A Decentralized Peer-to-Peer Market

Abstract

Good and financial services have always been present in the population daily life, from prehistory to the emergence of banks and institutions going through great evolutions since then, with the support of technology. It is time for another revolution to happen.

In this paper, we present an overview into the 4CADIA Market Place Ecosystem, a decentralized market for tokenized financial assets.

4MP provides a new way to promote the meeting between providers and services consumers, in order to make this matching easier. The project makes a match between all the buyers and sellers in a unique platform, allowing users to issue their tokenized products and negotiate them. The network works in a peer-to-peer fashion, where there is not a middle-man.

Our proposal is to allow a fair and inclusive market in the eyes of everyone, so that users that are excluded in the traditional financial markets also have access to it in a decentralized world.

4MarketPlace | 4MP

is a platform that will connect buyers and sellers of tokenized financial services in a peer-to-peer way, allowing users to connect with their decentralized digital identities. 4MP will be based on 3 main pillars: DECENTRALIZATION, REPUTATION and P2P. 4MP will act as a facilitator so that both counterparties can meet, and will act in a P2P model, with no middle-man.

Just like an Uber, where the passengers and drivers have ratings, they can pre-select if they actually want to “close the deal” or not with that counterparty. An Uber driver may decline to pick up a passenger, if their rating is lower than 3 stars, for example. 4MP is built using a Peer to Peer Reputation Model.

Today the traditional financial markets are the ones doing this connection between buyers and sellers. Stock exchanges, for example, can provide good liquidity and transparency between the parties, however, they do not provide a **Shared Reputation System** of its buyers and sellers. And finally, the last differential would be the lack of a middle man intermediating this business.

The centralized world break barriers of the traditional world, where one needs to trust a third party institution to store someone's data. When we **decentralize** this information, the power is taken from the ones that custody the data and focuses on the real data owner. In the centralized world the owner doesn't have privacy.

In the traditional financial market, we put our trust in banks and brokerages and when we use blockchain and tokenization, we put our trust in the network. Inside the network everything is seen and managed by all the users bringing the security and transparency extremely necessary these days. Asset tokenization and the peer-to-peer market is already a reality and our platform comes with the purpose of bringing all these concepts together.

Having in mind that the financial markets are a constant exchange, users sometimes willing to buy and other times interested to sell their assets. The average user has a difficulty in establishing contact within those interested parties. 4MP aims to make the Decentralized Financial Markets viable.

The marketplace system build-in 4MP counts with a "matching" algorithm. A hard-coded system that will allow the search between buyers and sellers to happen. Without that element, there will be no deal or business to close.

The Problem is that...

Searching for DeFi projects takes time and the investor might not be willing to search for each DeFi project in different platforms. Also, the user will need to be onboarded and registered in diverse

platforms to buy and sell decentralized financial services[1]. With the implementation of 4MP, buyers and sellers would be connected in **a single marketplace**.

We understand that people already had access to finding DeFi financial services in the past. But they would have to proceed with their onboarding in different "DeFi service providers". Today the decentralized finance projects in existence such as MakerDAO[2], Compound[3], Polymath, dYdX, Augur, to name a few, are not interconnected and do not share any reputation system. There is no single platform where one can find them all together and compare their shelf of products and services. 4MP comes to solve this current weakness in the market: **it comes to unite any buyer and seller who is willing to negotiate decentralized financial services.**

If for example one wants to use Maker's platform, they would have to create a new address and use this address inside their platform. If there is another buy opportunity with a similar DeFi service at dYdX, the address recently created at MakerDAO becomes useless, and the user will need to proceed with a new registration at dYdX. And the same goes on for Compound, Augur, Dharma, and other protocols of DeFi services: the user could benefit from one single decentralized identity and digital address and share the same reputation or scoring methodology.

In the traditional financial services, many investments and financial derivatives are limited to "Qualified Investors" and they usually have minimum ticket prices that are quite high. Many hedge funds, have a minimum investment of $100,000 as an entry ticket, which again, becomes a product that are designed for the wealthy client. The bar is set too high and the less privileged are excluded from this discriminatory system. The traditional financial system is driven by the "Qualified Investor" who moves trillions of dollars of capital around the globe every day. But 99% of the world population does not fit the standard definition of a qualified investor, and does not have access to

[1] Decentralized Finance is the set of digital financial products and services which exists without the authority of a centralized entity. The primary feature of decentralized finance is censorship-resistance. DeFi is an abbreviation of the phrase decentralized finance which generally refers to the digital assets and financial smart contracts, protocols, and decentralized applications (DApps) built on Ethereum.

[2] MakerDAO is a decentralized lending project who uses its native stablecoin: the DAI as a collateral. For more information: https://makerdao.com

[3] Compound is a smart contract that allows users to borrow and lend tokens. Similar to your bank, Compound lends out your money to borrowers and earn interest over time. But unlike your bank, your interest begins compounding the minute you deposit into Compound's smart contract. And since it's a smart contract, the rate you earn is higher than traditional banks because there's no middleman.

join the financial markets. Either because of regulatory exclusion (they do not pass the KYC onboarding process of a bank (ex. A citizen from Venezuela or Syria is not allowed to open a bank account anywhere in the world), or because they don't meet the high minimum investment ticket to participate as a buyer or a seller of a financial product (ex. If you want to buy shares of a StartUp company which is not public yet, let's say Via, AirBnB or Coursera, for example, you need a minimum investment of $10,000,000)** data provided by a selective mailing list of a friend who works for a Family Office & Venture Capital Firm and received the offers from "Unicorns Exchange"

We envision 4MP as a marketplace that will not have minimum ticket limitations for its users. Buyers and sellers will not be excluded for having lowers sums of digital assets (digital currencies, digital representations of assets or smart contracts that represent derivatives, for example) to invest. It will be an **open place for anyone to take part in**.

Tokenization matters because...

All assets circulating in the 4 MP platform will be digital representations of assets, whether they are financial or not. Asset tokenization came to the world with the intention to solve bottlenecks of the digital environment. Tokenization is nothing more, nothing less than the process of transferring information and associated value of assets of the non-digital world to the blockchain. In other words, they take valuable assets of the real world and put them into computer code.

The process occurs when sensible data, such as bank data are substituted by a digital cryptographed identity, maintaining all the essential information about that data. And, when possible, being able to recover that data with a secure key called private key.

A token is used to create a digital representation of an asset, proving its existence. For example, a currency, a paper currency bill or a share of a Stock Market can be digitalised proving that the beneficial owner is actually the legal entity that has rights over that stock or digital currency.

An Asset Backed Token (ABT) can help fractional and trustless participation in investments such as shared real estate ventures and ownership or intellectual property and royalty payments. Asset-backed tokens have a lot of potential for **increasing access to**

investments and **encouraging those with lower income to invest fractionally.**

Using blockchain and automated smart-contracts access to valuable assets can be increased because not only are the assets borderless, but it is now cheaper and safer to invest.

Tokenization has many advantages: it protects data in a transparent way. Every digital contract can be verified once it is deployed[4] in the Blockchain.

Thanks to blockchain technology the tokenization reached a new level, allowing the tokenization of any asset inside a digital and safe environment, improving and simplifying the tokens turnover.

Having in mind the tokenization "delete" the confidential data of a user, turning the data into a code after any transaction, thereby, the data become useless to a user with malicious intentions that will only see encrypted symbols and it also avoids data manipulation.

Our value proposition

Imagine a user who wants to expose the risk by selling a tokenized asset to another counterparty. Usually, the confirmation that the good or service was tokenized is a "Proof of Asset" protocol confirming that that token represents a digital representation of a good.

Let's say that this token is a digital representation of a USD (US Dollar). An asset may be custodied in a bank, in a trust company for example. The guarantee that this asset exists and is the actual digital representation of the tokenized asset is the responsibility of the party that issued it. 4MP will not enforce that this asset has collateral behind it, but the seller will have a reputation.

Today, when a user negotiates a stablecoin: be it a TUSD (True USD) , a USDT (USD Tether) a BUSD (USD Binance) , a USDC (USD Coinbase), PAX (Paxos) or GUSD (Gemni Dollar), without knowing if their reserves match their supply. But they have an idea of value and therefore negotiate this

[4] Deploying a contract means "publishing" it in the Blockchain. After it is recorded in the main chain it can never be tampered and it can be verified by anyone.

token. 4MP will allow the users to negotiate with counterparties that have different scores. The score will be built by the number of transactions that a buyer and seller will negotiate and rate each other. The preference will go to the counterparties with higher scores. But the **system is completely autonomous**. The marketplace is just a platform facilitator, not a centralized authority. The higher the transparency and evidence that the tokenized asset exists, the higher the reputation that the counterparty will build.

Reputation starts with zero, and is being built over time. After the first few "closed deals" start happening, buyers will rate the sellers and vice versa.

P2P Trust Company, for example, may build a digital identity on Holon platform, let's say they create an identity named PXTC-PXTC . This decentralized identity will have immediate access to negotiate at 4MP. After performing a few trades of the stablecoin PAX, users start giving positive ratings to PXTC-PXTC and after 54,700 trades, users attribute a 4.96 rating to it. That good reputation should also reflect when a user is looking forward to buy a different digital asset from the same identity. Let's say Alice is now looking forward to invest in tokenized gold. After careful analysis she looks at PXTC-PXTC 4.96 rating and decides she wants to buy a contract that has a digital representation of gold. PAXG (Paxos Gold[5]), is being offered at 4MP by user PXTC-PXTC and also by UyUxUyUx, which has a rating of 4.03 in 4MP.

Alice confirms that both users PXTC-PXTC and UyUxUyUx are sellers of legitimate PAXG contracts and both of them are selling PAXG at the price of $1,510.79 . Alice decides to buy from PXTC-PXTC because of its higher rating.

Reputation is one of the most valuable things in the world today. It's not something that you can put a dollar amount on or even something that you can buy. However, if it's damaged, it is something that you could spend endless amounts of money to try and repair... yet see little results at the same time.

[5] PAX Gold is a digital asset where one token represents one fine troy ounce of a London Good Delivery gold bar, stored in professional vaults in London. Anyone who owns PAX Gold owns the underlying gold which is held under the custody of Paxos Trust Company. The value of PAX Gold therefore also tracks with the real-time market price of gold.

Every digital identity user of 4MP starts off on the same level when it comes to their reputation, and the actions they take will quickly sway them in one direction or another. We believe that reputation is the most effective and fastest way to deliver a first impression to an existing user.

Benefits of good reputation:

- Distinguishes it from competitors
- Attracts supporters
- Builds resiliency with respect to non-supporters
- Creates opportunities for growth.

“Repetition makes reputation and reputation makes customers.” *Elizabeth Arden*

The Roadmap

The 4CADIA community have established a prudent governance roadmap that will allow the use of decentralized digital identity systems. Development of the code is happening using agile methodology and it is coherent with the ideals of decentralization and open-source movements. The development roadmap is aggressive and focused on connecting buyers and sellers of lower income in a responsible fashion.

So far, a lot has been produced to educate the general public about our decentralized solutions. Providing financial inclusion through the use of Decentralized Finance is our key mission at 4CADIA. For more information, you’re welcome to visit our https://4cadia.com and join us in this mission by becoming part of our global community.