



## The Blockchain Revolution for Trade Finance

**Abstract.** A digital asset functioning as a synthetic commodity can be utilized to eliminate costs associated with trade finance (known in most industries as invoice “factoring”). Identical to Bitcoin’s use of new token emissions to perfect the network, emissions can be used to mitigate the costs of invoice “factoring.” In the transportation industry, factoring companies (banks and intermediaries) charge unreasonably high interest rates – usually exceeding 25% annualized – with a true cost often exceeding 50% of a carrier’s net revenue on every load of freight. These fees lead to artificially increased shipping costs for all, trickling-down to every consumer and household when they purchase goods from grocers and retailers. In effect, there is a silent Value Added Tax (VAT) in supply chains that every consumer is paying – atop inflation. TCS, a blockchain-as-a-service (BaaS) company, has created an infinitely superior solution for settlement, allowing transportation Users to exchange (barter) collection rights in freight invoices for digital assets (TCS Tokens) – with no USD (fiat) exchanged. To avoid volatility and slippage, Users can then immediately sell TCS Tokens to gain USD liquidity on exchanges, and recapture invoice values. In so doing, TCS provides faster and cheaper settlement services to transportation companies. Many of these Users are forced to factor today, as they cannot wait the industry standard **30-180** days for payment. These Users also haul 90% of the full truckload “spot” capacity in America every day. Without them, every grocer and retailer would be rationing products within a week. Collectively, in the U.S. and Canada, Users are factoring nearly \$1T per year in commercial paper; though the total addressable market in North America exceeds \$2T annually. As TCS also serves as the buyer of last resort on exchanges, the economic models advanced here conclude in a fully sustainable and deflationary monetary policy, with guaranteed supply and demand that aligns incentives for all participants. In the transportation industry, a faster and cheaper solution is long overdue. TCS has solved factoring and – with a dream team of strategic partners – the solution is now advancing to market at scale.

## **Introduction**

TCS Blockchain is also a trade finance company. At scale, the TCS network can eliminate billions in annual intermediary costs throughout global supply chains, and this tranche of savings can transfer to consumers, households and small businesses. TCS endeavors to provide needed relief to the companies creating the backbone for developed economies, and to reduce the aggregate cost of consumer packaged goods, food, and related products in an era of rampant inflation.

Invoice settlement is a critical service, allowing companies to manage cash flow in industries with poor pay terms and related barriers to entry and scale. However, the cost associated with factoring freight invoices is commercially unreasonable and usurious. These costs are incurred like silent taxes on the entire supply chain. Blockchain technology presents the framework to disrupt and disintermediate waste in the current financial system. Furthermore, digital assets enable monetary policy to benefit every party in the supply chain. For Users, the TCS network works near-identically to traditional factoring.

To avoid factoring costs, Users need only 1) agree to terms for accounts receivable assignment, and 2) sign-on to the TCS mobile or web app. Unlike factoring companies, TCS does not require contractual exclusivity. Users can settle one (1) receivable – or all receivables – without pledging rights in future invoices. In 1-2 business days, Users are funded with the current USD equivalent of TCS Tokens, as TCS directly deposits Tokens into User accounts on exchanges. Once funded, TCS Tokens can immediately be sold, and transferred to U.S. Dollars. Alternatively, TCS Tokens can be converted to other digital assets like Bitcoin and USDC, giving users total autonomy of business revenue. For centralized exchanges that launch digital asset debit and credit cards, TCS Token can also be spent directly. TCS then monetizes the receivable with the shipper and/or debtor, by collecting the USD proceeds as revenue, less the (up to 90% cheaper) settlement fee.

By way of example, if the ratio is 10-1 when a TCS transportation User seeks to divest TCS Tokens – and the receivable value is \$10,000 USD – the User would receive 100,000 TCS Tokens in exchange for their invoice, less the settlement fee. TCS Tokens are then directly deposited into the User's exchange wallet. Here, and in most cases, the User receives 99% or more of the face value for the freight invoice, though some exchanges do charge de minimis conversion fees comparable to \$1 for every \$1,000 settled. Industry wide, net revenue for full truckload freight receivables average between 5-10%. Accordingly, on this \$10,000 invoice, let's say net revenue is \$500. By avoiding a 2% gross factoring fee, a User saves \$200 in costs. Here, a 2300 recapture represents a 40% increase in net revenue on the transaction. Repeated for 100 like kind loads in a fiscal year, this savings represents \$40,000.00 in additional net revenue to the TCS User.

Transactional volume from commercial paper settlement, moving through TCS Token, creates velocity of money – or coin velocity – propelling TCS Token into the stream of commerce. Coin velocity tends to raise values, signaling institutional and related buyers. In symphony with User activity, secondary markets are born on exchanges. The volume and value positions TCS to execute on all its business and revenue models: B2B and retail

partnerships, monetization of rich data, in-app advertising, AI and related tech licensing, and continued development and deployment of related products in the TCS tech stack.

### **Tokenomics**

TCS Token is an ERC-20 non-security digital asset deployed on the Polygon network at: <https://polygonscan.com/address/0x2f697BC31895ea05e6a364cedC8a76fF3467D32f>.

TCS Token is a “utility token” – not pegged to any sovereign currency, digital asset, or class of assets – and will fluctuate in accordance with market dynamics. Supply is capped at 50B; TCS will never mint more supply. More than 99% of all TCS Tokens minted in 2022, remain in the TCS Treasury, to be utilized for User settlements. All other outstanding TCS Tokens are subject to industry standard lock-up terms, and first-right-of-refusal options in favor of TCS. As TCS Tokens are depleted from the Treasury, TCS will repurchase from exchanges to ensure Users get to liquidity. Accordingly, TCS will be an active buyer of TCS Token and, in time, become the single largest buyer of TCS Token. Restated, the TCS tokenomics model, like Bitcoin, concludes in a fully sustainable and deflationary monetary policy.

### **Decentralization**

Bitcoin comes to market through the work of miners. Individuals with a specialized skill set in society, who exchange acumen, labor and other resources to mine BTC. Here, truck drivers and logistics companies are the miners of TCS Token. Their unique skill set creates the commercial paper assets required to bring the TCS supply cap to market. As TCS Token is an Ethereum/Polygon fungible token, the blockchain technology is akin to a railroad that TCS neither owns nor controls. While TCS Token acts like a train on the tracks, the railroad is proprietary and decentralized. While TCS conducts the train, it is not a promoter of the railroad. TCS is likewise dependent on the ability to transfer TCS Tokens directly into digital asset accounts and wallets on exchanges to settle transportation Users. Trains have no use case without depots and stations. Without exchanges, the TCS train is without depots and stations to transport stores of value. Similarly, TCS will rely on new digital asset debit and credit cards to create a more robust economic ecosystem. Access to these cards immediately accelerates the value proposition for Users, by permitting TCS Token to be spent directly at retail locations.

### **Competitive Advantages & Markets**

TCS was the first company in the world to settle a freight invoice on blockchain rails,<sup>1</sup> and the first company to move to scale.<sup>2</sup> TCS will capture market share in two industries simultaneously: transportation and Web3. Combined, these two industries represent approximately \$4T in value today, and are projected to exceed \$30T in value by 2030. The most acute pain is found in the full truckload sector. Fragmentation and inefficiency have plagued the sector for decades. Why venture capital has invested over \$28B since 2018. In the U.S. and Canada, the TCS User demographic is comprised of over 366,000 trucking companies (91% with six (6) or less trucks), and over 12,000 logistics companies.

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<sup>1</sup> <https://cointelegraph.com/press-releases/truckcoinswap-completes-worlds-1st-blockchain-settlement-in-2t-american-freight-industry>

<sup>2</sup> <https://www.einpresswire.com/article/740493976/tcs-blockchain-and-bulla-network-go-live-with-onchain-freight-set>

Collectively, these companies are generating nearly \$1T per year in accounts receivable. Accordingly, TCS only needs to capture a fraction of 1% of market share to generate billions in annual revenues. Once TCS has penetrated sector market share, it will focus on expansion to rail, air and maritime, and related industries that are similarly burdened by the usurious costs of invoice factoring. The true global TAM for TCS exceeds \$10T.

## Compliance

TCS Token is a non-security digital asset (NSDA). NSDAs are utility tokens that function as commodities in usage. This language is borrowed from the U.S. Securities and Exchange Commission (SEC). In his verbal and written statements before the U.S. Senate Banking Committee on September 15, 2022, Chairman Gensler shared:

“Thus, I have asked staff, in working to register crypto intermediaries, to recommend a pathway to allow both crypto security and crypto non-security tokens to trade versus or alongside one another.” (emphasis added)

This statement is profound, in that it mandates mutual exclusivity. For crypto securities to trade alongside crypto non-securities, both must exist. Markets must also exist, or be made, for both assets. A Latin adage is directly on point: *expressio unis est exclusio alterius*.

The concept of “Web3” is often referred to as the “internet of money.” A growing majority of U.S. lawmakers and financial regulators do not believe the Supreme Court – nearly 80 years ago – was anticipating the economic realities of digital assets, blockchain and Web3 when finding that investment in a fruit orchard offering constituted an investment contract, and a security. TCS agrees with the growing majority, and believes the U.S. Congress must act to keep innovation and capital formation on shore. However, we proceed with the *Howey* analysis for purposes of form. Not substance.

To be classified as a security pursuant to the 1946 *Howey* Test, all four (4) prongs of the test must be met, and any adverse party has an affirmative burden to prove the same. Guidance has also suggested a secondary burden, requiring proof that any alleged security remains a security throughout its lifetime, in addition to actually being a security when a challenge originates. Either way, the *Howey* Court intended to create a high legal bar.

This high bar has grown even higher over the years. There are now several judicially created exceptions to the *Howey* Test. Nearly 30 years after *Howey*, the Supreme Court created a “consumption” exception. See, *United Housing Foundation, Inc. v. Forman*, 421 U.S. 837, 852-53 (1975). Specifically, the Court noted: “When a purchaser is motivated by a desire to use or consume the item purchased . . . the securities laws do not apply.” Just a few years later, the Supreme Court created the “other purposes” exception in *Int’l Bhd. of Teamsters v. Daniel*, 439 U.S. 551, 99 S. Ct. 790 (1979). A carve out was then made to the investment contract analysis in *Landreth Timber Co. v. Landreth*, 471 U.S. 681, 689 (1985). Here, the Supreme Court stated, in pertinent part:

“Applying the *Howey* test, we conclude the instruments likewise were not ‘securities’ by virtue of being ‘investment contracts’ because the economic realities

of the transaction showed that the purchasers had parted with their money not for the purpose of reaping profits from the efforts of others, but for the purpose of purchasing a commodity . . . .” (emphasis added)

Pursuant to the *Howey* Test, an alleged securities offering requires 1) an investment of money, 2) for common enterprise, 3) with the expectation of profits, 4) from the efforts of others (and/or “solely” from the efforts of others). And as previously stated, the secondary “lifetime” burden may need to be met, and no judicially created exceptions can apply. For purposes of the analysis here, there are two contemplated actors: transportation Users and secondary market participants. As TCS Token is listed globally, the latter category could range from Manhattan hedge funds, to accredited investors in London, to family offices in Dubai, to fishing co-ops in India.

Market participants can and should vote with their wallets. They can vote in favor of truckers and operators – we saw this during COVID with the “Canadian trucking convoy.” They can also vote in favor of solutions that put downward pressure on artificially high freight rates, inflation and the cost of goods. In the U.S., cost of goods has been the #1 political issue for voters in recent elections. This market is global, and could not be more socially and economically diverse. Because TCS does not sell TCS Tokens to secondary market participants, secondary buyers can only purchase from transportation Users. Accordingly, we focus the balance of this analysis on the Users who bring the TCS Token supply cap to market.

Prong 1 of *Howey* requires an “investment of money.” No one would dispute the term “money” means U.S. Dollars. U.S. Dollars are debt instruments printed on paper. While once backed by gold deposits, Dollars are no longer backed by any real world assets. Users do not purchase TCS Tokens with Dollars, or any other type of fiat instrument. Nor do they use or “invest” money. Rather, Users swap (barter) collection rights in freight invoices for TCS Tokens. This is an exchange of two asset classes: commercial paper for digital assets. As there is no “investment of money,” Prong 1 fails, as does the entire *Howey* Test.

Prongs 2-4 require common enterprise with the expectation of profits from the efforts of others. On “common enterprise,” an offering could be deemed a security if the parties investing in the offering have a common motivation for something like a return on investment. However, TCS Token is not an offering, Users are not “investing,” nor are Users in search of yield or alpha. In fact, most Users will immediately divest to pay their operational costs. Likewise, Users have no expectation of profits from the efforts of others. The value proposition to Users is to utilize blockchain settlement and an NSDA to recapture the value of their own efforts – revenue already owed to Users from shippers and debtors – in the shortest period of time. Accordingly, *Howey* Prongs 2-4 fail.

Finally, because Users are “consuming” TCS Tokens for the purposes of fast liquidity and net revenue recapture, all of the Supreme Court’s *Howey* Test exceptions could apply: *Forman*, *Int’l Bhd. of Teamsters*, *Landreth Timber Co.*, et. al. And if the secondary “lifetime” burden is law, or becomes law, an adverse party would have to demonstrate that every fungible TCS Token has exclusively operated as a security for its lifetime. Perhaps

a better idea is to simply look at TCS Token as a commodity, like water. Water is consumed by industry actors to increase efficiency and mitigate costs. Water then cycles back to the land, and markets. While water loses some utility after industry use, it can be repurposed. And it will always be repurposed, because it will always remain scarce.

## **Conclusion**

We trust the era of irrational exuberance, fraud and nonsense is over in the American blockchain and digital asset Industry. This is the chapter for real use cases. Not use cases solving 1% problems or exclusively serving the top 1% of wealth classes. We mean “main street” use cases that solve macroeconomic problems in legacy industries. Packaging Bitcoin in an ETF is not a use case, nor does it have even a modicum of privity to the Satoshi thesis. In terms of business history, the opportunity to capitalize on a \$30T wave of value and innovation over the next 5 years is unprecedented. Further, as a company already developing and deploying AI, TCS is championing a larger mission to digitize, optimize and automate every component of freight invoice settlement. In addition to making transportation companies more solvent, academic studies suggest TCS can eliminate billions in financial waste throughout supply chains – making TCS one of the most innovative companies on the planet. TCS takes little credit, however. In simplest terms, TCS is the Satoshi thesis, solving the largest problem in global supply chains: addressing and mitigating the usurious costs associated with tradfi trade finance.

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