DeFi Trading and Financing Platform for Real World Valuables

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0 - Abstract

The issuance of digital tokens that represent Real World Assets (**RWAs**) and facilitate their interoperability with the rest of the crypto market allows collectors, traders, institutions and the broader public to diversify their risk in creating, managing and financing sophisticated portfolios, while at the same time dramatically reducing RWA transaction friction and automatically controlling for compliance and regulation.

This is done by creating an RWA Trading Platform (**TP**) with reverse API integration into existing RWA brokers and custodians that securely store, and provide liquidity against, physical assets, while the TP issues the corresponding token to be actively traded and financed P2P online.

The TP thus not only solves for the liquification of the previously stranded asset classes uncorrelated with the financial markets, but also injects unprecedented disruption into the RWA market by drastically reducing transaction frictions and introducing radically new concepts like instant settlement, royalties, fractionalization, securitization, collateralization and instant 24/7 user access and global reach.

The TP acts as an Open Garden across multiple asset classes with 1:1 tethering to the underlying RWAs and with seamless compliance and regulation running in the background. While the TP construct is institutional and multi-functional in nature, the

UI/IX is highly customer-centric and can be toggled for either institutional, professional or retail investor use.

The TP has crypto-fiat bridging functionality and is able to abstract web3 elements for non web3-native users.

1 - Introduction

RWA tokenization has been widely acknowledged as one the main ways forward for the crypto industry.
Utility was impossible without the technology but now the technology is defunct without the utility as well as the solid tethering to the physical RWA ecosystems of custodians, brokers, insurers and global logistics provides - all under the umbrella of formal regulation and compliance.
The purpose of this paper is to set the ground for a hybrid CeFI/DeFi project that would allow the tokenization and DeFi-nancialization of RWAs. More specifically the leverage of existing technologies, regulations, established RWA guardians, and sector norms for packaging into a <u>single service that would allow real world asset owners (**OWN**) to:</u>

a) deposit RWAs in Freeports,
b) mint the corresponding tokens,
c) launch tokens in a TP marketplace for trading, financing and wealth management purposes,
d) collect transaction fees,
and
e) have the option to burn the tokens in order to take physical possession of the underlying RWAs.

2 - Product Relevance

The choice of this concept and the assessment of its value as a business is driven by the following **Assumptions and Deductions:**

Assumption #1 Growth is only possible by tapping into largely sub-regulated and non-mature markets.
(https://hbr.org/2008/04/managing-hypergrowth)

Assumption #2 New sectors are risky and have a high failure rate.
(https://www.failory.com/blog/startup-failure-rate)

Deduction #1 Ideas at the intersection of tried and tested concepts but applied to new sectors/markets (green fields), have an outsized risk adjusted return.

Assumption #3 RWA tokenization is widely considered to be one of, if not the biggest, next disruption as a consequence of the application of blockchain technologies.
(https://markets.businessinsider.com/news/stocks/the-critical-role-of-real-world-assets-in-the-future-of-defi-11519394)

Deduction #2 Implementing a real-world use case of an RWA Dexchange would allow significant accrual of value while enabling hyper-growth conditions.

Initially, nonregulated assets can be financialized and onboarded into the blockchain without facing the same level of regulatory hurdles that other assets face. As the TP scales, the existing asset-agnostic tech infrastructure can also be used to access the markets for regulated assets.

A transparent CeFi company that legally wraps the custody of physical assets, insures, certifies, stores, on-ramps and off-ramps RWAs as Token, would be creating an economically relevant bridge between the real world and the blockchain.

By tokenizing those assets, trading could then be accomplished in an on-chain exchange with fees and royalties being distributed to the original owners (responsible for the minting during on-ramping), as well as the creation of pools of similar categorized assets that would then allow the creation of that pool's tokens to be traded and priced.

Those digital tokens would then represent a 1:1 investment in an alternative physical asset category.

Who benefits from this?

For the RWA owners, the TP allows liquification, and thus the creation of a market premium, for owner assets.

For the investors and finance providers, the TP creates an instant market for asset classes which were previously difficult and/or expensive to monetize. The TP also creates ample opportunity to safely, instantly, atomically and in an asset-agnostic way, deploy capital in search for yield where transactions are automated by smart contracts and the number of weekly trading sessions rises from (currently) 5/week to 21/week with no interruptions due to holidays & etc.

For the RWA ecosystem of brokers, custodians, insurers and logistics providers the TP creates a new and instant sales channel.

The TP's transparent blockchain rails, Open Garden approach and API interface allow it to be plugged into any asset ecosystem anywhere in the world and to serve this asset's ecosystem of clients, collectors, investors and service providers instantly and in way which expands, liquifies and optimizes the respective asset market through easy financialization and global user access.

Who is disintermediated?

RWA auction houses that currently collect 12-30% commission on sales - in addition to typical TradFi friction and market obfuscation.

Banks that run the fiat settlement rails and, instead of being providers of supporting functionalities, have become major sources of unpredictable settlement, transactional and compliance risks.

Competitors who are not providing a regulated and compliant multi asset class/Open Garden TP with 1:1 physical redemption and financing functionalities under a institution-to-retail friendly UI/UX and reverse integration into the relevant RWA ecosystem of custodians, brokers, insurers and logistics providers.

What would be a practical use case scenario?

Users can frictionlessly purchase and instantly settle (including secondary resales, financing & etc.) RWA ownership from established and complianced custodians and brokers via API. This dramatically cuts transaction, counterparty and provenance risks and frictions, while enabling subsequent full DeFinancialization of the RWA.

Further, an owner of a certified RWA work of art such as a painting by a major artist (**Item**), would be able to deliver the Item into our secure and insured Freeport custody and in return receive the 1:1 token representing the ownership rights to the Item. The Item is ready to be financialized through trading, royalties, fractionalization, securitization, collateralization and leverage.

Should the owner so desire, physical possession could be re-established by burning the token through the redemption of the Item in person or the fulfilment of a request to deliver the Item to the owner.

3 – Storing physical assets

As with securities, world class asset custody is paramount: RWA dematerialization is only possible if the item is in custody with an insured, secure, bonded/Freeport warehouse with appropriate TP integration encompassing onboarding, stock reconciliation, API integration, regular counterparty status and risk reviews and controlled and secure RWA access and audit as well a redemption and goods in/out process.

Separately, the TP is charging the client, in advance and through a smart contract, third party custody, insurance other applicable fees, plus a spread, to ensure that the RWA is kept safe. If the fees are not paid/or paid only partially, the RWA is locked (with potential for TP liquidation) until the due balances are settled. The token displays the balance of paid or unpaid fees.

4 – Custodian selection

TP chooses from the biggest and the best RWA custodians available by applying the following filters:

- TradFi custodian KYC – upfront and with, as a minimum, annual reviews;

- Physical visits by RWfi to custodial locations;

- Direct physical meetings between RWfi staff and a custodian's management;

-      Where possible, RWfi Co-Founders invest personal funds
       into Items sourced by the custodians and execute an A to
       Z Token lifecycle process from origination to trading to
       redemption to test custodian functionalities.

While this does not eliminate the risks, this reduces them
substantially for users who are unable to go through the above
processes themselves.

5 – Converting RWAs into Tokens

In case of a TP purchase of a new RWA though an API-integrated
broker, a token is minted and transferred into the ownership of
the buyer.

In case of the delivery of a previously owned RWA into physical
TP custody under a specific custodian, a token is minted and
transferred into the ownership of the buyer once delivery has
been made to TP's satisfaction encompassing all relevant
processes (provenance, condition inspection & etc.).

6 – Funding custody costs

Tokens of the TP will have a prepayment mechanism which ensures
that custodized Items have their custodial & etc fees covered
upfront. Each custodian sets the appropriate fee and TP passes it
to the Token, whereby the token holder must prepay such fees in
advance to ensure the item remains available for operations.
If the user has not topped up the fees and the prepayment amount
is reduced or is negative, the items is locked and the user is
unable to operate it. As per predetermined policy, if the unpaid
Item fees continue to accumulate, the Item may be liquidated to
cover the outstanding fees, with the balance returned to the Item
holder. Alternatively, any buyer is able to buy the Item by
covering the appropriate fee amount on top of the purchase price.

Notice that the Tokens always exhibit the extent of the prepaid fees.

7 - Initial sale

The token is uploaded to a TP for the first trade.
When the first sale occurs, the bulk of the payment is done to the original OWN (**OGO**) that onboarded the item and a fee is paid to the TP as a percentage of the payment and/or a fixed fee of the total sale, and an additional fee is charged representing custody fees accrued so far.

8 - Subsequent sales

This token is now being actively traded online while continuously accruing custody and related charges. Every time the token is traded, the bulk of the trade value is sent to the previous owner and in addition fees are also charged for the TP in commission inclusive of the subsequent custody period and may also be sent to the original owner as royalties (this might be for a limited time or limited number of transactions).

9 - Financing

The token has an additional smart contract P2P financing capability whereby the owner may nominate it as collateral for a loan and request specific financing terms. The potential lenders see lending opportunities (and are also able to bid on 'dormant' stock) which triggers a P2P loan negotiation process resulting in a loan with full smart contract self-execution and enforcement encompassing drawdown, collateral blockage and subsequent release

in case of repayment, or blockage and, later, liquidation, in case of default.

10 - Creating alternative investment products from the circulating token supply

Token owners might in the future opt to pool together their tokens into a common pool and fractionalize it.

Each token contributor would then get a share of that pool in the form of fungible tokens.

Additionally, the TP can scale quickly into collateralization, fractionalization and any kind derivatives that may be required and/or sought by the market. For example, pools of assets may be created by asset managers to fit standardized client portfolio profiles with swift deployment of client capital into fractionalized asset pools with appropriate asset manager compensation structure coded into the pool.

11 - Redeeming an NFT for a real world asset

A token can be 'burned' and the underlying RWA redeemed anytime that the token is not a part of a pool (or has been de-staked of one; or has been locked for financing). After the token has been burned, the OWN gains the right to collect the RWA from the storage facility, as well as being presented with secure shipping options. The burning fee is split between the OGO and the TP.

We believe that having a secure 1:1 return to physical state option for every token is a vital part of the value proposition, in effect eliminating many risks associated with fractional reserve systems.

12 - Economic incentives of third parties

-     Why would someone want to give up physical ownership of an RWA that has proven market value?

A: Access to the crypto market would represent a huge increase in liquidity.

-     Why would someone want to buy a token representing a valuable RWA?

A: The values of these tokens would be uncorrelated to the general crypto market as they would represent an Alternative Asset (AA), therefore allowing for more sophisticated hedging and diversification strategies.

-     Why would an asset agnostic institutional investor be interested in the TP?

A: Creation of a new asset class with revenue, yield farming, instant settlement, atomic trading and process management opportunities.

-     Why would the RWA ecosystem partners such as custodians, brokers, insurers and logistics providers be interested in supporting the TP?

A: On top of stock financing, the TP provides a scalable sales channel - in effect a world-wide shopfront.

= For every user, the TP dramatically scales the existing TradFi processes and turbocharges the speed, efficiency, transparency, interoperability, market accessibility , asset provenance and tracking as well as the counterparty KYC among other things.

13 – Business case

- How does the business make money?

By getting a fee (% and/or nominal fixed amount) every time an action is performed on the TP. Additional revenue streams can come from a multitude of strategies including charging for on-boarding, ad-ons to third party fees (eg custody, insurance, delivery), receipt of retrocessions from RWA guardians and promoting specific collections at the request of OGOs, or even issuing past ownership vanity NFTs.

- How can this business grow?

Opening the blockchain ecosystem to an RWA market would represent immense potential for total value locked (TVL) in the TP. Further down the road, buy-in from regulated TradFi players such as custodians and government registries (securities, real estate, IP & etc.) will make the proposition even more attractive.

Collectibles industry will reach 692.4 Billion dollars by 2032 (https://www.globenewswire.com/en/news-release/2022/05/30/2452649/0/en/Enormous-Demand-for-Art-Anime-Sports-and-NFT-Collectibles-will-Boost-Collectibles-Market-Size-to-692-4-billion-by-2032-NFT-growing-at-47-CAGR-Market-Decipher.html)

The platform is theoretically infinitely scalable on the blockchain side (DeFI) and fairly scalable on the real world side, limited only by the physical capacities of the specific RWA ecosystem. As it is expected that most of the items will have very little year on year physical churn, operating costs beyond RWA onboarding would be substantially less than for an equivalent e-commerce operation, exception made for special storage

requirements and insurance. At the same time, all of the real world services are out-sourced to tried and proven industry standard service providers already acting in the traditional space.

14 - Risks and unsolved issues

Global Tax implications - Unclear what the tax implications are of on-chain trading, onboarding and offboarding, as these may constitute taxable events. These concerns are valid for tax typologies like Income Tax, Value Added Tax and Wealth Tax.

Digital Security - Once the tokens for asset pools get issued, they become an attack vector that can lead to pool drain. Additionally, issues such as multi-sig wallets will be a significant attack vector given the almost inevitable use of such mechanisms within TP construct. DNS attacks, MEV attacks, and others will be ever present issues. Substantial and continuous on chain audits will be needed do insure the minimization of this risk.

Physical Security - Given the high value of many of the items, physical security will be delegated to professional and industry standard providers.

Counterparty Risk - While the TP will make use of the best available physical RWA ecosystem providers, these counterparties will need to be first onboarded and then regularly reassessed.

Legal, Compliance and Regulatory Risks - while TP can control for compliance (KYC), regulation (WIP) and legal (advice received) risks, these areas are in constant and disparate evolution across various geographies where the TP is expected to operate.