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Redefining Banking Through Defi: a New Proposal for Free Banking Based on Blockchain Technology and DeFi 2.0 Model

Abstract

This article aims to offer a new free banking proposal with a 100% cash ratio that uses the DeFi 2.0 model. The current monetary system, based on Central Banking with fractional reserve, has created a huge debt spiral and has distorted the entire production system, which produces deep recurring socioeconomic crises that increasingly impoverish citizens. This paper presents an innovative proposal that aims to take advantage of blockchain technology using the Defi 2.0 model. It would be a first attempt to merge centralized finance with the DeFi world, laying the foundation for a fairer and more decentralized monetary society.

Keywords

Bitcoin, crypto-economy, business, banking, decentralized finances.

JEL Code

A12, B22, C12, C63, E12, E14, E31, E32, E42, E51, G51, H12.

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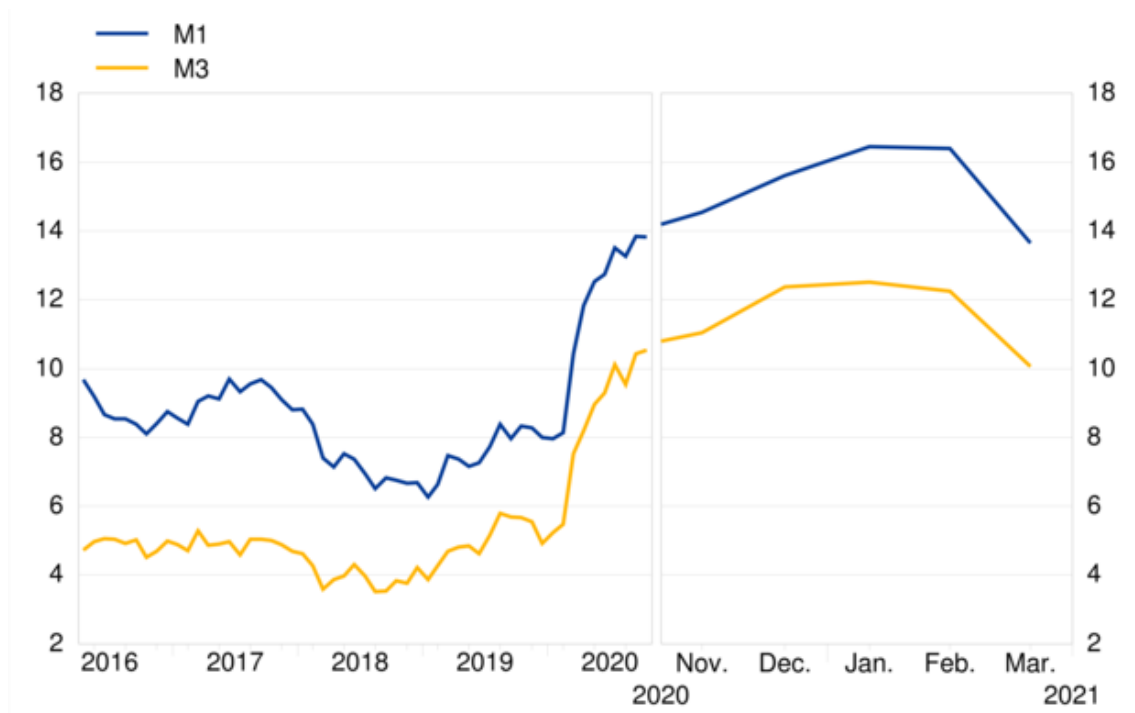
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1. INTRODUCTION

This last decade has been characterized by exponential growth of decentralized finance and by the rise of cryptocurrencies as a response to the 2008 financial crisis and to an inflationary and centralized monetary system based on debt and the constant printing of Fiat money by Central Banks. This system, as the economist Jesús Huerta de Soto (1998[2020]) rightly points out, distorts the entire productive structure, favors only a few actors (i.e., commercial banks, governments and large companies listed on the stock market and which have immediate access to newly created money) and clearly leads to ever deeper recurring crises. This centralized system, based on Keynesian economic theory (Keynes 1936), has the absolute monopoly to create new money, which lowers interest rates artificially and opens the way to credit expansion with fractional reserve. In other words, it allows for new credit without prior backing from savings, which leads to a rise in consumer goods, a fall in capital goods and, by extension, to a slow and steady impoverishment of the population. As Henry Ford (1863-1947), the founder of the Ford Motor Company, rightly remarked, “it is a good thing that people do not understand how the banking and monetary system works, otherwise there would be a revolution tomorrow morning.” Indeed, Fiat money—a government-issued currency that is not backed by a physical commodity—is not tied to anything and has no backing; its production is monopolized by the state and by the central banks, the main actors, beneficiaries of such production. The European Central Bank, in particular, sets a growth target for the money supply in the Euro zone of 4.5% per year with the objective to maintain price stability. However, as a result of the pandemic, there have been peaks of over 12% of the broad monetary aggregate (M3), as seen in the statistics provided by the European Central Bank:

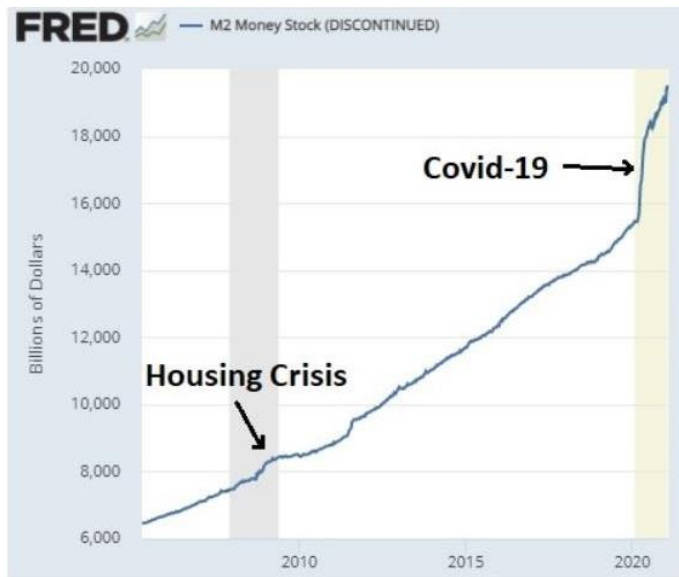
Figure 1: Monetary developments in the Euro zone



Source: BCE, March 25th 2021, Monetary developments in the Euro zone. Press release.

The main objectives of the U.S. Federal Reserve (FED) are to maintain price stability, promote employment and moderate long-term interest rates. If we analyze the monetary expansion of the FED, however, we can observe that the production of new money has been difficult to control in practice:

Figure 2: Time trends in M2 over the period 2000-2021



Source: Federal Reserve

The main issue with this time trend is that a significant injection of money does not create wealth in the economy. Additionally, inflation, understood as the increase in the money supply (cause) and not as the sustained increase in the prices of goods or consumption (consequence) causes an unequal distribution of welfare in the society and increases poverty. For this reason, the objective of this article is to elaborate on the current macroeconomic situation and propose an alternative to the traditional system of central banking and credit expansion with fractional reserve. A unique characteristic of this proposal is that it leverages the new technological advances offered by blockchain as applied to general economic and financial market problems.

2. THEORETICAL FRAMEWORK AND RESEARCH QUESTIONS

In macroeconomics, the current monetary system works similarly to a large accordion that expands and contracts in accordance with the economic cycle. According to Keynesian ideas, it is based on the fractional reserve model, which advocates an expansion of the money supply (inflation) followed by credit expansion by commercial banks. As a result, it is characterized by different stages, including a stage of contraction when interest rates are raised to slow down the circulation of

money, thus preventing an unprecedented increase in the price of goods and services. This theory is based on three essential pillars, defended by the Banking School (1844 British Banking Act, 1935 US Chicago Plan) required for the consolidation of the current monetary model (Schwartz 2008). Those pillars are as follows:

1. The fractional reserve system drives the economy.
2. The ideal monetary system should facilitate the extension of the money supply in accordance with the demand of trade.
3. The fractional reserve system should facilitate access to credit without prior backing based on savings, thus encouraging entrepreneurship and feeding the entire productive structure.

Although in theory this system may be viewed as solid and coherent, it disregards two fundamental aspects of economic processes. As a result, the system is hard to implement in practice, thus generating recurrent value destroying crises in society. To be more specific, the first of these aspects is that this system attempts to "mathematize human action" with statistical models that derive the probability of both entities and individuals facing solvency issues. However, according to the "liberal" theories of Ludwig von Mises (1980[2020]), this probability can only be accurately quantified under certain conditions that exist in the world of natural science. In the face of human actions there is an ineradicable uncertainty because of the creative nature of such actions (Hey 1981). The second aspect that can explain the inefficiency of the existing monetary systems is related to the nature of the credit expansion system. More specifically, commercial banks engage in lending activities using customers' demand deposits but retain as a back-up policy only 1%-2% fractional reserves. For example, when Customer A holds a demand deposit of €1000 in the bank, they will still find this amount available in their account, although the bank has lent a fraction of it (e.g., €990) to Customer B, with a bank policy of maintaining 1% (i.e., €10) as a cash ratio. This second aspect of the monetary system is particularly concerning due to the fact that it allows for a double availability of the same amount (i.e., both the depositor and the borrower can effectively make use of the same amount in euro) (Bagus and Howden 2010). This is worrying because two individuals cannot simultaneously benefit from the same item, as this would be

considered an illegal act (Hoppe 1994, 72-73). In this respect, Dr. Huerta de Soto's comparison between the deposit and the loan of money, from an economic and legal point of view, is particularly significant (Huerta de Soto 1998[2020], 23).

1. The economic aspect: With the deposit there is complete and continuous availability in favor of the depositor, whereas with the loan such availability is transferred entirely to the borrower, with the lender renouncing it.
2. The legal aspect: With the deposit the obligation of the depository (i.e., the bank) is to maintain at all times the *tantundem* (i.e., loan of a fungible good) at the disposal of the depositor, although with the loan the obligation of the borrower is to return the *tantundem* at the end of the term, paying the agreed interest in addition.

These aspects have been criticized with problematic arguments. The criticism focusses on the determining role played by the human action required for the system to work. For example, Dr. Juan Ramón Rallo, a proponent of banking liberalism and economic ideas consistent with the Austrian school of economics, argues that the fractional reserve operates with debt on demand whose backing must only be available at the time of payment execution (Rallo 2011). He also argues that banks should always have the required level of liquidity to meet their customers' withdrawals and claims it is "improbable" that money withdrawals will occur at the same time. However, it is clear that, if such circumstances did arise, as occurred in Argentina in December 2001, we would observe a "banking panic." Thus, it is impossible to have demand deposits available to customers at all times. To prevent this unfortunate state in the banking system, the Central Bank is enabled to print money and provide liquidity, thus avoiding the collapse of the banking system. Because the central bank will apply patches and help constantly refinance the spiral of debt, it has become increasingly unsustainable. The historical records suggest that such situations led to long periods of recession in the past and by extension raised poverty levels in society.

In defense of the theories that encourage fractional reserve credit expansion, we also look to the doctrines of John Fullarton (1780-1849), one of the great precursors of the banking school. He coined the so-called "law of reflux": namely, the idea that,

when the economy needs more means of payment, it borrows more, while when it needs less, loans flow back to the banks (Fullarton 1845). This theory is not only incomplete but has also proven to be incorrect in every economic crisis that the central banking and fractional reserve system has generated throughout history. As Vera Smith (1990) points out, empirical evidence suggests that central banks are not a spontaneous solution created by the market; instead, they have been deliberately created and imposed by the different governments in order to better finance their expenditures and policies.

Therefore, in line with this argument, we can see that the Central Bank implicitly protects the survival of the commercial banks and of the government, as a “lender of last resort” ready to intervene when required to ensure the stability of the economy. However, increasing the money supply and giving a “free hand” to a new credit expansion is likely to distort the entire productive structure, causing more severe downturns and damaging recession periods.

During the last century, as an alternative to this system, several theories of free banking emerged advocating a 100% cash ratio. For example, Murray N. Rothbard (1991, 44-46) proposed the abolition of the figure of the Central Bank and the implementation of a free banking system with a cash ratio of 100% associated with the gold standard. In his view, the fractional reserve system is comparable to a crime of misappropriation by a banker, given that the banker uses their clients’ demand deposits without the legal rights to do so. F.A. Hayek, Nobel prize winner in economics in 1972 and a disciple of Mises, also argues for a free banking model with a cash coefficient of 100% and a denationalization of money. In his opinion, “banks clearly would have to be content to do their business in other currencies. They would thus have to practice a kind of 100% banking and keep a full reserve against all their obligations payable on demand” (Hayek 1976, 94-95). Arguments of this nature led to an interest in the possibility of designing a new banking system that builds on the advances of blockchain technology, achieves the stability to monetary policy, and moreover protects users thanks to the economic and legal nature of deposits/loans in accordance with Roman Law. To elaborate on this possibility, the following research questions have been formulated:

1. Which specific characteristics of blockchain technology can overcome the limitations of the traditional banking model?
2. How can the new model DeFi 2.0 based on blockchain technology increase wealthfare in society (i.e., cost-benefit analysis)?

To address these questions, the following section will elaborate on DeFi, especially DeFi 2.0, relating it to the theoretical framework with the objective of designing an innovative proposal for redesigning the banking system to leverage the availability of new technological solutions.

3. DEFI ECOSYSTEM

Decentralized Finance (DeFi) is closely related to the blockchain ecosystem and the crypto-economy. It began to grow exponentially from 2020 onwards with the establishment of Uniswap, the first DEX created on the Ethereum network. We can view DeFi as a revolution in the traditional financial system, where there is a transformation towards decentralized structures based on smart contracts. DeFi offers three main benefits, namely: (a) greater transparency, (b) an unalterable record of transactions, and (c) the elimination of trusted third parties. Although Bitcoin is arguably the world's first DeFi platform, we can trace its origins back to 1994, when Nick Szabo presented for the first time the idea of smart contracts (Gans 2019). The arrival of DeFi and its increasing adoption across the globe decreases the benefits of traditional banks and large financial institutions, making them largely obsolete. The reason behind this is that the technology allows individuals to create financial products that are fair and transparent. As a result, individuals can provide liquidity to a decentralized exchange and each participant in this market can apply for a loan using a crypto as collateral. Due to the advances in this decentralized finance, it is possible to borrow or apply for financial services using a mobile application without the bank as an intermediary. This trend can be viewed as a transformation towards a new type of economy that is characterized as decentralized, borderless and democratic. This transformation is different from FinTech where the traditional financial system saw an opportunity after the 2008 crisis to create digital finance that is fast, efficient and cheap, thus reaching clients on a large scale. In contrast to FinTech, DeFi uses decentralized blockchains, thus

eliminating intermediaries and the bureaucratic procedures behind the traditional banking system while offering loans through tokenized debt. It also allows P2P money transfers through non-custodial wallets, such as Metamask, and markets move on decentralized exchanges (DEX).

In contrast to centralized exchanges, such as Binance or Coinbase, DEXs are smart contracts, allowing users to buy and sell tokens without the need for a third party; such decentralization is achieved through programmable escrows (Hashed Timelock Contracts) which in the computational realm are called atomic swaps (Mad 2021). These DEXs are considered AMMs (Automated Market Makers), as they allow trading without the need for a trusted third party; do not use an order book to trade and work thanks to liquidity pools, where users can contribute liquidity to the platform, receiving in return a commission every time a trader makes use of it. A liquidity pool is always composed of two tokens, for example, ETH/USDC, and the liquidity provider has to contribute the two tokens in the same proportion: in the ETH/USDC pair, if 1 ETH trades at \$3,000, the LP will be 1ETH/3,000USDC. So, imagine that ETH is represented by x and USDC by y ; the protocol multiplies them against each other and obtains a total liquidity pool represented by k , so the final formula would be $x*y=k$. The most important thing here is that the function of k remains constant at all times. That means that if a user decides to buy 0.5 ETH for 1,500 USDC using that liquidity pool, USDC in the reserve will increase and ETH will decrease, so the price of Ethereum will go up. In addition, the market itself is in charge of ensuring that prices do not get out of control, since if the price of an asset is higher in one exchange with respect to another, arbitrage opportunities are generated that rebalance the price.

The mechanism described above determines prices without the need to have an order book which is required for centralized exchanges. It allows for automation of processes and decentralization. However, today we have two main issues related to this system:

1. In this DeFi 1.0 model, users are lending their liquidity to protocols and can withdraw it at any time to move it to new protocols that offer better returns in terms of APR and APY. This constant migration creates a lot of

instability and manipulation by the “whales”,¹ causing many protocols to fail and die by suddenly running out of their best asset: liquidity.

2. The decentralization of finance brings great benefits, but it also brings great risks, including cyber risk (i.e., hacking of Smart contracts), impermanent loss and rug pulls, when the developer team abandons the project and leaves with the users' money. Moreover, ordinary users may not be sufficiently trained and prepared to take full responsibility for their money without a trusted third party.

To address these problems and relate them to the drawbacks of the fractional reserve banking system (Section 2), we will elaborate on a win-win solution consistent with game theory (Nash 1996), thus bringing together the current needs of both the traditional banking system and the DeFi sector. The arrival of a DeFi 2.0 with the launch of Olympus Dao in mid-2021 has led to a paradigm shift in the decentralized finance environment, since now the protocol buys liquidity from users instead of borrowing it, as was the case in DeFi 1.0. This liquidity becomes part of the Decentralized Autonomous Organization's (DAO) treasury and the user receives in return some tokens represented by the platform's native token, which is acquired at a discount. At this point, there is still a risk of selling pressure on the native token, as “big whales” could sell their liquidity to the protocol in exchange for many tokens received at a discount and then sold at market price; as a solution, DeFi 2.0 incentivizes users with high APYs to stake their tokens on the platform instead of selling them or even to use them as collateral and be able to borrow in stable currency. Looking at the dashboard of Olympus Dao, the first DeFi 2.0 protocol built on the Ethereum blockchain, we can visualize the process behind the entire workings of the platform.²

¹ Users with lots of cash.

² Data as of January 10th, 2022

Figure 3: Dashboard Olympus DAO

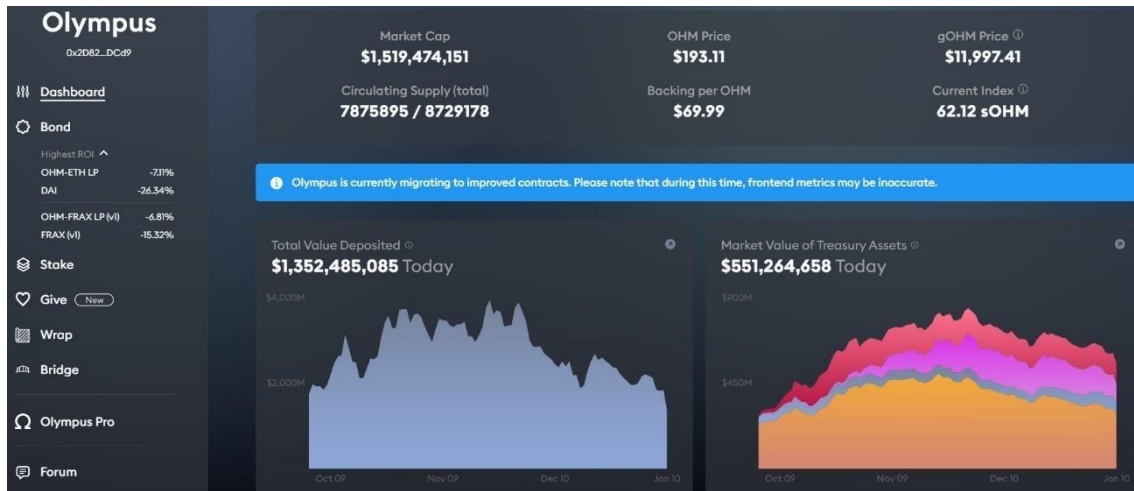


Figure 4: Dashboard 2 Olympus DAO

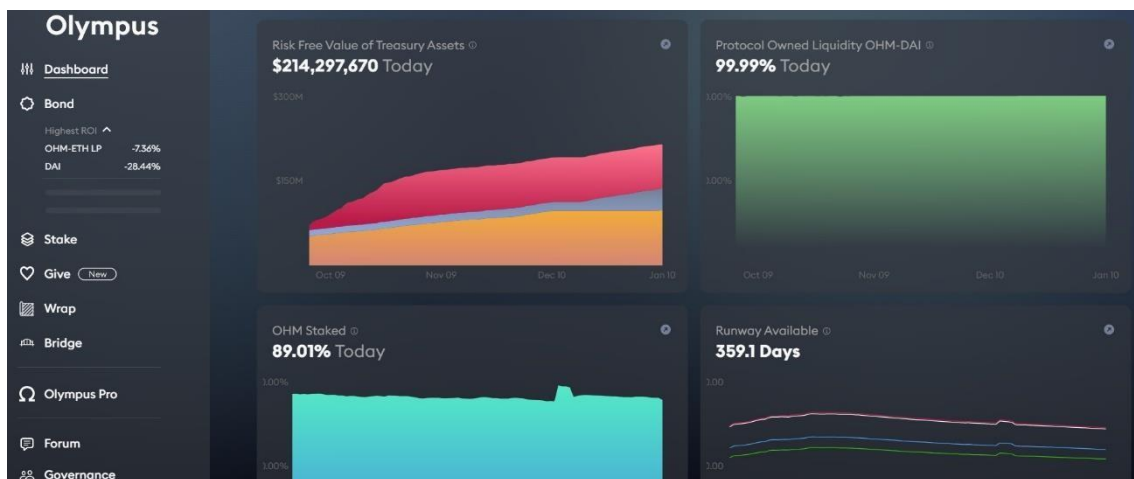
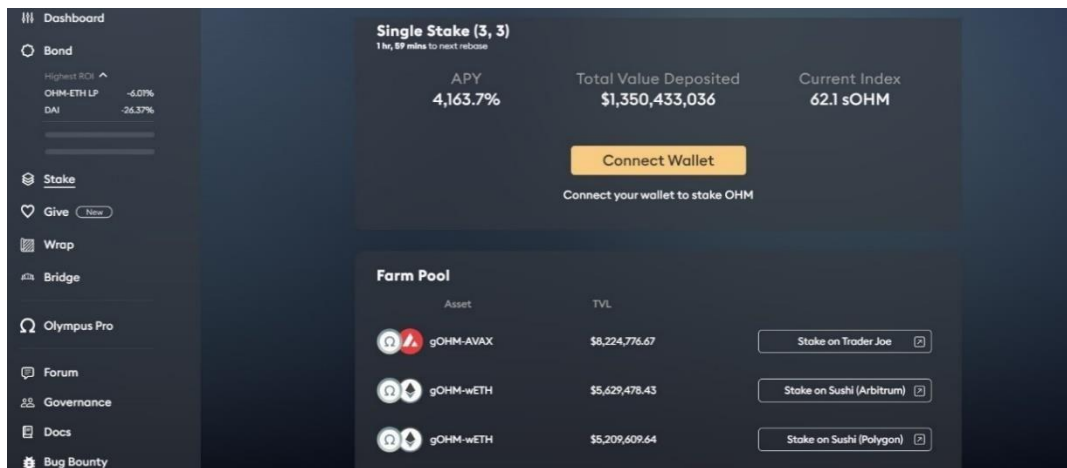


Figure 4 shows the market capitalization, the market price of the OHM token, the circulating supply and the backing price,³ Figure 5 displays the risk free value, the protocol owned liquidity (99.99%), the OHMs staked (89.01%) and the Runway Available (i.e., the number of days in which the protocol could continue to pay overruns taking into account its treasury). Regarding the gOHM token, it is a

³ This refers to the minimum price that 1 OHM can reach before the protocol itself starts buying tokens to stabilize the price. It is calculated by dividing the Market Value of Treasury asset by the circulating supply.

governance currency with its value calculated as a price of 1 OHM (\$193.11) times the current index (62.12). The current index refers to the number of OHMs that would be held if compound interest had been applied to 1 OHM after the protocol started; it increases after 8 hours after the distribution of profits (rebase). Therefore, if one owns gOHMs, one will always have the same number of tokens, but their value will grow due to the increase in the current index. At the same time, OHMs can be staked in exchange for sOHMs and the tokens will grow according to the APY, which is currently 4,163.7%:

Figure 5: Staking in Olympus DAO and APY



Such a disproportionate APY gives rise to the following question: How is the protocol able to pay those incentives for staking OHMs? The answer lies in the nature of Smart contracts: the protocol states that to issue an OHM token only 1 DAI (\$1) is needed, i.e., it costs the platform \$1 to produce 1 OHM. When sold, albeit at a slight discount, at a market price of around \$190, it gives a 19,000% profit.

In addition, the liquidity becomes part of the treasury; therefore, it is deposited on other platforms in the form of LP tokens to receive incentives and the user no longer has the risk of impermanent loss. Although this model seems very profitable for the protocol and more sustainable with respect to DeFi 1.0., it has three drawbacks:

1. It has an inflationary monetary policy: the price of the token will tend to go down over time.⁴ Liquidity is also more centralized.
2. To be sustainable in the long term, users are required to be active on the market and this could suggest a Ponzi scheme.

APYs will go down as more users participate. The risk is that users will take the token out of staking, generate selling pressure and then leave for other DeFi 2.0 protocols that offer better returns. The latter is what happened in the case of DeFi 1.0.

As can be seen, these aspects are reminiscent of the central banks' monopoly, although we find ourselves in a more decentralized and practically unregulated context. It is clear that the protocol would not be sustainable in the long run, if liquidity stopped flowing in. However, this would also be a concern in the current banking system: it would not be sustainable if the Central Bank stopped injecting liquidity by constantly expanding the money supply. These similarities lead us to a deep reflection and lay the foundations for the proposal that we will see in the following section, which aims to answer the two research questions on which this paper is based.

4. THE PROPOSAL: REDEFINING BANKING THROUGH DEFI

We may say that the solution to serious macroeconomic problems has always been polarized. On the one hand, some experts argue that the inflationary system can be financed on a continuous basis and can withstand the inevitable recessions that occur cyclically every time interest rates are raised in order to curb the collateral effects produced by monetary expansion. On the other hand, others suggest that world debt is already unsustainable and that a financial reset is needed as soon as possible. The latter group includes those who propose to adopt once again the gold standard and a cash ratio of 100%, (See Section 1 for details). For example, the proposal elaborated by Professor Huerta de Soto (1998[2020]) focuses on these three aspects:

⁴ Despite market corrections, all DeFi 2.0 tokens have suffered large declines since their launch.

1. Total freedom of choice of currency, eliminating the intervention of the State and the Central Bank in terms of its issuance and value control.
2. The elimination of Central Banks and any government agency dedicated to controlling and intervening in financial markets.
3. The obligation for banks to maintain a cash ratio of 100% for demand deposits, respecting the traditional principles of property and law.

According to Huerta de Soto, this reform would prevent banking crises and economic crises of a cyclical nature, promote stable and sustained economic growth, put an end to speculation and respect the property rights of depositors at all times. Although we agree with those statements, we consider it would be hard to implement this reform in the short-term for a number of reasons. Firstly, it is likely to be viewed as a drastic solution and therefore not feasible as a short-term solution to the macroeconomic problems driven by the expansionist policy of central banks. It is unlikely that Central Banks will disappear from one day to the next and that governments will allow this process to take place. Furthermore, a return to the gold standard and/or a 100% cash ratio for demand deposits would significantly reduce the available credit; as a result, this would lead to the bankruptcy of a large number of companies, including those with good projects that cannot be refinanced in the short term. Although this chain of events can be observed in any crisis, we believe that the best option is to experiment with a hybrid system for the gradual transition to a more sustainable and more democratic banking model, where the citizen is not adversely affected. To this end, our proposal is broken down into the following key points:

1. The creation of a private banking ecosystem based on blockchain technology.
2. Each bank creates its own currency and applies a model similar to DeFi 2.0.
3. Each bank maintains a 100% cash ratio for demand deposits.
4. The role of the Central Bank becomes that of supervising and ensuring the correct functioning of commercial banks, carrying out periodic audits in order to avoid and punish unethical practices that violate the rules of the new model.

Below we elaborate on the critical aspects of this proposal. The first recommendation is to create a complete, private Turing blockchain to which all commercial banks adhere, with each one of them functioning as a validating node of the same. This would logically be a permissioned blockchain where nodes are carefully selected and supervised, thus maintaining a high degree of centralization and very high scalability. While these features provide lower levels of security and a higher tendency to network congestion, a critical condition will be the number of banks participating as nodes in the network: the more distributed the network is, the more resilient it becomes. Moreover, in this way there is clearly no risk of rug pull and the user is much more protected. The second recommendation is perhaps the most experimental part of the proposal and consists in emulating the DeFi 2.0 model described in Section 3. By doing so, each commercial bank could create its own token and would pay the network fees with the native currency of the blockchain, as occurs in the world of decentralized finance. Customers open an account to deposit their euros and have two options: to open a demand deposit or to buy a bond. If they choose the first option, their money will appear in the account and will be available at all times. Their money will also have 100% cash backing and comply with the fundamental principles of ownership that are contemplated in the nature of any deposit. In the case of the second option, the customer sells their liquidity to the bank and in return receives the token at a discount to the market price (bond). As we saw with Olympus in Section 3, it costs the bank \$1 to issue that token, but it is selling it at a market price that could range from \$100 to \$500 depending on supply and demand. The bank's own treasury would set and lock in a backing price for the token (buying the token to stabilize its price in the event of a drop) and the customer would have the opportunity to lock the token staking it during set vesting periods in order to receive rewards. This mechanism, despite being hybrid and experimental, would offer two main benefits: (a) a large part of the FIAT money in circulation would be brought together without raising interest rates, and (b) a win-win solution would be provided where both the bank and the client have positive payouts, the former with the sale of tokens and the latter with the staking rewards. In addition, a governance token would be created, as in Olympus: this token would gain value as the current index increases and would give its holders

the right to vote on important decisions, turning banks into a kind of financial DAO where customers would have an active participation based on their holdings. The commercial bank would have two main sources of profitable income: (1) the sale of bonds, and (2) the returns generated by investing a portion of its treasury, thus having enough liquidity to back all demand deposits without the need for fractional reserve. It is obvious that the sale at market price of tokens (bond) that only cost \$1 to produce is a clear form of monetary expansion. Despite this characteristic, we argue that the advantages over the traditional system are evident, especially the benefits that customers can take away by staking the tokens and also the fact of having greater liquidity for the treasury to back up demand deposits, something that does not occur in the current system. The major challenge of this system, to make it sustainable in the long term, is for users to keep buying tokens, thus making sure that the treasury is not depleted by the payment of staking rewards and continues to have a flow of money. However, it is important to emphasize that this model has two defined phases: (1) a phase of wealth creation, and (2) a phase of price stability, where the bank could buy the tokens in circulation to stop a possible fall in the price. If users stop buying tokens, the staking APYs are simply reset and the rewards are lower.

Finally, the role of the Central Bank during the implementation of the proposal would be to oversee the proper functioning of commercial banks, as if it were a federated DAO that unites and represents the interests of all banks in order to amplify their power, strengthen their philosophy and join forces to achieve greater goals that a single bank might not achieve. It would also be responsible for conducting periodic audits to check that ethical conduct is respected and to monitor that commercial banks do not cannibalize each other for the monopoly of token sales, giving rise to interim diatribes within the banking ecosystem. There are certain risk factors of this model, namely:

1. Until a commercial bank manages to build up a stable cash flow (wealth creation phase), it would be required to keep selling bonds. This requirement may resemble a Ponzi scheme, because the first users to enter the system benefit more from the staking returns compared to the late users who would be disadvantaged. Although this is a risk factor, we

may also argue that in DeFi 2.0 the first ones to enter buy the token at a higher price, because there is more demand and less issuance. In contrast, the last ones secure a price closer to the backing price (price stabilization phase). Therefore, the late users receive more tokens by selling the same amount of liquidity as the first ones. Under the condition that the commercial bank properly manages its treasury, it can increasingly expand its Runaway Available, thus becoming sustainable over time and even implementing token burning to stabilize the price of the token.

2. The banking ecosystem does not work as a free market, but rather as an oligarchy, and the risk is that there will be a cannibalization in terms of token issuance to attract new customers, something similar to what happened when ING Direct drastically lowered its fees and originated a real interim war between banks. For this, it is essential that the Central Bank participates in the private blockchain as supervisor and judge of the banking ecosystem and adheres to the new model. This is the key to designing a set of rules regarding the issuance of tokens that have to be respected by all nodes (commercial banks) in order not to incur financial penalties.

Although there are some risks related to this experimental model that cannot be overlooked, we think it would be a viable solution to decentralize the monopoly of money and power that characterizes the traditional banking system. It would be a path to empower the individual, while securing their deposits, thus building together a new, fairer and more democratic monetary policy and taking advantage of the potential of blockchain technology. The African proverb captures the philosophy of DAOs and this proposal: if you want to go fast, go alone. If you want to go far, go together.

5. CONCLUSIONS

The proposal for reforming the banking system contemplated in this article may seem paradoxical and far-fetched to many. In fact, we live in a very early stage of adoption of blockchain technology and the traditional financial world is still very reluctant to adopt cryptocurrencies on a global scale, believing that it is only a

speculative bubble that will wipe out the savings of many people. While it is true that there is a lot of speculation and a lot of manipulation due to the low marketcap in the crypto sector, it is also equally true that many blockchain protocols are completely revolutionizing the technological and financial sphere. Furthermore, it should not be forgotten that speculation is also present in traditional markets, otherwise it would be inexplicable that the stock market continues to rise during a health crisis in which the vast majority of companies have gone bankrupt and have been forced to close. Just like the internet in the 1990s, when it had a large number of detractors, we believe that blockchain technology is here to stay and that it will completely revolutionize our society in the coming years, having an impact equal to or even greater than that of the internet in its day. If we add to this the fact that the traditional banking system based on monetary expansion and then credit expansion with fractional reserve has proven over the decades (even centuries) to be flawed, leading to recurrent and ever deeper crises, it becomes easier to give an answer to the two questions posed at the beginning of this article: first, to remedy macroeconomic problems it is essential to create a new monetary policy that can benefit not only the banks, but also the users. It is true that the current system is a philosopher's stone for governments, since it allows them unlimited financing, but it is also true that this practice creates an infinite spiral of debt and has very harmful consequences for society and for the entire productive system, causing a gradual and progressive impoverishment of a large part of the population. Regarding the second question, we think that the proposal "Redefining Banking through DeFi" offers a satisfactory answer, since it would take advantage of blockchain technology and adopt the model offered by the decentralized protocols of DeFi 2.0 to implement a freer and more sustainable banking model over time, especially if we take into account that the ordinary user is not yet ready to take full responsibility for his money without a trusted third party.

The debt spiral and the uncontrolled creation of money since the arrival of the pandemic show worrying data that can only be compared to the 1920s, a period that preceded the great stock market crash of '29 and which led to an unprecedented recession in modern history. Right now, at the beginning of 2022, the increase in the money supply in both the US and the euro zone is simply alarming, and it is difficult

to foresee the effects it may have in the short and medium term, beyond the expected rise in interest rates and the accordion contracting again. The question here is not when that will happen, which will be soon, but what will happen when that contraction arrives, since there is historical evidence that defines the current monetary system: the more the accordion stretches, the stronger the contraction will be. And, as Mark Twain famously said, history does not repeat itself, but it rhymes. Faced with this discouraging panorama of collective impoverishment, the model proposed in this article aims to make a contribution towards building a fairer, more democratic and sustainable monetary system, despite the risk that is always assumed when betting on something new. Is the banking system ready for change? It is difficult to find an answer, but there is no doubt that the ball is now in its court. With great power always comes great responsibility.

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