BlockChain & Trade Finance "Hollywood Marriage"

This article is authored by an Executive Advisor of Alberta Advisory and is sponsored by Madfoatcom.

Introduction

Over the past 5 years, the global scene witnessed a myriad of Financial Technology Companies (FinTech) and Industry Consortiums who attempted to transform the Trade Finance cycle (time-, cost-, control- and experience-wise) through the use of blockchain technology and its off-shoot developments of: Smart Contracts, Crypto Exchanges, Stable Coins, RWAs, DiFi Protocols and DAO.

Tagging this market move as *Material* is an understatement. Many international banks chipped-in including: HSBC, Santander, Citi, BNP Baribas and ING. Blue-Chip Companies also joined the parade including: IBM, Measrk, Singapore Port Authority, Port Of Rohterdam, ONE (Ocean Network Express), Master Card, and CMA-CGM.

Nevertheless, many of these Trade Finance FinTechs (TFFT) either rendered insolvent such as- Contour, TadeLens, We.Trade, Lygon and Baton Systems, or downsized such as- Marco Polo Network, dtlLedgers, and Skuchain. The remaining survivals clung to government backing such as- HKMA Ping An's OneConnect, China Blockchain Service Network (BSN) and DP World, or veered off Blockchain as the mainstream backbone of their solutions (e.g. Kogmo).

This is a major set back that pegs the question of- *Why?* It's a question meant to improve future initiatives, rather than, lament past failures.

In attempting to answer the "Why?", we examine how indispencible the Blockchain's unique technology characteristics (i.e. Distributed Ledgers, Decentralized Governance, Smart Contracts and Asset Tokenization) to the two business dynamics of a Trade Transaction's Cost and Risk.

Cost

As per WTO, World Bank and UNCTAD, the International Trade maket can be simplified as worth USD 100 Trillion with a 70% (Domestic) vs. 30% (Cross-Border) split. The share of each trade finance mechanism is- 80% "*Open Account*", 12% "*Letter Of Credit*", 5% "*Document Collection"* and 3% "*Advance Payments*".

The "*Open Account*" and "*Advance Payments*" finance mechanisms rely heavily on standard payments and invoicing technologies and do not require the high-level sophistication of distributed ledgers and smart contracts. In contrary, today's payment networks are heavily regulated, tightly controlled centralized counterparties such as- Automated Clearing Houses (ACH), Real Time Gross Settlement Systems (RTGS) and Card Scheme Operators (e.g. Visa, Master Cards).

In case of "*Letter Of Credit*" and "*Document Collection*", banks typically- (a) use SWIFT as the primary messaging and settlement platform, (b) generate an average of 8 SWIFT messages per Trade Transaction and (c) incur an average of USD 1 fee per MT700 / MT400 message. The message syntax and semantics are heavily regulated by SWIFT and ICC (UCP 600 and URDTT).

Non-SWIFT messaging platforms (e.g. Ripple, Stellar, Kogmo) deliver a clear cost advantage. They do that either by: (a) waiving message-based fees in exchange of a sizeable annual subscription (Kogmo: USD 50 - +200K based on usage tier), or (b) reducing their message fees to fractions of thousands or tens of thousands of a dollar (e.g. Ripple: USD 0.00001 / message).

The USD 8 cost advantage per Trade Transaction to banks are only meaningful to high-volume, low-value standardized Documentary Credit-based transactions where efficiency gains can be scaled into good profits. In corollary, the USD 8 cost advantage is negligible in comparison to the Documentary Credit collection advising and settlement commissions which average 1% of total Trade Transaction value.

Finally, blockchain is not the only must-have technology for digitizing documents, orchestrating messages, managing approvals and affecting settlements. Many players rely on proven Cloud, Kafka and Camunda to do just that. Examples include- EssDocs, TradeSun, TraydStream and Mitigram.

In conclusion, the Trade Finance FinTechs must attract large volumes of low-value standardized trade flows to stay afloat, due to their hefty upfront price discounts. Banks prefer to rely on SWIFT for medium-to-large size trade transactions due to SWIFT's reliable history, wide acceptance, diversified services and prudent risk management.

Moving forward, TFFT should secure regulations to enforce their acceptance by the financial system across the Small-To-Medium Enterprise segment.

Risk

A Trade Transaction is typically exposed to three (3) types of risks- Credit, FX and Financial Crime (e.g. Money Laundering, Terrorist Financing, Fraud). As per ICC, Allianz Trade, FATF, Euler Hermes and Other sources, the annual loss for each risk is at least- USD 50 B, USD 20 B and USD 100 B, respectively.

Credit Risk is typically managed by- (a) prudent rating of the obligors through a mix of own- and third-party rating models (e.g. Moody's, Experion, Fair Isaac) and (b) early command of collaterals in the form of upfront cash cover, consignment of merchandise or future claims on receivables. It's evident that neither Blockchain technology, nor TFFTs have a clear advantage in this field. Their impact is marginal in terms of reducing the credit risk exposure period through semi-real time settlement.

FX Risk stems from the volatility in foreign currency exchange prices between the Domestic, Settlement and International legs of a Trade Transaction. Some TFFTs tries to introduce an intermediary crypto currency such as- USDT, USDC, XPR or BitCoin to streamline both the currency conversion and settlement processes.

When Stable Crypto Coins (e.g. USDT and USDC) are used, the 1:1 peg to the USD may occasionally be impacted by the high trading commissions and constrained liquidity of the Crypto Exchanges. For example, USDT demonstrates USD 0.0001 – 0.0005 intraday price movements, despite being pegged to the US Dollar. Hence, again, Blockchain and TFFT

have a marginal impact on FX risk management of an international Trade transaction. The only exception is when engaging in sanctioned, illiquid or volatile currencies.

In case of Freely Floated Coins (e.g. XPR, BitCoin) the FX Risk is higher due to relatively sharp intra-day swings in these currencies values against the USD. The 18-month intraday volatility of major currencies against the USD is- EUR (1%), GBP (0.8%), CNY (0.2%), XRP (10%) and BTC (7%). Hence, on average Crypto Currencies are 7-10 times more volatie during the day than other leading fiat currencies.

Financial Crime Risk stems from engaging with high-risk counterparties either voluntarily (i.e business transaction) or involunatirly (e.g. cyber attacks) to avoid losess or acquire illicit gains.

In Trade Transactions, this includes a wide spectrum of activities including- validating merchants' identities, screening related countries, ships, ports, merchandise and intermediaries against sanction lists, insuring against sabotage and damages, cross-validating trade documents against issuing authorities records, analyzing documents content for integrity, completeness and accuracy and unveiling anomalies in pricing, demand and flows.

Blockchain distributed ledger technology proofs transactions through multi-lateral validation (by work or by stake), thus reducing the financial crime risk related to "*Denial Of Service*" or "*Identity Theft*" attacks. Furthermore, Blockchain's Smart Contracts reduce manual interventions through automatic triggering of basic contract activities such as-confirmation, expiry and settlement.

Yet, the Blockchain is susceptible to attacks on its consensus mechanism (e.g. 51% Attack, Sybil Attack, Long Range Attacks). The successful attacks had devastating effects, such as- 2018 BitCoin Gold Attack Of USD 18 M losses, 2022 Solana Sybil Attack Of USD 114 M and 2022 FTX Attack Of USD 415 M).

Moving forward, TFFT should build real time interfaces with credit rating, collateral management and transaction screening systems, while shoring up their Analytics- and AI-driven fraud detection capabilities.

Thanks!

Disclaimer:

This article provides the personal views of the author. The words and other content provided in this article, and in any linked materials, are not intended and should not be construed as investment, financial, consulting or otherwise advice.

While the author has exercised diligence in the collection, analysis and representation of the business and market information provided, the author and the sponsor disclaim any and all liability in the event any information, commentary, analysis, opinions, advice and/or recommendations contained in this article prove to be inaccurate, incomplete or unreliable, or result in any tangible intangible or otherwise damages.