RIVCoin: an alternative, integrated, CeFi/DeFi-Vaulted Cryptocurrency

Abstract— **This whitepaper introduces RIVCoin, a cryptocurrency built on Cøsmos, fully stabilized by a diversified portfolio of both CeFi and DeFi assets, available in a digital, non-custodial wallet called RIV Wallet, that aims to provide Users an easy way to access the cryptocurrency markets, compliant to the strictest AML laws and regulations up to date. The token is a cryptocurrency at any time stabilized by a basket of assets: reserves are invested in a portfolio composed long term by 50% of CeFi assets, comprised of Fixed Income, Equity, Mutual and Hedge Funds and 50% of diversified strategies focused on digital assets, mainly staking and LP farming on the major, battle tested DeFi protocols. The cryptocurrency, as well as the dollar before Bretton Woods, is always fully stabilized by vaulted proof of assets: it is born and managed as a decentralized token, minted by a Decentralized Autonomous Organization, and entirely stabilized by assets evaluated by professional independent third parties. Users will trade, pool, and exchange the token without any intermediary, being able to merge them into a Liquidity Pool whose rewards will be composed by both the trading fees and the liquidity rewards derived from the reserve's seigniorage, that should affect the token's price movement. In the long run, RIVCoin holders will also have access to an ecosystem of added-value services that will further increase the token's value. Our cryptocurrency is built to be Proof of Stake (PoS - energy saver), Proof of Asset (PoA - stabilized) and Proof of Liquidity (PoL – market provided). RIVCoin allows the User to enter the cryptocurrency market easily, without experiencing unjustified huge price depreciations, being the reserves pledged in last resort in favour of the users. Moreover, using RIV Wallet will allow the User to perform KYC/AML procedures that comply with the latest international regulatory FATF-GAFI VASP framework. The Liquidity Pool fair incentive mechanism is executed such that it will force a de facto democratic redistribution of wealth: Users who wish and decide to pool RIVCoin in the Liquidity Pool will receive additional RIVCoin for themselves, and new RIVCoin are minted when the reserves increase in value or in case of purchase of new RIVCoin. All wealthier Users are then accepting a redistribution of income, to the benefit of those who have purchased less tokens. In (Cooperative) Game Theory, maximization of the economic benefit of the ecosystem is achieved when players' incentives are perfectly aligned. The proposed model allows for alignment of incentives: decreasing the risk exposure by wealthier Users, but implicitly increasing that of smaller ones to a level perceived by them as still sustainable and never creating ultra-speculative positions (according to H.P. Minsky definition, "when the incoming flows are not sufficient even to pay interest, so that it is necessary to apply for new loans both to repay the principal portion of the initial loan but also to honor the payment of the related interest"). In other words, wealthier Users stabilize the risk associated with the market portfolios of the reserves invested in Centralized and Decentralized Finance, without falling into the "bet scheme". Users indirectly benefit from the access to the rewards of sophisticated cryptocurrency portfolios hitherto precluded to them, as well as having access to a real redistribution of wealth, without this turning into a disadvantage for the wealthy User, who benefits from the greater stability created by the huge influx of smaller Users. Therefore, the progressive growth becomes additional value that tends to stabilize over time, optimizing RIVCoin on the systemic risk level.**

Keywords—Blockchain, Decentralized Applications, DeFi, Cryptocurrency, Asset-Referenced Token

I. Introduction

The access of end Users to the cryptocurrency market is one of the most crucial points to solve before cryptocurrencies can reach mainstream adoption. Although cryptocurrency has seen a spike in interest in 2021, bolstered by the last Bitcoin halving occurred in May 2020, still mainstream adoption is far from happening.

Currently, Users access the markets by the means of centralized entities (usually via Centralized Exchanges), while only the more tech-savvy Users can quickly interact with Staking Pools, Liquidity Pools and all the various DeFi protocols. While using Centralized Exchanges is usually straightforward, still the User needs to trust a centralized entity, that often does not act in the best interest of its Users.

The aim of this whitepaper is to describe the first CeFi/DeFi-stabilized cryptocurrency built on Cøsmos and whose cash reserves are invested in a diversified combination of CeFi and DeFi assets with high degree of liquidity. The token, named RIVCoin, is completely guaranteed by its reserves, and has as its primary objective to allow everyone to easily access the cryptocurrency market via carefully enforced, self-imposed boundaries.

In the system we are designing, the User can only operate after proper KYC/AML procedures have been carried out: as a result, there is total transparency on who the Users are, drastically reducing the possibility of frauds, criminal or improper use of the token. The problem of how retail Users access the cryptocurrency market is not to be overlooked. Trust in cryptocurrency slows at its minimum when scams happen. The recent cases of CEX bankruptcies have shed a bad light on crypto assets: while these have been isolated cases of mismanagement of the User's funds, still the whole cryptocurrency market suffered from these crashes.

Crucial for every cryptocurrency is now to be, far beyond any other doubt, Proof of Stake (PoS - energy saver), Proof of Asset (PoA - stabilized) and Proof of Liquidity (PoL – market provided). These three core features contribute to the final tangible concept of cryptocurrency: its circulation as a medium of exchange adds value and does not represent a danger (i.e., energy-wise), it is accepted given its stabilized intrinsic value (constantly officially evaluated), it can be always exchanged either through the Liquidity Pools or through the Vault which will act always as the Seller of Last Resort (SoLR).

The is no direct linking between the RIVCoin value and the value of the underlying reserves. Our purpose is to create a cryptocurrency whose value should gradually increase towards a reference value, with possible fluctuations around such value. The reference value will change according to market conditions, while the primary minting price could temporarily be above or below such price, to stabilize the value of the currency.

In the system we are going to build, a Vault guarantees the total number of coins minted and, as a last resort, it can always be sold to reimburse part/all the coins in circulation. The Vault Reserves are invested in a portfolio of productive assets. They fluctuate in its value, but they cannot be used for anything else except for guaranteeing the reference value of all the coins minted.

The potential "bad inflation" is a-priori defined by the total number of coins mintable. The seignorage will be used for a democratic redistribution of the wealth generated by the reserves of the Vault, subject to explicit actions to be implemented by the Users. Like Central Banks redistribute the incomes to the national banks pro-rata their participation, the same will happen with our proposed model, which will redistribute the seigniorage to all the holders that actively operate as Liquidity Providers, as an extra incentive to the normal trading fees that every Liquidity Pool redistributes. Differently by what happens in the real economy, where the seigniorage increases with the monetization of public spending not covered by tax revenues, thus creating "bad inflation", here the seigniorage is constantly redistributed and cannot be affected by new print of money. To some extent, it generates "good inflation".

II. TOWARDS A DECENTRALIZED STORE OF VALUE

Fiat-pegged stablecoins have emerged throughout the years as a solution to the high volatility of the crypto space. The need of having a numeraire which can hold value, being an effective mean of payment and unit of account, is of the utmost importance for cryptocurrencies to be considered actual currencies.

According to the Bank of International Settlements [2], stablecoins "*evolved in order to address the failure of Bitcoin and other cryptocurrencies to provide an effective monetary and payment instrument. This reflected the preference of main market participants to base transactions and payments on sovereign fiat currencies, in particular the US dollar*".

It is evident that the need of a stable unit of account is essential for crypto to reach mainstream adoption. Still, the relatively small market capitalization, the macro-economic uncertainties and the low appetite for risk that nowadays characterize markets hinder this possibility from the start. The need for regulation is evident, now: the more the market capitalization of cryptocurrencies and digital assets grows, the more regulators will try to capture this unregulated market into a normative frame.

Central Bank Digital Currencies (CBDCs) have emerged as a possible stable unit of account in the cryptocurrency markets. Their potential to allow faster settlement of transactions and to reduce settlement risk is an interesting innovation in Banking and Financial Markets.

Many different regulators have taken initiatives towards the development of CBDCs [7]. Among the most important projects, the National Bank of Cambodia has launched in 2020 the first CBDC in the Asia region. Other important projects have been carried out by China and Singapore. Still, Central Bank Digital Currencies suffer from centralization: it is the Central Bank that issues the currency and guarantees for the value of the currency.

There have been many classifications of stablecoins in literature. The one of G. Liao and J.Caramichael [10] classifies stablecoins as follows:

- Public Reserve Backed Stablecoins, such as Tether, USDC and Paxos Dollar;
- Public Algorithmic Stablecoins, such as DAI and FRAX;
- Private Stablecoins, such as the JPM Coin.

This classification highlights two distinctive frames of reference in which stablecoins are labeled: the public vs. private nature of the stablecoin (i.e. whether the stablecoin can be publicly purchased and traded) and the intrinsic nature of the pegging mechanism (i.e. whether the stablecoin is backed by cash/cash equivalents, or if the peg is maintained through an algorithm).

Private Stablecoins are by nature centralized: there is a single entity that controls the emission of the currency. At the same time, Public Algorithmic Stablecoins heavily suffer from market downturns. This is the case of TerraUSD, collapsed in 2021 after a speculative attack.

We would like to highlight how the logic behind the general concept of stablecoin is similar to the one behind the mechanism of ETFs: instruments which exist to replicate the movements of a certain underlying. Unfortunately, if there is a disruptive detachment of correlation between the underlying to replicate and the basket used to achieve the performance of the replica, then the stablecoin will inevitably de-peg, in some cases causing the entire crash of the stablecoin. Our solution is inscribed into the idea of providing a decentralized store of value, stabilized by a diversified portfolio of liquid assets: reserves are invested in funds holding a combination of traditional financial assets and cryptocurrencies, whose proceeds are distributed only to Liquidity Providers. At the same time, we are also focused on bringing an innovative cryptocurrency to Crypto Users, allowing them to pool the token to reap the rewards of the cryptocurrency markets without dealing with the complexity of the underlying protocols.

The cryptocurrency market still lacks a "gold standard-type" stabilized token traded in the market in the same way utility tokens are. It is fundamental to build tokens that are fully compliant with upcoming laws and regulations (ex. VARA recently official in Dubai, or Europe's upcoming MICAR) and created and traded as tokens on the main blockchain platforms and ecosystems. Still, such tokens have immense potential, since they can allow a whole potential market of Users to enter the cryptocurrency market: namely, Users that are now worried by the entry barrier that crypto requires.

III. Solution

In this section, we will discuss how we are planning to build the first cryptocurrency on the Cøsmos ecosystem stabilized by a diversified portfolio of CeFi and DeFi assets and that distributes to Liquidity Providers its overprice and/or part or all of its seignoirage created, using an innovative approach, which combines Centralized and Decentralized Finance.

Let us recall this simple, yet so profound principle: you cannot have a meaningful store of value backed by cryptocurrencies automatically shielded from the inherent volatility of the crypto space. This depends on the nature itself of cryptocurrencies: assets that only exists in the digital space, without a real physical counterpart.

Stablecoins have surely contributed to provide a fixed conversion between fiat and cryptocurrencies, via different pegging mechanisms. While fiat-backed stablecoins such as Tether and USDC have been used, still they rely on a central trusted party which backs every token with possibly enough sufficient cash equivalents. Crypto-Backed Stablecoins are inherently dangerous, since their peg relies on the stability of the cryptocurrency markets: while over-collateralization still mitigates the risks of default, the mechanism is still suboptimal from the beginning, since they protect the peg via assets falling in value when the market where the token is valued loses capitalization: it should be the other way around. Algorithmic stablecoins such as TerraUST, on the other end, tried to maintain the peg via the execution of an algorithm. The result has proven inadequate to the expectations of the holders, many of whom have lost all their money.

For this reason, we believe that, to guarantee a stable and fixed conversion between cryptocurrency and fiat currency, we must use a different approach, providing a token that is stabilized by a combination of both fiat and cryptocurrency.

While the combination of CeFi and DeFi assets will be the guaranty for the Users of the token, at the same time the decentralized nature of the token itself, with the possibility of being freely traded on many different blockchains, will remove the need to trust a third party: nevertheless, for the Authorities the existence of third parties also will be a further mechanism of control.

Actually, the solution we are building solves in a single cryptocurrency two different and related problems:

- The existence of a decentralized token that is stabilized by real-world assets;
- The existence of a cryptocurrency which allows non tech-savvy Users to enter the crypto space, while guaranteeing both liquidity and ease of use.

We are planning to solve this problem by providing a cryptocurrency called RIVCoin, which is minted by a Decentralized Autonomous Organization on the Cøsmos ecosystem if, and only if, a certain amount of real asset, as a reserve, is pledged (in a Vault deposit) as a minimum guarantee behind the issuing of the RIVCoin. The RIVCoin can be stored in a KYC/AML-compliant, digital non-custodial wallet called RIV Wallet. Afterwards, with the setup of an Osmosis Liquidity Pool, everyone will be free to purchase RIVCoin on any Cøsmos-compatible wallet.

The emission of RIVCoin will be subject to a very strict minting schedule: there will be a maximum coinbase amount of 99 billion RIVCoin (max cap), and each RIVCoin will be issued and made available to the market only after an equivalent investment has been acquired and vaulted as a pledge for all the users. In other words: the evaluated amount of reserves vaulted and pledged represents the quasi-full hedge of all the coins minted (both the primary minted and the ones in the liquidity pools).

A reasonable, fixed part of the total token supply will be pre-allocated to a separate Wallet and it will be used to compensate the team and the most relevant advisors adherent with the best incentives schemes. These tokens will be vested proportionally to the minting activity. The larger the minting the faster will be the premium that Users will release to this Wallet. This separate Wallet will be filled with a maximum cap of 4% of all the token supply. In other words, for every 100 EUR of collateral, the final token minted could be up to 104.

RIVCoin will be a fully decentralized cryptocurrency whose issuing will be carried out by a DAO (called RIV DAO). Users will be able to buy RIVCoin by downloading a digital, non-custodial Wallet called RIV Wallet, and performing the required Know Your Customer and Anti-Money Laundering procedures.

The fiat funds arising from the token sale will be securely stored in a Vault and will compose the underlying of the token. Reserves will be mostly used to purchase units of a Luxembourg SICAV RAIF (Reserved Alternative Investment Fund) in order to increase the reserves and/or the Liquidity Pool. A half of the invested reserves will go into a compartment invested in a model-driven, traditional quantitative strategy, not automated called A-RAIF, which diversifies into Fixed Income, thematic equity portfolios, and mutual/hedge funds, while the other half will be conveyed into another compartment called C-RAIF, which invests in hedge funds' portfolios composed of outright positions on crypto assets, staking, and liquidity pools on the leading Decentralized Exchanges, through a portfolio of ISIN-coded funds.

Trusted Oracles will ensure the Proof of Assets, being able to prove, at every given moment, that all the assets that collateralize RIVCoin exist.

It is statistically unpredictable the case of all CeFi and DeFi reserves both down to zero, but we can argue that such a case can only happen either in case of extreme natural catastrophic events or in case of extreme fraudulent schemes. While we are optimistic that the first case will not happen, for the second case we have set a blind mechanism of enlarged trust and checks, which drastically limits the possibility of fraud.

Cryptocurrency companies should never use their tokens as collateral. Instead, the focus should be on asset-referenced tokens and network-based connected liquidity pools that serve as “large reserves" to always ensure liquidity. The code is written to maintain an impeccably transparent and constant monitoring of the assets in the Vault, without permitting any distraction out of the investment framework agreed with the token's owners.

We can say that RIVCoin is built on the three pillars of MPH: Meritocracy, Pragmatism, and Honesty. The way the code is written, paired with segregated and transparent accounts, does exclude any chance to use either fiat or cryptocurrencies to enter improper or fraudulent transactions. In other words, no bad surprise can happen. The price of the token can fluctuate due to demand and supply, but always in a transparent environment and within a strict legal frame.

The aim is to launch a cryptocurrency suitable to the highest number of Users. Traditional professionals are always eager to develop new skills, but they do not accept a superficial approach to risk management and to legal compliance. Hence, we developed a cryptocurrency which is suitable to CeFi and arouses the interest of DeFi Users. In fact, the code automatizes the pledge behind the token, net of fees quasi-full guaranteed, and at the same time, fixing the exposure at risk of the invested reserves, that consists of 50% traditional investments and 50% virtual asset investments (in the long run).

We will offer to our Users an innovative way of entering the crypto markets, which conjugates decentralization with a liquidity providing reward structure. This innovative way of thinking DeFi, namely a complement and not an adversary to Traditional Finance, will add value both for institutional players and smaller Users.

IV. Business Strategy

We will now delve more in detail into our business strategy. As already mentioned before, RIVCoin is a cryptocurrency minted by a Decentralized Autonomous Organization, called RIV DAO. The issuing of RIVCoin follows a tight schedule: namely, a RIVCoin is minted for each new reference value unit of fiat currency pledged in the Vault. Since the invested reserves will increase the value of the Vault, the value of the RIVCoin should be, to some extent, affected by these increases.

When that happens, an opportunity to mint new currency emerges. In this case, a part of the increased liquidity will be cashed out and yield new RIVCoin, that will be democratically redistributed through all Liquidity Providers.

A change in the value of the reserves could (but must not) lead to a change in the same direction of the RIVCoin price, due to the perception of the Users. Reality is that the invested reserves fluctuate, and it is not due that by raising the level of the reserves the token necessarily appreciates its value. As a matter of fact, fluctuations of the RIVCoin cannot be prevented ex ante and, therefore, stabilization mechanisms need to be put in place as described in this Whitepaper.

If all these conditions hold, one (or more) RIVCoin are issued and sent to the User's address. From that moment onwards, the sum will be sent into the Vault. The funds are distributed on two portfolios: the first portfolio will be allocated on traditional Fixed Income investments (such as high-yields bonds), Equity and Funds (mutual/hedge) through the A-RAIF, while the other 50% will fuel a portfolio that invests in staking and LP farming on the main decentralized protocols through the C-RAIF. All the investments are executed under a strict risk management control to assure the immediate liquidity at occurrence and convenience.

Part of the returns of the reserves will be distributed to the Liquidity Providers via incentive to the pool's rewards, that will sum up to the rewards derived from trading fees.

We plan to launch RIVCoin starting from a Presale Phase, where selected Users will be able to acquire the token before the actual release. Following the Presale, the Primary Minting will be held: tokens will be sold at the reference price to all Users. We will then create a Liquidity Pool that will give holders the possibility of trading the token on the secondary market.

More in detail:

- **First Minting – Presale**

We will hold presales where a limited number of tokens will be released to selected Users at the reference price. To secure a spot in a presale, you will need to download RIV Wallet, perform all KYC/AML measures and digitally sign a Token Offering Request.

The Token Offering Request is a formal document that states your intention to acquire a certain number of RIVCoin before a given date in the future. In the Token Offering Request, you must state the number of tokens you want to buy. After signing the document, you will still have 21 days if you wish to withdraw your order. The token offering will mint the number of tokens necessary to fill out the requests of all interested parties.

- **Development of RIV Wallet**

A digital non-custodial wallet has been developed: the RIV Wallet. This will allow Users to buy and sell RIVCoin. The wallet will have all the functionalities of a known digital non-custodial Cøsmos wallet. RIV Wallet will be available on the main stores for Android and iOS. Everyone will be able to download the wallet from the website after the registration.

- **Token Minting - Primary Minting**

Primary Minting will then be open. Users will be able to buy RIVCoin through a predefined fiat on-ramp procedure. The minting price will initially be fixed to a reference value. The Primary Minting price will not necessarily remain the same, but it could fluctuate due to the different variables affecting the price (i.e., supply and demand, value of the reserves, etc.) subject to strict and rigorous protocols of risk monitoring, with the sole purpose of ensuring the stabilization of the RIVCoin.

- **Liquidity Pool Bootstrap**

We will set up a Liquidity Pool on Osmosis, that will allow Users to buy and sell RIVCoin in the secondary market against USDC and/or OSMO. The Pool could be incentivized with the usual rewards and/or the redistribution of the token's overprice upon the activities of bonding. The choice of if and when to redistribute the token's overprice is taken in the exclusive interest of the Users and the RIVCoin stability.

At regime, Users will be able to buy RIVCoin from both the Primary Market during the minting activity and, at a later stage, from the Secondary Market, buying it from the Liquidity Pool. When the max cap will be reached, Users will exchange the RIVCoin on a continuous secondary market. While the Secondary Market will always be open, Primary Minting could be temporarily paused according to market conditions.

A sudden change in the RIVCoin price, or more in general a clear uptrend, signals an abrupt change in the token's demand. The Primary Market price mitigates such trends, since it creates a natural arbitrage where Users could buy the token on the primary market and sell it for a profit in the Liquidity Pool, nullifying eventual token appreciations.

For example, if it is profitable to stimulate the demand for higher prices, a temporary halt to Primary Minting could be implemented. More in general, the Primary Minting price will be used for the sole purpose of stabilizing the price on the reference value. Also, Primary Minting could be varied according to the reserves' appreciation or depreciation. For example, if the reserves lose value, token minting could be halted to avoid further dilution of value, or alternatively more RIVCoin could be minted at lower prices.

RIV Wallet will be available on the main App Stores for Android and iOS. We plan to distribute the token on the leading Decentralized Exchanges.

V. RIVCOIN

The ecosystem is fueled by RIVCoin: a cryptocurrency minted by RIV DAO that is designed to have a value which fluctuates around a stable reference. RIVCoin has a fixed cap of 99 billion tokens. The initial selling price of the token in the primary market will be chosen according to the main fiat currencies. If market conditions vary abruptly, such as if a sudden increase in demand doubles the price of the token, RIVCoin's reference value could change. The token minting schedule will reflect such change.

Note that the reference value does not necessarily coincide with neither the primary nor the secondary minting price. To avoid price speculations different from normal supply and demand equilibriums, all main numbers will be publicly disclosed in order for the Users to be able to judge at any time.

5.1 Reserves Allocation

The Vault's reserves are granularly invested in a wide range of financial products, ranging from high-yield Fixed Income securities to DeFi staking and liquidity pools. On the basis of the model, we expect a close to zero delinquency rate. This makes the token fully stabilized and shields the Users from the high downward volatility usually experienced in cryptocurrency markets.

More in detail, the strategic asset allocation that backs RIVCoin is summarized as follows. In the long run:

- 50% (or more) of the reserves will be invested in a model-driven, traditional quantitative strategy that diversifies into Fixed Income, thematic equity portfolios, and mutual/hedge funds.
- Up to 50% of the reserves will be invested in portfolios composed of outright positions on crypto assets, staking, and liquidity pools on the leading Decentralized Exchanges.

Diversification of the vaulted assets ensure that, if a black swan event happens, Users are shielded from catastrophic losses of the token's reserves. Of course, volatility can always increase, but the expectation is that the risk/reward will be on an optimal point, marking an acceptable position given the expected return associated to that variability in prices.

RIVCoin is born as a cryptocurrency fully stabilized by assets. As such, its value should never eventually slow below the stabilized Net Asset Value price of the invested reserves, since natural arbitrage mechanisms will push the price back to it.

No leverage will be ever implemented using the tokens of the Users as a collateral, no matter the haircut granted by the banking system. The code is written exclusively to build up the reserves, properly pledged in favour of all Users holding the tokens.

Portfolio allocation will be decided via selected strategies that will strike a balance between risk and reward, always in the exclusive interest of the Users and following the highest standards. The staking and LP farming portfolios of the reserves will be diversified enough to minimize market risk: Liquidity Pools will be chosen on the leading Decentralized Exchanges, from Osmosis to Uniswap.

5.2 Token Allocation

The allocation of tokens will follow the principles of equality and fairness. Tokens will only be issued after a user's purchase.

Also, the issuing mechanism is built such that each User, by buying RIVCoin and contributing to fill the Vault with new reserves, enables the issuing of other RIVCoin, thus actually acting as miner of new currency. The miner and User at time t_{-1} is the issuing company, investing the very first seed. The users at time t_0 are the miners of the RIVCoin minted in t_1, the Users in t_1 becomes the miners of the coins minted in t_2, and so on. Every User purchases coins already stabilized, vaulted and secured.

We believe that enabling a secondary market for RIVCoin will lead to a fairer network, allowing Users to gain full control of their investment. This contrasts with black boxes where Users invest their money without any possibility to use and unwind it.

The goal is to create a Gold Standard for the world of cryptocurrencies, as the token is immediately convertible into assets already valued, be they CeFi or DeFi, in full credibility of the coin itself being convertible in last resort, being the Vault the "Seller of Last Resort" (SoLR).

The following rules will be strictly applied without any exception:

- The portfolio allocation is decided within the regulated and vigilated Asset Management Company managing the SICAV RAIF.
- The cryptocurrency allocation of the reserves cannot be over 50% of the total reserves. This will prevent overexposure to cryptocurrency.

- In case of a depreciation of the RIVCoin price of more the 30% of its value in a week's timeframe, the Liquidity Pool contract on Osmosis could be paused (Safeguard Policy). Such pausing will have the sole purpose of preventing an excessive depreciation of the RIVCoin, safeguarding the peg to the reference value.
- In case of overshooting of the RIVCoin, the governance could decide to intervene with open market measures buying/selling RIVCoin.

VI. The Underlying Structure of the Reserves

In this section, we will describe the Reserves Structure, explaining in detail how the mechanisms of RIVCoin Issuing and Democratic Rewards Distribution work. As we will see, the issuing of new RIVCoin is subject to a strict minting schedule: new RIVCoin will be issued if, and only if, there is the correspondent amount of reserves that backs them in the Vault.

We first need to define the two entities that are behind the Reserves investments. These entities are part of a RAIF (Reserved Alternative Investment Fund) [1].

> **Definition 1.** A RAIF (Reserved Alternative Investment Fund) is an investment fund based in Luxembourg, which qualifies as Alternative Investment Fund, and for this reason it is not subject to the Commission de Surveillance du Secteur Financier (CSSF) product approval.

RAIF can invest in all types of assets. They must appoint an authorized external Alternative Investment Fund Manager (AIFM). Also, investment in RAIF is limited to "*well-informed investors that are able to adequately assess the risks associated with an investment in such a vehicle*". These are defined as institutional investors, professional investors and investors that are "well-informed", in the sense that they have confirmed to be aware of all the risks involved with investing.

As we said before, RAIFs are not subject to the approval of the CSSF. However, the fund manager needs to inform the CSSF, via regular reporting requirements.

According to Association of the Luxembourg Fund Industry (ALFI), "*the net assets of a RAIF may not be less than 1.250.000€. This minimum must be reached within a period of twelve months following its authorization. At least 5% of the capital must be paid up at subscription*". The RAIF does not need to obtain any regulatory approval and may therefore gain in efficiency in terms of time-to-market.

Here you can find an example of a RAIF structure. The following picture describes, at a very high level, the allocation of the RAIF where the issuing company is also invested.

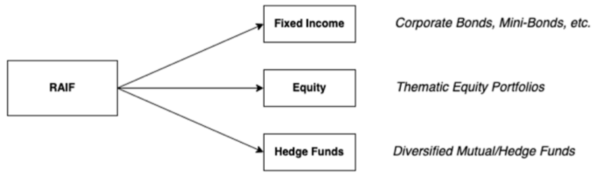

Fig. 1. RIVCoin Issuing Company's RAIF Structure

To be able to effectively invest in cryptocurrency while still guaranteeing liquidity of the invested funds, we will introduce a new concept called Crypto RAIF, or equivalently C-RAIF.

> **Definition 2.** We define **C-RAIF** a RAIF that invest in other funds whose strategies are comprised in one of the following: outright position on cryptocurrency, cryptocurrency staking and/or cryptocurrency Liquidity Pool farming, model-driven automated trading codes.

C-RAIF allows us to build over DeFi decentralized protocols with a CeFi top layer, at the same time allowing institutional and professional investors to enter the crypto markets with a professional intermediary that is able to perform a risk analysis on the underlying assets of the Vault. Professional investors and institutions don't have to manage a Hardware Wallet, safely store their keys and actively thinking about the protection of their account.

A structure of a typical C-RAIF is described in the following picture:

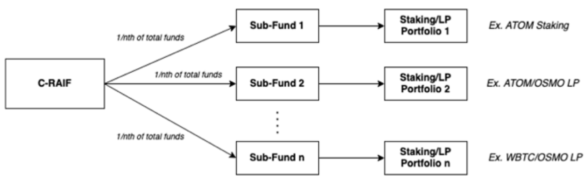

Fig. 2. Structure of a C-RAIF

In this case, the C-RAIF invests its available capital in parts (not necessarily equal) among the sub-funds: these can be any other fund, ISIN coded, investing in long only positions on cryptocurrencies, Liquidity Pool farming or staking. The sub-fund takes care of the complexity of the investment, performing practically all the steps required to allocate the User's funds in the given DeFi protocol (ex. by physically putting the assets at stake or providing liquidity to Liquidity Pools).

In our model, a half of the invested reserves will go into a RAIF that invests in Fixed Income, Equity and Mutual/Hedge Funds strategies, while the other half will be routed towards a C-RAIF that will apply a risk-balanced portfolio allocation, to minimize drawdowns at the same time guaranteeing high yields and minimizing the systemic delinquency rate of the crypto market.

6.1 Flow – RIVCoin Minting

A Trusted Oracle will automatically manage the Issuing Flow, by checking the presence of new fiat currency in the Vault, notifying the DAO when new RIVCoin can be issued and ensuring that the User's funds lay in the Deposit Account. The Trusted Oracle will notify each day the DAO Smart Contract whether new RIVCoin can be issued, and if yes, the number of new RIVCoin to be issued. Since Users transactions are written on the blockchain, the DAO knows all the transactions happening each day and the amount of each transaction. The DAO proceeds to mint RIVCoin and send them to the User's wallet, after the user purchase has been made.

At the start of the flow, to be able to issue new RIVCoin, enough cash needs to lay in the Vault's Bank Account. For this reason, the issuing company will bootstrap the flow with the first cash deposit in the Vault, giving birth to the first 250.000 RIVCoin.

The reserves of the Vault can vary in time following the value of the Vault's investments: this should always, to some extent, affect the price of the RIVCoin in the secondary market, but the redistribution of the overprice to the Liquidity Providers will mitigate any big price movement.

After a new investment has been pledged into the Vault, there is the possibility for new RIVCoin to be minted. If tokens have been bought by a User and the equivalent amount of fiat currency has been pledged in the Vault, then the Trusted Oracle proceeds to notify the DAO of the new number of RIVCoin to be issued. The DAO will then issue new RIVCoin and send them to the Users who bought them.

6.2 Flow – Rewards Distribution

Let us now examine how, in our model, rewards are distributed to Liquidity Providers. The last day of each month, the Vault's Directors determine how many RIVCoin needs to be distributed as rewards the following month (in addition of trading fees rewards), by computing, also considering market conditions, the effective reserves value update. This will determine whether a rewards distribution will hold for the subsequent month on the Osmosis Liquidity Pool.

When a Rewards Distribution takes place, there will be a proceeds distribution of a certain percentage of the reserves appreciation value to the Liquidity Providers, via the Osmosis gauge. If RIVCoin has no appreciation for the current month, such as for example if the reserves have lost value, the only incentive that could be distributed to the Liquidity Providers are those acquired via trading fees and/or not eventual cashed returns.

In the occurrence of an unattended event (such as for example a "bank run") Users will be able to redeem the equivalent fiat value of the reserves underlying RIVCoin, simply dividing the total amount of the reserves locked in the Vault by the number of RIVCoin in circulation.

Upon the occurrence of the distribution of the overprice, which is also determined by the increase in purchases, a democratic redistribution of wealth is performed, where all Users who buy RIVCoin do that with the intention of creating additional wealth for themselves in the long run, accepting a redistribution of wealth even to the benefit of those who have invested much less. Of course, the more one provides in terms of liquidity pooling and/or staking, the bigger the potential rewards.

VII. Conclusion

In this Whitepaper, we introduced RIVCoin, a cryptocurrency stabilized by a combination of CeFi and DeFi assets, fully compliant with all the relevant laws and regulations worldwide.

RIVCoin will be accessible to all Users via subsequent Token Minting. By buying RIVCoin and providing liquidity, Users can earn rewards on their investment, allowing them to build a second income stream, and being able at the same time to spend it and use it. We believe that Blockchain and DeFi will democratize finance allowing a fairer redistribution of wealth, co-operating and integrating with the traditional universe.

In the real world, both in the old and the new economy, no substantial progress has been achieved regarding the biases caused by wealth inequality. The problem of inequality has been perceived mostly as a political matter dividing the electorates between left and right-wing. The reality is that aggressive taxation can only produce conflicts. Direct taxes are often too high in general to be raised further and indirect taxes usually increase income inequality.

We have explored the problem from a different point of view. Let's bear in mind this analogy: as well as we have to be creators and not competitors, we found the way to create and add wealth instead of causing its dispersion. No doubt that such a cryptocurrency will increase the capacity of the wealthy people, but the marginal utility is bigger for Retail Users who will benefit, with the placet of Wealthier Users, from the bigger amounts invested by these ones. The last ones look for stability, the first ones would like not to be frauded participating at a fair game.

The Blockchain Revolution will enable a fairer world where everyone can profit. We believe that anyone has the right to live a life at its fullest potential: by creating RIVCoin, we want to allow you to achieve this objective.

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