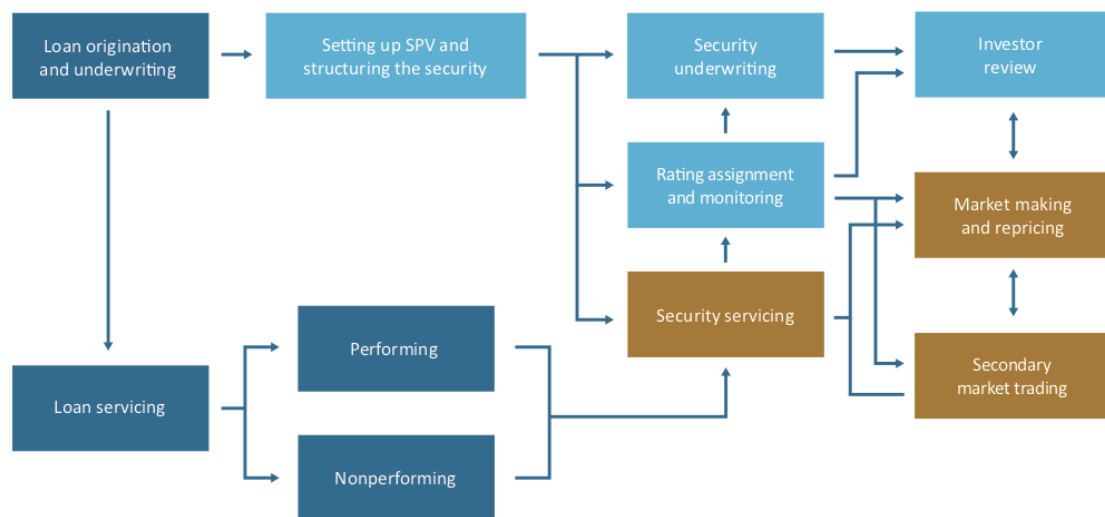


Figure 2 – a typical securitization process

Before discussing in detail on how blockchain may change the securitization lifecycle, a brief high-level review of securitization (Figure 2) may be helpful.

It begins with originating and underwriting² of loans, which are then serviced regularly, similar to traditional bank lending. An issuer or originator pools together many loans, places them in a bankruptcy-remote trust or special purpose vehicle (SPV), and structures the securities. An auditing firm reviews the pool and provides a pool audit letter and an agreed-upon procedures letter covering the pool statistics provided to investors. Rating agencies may be asked to express an opinion on the securities’ credit-worthiness by providing a credit rating.

The underwriters’ task is to raise investment capital. They work with a counsel and the transaction sponsor to prepare an offering document. The underwriters then price and bring the securities to market, where investors make purchases based on their risk-reward preferences.

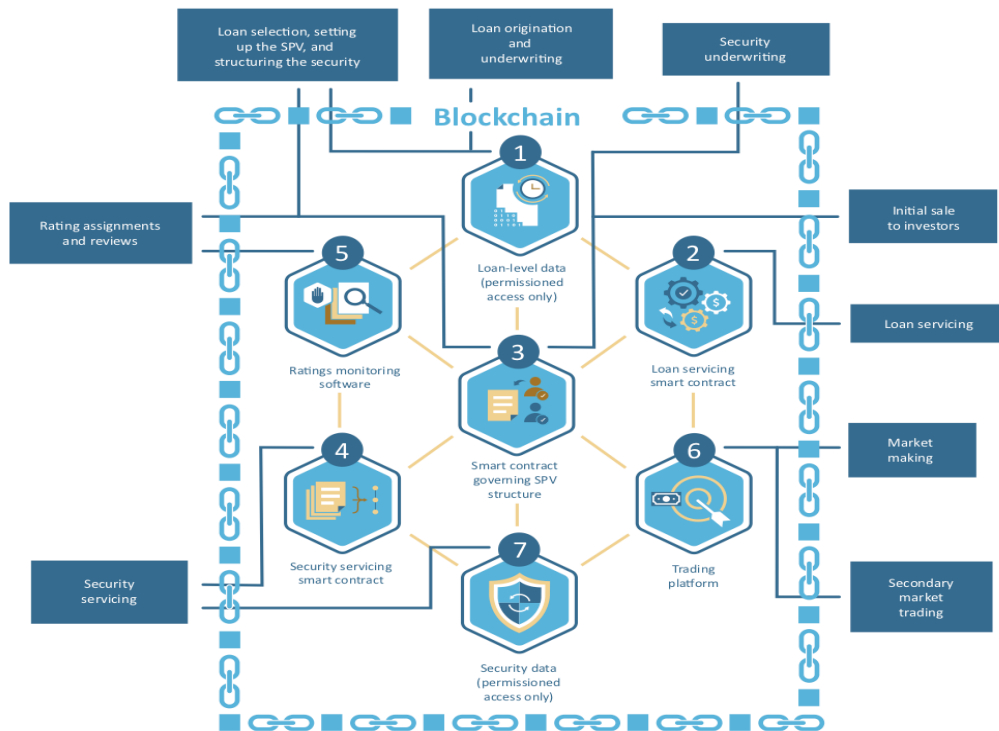
Trustees manage the trust entity and represent investor interests. A servicer collects borrower repayments, pools them, and forwards them to a trustee, who allocates distributions to security holders based on the payments waterfall defined in the transaction documents. Rating agencies monitor the securities' performance and update ratings if needed. In secondary markets, investors continue to review and reassess the securities based on performance. Broker-dealers make markets among investors trading the securities and establish new prices.

Securitization, due its current level of complexity and the participation of numerous intermediaries, is mostly used for larger trade deals that range in the millions of US Dollars. Shortcomings of the current setup and efficiency gaps in the securitization value chain are: non standardized processes and dependencies on central clearing houses and custodians.

In this context, blockchain can have a large impact in transforming and enhancing securitization.

Market Opportunity for a blockchain powered solution

Opportunities for blockchain solutions in the trade finance securitization process are summarized by Deloitte in the flow below. This is the platform that Traxia will create (Deloitte, 2017):



Source: Deloitte Development LLC, 2017.

Figure 3: Blockchain and Securitization - a possible look at the future

Step 1: As a borrower and lender agree to the terms of a loan, a new electronic asset is created on the blockchain and time-stamped. Ownership information and other pertinent underwriting data, such as supporting documents or Credit scores, are attached to the loan and recorded on the blockchain. This information cannot be altered without a new consensus between the borrower and loan owner.

Step 2: Relevant information about the loan is automatically coded into a smart contract which governs the automated servicing of the loan. As the borrower makes or fails to make payments, this history is added to the loan-level data and supports future servicing decisions, such as the possible need to engage a default servicer if the borrower does not pay. Ownership rights of the asset are also automatically immutably recorded and timestamped.

Step 3: The sponsor/issuer pools together loans and transfers them to an SPV, which records the transfer and the related loans on the blockchain. The 'automatable' portion of the transaction's terms, including its cash-flow model, are written in a series of smart contracts, which the sponsor/issuer, underwriter, rating agencies, trustees, and other relevant third parties verify and agree to.

This consensus creates a single governing model for the transaction.

Rating agencies, investors, and other relevant stakeholders reference this model and, if desired, also the underlying loan-level data to perform their assessment of the newly-created securities. In addition, relevant portions of the offering and legal documents are also automatically created with smart contracts. Regulatory compliance is largely automated, as smart contracts are programmed to immediately note any potential irregularities.

Step 4: A separate smart contract to service the securities is layered on top of the SPV and the smart contract developed for the transaction itself. This new contract collects payments from loan servicers, references the cash-flow model specified in the contract governing the SPV, and distributes payments to the beneficiary holders of the security with only minimal delays for settlement. This information stream is related to rating agencies and the secondary markets.

Step 5: Ratings monitoring software sometime referred to as 'Oracles' are placed on the blockchain to match the security performance with expected cash flows and trigger rating reviews when discrepancies arise.

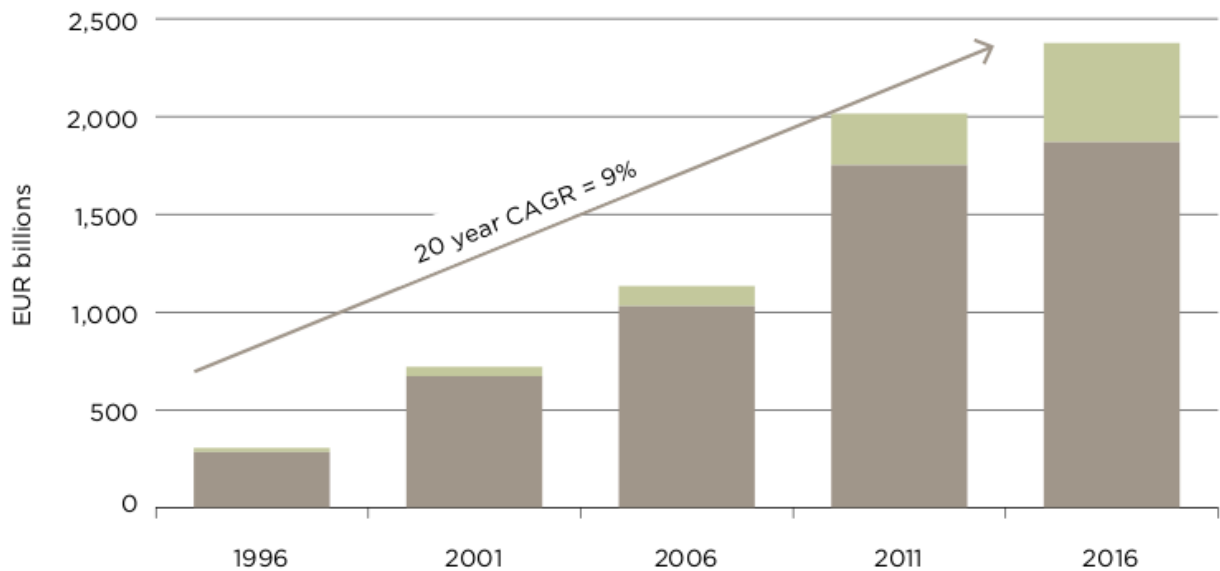
Step 6: Trading or market information platforms are constructed with blockchain technology to interoperate with the blockchains used for the transactions and enable market makers to create robust secondary markets in securitized assets. With the help of market makers, securities trading on the blockchain is near-instant and low cost, with regulatory compliance close to automatic, as data on asset ownership is reported in real-time to regulators while it remains hidden from competitors. Large investors could potentially directly trade on these platforms without having to go through broker-dealers.

Step 7: As the securities are created and traded, beneficiary information is stored and updated in a separate repository, which acts as a custodial entity. This updated beneficiary information is referenced to facilitate future security servicing. To maintain confidentiality, only relevant trustees and regulators possess full access to this information. Less sensitive data such as ratings or underlying payments information could be made available to other actors.

The growth of Factoring

Commercial, non-bank factoring enterprises are playing a large role in the US, UK, and China, and with the rise of FinTechs, non-bank players will have an increasingly significant impact on the industry. The explosive growth of the industry, especially since the start of the financial crisis, is in large part inspired by an improved perception of risk globally, but also stemming from a shift from overdraft/unsecured credit facilities to receivables-based financing (International Chamber of Commerce, 2017).

Combined growth of national and international factoring:



Total factoring volume from 2010 to 2016:

								VARIATION	
	2010	2011	2012	2013	2014	2015	2016	2015/2016	CAGR
World Domestic Factoring	1,402,331	1,750,899	1,779,785	1,827,680	1,857,410	1,838,366	1,868,855	1.66%	4.90%
World International Factoring	245,898	264,108	352,446	402,798	490,114	529,379	507,112	-4.21%	12.82%
World Total	1,648,229	2,015,007	2,132,231	2,230,477	2,347,524	2,367,745	2,375,967	0.35%	6.28%

Those trends allow the Dept Exchange and Traxia to tap into a massive market with huge growth potential which is supported by increasingly favorable macroeconomic data and validated by startups operating in similar segments.

Traxia's solution: a decentralized trade finance ecosystem

The vision of Traxia is to establish an open and decentralized ecosystem to improve trade finance globally. Traxia combines blockchain and an open, connected IT architecture to create a new ecosystem for trade finance. It allows corporates to create smart contracts — automated, self-executing digital contracts that trigger payments and receipts in real time as goods move through the supply chain.

Tracking of goods through modern Internet of Things (IoT) solutions can further eliminate uncertainty about where physical goods are; blockchain helps to verify identity and ownership and could conceivably simplify compliance and governance, as well as reducing manual work and human error. The transparency gain from such advancements ultimately leads to better access to finance in several ways:

1. Trust and Transparency - an inherent feature of blockchain technology, further enhanced with smart contracts

Recording and confirming a trade on the Traxia blockchain will create higher levels of trust in B2B trades. A Seller and Buyer are asked to sign such trade transaction using their private keys to record and create an immutable entry on a blockchain. The technology makes it seamless to assign privileges to data entries in accordance to the role of each participant such as: Trading Businesses, Investors, Regulators, Logistic Providers etc. therefore combining data ownership with a new level of transparency as needed. Use cases around IoT and business process automation will be the focus of our next phase. Such use cases have the potential to further increase supply chain transparency.

2. Securitization and Standardization – the first Traxia-supported project

Securitization can be attractive to both bank and non-bank investors. For banks, securitization allows them to economize on capital and/or liquidity and reduce US dollar funding needs, while preserving a return on firms' expertise/comparative advantage in originating and managing trade finance loans. Distribution to outside investors can also free up counterparty space on balance sheets and reduce trade loan concentrations.

For non-bank investors, direct or indirect investment in trade finance assets offers a potentially attractive return relative to risk. We will introduce how Traxia will use blockchain technology to streamline the securitization process below. Standardization ranks among the Top 3 challenges of having more institutional investors entering export finance (International Chamber of Commerce, 2016). The Traxia Ecosystem will provide standardized processes and products to make the issuance of a Smart Contract backed by trade more seamless with the support of our exchange provider – the Dept Exchange.

3. Access to capital markets through centralization – initial TM2 focus

Traxia will decentralizes trade finance technology and will work closely with international regulators to make such an open market possible. The largest global banks account for a quarter to a third of the global supply of bank-intermediated trade finance, with local and regional banks providing the remainder (International Chamber of Commerce, 2017). Such centralization comes with the disadvantage of dedicated market knowledge that favours local and regional banks. Those banks on the other hand face the disadvantage of L/Cs being 80% denominated in US Dollars which makes refinancing in US Dollars a hurdle and major obstacle for those banks (Bank for International Settlement, 2014). In result, 61% of banks perceive that there is more demand than supply for trade finance (International Chamber of Commerce, 2017). Decentralization has the potential to stabilize the trade finance markets. New entrants such as fixed

income funds can get access to a standardized trade finance product similar to a corporate bond. Such a digital platform can also provide credit risk insurers with an additional channel to sell their products directly to SMEs.

Our proposed model for optimizing financial flows in supply chains, turns the actors within the supply chain into intermediaries who can overcome the problem of asymmetric information between capital markets (e.g. banks) and the parties seeking capital.

The Smart Contract

Traxia creates a new trade finance platform that operates through smart contracts running on a blockchain. Those smart contracts hold information such as volume and duration of an underlying trade, while also becoming interoperable with existing Enterprise Resource Planning (ERP) Systems, Payment Networks such as SWIFT, [Ripple Settlement System] and others. Traxia is also a tool to model and automate business processes to save time, costs and generate a higher efficiency for corporates along their respective supply chains.

As argued by Hans-Christian Pfohl and Moritz Gomm in their paper 'Supply chain finance: optimizing financial flows in supply chains', the proposed model for financing the supply chain, turns the actors within the supply chain into intermediaries who can overcome the problem of asymmetric information mentioned above.

Traxia will take their scientific model that has been proven successfully using a qualitative approach, as our underlying assumption to improve cash allocation into trade-related financial products. In a nutshell, their model assumes that the information asymmetry between actors within the supply chain and financial institutions providing cash liquidity can be solved by making the supply chain actors part of the financial supply chain. We therefore make the B2B trade intermediaries (Buyers, Sellers) part of the financial supply chain by letting them issue the trade related smart contracts using our technology. We therefore propose the following Actors to be part of the Traxia Blockchain Ecosystem for Trade Finance. Besides the Traxia itself, we have companies engaging in a B2B trade which we call Sellers and Buyers, as well as Investors, Issuing Providers, Factors and other Issuers of Debt Securities, Listing Providers such as the Dept Exchange - our first supported project with TM2.

The Actors

1. Seller

A company that is offering a product for sale. In our ecosystem, it also represents the party that is looking to improve its cash liquidity and, solely or jointly with the Buyer, looking to issue a smart contract representing a trade obligation. In the Traxia ecosystem, these are often SMEs.

2. Buyer

A company that is purchasing the product. In the Traxia ecosystem, the Buyer is often a larger corporation which generally has a better credit rating than an SME Seller. Better ratings can be used to mitigate the risk for the Investors if the smart contract representing the trade obligation is jointly issued, which is similar to the reverse factoring model. In short, a large company like Porsche, is more than likely to pay than a smaller company and that ability to pay can help the credit rating of the contract.

3. Investors

A person or organization that puts money into financial products, assets, etc. with the expectation of achieving a profit.

4. Issuing Provider

Due to the novelty of putting trade-finance on a blockchain, Traxia came up with the concept and role of the 'Issuing Provider,' which is the technology provider that setups and maintains the Traxia platform.

The issuing provider creates a platform to streamline the process of uploading and validating business and trade details by combining commonly used web technologies with a modern blockchain infrastructure running on the backend in a manner that is transparent to the Buyer, Seller or Investor. The only exposure that the actor would have to the blockchain is the need to sign a transaction with an individual private key/passphrase that has been assigned to the user.

The issuing provider will be responsible for the technical integration of rating agencies and data providers e.g. accessing directly via Oracles or more traditional via API interfaces as well as provide access to licensed payment gateways to make settlement of fiat currencies possible between actors.

To sum it up, the Issuing Provider:

- Sets up and maintains the technical infrastructure to gather information relevant for issuing the smart contract on behalf of the Buyer and/or Seller representing a B2B trade and including information such as 'Contract Volume', 'Contract Currency', 'Contract Duration' etc..
- Implement standards to guide Buyers and Sellers through a due diligence process including KYC and AML checks based on Business Certificates, staff Passports, Financial Statements, audits, letters of good standing etc.
- Take necessary technical precautions in terms of data safety and
- Implement the public key, asymmetric encryption method to let Buyers and Sellers digitally sign their smart contract and digital asset issuing transactions

5. Listing Providers

A Listing Provider is a marketplace that matches investors of securities with listed, regulated debt securities. A listed security is a financial instrument that is traded through such an exchange. Exchanges have listing requirements to ensure that

only high-quality securities are traded on them to maintain the exchange's reputation among investors.

Although there is increased scrutiny of regulators regarding cryptocurrencies and increased targeting of fraudulent ICO business practices, there is in no jurisdiction that has a dedicated set of rules and laws in place to categorize a digital asset and/or blockchain token. Also considering that accounts receivables are in fact categorized as current assets under international bookkeeping standards, it seems unlikely to see a new set of rules approaching that will transform accounts receivables into a security, as traditional factoring services have been in operation for many years. In some markets, like the US, UK and Brazil, factoring is unregulated, giving commercial factors an advantage over their bank counterparts in the traditional factoring field.

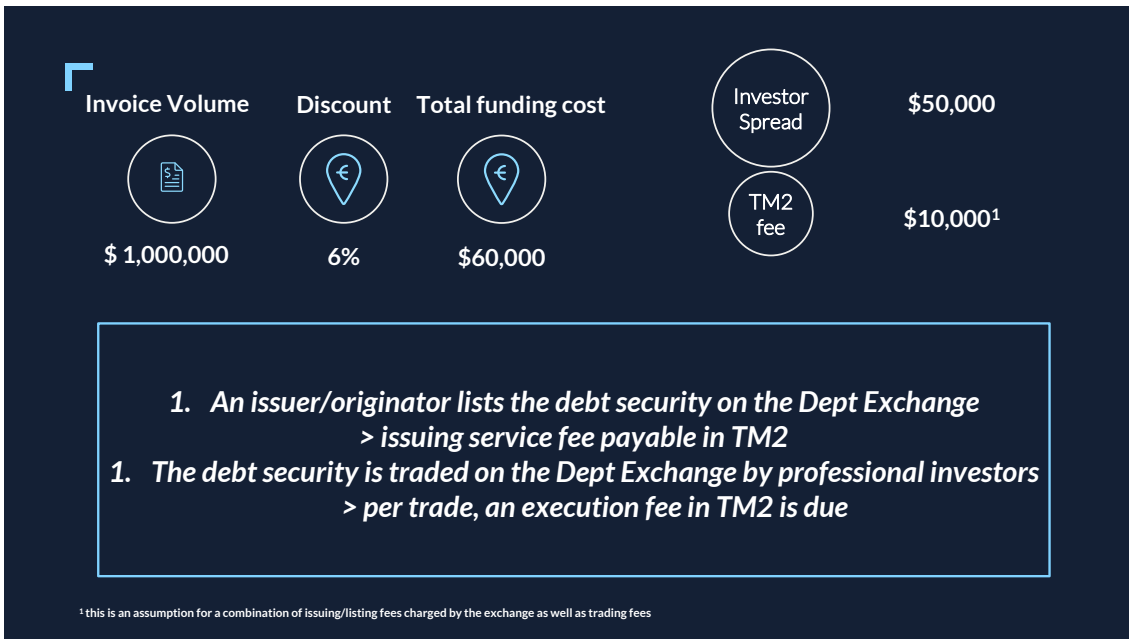
6. Risk management and 3rd party data providers

Data providers such as <https://www.cynopsis-solutions.com> are integrated via APIs and allow us to conduct Know-Your-Customer and Anti-Money Laundering checks. Providers such as <https://www.creditsafe.com/> are connected to the platform to validate information provided by the businesses that register and want to access finance through the Traxia Ecosystem. The credit scores that are provided by Creditsafe are accepted by large credit insurance companies such as Euler Hermes (<http://www.eulerhermes.com/Pages/default.aspx>) and Coface (<http://www.coface.com/>). Allowing only 'high score' companies to access finance through our ecosystem can therefore always be combined with a trade insurance that is covering up to 100% of the trade and therefore reducing the risk significantly for professional investors investing in those assets through our platform. In essence the focus is on high quality assets only to begin with such as already traded and listed SME Bonds and ETFs with a focus on the most liquid debt securities that are currently being traded in the global markets. This approach of focusing on the listing of assets that have already been pre-vetted by traditional exchanges will allow us to move faster and with a focus on debt securities only to pave the way for independent issuers and partners to list their debt securities on a liquid exchange.

Tokenized access to the Traxia platform

Our model is straightforward and involves two types of access a) accessing the ecosystem through Issuing and Listing services and b) membership fee on a per transaction basis to be settled in Traxia Membership Token (TM2) at the conversion rate of when the Issuing and Listing services have been provided.

The following diagram illustrates the business model:



As illustrated in the graphic above, the technology partner is providing the services of Listing and Issuing to interested Buyers and Sellers to access the ecosystem. The Dept Exchange can be compared to the Ethereum Switzerland GmbH which is associated to the Ethereum Foundation and is entitled to use the funds of the Crowdsale according to the statute of the Foundation. For establishing the basis of the Traxia Ecosystem which is a liquid exchange for debt securities, the Dept Exchange as well as Traxia Foundation are therefore entitled to a share of the proceeds as illustrated above. The clear focus on the Debt Exchange will allow the Ecosystem to also look into existing debt securities such as Bonds, Money Market Products and ETFs that exist in that market to not only create trust in the exchange but also increase the likelihood of liquidity and trading activity.

What we already built

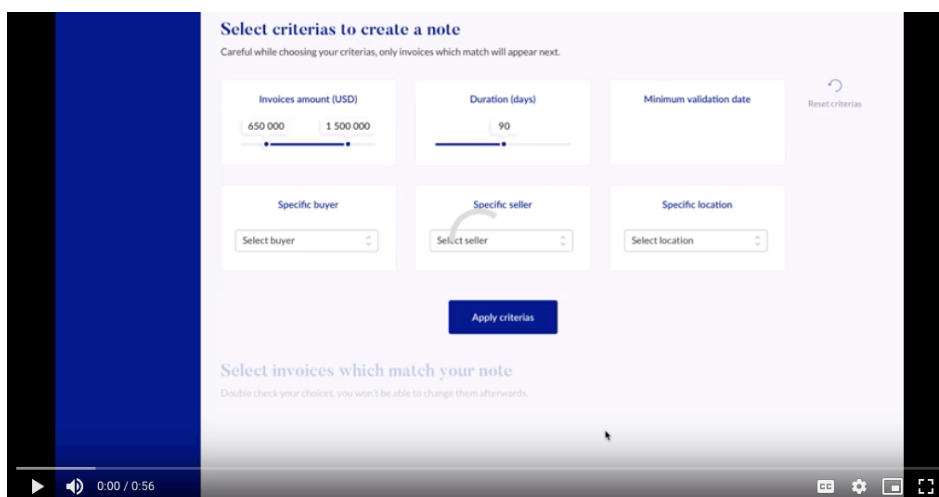


Figure 4: Decentralized Exchange home page. See the video here: https://drive.google.com/open?id=1PdpNyEX8m5iNQIxNL_COF10oT1ssn7uq

The first project supported by the Traxia Foundation is the award winning LiqEase¹ is a Limited company registered in Hong Kong since 2017 and borne out of a project that begun in 2016. The initial technology provider within the Traxia ecosystem providing IT development, as well as business development services.

The company has built an initial version of a decentralized exchange that can be seen above and is available at: <https://dex.liqease.com/>

Going forward this initial work is the strong basis for the Dept Exchange to tap into a working, live product and turning it into an even better 2nd version of such a (de)centralized exchange that will list regulated debt securities.

As the assets created on the platform are merely a digital representation of a real trade asset issued by the Buyers/Sellers, there is no need for an International Security Identification Number (ISIN). In addition, there is no custodian as the digital version of the asset has already been digitally signed by the Supplier and/or Buyer with their respective private keys and recorded on a blockchain. As the blockchain is distributed, this adds an additional layer of trust as compared to a traditional central custodian safekeeping the asset. The asset is then listed on the marketplace instantly and settlement times can easily be reduced to minutes rather than days.

Traxia and the Dept Exchange

Traxia is a non-profit foundation being established under the laws of Switzerland. It is the creator and initiator of the blockchain model described in this paper. The Traxia foundation's mission is to promote and support the Traxia platform through development and education and provide buyers, sellers and investors around the world with a more accessible, transparent and more trustworthy system to engage in global trade and improve access to finance for SMEs globally.

The Traxia foundation has supported projects like LiqEase and will support projects like the Dept Exchange and can invest in entities and projects that support the purpose of the foundation as stated.

The Dept Exchange intends to operate a for profit security exchange first to be licensed offshore and aims to get another license in the EU. The Dept Exchange is building and managing a debt exchange to be the center part of the Traxia ecosystem.

Coming back to our initial assumption, the Traxia platform creates more transparency within a supply chain by integrating smart contracts into business processes and is creating the basis for Buyers and Sellers in B2B trade to become active participants in supply chain finance, hence improving the information symmetry between the supply chain and capital markets. Higher information transparency between actors, increases the likelihood that financing can be provided for an asset that is issued by a Seller/Buyer.

² LiqEase was the winner of SLUSH Shanghai 2017 (<http://www.slush.org/news/liqease-to-win-the-slush-shanghai-pitch-competition/>)

The development of the Dept Exchange and the intended establishment of a liquid exchange for regulated debt securities increases the demand for the TM2. Using Smart Contracts and Tokens to represent such securities creates a higher levels of transparency and vast improvements in terms of time and efficiency in the settlement process of such securities.

Business Strategy

Our strategy focuses on tapping into the existing pools of liquidity by listing existing and liquid debt securities represented by Tokens on the Dept Exchange first. This seems to be the most viable first step for us to create trust and a transparent ecosystem should enable us to do so. We will use the well-known bowling pin strategy i.e. start with a niche market, and then move to other niches and broader markets.

Stage 1

Focusing on the asset supply side first: Traxia will work on and utilize the debt assets that are already listed and traded on other exchanges such as ETFs that mimic debt products. The established way is to lend those securities from existing investors such as banks or funds and place those lent securities into custody with a regulated provider.

Those securities are than not only with a trusted custodian which is relevant for all institutional investors and traders willing to trade on our Dept Exchange, but they are also immutable represented on a blockchain which makes settlement much more efficient and reduces the need for intermediaries significantly saving costs.

To get a head start and accelerate liquidity on the Dept Exchange, regulated securities and assets that are already vetted by the relevant market participants will give us an edge and are more likely to allow us a successful acquisition of market makers, traders and investors to participate and use our exchange.

The goal is to use this yet to be established liquidity to make it easier for SMEs to access public debt markets without intermediaries but transparency that improves AML and KYC compliance requirements and allows for better and more targeted diversification of an investor's portfolio at the simultaneously.

Stage 2

Educate and develop the offering together with existing and innovative banks, regulators and institutional investors and government bodies.

Non-stop 24/7 trading

Convenience of connection: WebSocket API, REST API, FIX API

Instant order book flow when connect

V1

In terms of architecture, we are building and using server infrastructure provided by aws.

So far, we built an exchange that is decentralized and hence has the issues of latency and related performance as well as the potential of frontrunning. The exchange was built by LiqEase and will now be improved to a Version 2 by the Dept Exchange which will make sure that those are covered and enhanced as follows.

V2

Our second version will have an integration with a ticketing system such as Zendesk

Integration by API with eWallets and e money providers such as Skrill, Neteller, PayPal and others

Integration by API with any PSP

Integration with different blockchains and with any tokens based on Ethereum, NEM, NEO

More seamless integration with our KYC providers

Administrative module for our employees

Automatic deposits and payments to customers via different payment gateways

Affiliate system to reward traders for referrals

The second version of the product might be a central or a decentral and central hybrid exchange since the issues mentioned above seem hard or impossible to solve at this point in time. The TM2 Token will be used on the exchange to settle fees.

Further details about the Technology and Smart Contracts can be found in the Annex.

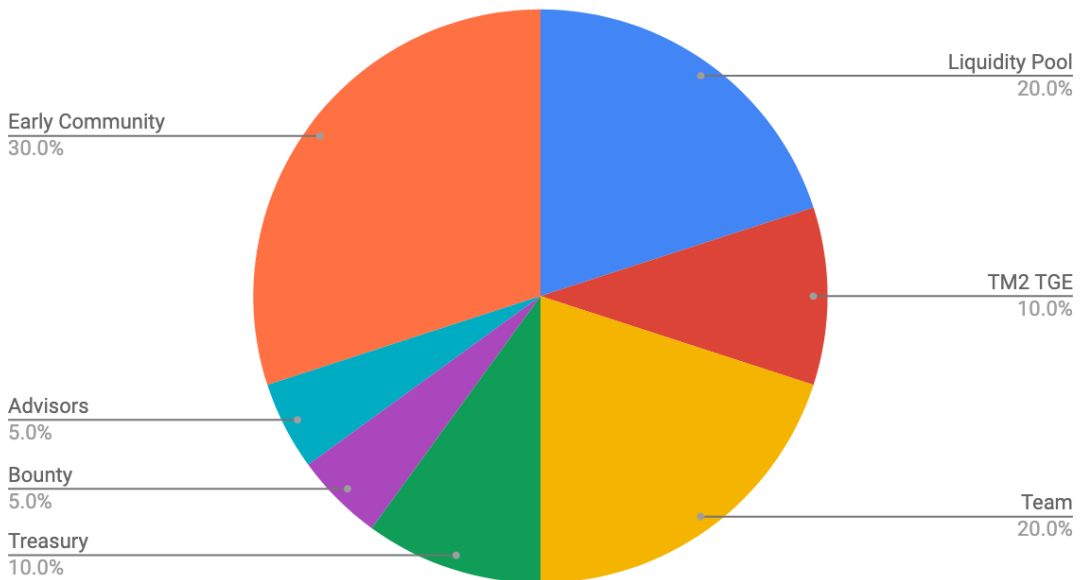
Traxia Membership Token (TM2) Sale

To fund the further operation and creation of the Traxia exchange, we will be offering the sale of TM2 tokens.

The supply of TM2 is limited to a maximum of max. ten billion (10,000,000,000) tokens in total, including those available for sale during the Token Sale. The tokens will be generated upon the token launch and will be distributed in the following manner:

3,000,000,000 Community	Early	30%	TMT Early Community will be distributed 10% of TM2 before or on October 31 st 2019, 20% of TM2 before or on January 31 st 2020, 30% of TM2 before or on April 30 th 2020 40% of their participation shall be distributed before or on July 31 st 2020. Unpledged TM2 will be allocated to the Foundation.
2,000,000,000 Members	Team	20%	10% of TM2 before or on October 31 st 2019, 20% of TM2 before or on January 31 st 2020, 30% of TM2 before or on April 30 th 2020 40% of their participation shall be distributed before or on July 31 st 2021.

TM2 Distribution



Token Demand and Supply

The price for the TM2 will be priced by markets and exchanges, identical to any other token. As our network and ecosystem grows — meaning more Debt Issuers issuing their digital debt assets and listing those on the marketplace operated by the Dept Exchange in the ecosystem — the total amount of TM2 remains fixed to max. 10,000,000,000 Tokens. Such an upper ceiling triggers traditional market dynamics, as soon as Buyers and Sellers issue smart contracts on the exchange representing their B2B debt obligation, generating TM2 demand for fees associated to trade in the ecosystem.

Token Amounts and Pricing

The total amount of TM2 Tokens sold will be 100,000,000.00 in this Token Generating Event. The price for the TM2 will be fixed:

Phase	June/July TGE	Total sale
TM2 Max Amount	1,000,000,000	1,000,000,000
Price per TM2 in US\$	\$0.002	\$2,000,000

Usage of Proceeds from TM2 Token Generating Event

Business Area	Max. budget in USD	Portion of Budget	Activities
Business Development & Sales	~600,000	~30%	Salaries and Sales Related Expenses
Smart-Contract Development	~600,000	~30%	Product development
Legal, Broker License and Compliance	~200,000	~10%	Company establishment, Contracts, licenses
Liquidity Buffer	~600,000	~30%	Manage Uncertainty

Team

The core team holds deep expertise in launching and executing digital projects successfully both independently and for large corporations. The team has a variety of knowledge in various disciplines such as digital platforms, payments, fintech, FMCG, supply chain management, software engineering and more. Profiles of the team members are posted on www.traxia.co

Legal

Participants shall not construe these Terms as investment, legal, tax, regulatory, financial, accounting, or other advice, and they are not intended to provide the sole basis for any evaluation of a contribution. Prior to acquiring Traxia Tokens, Participants should consult with their own legal, investment, tax, accounting, and other advisors to determine (i) the potential benefits, burdens, and other consequences of such investment, including without limitation a Participant's financial situation and goals, and (ii) suitability and appropriateness of the acquisition, holding and disposition of Traxia Tokens. Participants are entirely responsible for the financial risk of their contribution during the entire term.

Rights related to Traxia Tokens

By participating in the TGE and obtaining the Traxia Token in the course of the latter, Participants acquire no rights whatsoever, neither expressed nor implied, related to the Traxia Foundation or its projects. In particular, Participants will have no influence over the governance of the Traxia Foundation, and no control over its distribution, allocation and use of the Participants' contributions, which may include covering costs incurred before the TGE, strategic reserves, and awards for beneficiaries (including without limitation parties affiliated with the Traxia Foundation, any related legal entities or the projects) who in the Traxia Foundation's view significantly contributed to the projects. It is thus in the Traxia Foundation's sole discretion how and to whom Participants' contribution will be given in the context of its projects; it will do so as it deems fit.

Participants' contributions in the course of the TGE are final and non-refundable. The Participants acknowledge that the Traxia Foundation is not required to provide a refund for any reason, and the Participants will not receive money or other compensation for any Traxia Tokens that are not used or remain unused.

A participation in the TGE involves a high degree of risk, volatility, and illiquidity. Participants need to be aware that by participating in the TGE, their entire contribution to the Traxia Foundation may be lost for whatever reason, in particular due to the fact that the Traxia Foundation and its project are still under development, and no warranties can be given that it will be successfully completed. The Traxia Foundation will – on a best efforts basis – take economically reasonable measures to issue the Traxia Tokens and to release the project, but it may be possible that the project launch will not occur, or that the Traxia Tokens, even if successfully developed and maintained, may not meet Participants' expectations at the time of purchase. As a consequence, the Traxia Token may have no value after all. Contrary to traditional start-up financings, Participants do not have any comparable rights at all; they are neither shareholders (equity financing) nor creditors (debt financing), and they do not have any corresponding rights whatsoever. Furthermore, the Traxia Foundation may at any given time cancel the TGE for whatever reason and in its sole discretion. In addition, no guarantees can be given that the TGE will be carried out or completed in accordance with the time-frame as set out in the Whitepaper.

Authorization

Participants represent and warrant that they are authorized to acquire and obtain Traxia Tokens in their relevant jurisdiction, that they are not subject to a jurisdiction where the distribution, acquisition, holding and resale of Traxia Tokens is restricted, and are of a legal age to be bound by these Terms.

They shall make their own investigations and evaluations of the contributions that will be delivered pursuant thereto, including the merits and risks involved. Participants shall inform themselves as to the legal requirements applicable to them in respect of the acquisition, holding, and disposition of the Traxia Tokens upon their delivery, and as to the income and other tax consequences to them of such acquisition, holding, and disposition. They shall accordingly observe all applicable restrictions.

These Terms shall not be used or relied upon by any person who is subject to laws which for whatever reason prohibit or restrict the distribution, publication, availability or use of these Terms and the Whitepaper or any actions taken thereunder, such as the distribution, acquisition, holding and resale of Traxia Tokens (including without limitation citizens or residents of the U.S., Canada, U.K., Singapore, North and South Korea, Hong Kong, China).

With regard to the aforementioned, including without limitation in case of regulatory actions against Participants who acquired Traxia Tokens despite any applicable limitations in their jurisdictions, Participants further represent and warrant that they will not hold the Traxia Foundation, its affiliates, officers, directors, agents, joint ventures, employees, advisors and suppliers, now or in the future, liable for any losses, costs or any direct, special, incidental, or consequential damages arising out of, or in any way related to, the TGE or the Traxia Foundation.

Forward-Looking Statements

Certain statements contained in the Terms or the Whitepaper constitute forward-looking statements. Such forward-looking statements, including the intended actions and performance objectives of the Traxia Foundation, involve known and unknown risks, uncertainties, and other important factors that could cause the actual results, performance, or achievements of the Traxia Foundation in its development of the project to differ materially from any future results, performance, or achievements expressed or implied by such forward-looking statements. No representation or warranty is made as to future performance or such forward-looking statements. All forward-looking statements in the Terms or the Whitepaper speak only as of the date hereof. The Traxia Foundation expressly disclaims any obligation or undertaking to disseminate any updates or revisions to any forward-looking statement contained herein to reflect any change in its expectation with regard thereto or any change in events, conditions, or circumstances on which any such statement is based.

Provision of Additional Information

The Traxia Foundation will cooperate with all law enforcement enquiries, subpoenas, or requests provided they are fully supported and documented by the law in the relevant jurisdictions. This also applies to information requests with regard to Participants from regulatory authorities.

Immediately upon first request, Participants shall provide to the Traxia Foundation information which it deems, in its sole discretion, to be required to maintain compliance with any federal, state, local, domestic or foreign laws, regulations or policies. The Participants acknowledge that the Traxia Foundation may refuse to distribute Traxia Tokens until such requested information will be provided.

Limitation of Liability

Participants release the Traxia Foundation and its respective predecessors, successors and assigns – to the fullest extent permitted by law – from all claims, demands, actions, damages, losses, costs and expenses of every kind and nature, known and unknown (including, but not limited to, claims of negligence, actions for breach of warranty, breach of contract, tort), arising out of or otherwise in connection with: (a) their contributions to the Traxia Foundation; (b) their participation in the Traxia Foundation's TGE; (c) their rights, responsibilities or obligations under these Terms and the Whitepaper; (d) their violation of these Terms; or (e) their violation of any rights of any other person or entity, including in relation to or arising out of disputes between the Traxia Foundation and them or between them and other participants in the TGE, and the acts or omissions of third parties, or (f) their envisaged future use of the Traxia Token.

Indemnification

Participants shall indemnify the Traxia Foundation and its respective predecessors, successors and assigns – to the fullest extent permitted by law – from and against all claims, demands, actions, damages, losses, costs and expenses (including attorneys' fees) that arise out of or are otherwise connected with: (a) their contribution to the Foundation; (b) their participation in the TGE; (c) their rights, responsibilities or obligations under these Terms and the Whitepaper; (d) their violation of these Terms; or (e) their violation of any rights of any other person or entity. The Traxia Foundation reserves the right to exercise sole control over the defense, at the Participants' expense, of any claim subject to indemnification under this section. This indemnity is in addition to, and not in lieu of, any other indemnity implied into or set forth in any written agreement between Participants and the Traxia Foundation or provided by any applicable laws.

Disclaimer of Warranties

Participants expressly agree that they obtain Traxia Tokens at their own risk and that the Traxia Tokens are provided on an “as is” basis without warranties of any kind, either express or implied, including without limitation warranties of title or implied warranties, merchantability or fitness for a particular purpose. Without limiting the foregoing, no warranty is given that the TGE will be uninterrupted, error-free or fully completed.

Severability

If any portion of these Terms is found illegal or unenforceable, in whole or in part, such provision shall, as to such jurisdiction, be ineffective solely to the extent of such determination of invalidity or unenforceability without affecting the validity or enforceability thereof in any other manner or jurisdiction and without affecting the remaining provisions of the Terms, which shall continue to be in full force and effect.

Updates to the Terms

The Traxia Foundation reserves the right, at its sole discretion, to change, modify, add, or remove portions of the Terms at any time during the TGE by posting the amended Terms on its website <https://www.traxia.co/terms-of-use>. Any Participant will be deemed to have accepted such changes by purchasing Traxia Tokens. If at any point Participants do

World Trade Organization. (2008). *Restoring Trade Finance during a period of Financial Crisis*. Retrieved from https://www.wto.org/english/res_e/reser_e/ersd200916_e.pdf