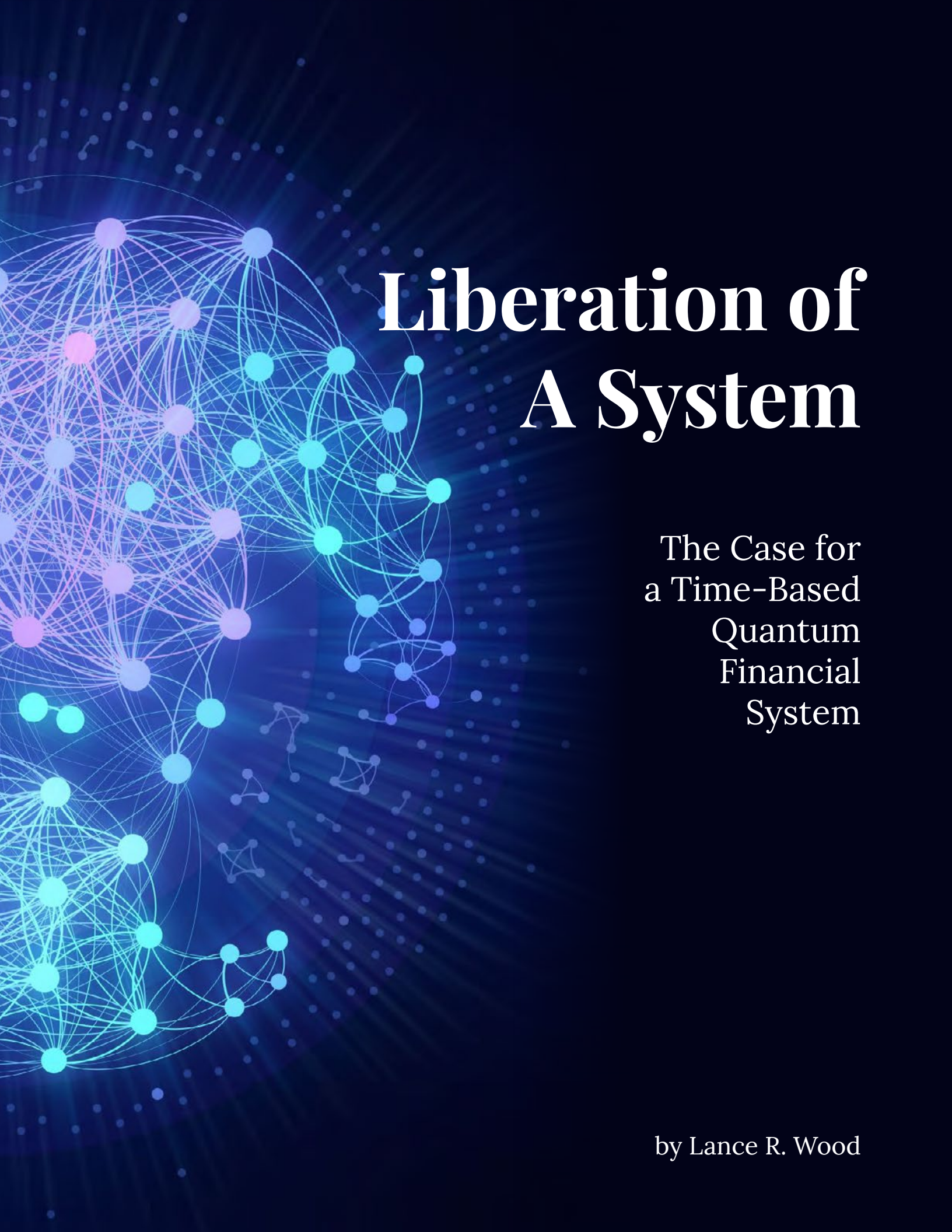

Liberation of A System

The Case for a Time-Based Quantum Financial System

by Lance R. Wood

Preface

It has been prophesied that the Quantum Financial System (QFS) will be a financial system gifted to us from the heavens. A financial infrastructure that operates on consciousness, it will bring about an end to our system of debt, an end to interest and it will facilitate the revaluation of global currency, ushering in a golden age of humanity.

All of this would have to be gifted to us from the heavens, because none of it seems possible from where we stand now. The technology in use in the cosmos and possibly withheld from humanity here on earth, is something that we can only imagine at this point. It could all be completely possible.

What feels far more likely is that the inspiration for creating a new financial system being provided to us from the heavens while the responsibility of creating it being ours. What if Quantum simply referred to the nature of the currency we choose to use and we could create it with the technology we have available to us now?

Complexity theory has shown us that one variable or one solution, has the power to completely change a system. This proposal is an exploration of the possibility that changing only one variable in our financial system is necessary for a QFS to emerge. And that one variable is our currency.

If currency functioned as a reciprocal of time continuously increasing in quantity, new currency would emanate essentially from a zero point of currency. This would result in an intrinsic expansion of our supply of currency with time.

Using our current technology, this currency could be created with a scalar ratio, a very simple equation, and transitioned to with an equally simple process. I believe with this one change, it is possible to accomplish everything the QFS has been promised to deliver.

It may not be necessary to have technology that operates with consciousness in order to create this new currency or financial system, but creating it could certainly enable all of humanity to begin operating at a higher level of consciousness.

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The Paradigm of Disempowerment

If all of the world's wealth was redistributed evenly among the population tomorrow, how long would it take until we again had a distribution of wealth similar to what we have now?

Most believe that it would not take long. The primary explanation given is a *lack of financial education.*

Is that true? The extreme poverty that exists on this planet is the result of those experiencing it not taking the time to learn about money? The solution is to teach the starving children of the world how to maintain good credit and invest in the stock market?

No, but why does this vast financial inequality occur? What makes our financial system so disempowering? Answering these questions and more so, finding a solution consumes me.

The conclusion I've come to is that the primary factor driving this inequality is that ….. **We don't have any money.**

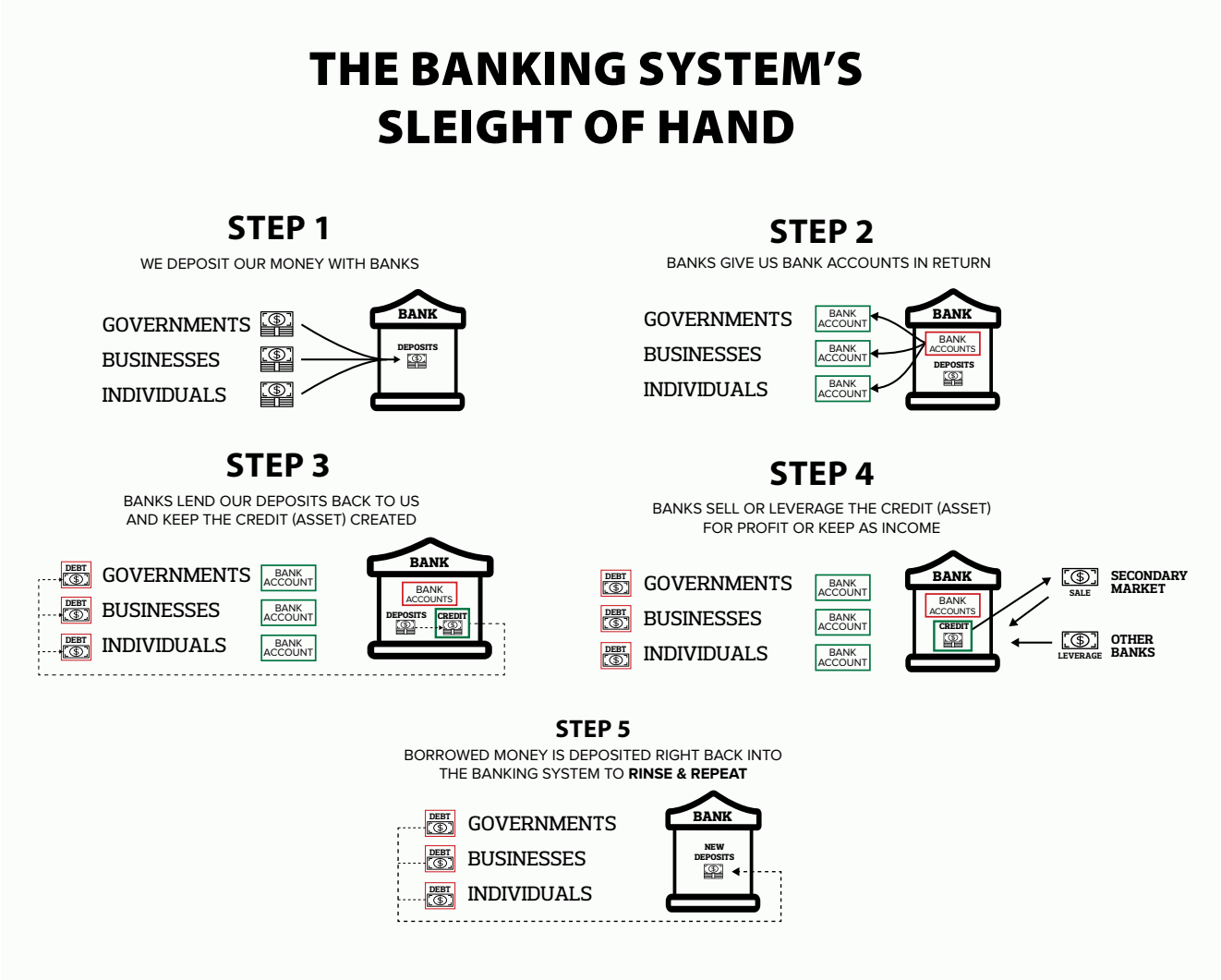
Not in the sense that most of the world is living paycheck to paycheck. Rather, we have been so well-programmed in giving the possession of our money over to entities and institutions that we **never** actually have any.

Only 7% of the world's money is in physical currency, the rest is digital. So, for the "banked" world, money is an extremely short-term store of value that we only possess for a very small fraction of a second when it is received as it is passing from a sender's bank's server to ours. At which point, we have a bank account. Our money is undoubtedly the banks to create unimaginable profit from and control our financial system with.

In 1926, the President of the Bank of England, Sir Josiah Stamp explained,

> ***"The modern banking system manufactures money out of nothing. The process is perhaps the most astounding piece of sleight of hand ever invented. Banking was conceived in iniquity and was born in sin. The Bankers own the Earth. Take it away from them, but leave them the power to create money and control credit, and with the flick of the pen they will create enough deposits to buy it back again. However, take it away from them, and all the great fortunes like mine will disappear, and they ought to disappear, for this would be a happier and better world to live in. But if you wish to remain the slaves of Bankers and pay the cost of your own slavery, let them continue to create money and control credit."***

The sleight of hand Stamp is referring to is this:



Everyone uses the banking system: governments, businesses and individuals. While our money is deposited, the bank is able to use it to create debt and a bank credit is used to hold the place of the deposit while it is being lent. The idea being that by supplying "unused" capital to creditworthy businesses and individuals, our economy is helped to move and grow. When the loan is repaid, the bank will replace the deposit and earn interest on the loan.

However, this is an ongoing process. And while it can take up to 30 years to work and repay the loan, an asset with an equivalent value is created immediately. This asset doesn't replace the bank credit or the deposit. It is essentially the bank's to sell for an immediate profit, keep as a stream of income or to leverage, meaning it's used as collateral in borrowing a new loan, which the bank then has the borrower of the original loan pay for. The money lent is immediately deposited right back into the banking system to rinse and repeat.

It is quite challenging to fully grasp exactly how our banking system is or could be one big system of financial enslavement that we all agree to. The difficulty is that we get the money we borrow and the house or the car it buys. Shouldn't we have to repay the money we borrow? Yes, of course. But, on the other side of every debt created is an asset simultaneously created, which the banking system then owns. If the banking system were using its own money to create this debt, it wouldn't be enslavement. It's not.

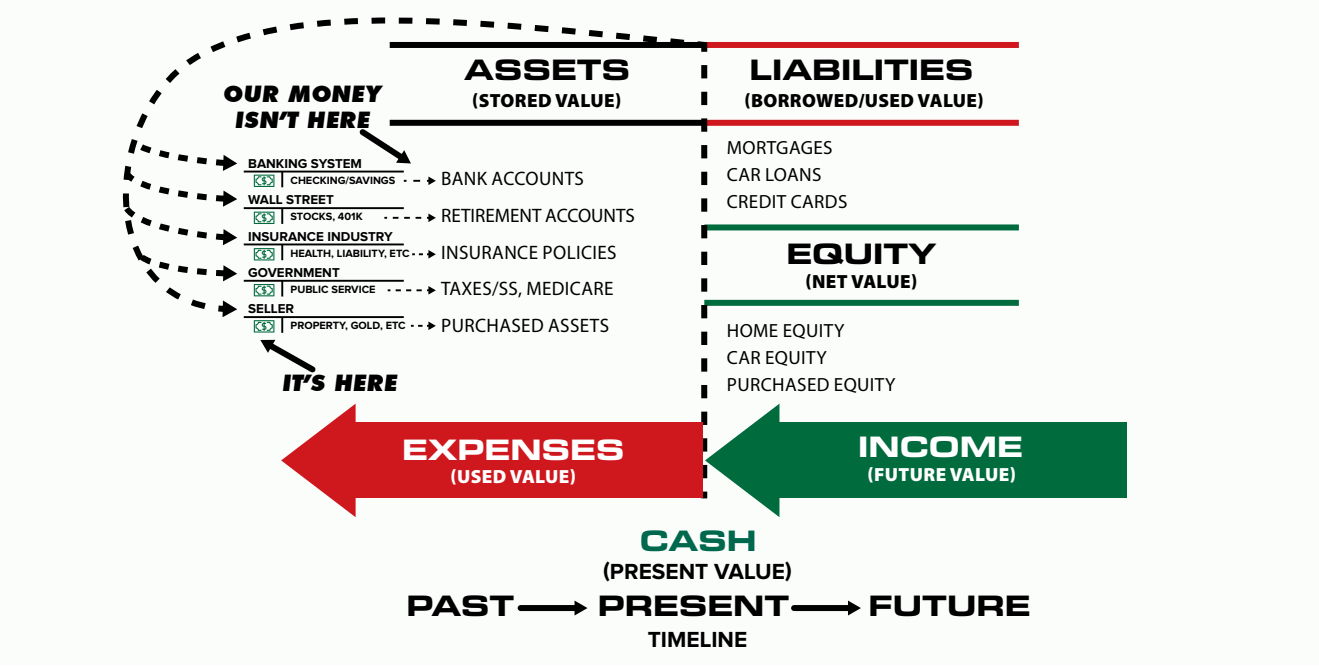
The banking system is using depositor's money to create these assets, essentially from nothing, which it then owns. While we have to work to pay for the asset we receive from the transaction, the bank does not. The president of the Bank of England's description of our banking system as financial slavery is completely true and completely accurate.

> **NOTE:**
> **Slave masters have always provided those they enslave with food, clothing and shelter, to some degree. Our modern financial enslavement provides some of us with more freedoms and better treatment. This doesn't mean it isn't slavery.**

This graphic from visualcapitalist.com is an excellent visualization of just how much debt the world has ($323 trillion at the end of 2020), compared with the rest of our financial markets.

Curiously, this figure (the world's debt) is always presented as debt. Yes, it is a representation of money that we've actually received to purchase our homes, vehicles, goods and services, as well as the money that governments have spent and businesses have used. To the Banking System and Financial Industry, this debt is a *Financial Asset*. Three hundred, twenty-three trillion dollars in accounts receivable created by lending us our own money.

This is the paradigm of our financial system.



Primarily, the perspective of the personal economy is being considered, but the economy of businesses, governments and the economy as a whole, are all very similar in nature.

If you think of the personal economy as a timeline in which money is the present (extremely short-term) state of value. When recieved, it is immediately converted to a different state of value or unit of account.

Income future value earned

Expenses value eliminated from the personal economy

Assets the converted or stored state of value in which money is exchanged for a different unit of account (bank account, stock, policy, promise, physical asset, etc). Assets are measured in dollars, but the asset/unit of account must be converted back to dollars in order to be used as an expense (excluding barter transactions).

Debt value borrowed and eliminated from the personal economy, paid for with future value earned

Equity the net of converted or stored value less value borrowed and eliminated from the personal economy

Unless we are holding physical currency in our hands, at no point during this timeline or the financial life cycle of our personal economy are we ever in possession of our money.

We are enabling our own disempowerment by giving our money, wealth and power away. A decision we willingly agree to because it's been presented to us as and we believe it to be, in our best interest to do so. However, in doing so we are risking the success, allocation, accountability and intent of the entity or institution that we have given possession of our money to. In doing so, we also enable the control of, great profit from and the accumulation of our wealth by a very powerful .01%.

This paradigm is the source of our disempowerment and many are waking up to this truth. Whether by design or evolution, the personal economy is something to survive. Following "conventional wisdom" and the advice of "experts," one has little hope of leading a life of financial abundance and doing so leaves most struggling financially.

A tide of desire to take back the control of our money, for financial inclusion, equality and empowerment has been swelling. It has fueled the sharing economy, fintech and digital asset movements. Many believe, and even more hope, that we are on the verge of a fundamental paradigm shift in our financial system. Uber, AirBNB and other innovators have demonstrated in our digitally connected world, that these paradigm shifts can occur in the blink of an eye.

To paraphrase a quote from many industry experts, "*the future of finance lies at the intersection of decentralized finance, fintech and distributed ledger technology.*" I would also add that the future financial empowerment of humanity rests in the personal economy.

It can not be understated what Bitcoin has achieved for the world. As powerless as we often feel, it has reaffirmed our power to create value as we envision it and our freedom to store and exchange the value we earn as we so choose. It's greatest achievement, in my opinion, is the immutable seed that has been planted in the collective conscience: We Have the Power to Change Our Global Financial System!

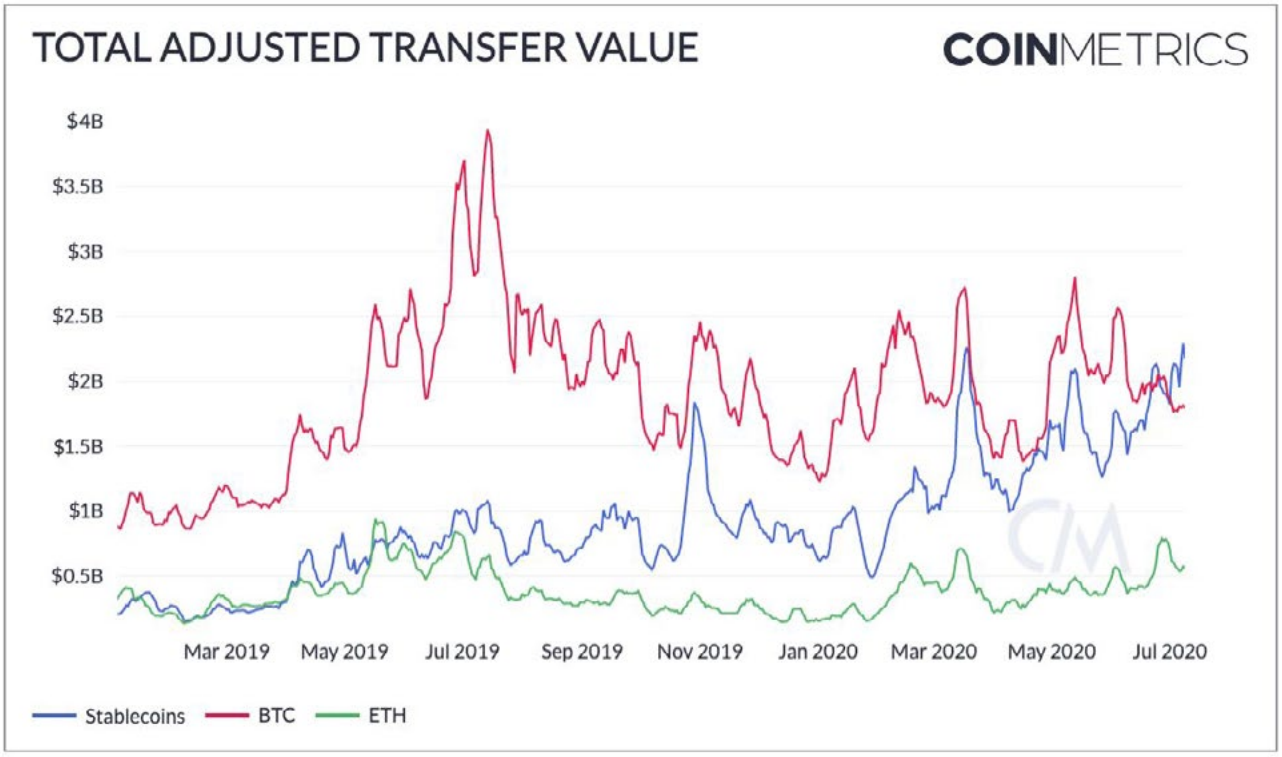
This proposal is for those of us with a passion for the pursuit of this possibility.

Keep Our Money, Keep Our Power

We can't hope for financial empowerment and continue to give it away. The simplest solution and perhaps the key to an empowering financial system, is a system specifically designed for us to keep it.

Bitcoin has silenced most critics and proven its case as a store of value. Its solution for the Byzantine General's Problem and creation of a decentralized network of information, has sparked a decentralization revolution. The innovation occurring on Ethereum's blockchain using smart contracts is pushing the use case for distributed ledger technology to a limit we've yet to imagine.

The potential exists to decentralize and replace almost every powerful entity and intermediary that we currently give our money to, but not with the instability and uncertainty currently experienced with digital assets. The utility of digital assets will continue to drive their value and price, but the volatility of digital currencies serve as a poor foundation for building our future financial system.



Stability is essential to any financial system, whether it's the old system or the future decentralized system being developed. In June of 2020, this need was confirmed when the amount of value transferred using Stablecoins eclipsed the amount transferred in BTC and ETH.

In anticipation of, and in response to, this continuing trend, while 93% of the world's money is digital, central banks and governments are scrambling to create Central Bank Digital Currencies (CBDCs), which are their own version of Stablecoins—not cryptocurrencies.

On December 2nd, 2020, a proposal for the Stablecoin Tethering and Bank Licensing Enforcement (STABLE) Act was announced by members of the 116th United States Congress and it stated, "It is critical not to let Wall St. and Silicon Valley own the future of digital payments."

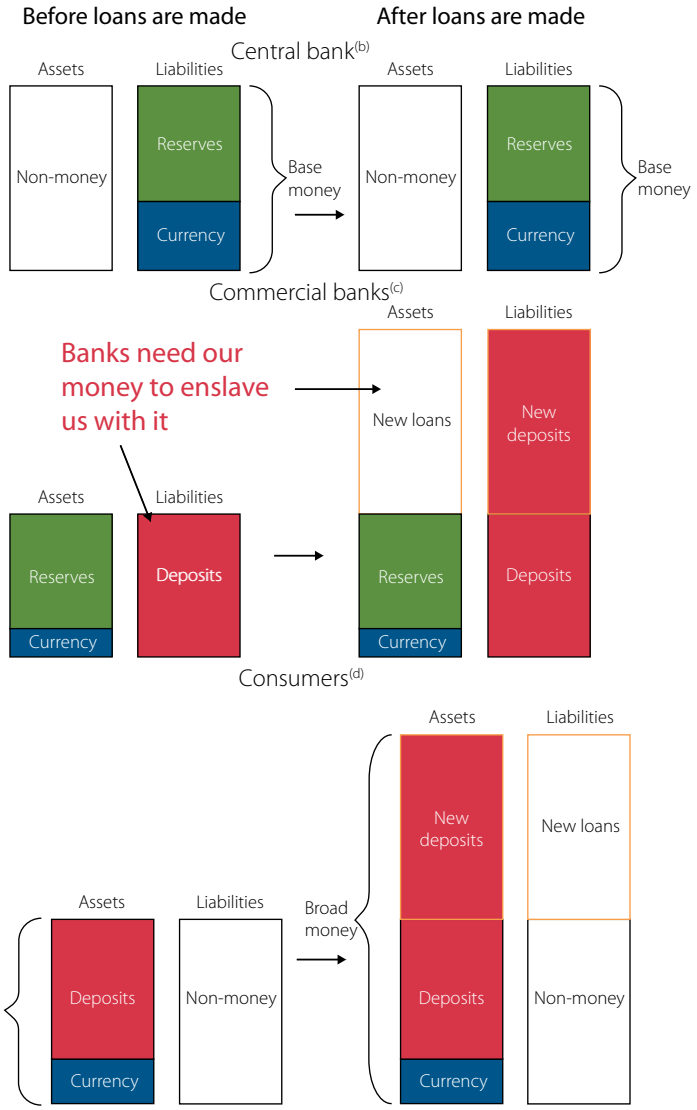
The announcement proposes to:

- Require any prospective issuer of a stablecoin to obtain a banking charter;
- Require that any company offering stablecoin services must follow the appropriate banking regulations under the existing regulatory jurisdictions;
- Require that any company or bank issuing a stablecoin to notify and obtain approval from the Fed, the FDIC, and the appropriate banking agency 6 months prior to its issuance and maintain an ongoing analysis of potential systemic impacts and risks.

The desire to retain control of the creation of currency is not difficult to understand and both mouthpieces of the banking system, governments and the media, have been careful to reference the future of digital payments as the concern.

The greatest fear of the banking system is not digital payments or the creation of currency, it's losing possession of our money, whichever form it takes.

Money creation by the aggregate banking sector making additional loans[a]



(a) Balance sheets are highly stylised for ease of exposition: the quantities of each type of money shown do not correspond to the quantities actually held on each sector's balance sheet.

(b) Central bank balance sheet only shows base money liabilities and the corresponding assets. In practice the central bank holds other non-money liabilities. Its non-monetary assets are mostly made up of government debt. Altough that government debt is actually held by the Bank of England Asset Purchase Facility, so does not appear directly on the balance sheet.

(c) Commercial banks' balance sheets only show money assets and liabilities before any loans are made.

(c) Consumers represent the private sector of households and companies. Balance sheet only shows broad money assets and corresponding liabilities -- real assets such as the house being transacted are not shown. Consumers' non-money liabilities include existing secured and unsecured loans.

To create $323 trillion in financial assets (global debt) with only 35 trillion in "accessible" global currency (95 trillion total) to do so, the banking system needs two things:

- It needs to recycle the same money and lend it over and over again.
- And, it needs *continuous access to it.*

A stable currency privately created and held in private digital wallets by the population is a fatal threat to the banking system's business model.

Banks can't control, lend and profit from what they don't have!

> **" I don't see central banks ever completely handing over currency creation to private sector. Sometimes people dramatize the currency wars as battle between flat currencies and private sector currencies. Competition is healthy for the economy as a whole and forces central banks to evolve, but the idea that states will lay down and let stablecoin issuers run away with money creation is erroneous."**
>
> **Garrick Hileman**
> *Blockchain.com*

I'm not in favor of giving Wall St. or Silicon Valley the power to create and have custody of the currency we use to store and exchange value with, but not because they shouldn't have the right to. The desire to control is at the root of our financial inequality. We are not going to regulate equality into being, it must occur as the result of an open and empowering design naturally.

I'm not in favor of giving Wall St. and Silicon Valley the power to create the currency we use, because it only really empowers Wall St. and Silicon Valley. It does little if anything to empower individuals.

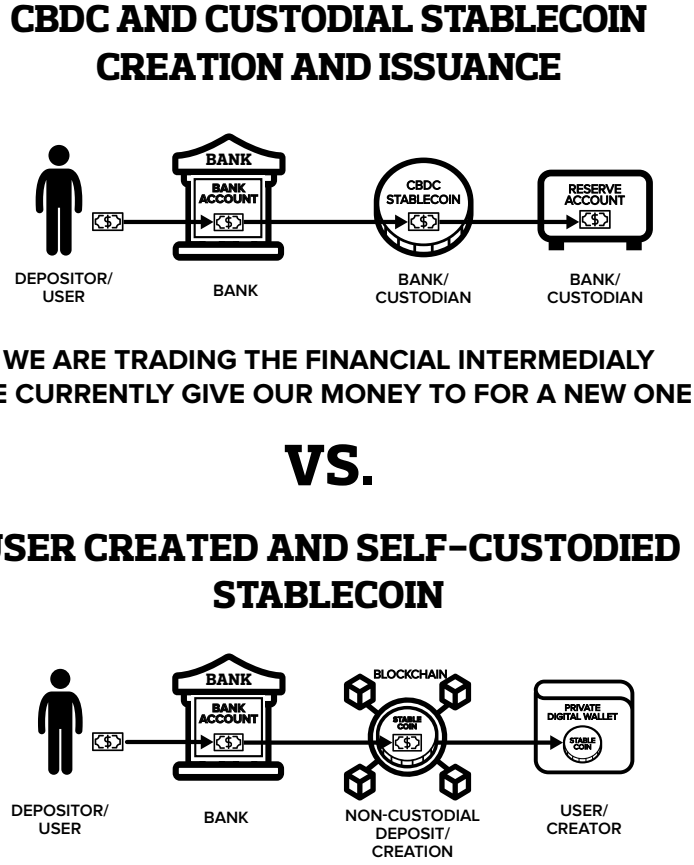
The Regulation, Supervision and Oversight of "Global Stablecoin" Arrangements report from the Financial Stability Board argues that "so-called stablecoins," a derogatory term created by regulators not to be confused with "so-called bank accounts," have the potential to enhance the efficiency of the provision of financial services, but **may also generate risks to financial stability, particularly if they are adopted at a significant scale.**

The most successful means of creating a stablecoin is "pegging" a fiat currency held in custody by an intermediary to a corresponding digital currency, the stablecoin. The presence of the fiat currency gives legitimacy to its value and stability equivalent to its fiat peg. A concept presumably originating from "backing" a representative quantity of currency with a quantity of gold, it is structurally very similar to bank accounts. However, the maintenance of reserve accounts has come into question, most notably the largest stablecoin project, USDT-Tether, was found using their reserve account to cover losses.

Quite frankly, an intermediary taking custody of a large reserve of peg currency is more of the same, "give us your money, we'll take care of it for you."

Individuals could just as easily create their own stablecoin and retain custody of this digital currency and the peg used to create it, in a private digital wallet. This would give individuals the same stability and 100% possession of their money.

The banking system is built on the basis of having access to our money. Widespread adoption of a currency truly placing our money out of its reach would definitively halt the banking system's cycle of debt, but it would also have systemic risks. By no means do I wish to minimize the potential impact this proposal might have on our financial system, but the choices seem to be:



1. "Remain the slaves of Bankers and pay the cost of your own slavery" or
2. Stop giving the banking system our money and enabling our own financial enslavement. And, risk its stability and, in turn, the stability of our financial system.

Unlike the system we've been born into, if we were to create and use this currency, the decision to risk the stability of our financial system would then be ours to make.

NOTE:
Since everyone has the power to create their own stablecoin and retain custody of it in their own private digital wallet, does everyone in the world need a banking charter?

While this proposal is disempowering to the banking system, it alone is not empowering to individuals. Widespread adoption and implementation would have its challenges.

- **Scalability** — The original intent of "e-money" was the ability to transact, to exchange financial information equivalent to a text or email, without the need for and the expense of costly intermediaries. As the adoption of digital assets expands, the challenge is maintaining decentralization without exceeding the cost of the intermediaries we intend to avoid. This will occur and it must as we continue to develop a fully decentralized financial system.
- **Security** — Many believe the security of money on blockchains is comparable to money on bank servers. The risk with decentralized finance occurs at the application level. It is similar to the risk experienced at the software/home computer level with traditional banking. Security of our financial information is a concern and a benefit to us all. It must continue to be improved and maintained. Comfort with the security of any innovation is always an obstacle to its adoption, but it is most easily overcome with the benefits to users.
- **Benefit** — In a world living paycheck to paycheck, the greater good is not good enough. Liberation seems like a worthy cause, but for the widespread adoption and use of a new currency to occur, it must result in an immediate improvement to the lives of individuals.

Before considering the benefit of or proposing the adoption of any new currency, we must first address the underlying concern of *all currency*....

The Shared Fate of Currency

Every currency in history has either died or failed. All can be categorized in one of two ways: the civilization creating it ended and in turn the currency, or the civilization didn't end, but the currency did. In the case of the latter the political, economic and social events or conditions leading to demonetization are unique to each, but the ultimate cause of failure is always the same.

In response, or in an attempt to control or solve a short-term problem, those in control of the creation of currency create more. Sometimes the intended outcome is achieved, but eventually they are unable to constrain the creation of currency, too much is created and the currency fails.

The most recent examples of creating currency to solve problems have been the world's responses to the 2008 global financial crisis and the 2020 pandemic. We have no clear indication that we are not on a similar path leading to a similar fate.

We can not build our future financial system "pegged" to an unsustainable system for stability. We risk both the indirect control of it and the shared fate of it. If we have any hope of a financial system capable of transcending the short-sighted political and economic interests and aspirations of a few, we must crack the stability code independent of the currency global leaders create.

To accomplish this, we must establish what truly gives legitimacy and stability to the value of money and identify a sustainable process of creation that is incapable of control. Only then is it possible for a free and transcendent financial system to exist.

What gives legitimacy to the value of money is one thing, consent. For example, *I will give you* 100 *Tomato Coins for your good or service.* OK. Uniform value of a currency requires the collective consensus of a population. Traditionally, this has been achieved through the declaration and issuance of "legal" tender, but is not a requirement.

Stability of the value of money is dependent on the processes and decisions of the governing body that is creating it and the quantity they create. When these processes and decisions result in overinflation of the supply, the stability and legitimacy of its value are lost as consensus for the value of currency becomes zero and the collective no longer uses or accepts it.

So, legitimacy of the value of money only requires consent, uniform value requires collective consensus and stability is reliant on the quantity of currency the process and decisions used to create it result in. Central banks, governments, "legal" tender, banking charters, FDIC insurance and "I'm bigger and more powerful than you" are not essential variables of this equation.

Currency	Gold & Gold Based Currencies	Fiat Currencies (Debt Based)	Stablecoins (Custodied)	Bitcoin (BTC)	Ethereum (ETH)	XRP (XRP)
Basis of Creation	Gold	Debt	Fiat (Debt)	Reward-Incentive	Reward-Incentive	Coin Offering
Mechanism(s) of Constraint (Deflation)	Gold	Banking Regulation & Monetary Policy	Banking Regulation & Monetary Policy	Fixed Supply (Algorithmic Release)	Distributed Governance	Fixed Supply
Supply of Currency (Quantity)	Gold	95.7 Trillion (Global 2020)	37.8 Billion (Total 2021)	21 Million	116.94 Million (2021)	100 Billion
Stability (Value)	Unstable	Stable	Stable	Very Unstable	Very Unstable	Very Unstable

The four elements for creating currency are the basis of creation (inflation of supply), mechanism(s) of constraint (deflation of supply), quantity (supply) and resulting stability (value).

Humanity's ancient love affair with gold has always made it a legitimate store of value and medium of exchange.

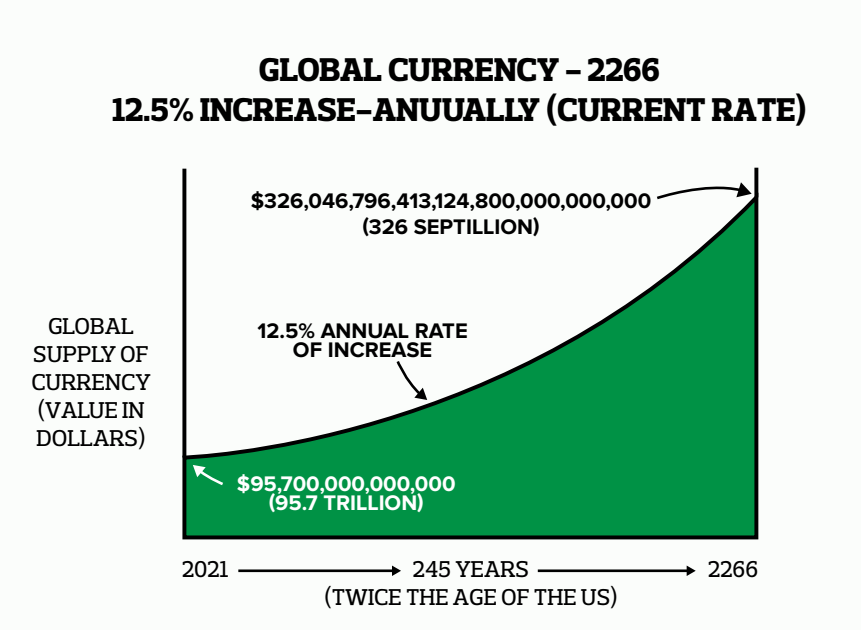
Throughout history its relationship with money has taken many forms: gold as money, gold smelted into money and money "backed" with and exchangeable for gold. All were utilizing the same basic premise; gold, a form of matter with "inherent value", is used to give legitimacy to the value of a quantity of currency with the stability of the value of this currency obtained from the quantity of gold's constraint of the supply. And all having had the same inherent flaw, the quantity of gold is unstable along with its value, but certainly a useful relationship for thousands of years.

In our modern history, gold has had very little to do with the creation of money.

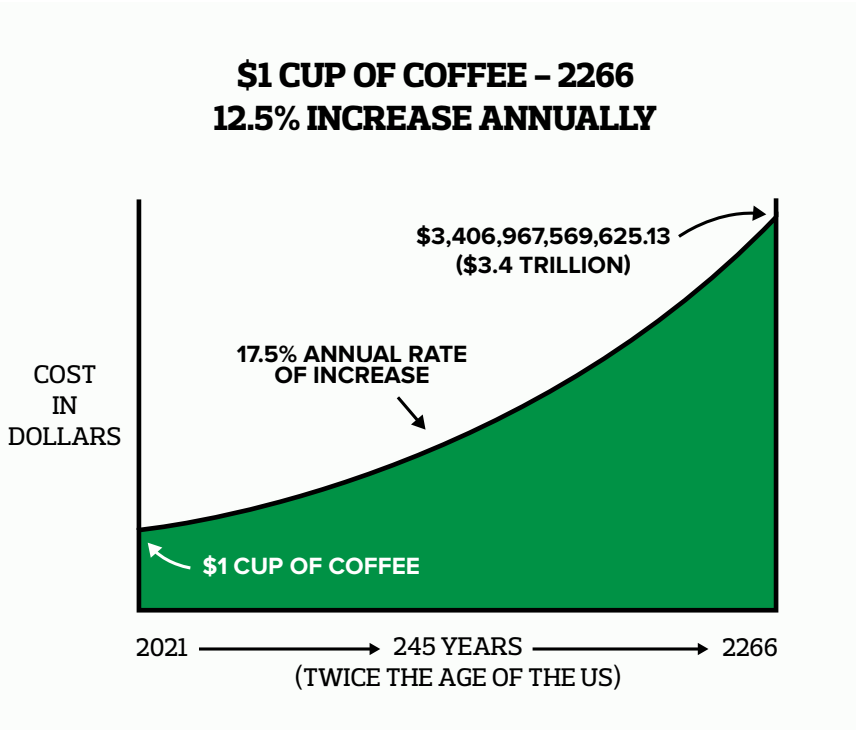
In 1900, the United States tried "backing" currency with gold by enacting the Gold Standard Act; but in the 1930s, the gold standard was revised and the price of gold was devalued — marking the beginning of the end of the relationship altogether. As previously explained by the President of the Bank of England, "The modern banking system manufactures money out of nothing."

Well, sort of. The basis for the creation of our currency is debt, hence the term "Debt Based System." Since 1980, the United States has been creating currency at a rate of 12.5% annually. The US dollar is the world's reserve currency, meaning countries are required to maintain and use a reserve of USD to transact internationally a.k.a, the "Petro Dollar." The rate of its creation is then a primary driving factor in the creation and valuation of global currency, which are currently valued at $95.7 trillion (at the end of 2020).

Continuing at this rate, 245 years from now, twice the age of the U.S. and a very modest existence for a country or civilization historically, the world will have currency valued at 326 septillion dollars.



To compare, a $1 cup of coffee today, increasing at this same rate, would cost over $3.4 trillion dollars in 2226. The creation of currency and the cost of goods and services are not correlated. While the Federal Reserve and central banks create currency at a rate of 12.5% annually, they "target" an inflation rate of 3%.



This is very simple math. Annually means the amount of currency times 112.5%. Then, take that total times 112.5% the following year and repeat. This is exponential growth. It's acceleration and it is undeniably unsustainable. The very definition of unsustainable is something that can not continue at the same rate.

This rate of creation is the result of the debt-based process used to create it. Monetary policy and banking regulation are the mechanisms of constraint, which have proven to be very ineffective at constraining the amount of debt created by central banks, governments and, in turn, currency.

The modern banking system offers no fundamental variation or improvement to a debt-based system that originated in Babylon. Either the belief truly is that "we" can accomplish what no other civilization in history has or the banking system is unwilling to change a system that enables them to retain such financial control.

Cryptocurrencies are the opportunity for the rest of the population to solve our ancient problem with creating currency. There are currently 14,304 cryptocurrency projects listed on coinmarketcap.com, with many business models and value propositions included. Their money supply and issuance models vary, but their approach to the inflation and deflation of their respective currency supplies are fundamentally similar.

Inflation, or the creation of currency, is achieved as an incentive for providing a function or a benefit to a network or ecosystem—mining, staking, securing or growing the network—or through an initial offering such as an ICO-initial coin offering, an IEO-initial exchange offering which are both very similar to the IPO-initial public offering of a stock, etc.

Deflation or constraint of the supply is achieved with either a fixed quantity or through a decentralized governance model which distributes decisions for the creation, issuance and deflation of the currency supply among users.

The instability of cryptocurrencies is a product of quantity and mechanics. A fixed quantity does solve the over inflation problem, but 21 million Bitcoin do not scale to 7.8 billion people. We have a history of over 200 years of stock exchanges to know how the value of assets with fixed quantities behave. A fixed quantity equals scarcity, which can equate to value, but not to stability.

The decentralized governance model absolutely is empowering. It places decision-making for the creation and issuance of currency in the hands of users rather than banks or governments. However, the most successful example of this model is Ethereum. The creation of its currency is reliant on the number of transactions on the network, which is the equivalent of central banks expecting credit card transaction fees to be an appropriate quantity of currency for our financial system or attempting to adjust the quantity to make it appropriate. Creating currency based on the number of transactions on a network is a basis of the creation as arbitrary and uncontrollable as currency creation based on the creation of debt.

The utility of Ethereum is not in question, but if the intent is a stable currency to be used by the population, even with the most intelligent benevolent AI guiding deflation, adjustments to the supply are based on short-term conditions/variables and arguably vulnerable to the premise that "we" can accomplish what no other civilization in history has.

Complexity theory has been utilized in our efforts to stabilize currency and our financial system for decades. Financial systems are organized systems of complexity. The challenge in stabilizing these systems and currency is the nature of them. They are unpredictable.

Our financial system is so intentionally designed to exploit users, it is difficult to say with certainty that we could not find the answer to a means of stabilizing currency and the system with a sustainable basis of adjusting the supply, if this were our sole intent. The incentive for controlling and manipulating the creation of money is so great, these conditions may never exist.

Perhaps, this is the answer. No process of creation and adjustment is infallible and ultimately unsustainable.

The value of a fixed quantity of currency is unstable. Any process resulting in the creation of currency at an accelerating rate requires a deflationary mechanism and every process not utilizing a fixed quantity accelerates. The fault of every mechanism of constraint is its reliance on decisions, human or algorithmic, which must be based on short-term variables and conditions all of which are vulnerable to control, manipulation and unpredictability.

How do we solve this problem?

Money as a Process of Time

The postulate of this proposal is the only uncontrollable, infallible constant upon which we can base the creation and constraint of currency, is the basis for the creation and constraint of all things. In order to build a transcendent financial system, our money must be based on the one thing that transcends all things—TIME.

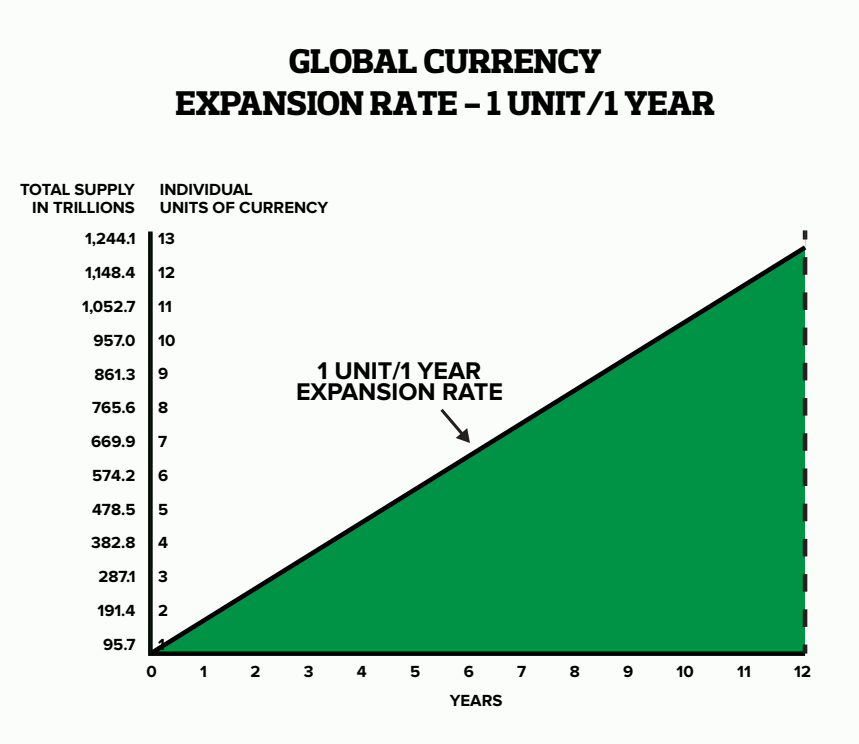
Every process of creation utilizes the progression of time. The basis of creation and the mechanisms of constraint or adjustment are both points of vulnerability. They both are and contain controllable, fallible elements. A process that only utilizes the progression of time to create currency, an element we can't control, would eliminate these risks.

Mathematically, the only equation that does not result in an accelerating rate of creation, is a constant rate. *For example, 1 Unit of Currency per 1 Year*. The nature of a constant rate is that it isn't acceleration and it doesn't increase from one measure of time to the next. With this particular use of time, the quantity of currency is not fixed, but it does not require a method of constraint or a deflationary mechanism.

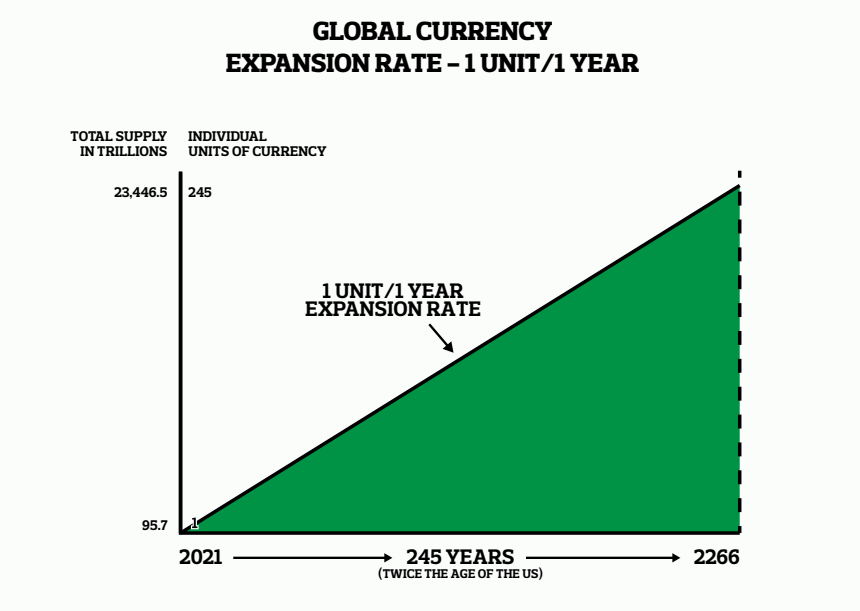
NOTE:
Money and time are both scalar quantities. The constant increase of a scalar quantity is scalar expansion and the correlation of the scalar expansion of two scalar quantities is a scalar ratio. This correlated expansion is how the universe expands. Money and time are only two dimensions, the universe expands in three, but with this use of time, like space, money would expand from every infinitely small unit or quantum.

A very precise calculation and record of time accounting for time variations, for example, leap year, etc., would be necessary in maintaining a time-based system of currency and financial system.

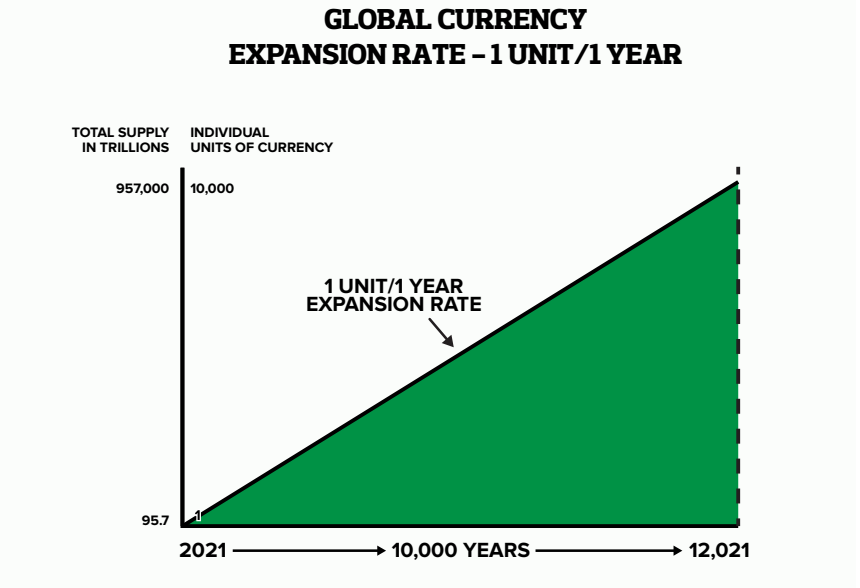
If we were to expand our global supply of currency at a constant rate of 1 unit per 1 year, in the second year we would have $191.4 trillion in currency, doubling the supply. This seems to be counterproductive in solving an inflation problem. However...



245 years from now we would have $23.4 quadrillion in currency, a far smaller yield than the process currently being utilized.



Ten thousand years from now, we would have $957 quadrillion in currency.

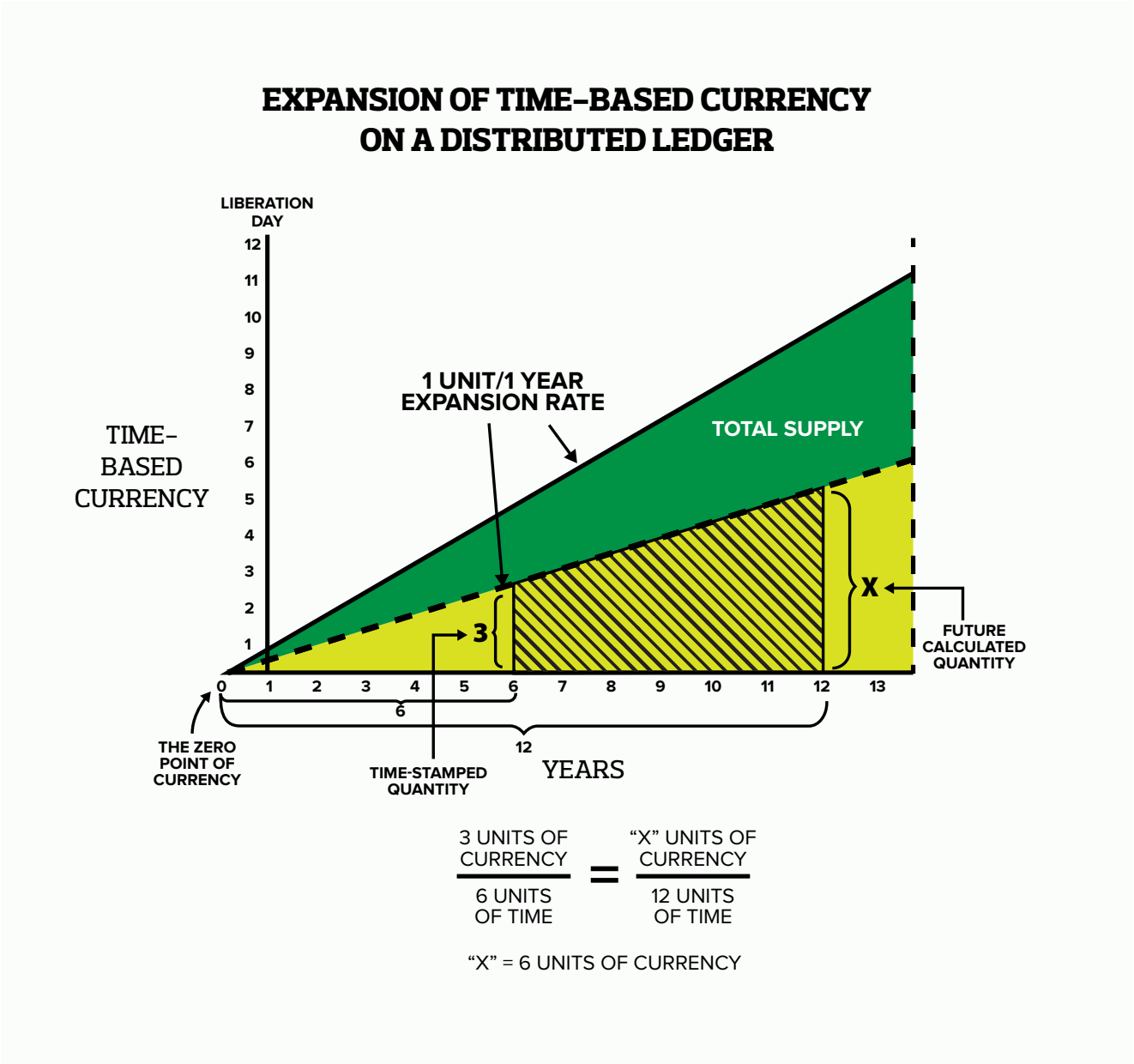


This is a very simple solution to inflation and the creation of currency. But is it too simple to empower individuals? Is it enough money to sustain a financial system? The goal is not to sustain an unsustainable system, it's to create a better one that is sustainable. The power of this solution is in its application, its impact on the personal economy and possibly the global economy.

Decentralization and financial inclusion are primary initiatives of financial innovation.

Cryptocurrencies have achieved the goal of decentralizing processes of creating currency, but these processes are not inclusive. Every process requires an action from a user often creating a barrier to inclusion and an obstacle for participation. These actions include the purchase of equipment, technical understanding and the purchase of currencies or assets with associated financial risk that most can't afford. This results in a heavy concentration in the creation, accumulation and control of these currencies and the processes they are created with—not unlike our system now.

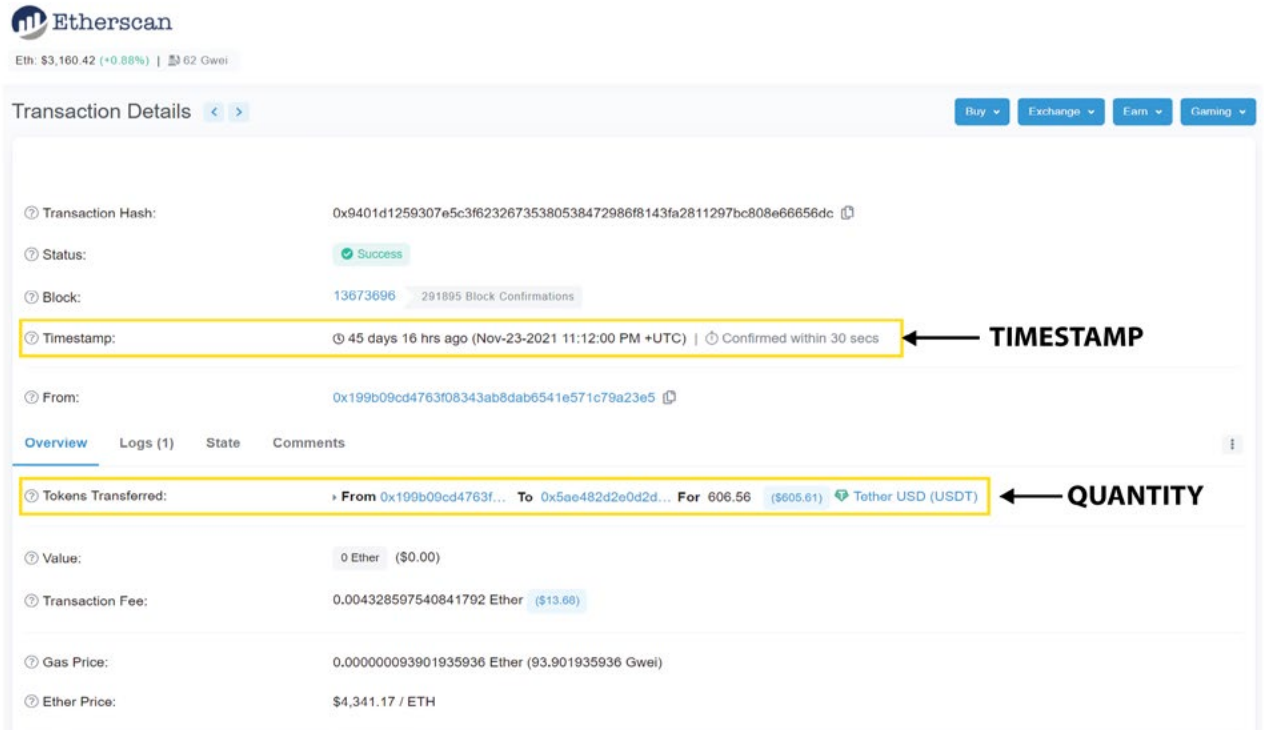
Using a constant rate of expansion (units of currency/measure of time) we can uniformly include all users in the process of creation through the simple act of possessing and using money. The result of applying a constant rate of expansion to each individual unit of currency or applying it to the total supply of currency are the same. We can achieve a continuous intrinsic expansion of our supply of currency, meaning new



currency is created and issued through the expansion of all currency, rather than being created and inserted into circulation by a central authority or created and sold into circulation by a decentralized creator.

This expansion can be created and maintained with distributed ledger technology. Banks use internal digital ledgers to record and track financial information. The Central Banking System uses this information to track the quantity of currency in our system. Distributed ledger technology, blockchains, track and record the same information on a decentralized network of information.

Distributed ledger technology could be used to create this system of currency, but it wouldn't be necessary to track every unit of currency in the system provided all currency used the same currency timeline, start date and time, which we could consider Liberation Day.



NOTE:
This is similar to the calculation of speed and the concept of space-time, in that one needs a location in space, a location in time and the displacement of both to determine speed. Essentially, this reciprocal relationship between money and time would equate to money-time, in a sense.

A timestamp on a distributed ledger would be used to record the date, time and quantity of currency created. The expansion of the currency could be determined at any date and time in the future by its displacement of time from its creation using the given rate of creation.

The benefits to a time based system of currency:

Inclusion — An intrinsic expansion of our supply of currency utilizing time enables the uniform inclusion of all users in the process of creation by simply having and using money.

NOTE:
A decentralized financial system requires a decentralized network of financial information currently achieved with the incentivization of participants securing these networks. These relationships are essential and should continue to grow and evolve, but the need for incentivization and creation of a new form of currency are not synonymous. Visa doesn't get paid in Visa-coin.

Sustainability — A constant rate of expansion is not stagnant and is not acceleration. By removing ourselves and our decisions from the process of creating currency, we can eliminate the risk of over inflation. The potential for a transcendent financial system would exist.

Immediate Benefit — If possession of currency meant users were included in the creation and issuance of new currency, individuals/users would receive an immediate benefit and have an incentive to use this new currency.

Uncontrollable — Control of the creation of currency is achieved by controlling the point of creation whether by controlling the land and machines pulling it out of the ground, the machines and energy used in the process of creation, or the governing body and regulations granting the "right" to create it.

By moving the point of creation to currency itself and a supply that only expands with time, one would need to control every unit of currency in the system or time to control the creation of currency. Currently, the banking system has control of our money through its possession of all of the money in the banking system. A currency relieving it of this possession would arguably create an uncontrollable process.

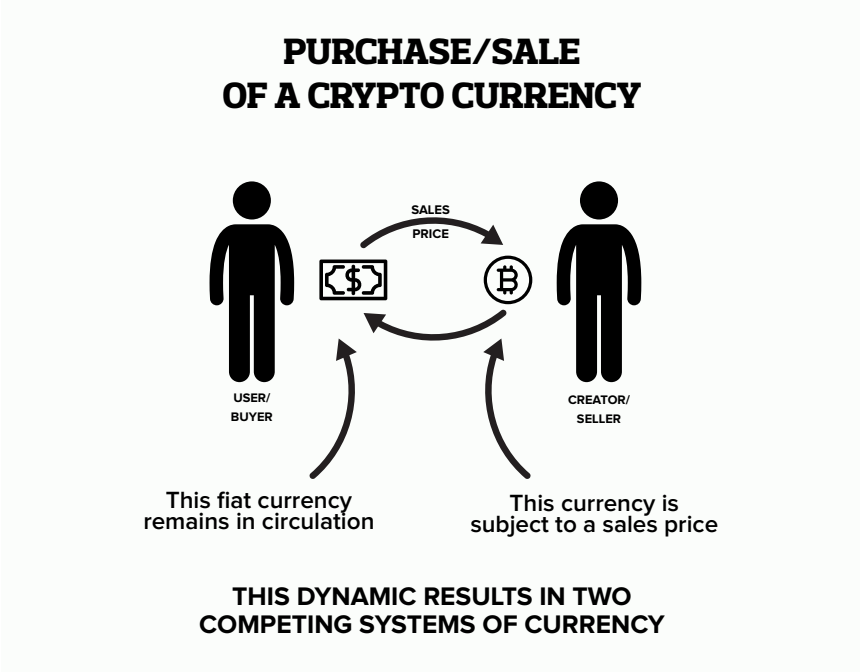
This doesn't guarantee central banks would stop creating currency and I imagine they wouldn't. But, the creation of currency is based on debt. The creation of debt is facilitated through the use of our money.

Therefore, a currency placing our money completely out of the reach of banks with a very good incentive to do so would severely diminish the banking system's ability to create debt and in turn currency.

Consensus & Stability

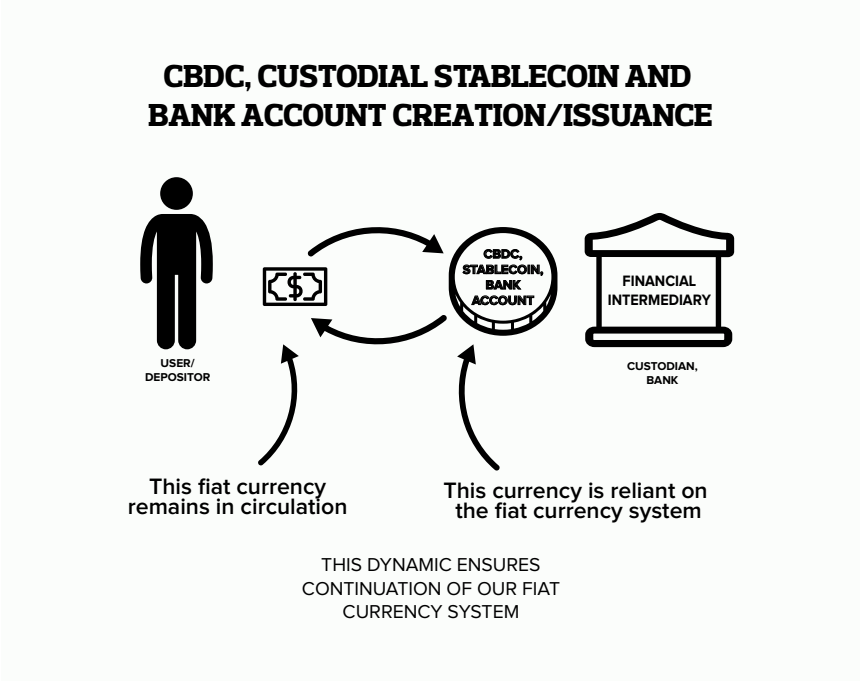
The challenge in stabilization of a new or independent currency is in establishing and maintaining consensus of a uniform value. The simplest solution is utilizing the consensus that already exists and the reason stablecoins have thus far been successful.

Purchase — Purchasing a new currency results in the fiat currency used to purchase it "passing-through" the new currency. The fiat currency remains in circulation ensuring the new system of currency must compete with the old one. It is tremendously difficult for Bitcoin and cryptocurrencies to replace our fiat currency system, and not because they aren't amazing innovations— they are. Rather, they don't have the mechanics to replace it, only to compete.



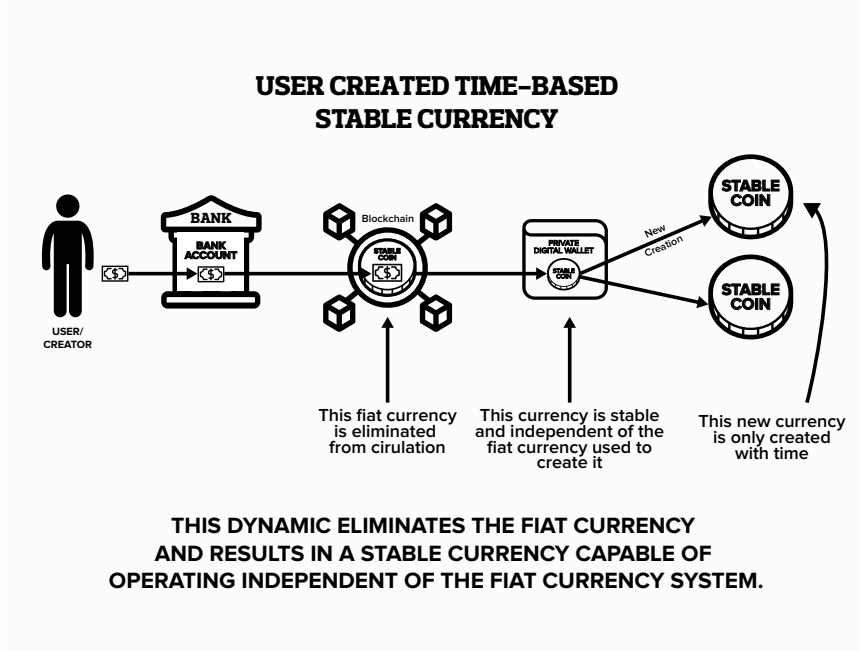
The instability in value results from the new user's need to purchase the new currency subject to a seller's asking price and/or market value.

Exchange — According to The Block, as of January 2021, $37.8 billion in value was locked in DeFi with stablecoins. This is not completely accurate. $37.8 billion in fiat currency, excluding collateral and algorithmic stablecoins, were held in custody by intermediaries and $37.8 billion of representative currency was locked in DeFi.



Custodial stablecoins, CBDCs and bank accounts are fundamentally the same thing. The fiat currency used to create them is in possession of a custodian or intermediary (bank) and users have a representation of their money. The fiat currency is still in circulation. This dynamic ensures continuation of a financial system reliant on our fiat system.

Creation — The price of a bank account never changes as they are not purchased; they are created. A new currency created with a fiat currency is not subject to the instability in price experienced purchasing cryptocurrencies. Provided the fiat currency used to create it remains "self-custodied" on the blockchain and use of the new currency continues, there is no risk of the fiat peg reentering circulation. The fiat currency is effectively eliminated from circulation.



NOTE:
Those wanting "out" of our financial system buy gold or more recently digital gold and digital assets. This results in some of the value in the personal economy being stored outside of fiat currency and conventional assets. However, the cost of living is paid in fiat, and we are all subject to the failure of our financial system.

To truly get "out" of our financial system and change it, we must take the value stored in the banking system as fiat currency, use it to create a new currency, time-based or otherwise, and eliminate it. Then, pay for our expenses and buy alternative assets. If not, our collective value stored as fiat currency in the banking system will remain theirs.

This solution could scale to $95.7 trillion in global currencies without centralized possession by new intermediaries. Because the fiat currency is effectively eliminated, the potential exists to **transition** to a new system of currency rather than competing with our old one.

Global Unification & Revaluation of Currency

This dynamic also creates the opportunity to unify and revalue our global supply of currency. Competition is an excellent driver of innovation, but stability is of far greater value when it comes to currency.

The price of goods and services are always changing. If the world only had a single currency to use, the price of goods and services would all move relative to that single currency. The purchasing power of it would be impacted by the quantity in circulation, but one unit of currency would always be worth one unit of currency.

If a second currency were added to the equation, the two currencies would then need to compete with one another. Assuming the quantity of both currencies in circulation were the same, the amount available and, in turn, the purchasing power of each, would rarely, if ever, be the same. Users would constantly be at risk of choosing to use one currency and losing purchasing power relative to the other. Each additional currency added to the equation would add to this risk.

In a truly free and open financial system, the decision to use a single currency must be a choice made by individuals, but stability is more likely the result of unification, rather than competition.

Global leaders are terrified of a GSC, or global stable coin. The more powerful, developed countries of the world impose their will on and outsource their inflation to lesser developed countries of the world via the international currency system, international banking regulation and the USD's global reserve currency status. A unified global stable currency would make it very difficult to continue this practice. It would also offer tremendous empowerment to EMDEs, emerging markets and developing economies and the populations of these countries.

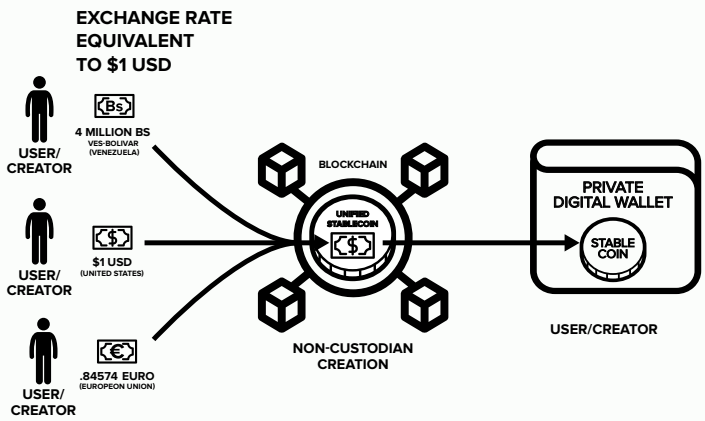
Unifying global currencies historically has been challenging. The euro and Brexit being the most recent example of this. The obstacle to these efforts originates from conflicting political and financial interests of the ruling class, not necessarily the best interest of the 90% of the world's population with 15% of the wealth.

The assumption is the decision to unify global currencies needs to be a decision made at the top. This is not true.

Using a currency price oracle and the U.S. dollar (the world's reserve currency) as the basis of valuation, we could simultaneously unify, revalue and eliminate fiat currencies.

It would then seem the unification of global currency would require the unification of humanity.

UNIFICATION AND REVALUATION OF GLOBAL CURRENCY



USING A CURRENCY PRICING/EXCHANGE RATE ORACLE, ALL GLOBAL FIAT CURRENCIES COULD BE SIMULTANEOSLY UNIFIED, REVALUED AND ELIMINATED

This may not be the case either.

The velocity of money is the measure of how many times the average unit of currency exchanges hands in an economy. It is usually a ratio of a country's GDP, gross domestic product, to its money supply. In 2020, the GDP for the U.S. was $74.3 trillion with $35.2 trillion in accessible money, meaning our entire available money supply changed hands roughly twice. This doesn't take into account the number of times money changes hands on exchanges either.

A small percentage of the global population with access to a small percentage of these transactions and a sincere desire to liberate our financial system or simply a desire to use a currency they felt offered greater benefit than their fiat currency, could convert and eliminate a large percentage of our global supply in a short period of time. A large percentage of the population could accomplish it in no time. Global leaders would have a very hard time stopping it.

Those in control of the creation of currency would undoubtedly do everything in their power to prevent the creation, adoption and use of a unified currency they did not create or have possession of but, if the banking system began to empty and fiat currencies began to disappear from circulation at a significant rate, they would have no choice but to enable the use of this new currency.

The product of this proposal is a *User-Created (Self-Custodied) Unified Stable Time-Based Currency.*

Transition & The Conservation of Integrity

Protecting and preserving the integrity of a supply of currency is crucial to any currency, whether that risk is counterfeiting a physical currency or hacking a blockchain or a smart contract. A review of the characteristics of an ideal technical infrastructure are necessary in illustrating the logistics of adoption and evaluating how to preserve the integrity of the supply both during and after transition.

An advanced technology yet to be discovered by, shared with or disclosed to humanity may certainly be best suited for a time-based financial system. As stated, this proposal is an examination of how this system could be created and maintained with current technology.

Technical Characteristics

The Network and Currency — Decentralization is a movement that stems from the belief that the possession of or control over too much of anything by a single individual or group leads to or carries the risk of the corruption or manipulation of it. This includes our information, resources, governance and the processes essential to our society.

Our digital fiat currency system is essentially a network of information the banking system controls by controlling the governance, regulation and legislation, of the processes for creating currency and credit and possession of all of the information and currency in the system. This multi-layered control feels like the banking system is an insurmountable force impossible to dismantle or change.

Changing it is unnecessary if the collective moves the value stored as fiat currency in the banking system to a network of information that global leaders can't control and uses it. Distributed ledger technology and blockchains enable this possibility. And if the desire is a financial system as close to uncontrollable as we can manage, utilizing a decentralized network for a time-based currency would seem to be an obvious answer.

However, currency's greatest function is providing all with the ability to store and exchange value across time and distance. The challenge we face is not limiting this function by constraining our money to a single technology or distributed ledger. Doing so would slow both adoption and use and increase the risk of, and a focus on, controlling that single technology. The information must exist somewhere and innovators are addressing this concern with network interoperability.

Attempting to offer the perfect technological design would likely reveal the limits of my technical expertise, rather the following is a proposed direction.

The unification and elimination of global fiat currencies may be best achieved with a single "impenetrable" distributed ledger. The action to achieve this could be accomplished with a smart contract. The new time-based currency would be simultaneously created with and exist on this same contract.

The likelihood of time-based currency and this smart contract, as they would be one in the same, operating independent of a single distributed ledger—the one used to create it in particular—and functioning interoperable of all networks while expanding is greatly increased as its process of expansion, or time, isn't a process at all and needs no governance.

Like the point of creation, the key to preserving integrity and achieving technological independence may be found at the currency level.

Quantum-Resistance — Quantum computers have the potential to break the cryptography and security used to encode and protect all of the digital financial information on the planet. It would seem to resist quantum computers, quantum computers are necessary, which may or may not be the case.

Quantum-resistant is simply an attribute our financial system must have now that quantum computers exist.

Fungible vs. Non-Fungible — Fungible means interchangeable. In other words, my dollar and your dollar are the same. Non-fungible means that they are not, or my digital dollar and your digital dollar are unique.

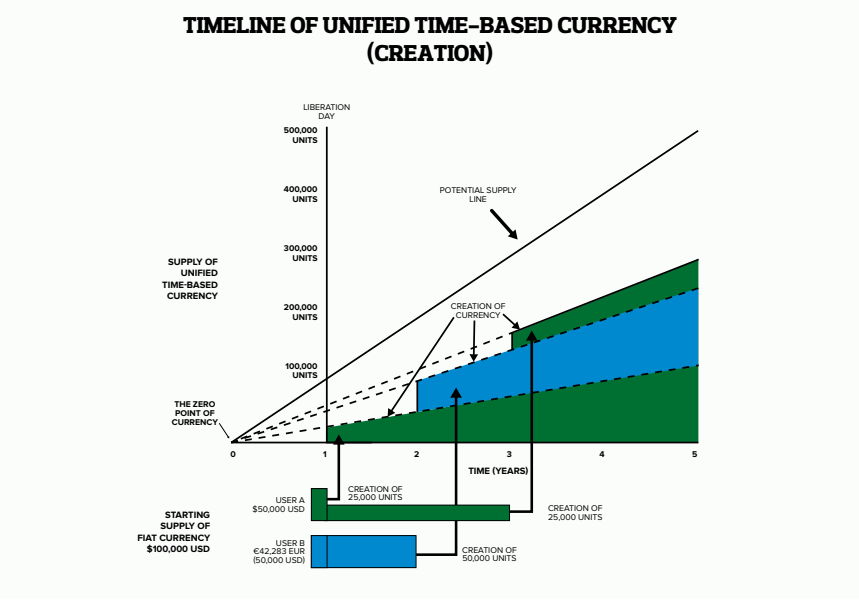
The banking system currently treats our dollars as their own and our legislation supports this practice. It also believes money and credit are the same thing, which they are not. It is possible to create a unified time-based currency as an NFUC, non-fungible unified currency, to deal with this problem. Making 95 trillion units and fractions of units of currency unique may be more easily accomplished than I assume. The benefits versus the potential privacy and proprietary costs of doing so are arguable. Focusing on a sound process of creation and the integrity of the supply, math and logistics may solve this problem.

Logistical Infrastructure

A sample size of fiat currency, $100,000 in value, is used below to illustrate how the creation and transition to a time-based system of currency would occur with three possible scenarios.

Creation of Currency

A beginning supply of $100,000 in fiat currency has an equivalent potential starting supply of time-based currency. The possible future expansion of that supply is represented by the expansion line.



Individual A, at the start of our currency timeline, creates 25,000 units of time-based currency with fiat currency. In the second year, Individual B creates 50,000 units using their respective fiat currency.

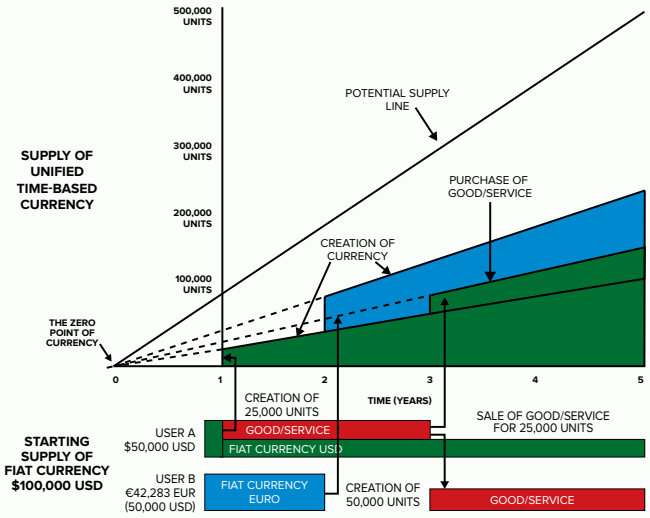
Both actions eliminate the fiat currency from circulation and the future expansion of each is represented.

NOTE:
The unification, revaluation and elimination of the fiat system is our objective. The creation of time-based currency with digital currencies and assets is a slippery slope. Enabling creation with currency other than fiat would jeopardize the integrity of the supply. Time-based currency could be used to purchase, swap or exchange for any currency, asset, good or service, but the creation of it should be limited to fiat currency.

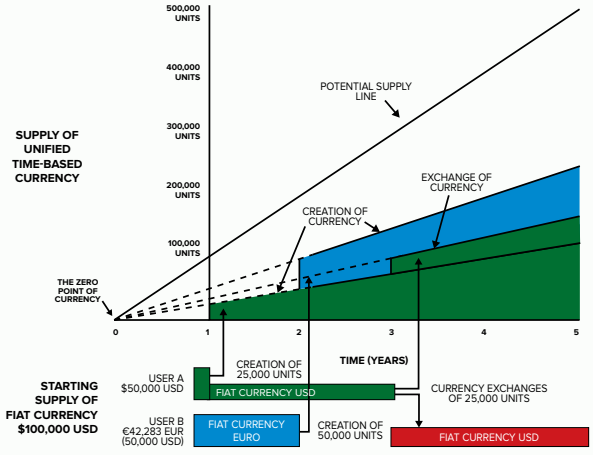
Purchase of a good, service, digital asset, etc.

In year three, if Individual A were to make a purchase from Individual B for 25,000 units of time-based currency, the exchange of currency would function as an exchange of the units of currency at that point in time on the timeline. The 25,000 units of currency for Individual B (100,000 total), the remaining 50,000 units of currency for Individual A and all other currency in the system from that point in time would continue to expand at the same rate. They would all have equal "value".

TIMELINE OF UNIFIED TIME-BASED CURRENCY (CREATION AND PURCHASE-GOOD/SERVICE)



TIMELINE OF UNIFIED TIME-BASED CURRENCY (CREATION AND CURRENCY EXCHANGE)



Currency Exchange

The ability to transact using a new currency during transition to it is a process. To ensure adoption, users need to be able to convert a new currency back to their native currencies. This is becoming increasingly accessible to the point that depending on the country a user is in, anyone with a phone can accomplish an exchange.

A currency created with fiat currency has two possible options for the fiat currency used in creation worth addressing:

Option 1: Release/Use of the Fiat Currency — The smart contract used in the creation of a unified time-based currency could be designed to allow for the release and/or use of the fiat currency used in its creation. It is worth addressing this possibility as it would provide users an option for converting back to their native currency, offer users peace of mind by having access to their fiat currency, a source of liquidity during transition and, most importantly, this is a common practice in defi.

The arguments against this design are as follows:

1. Users would be limited to only the original amount of fiat currency used in creation as the increase in time-based currency would not be "backed" with fiat to release. Users could only receive the fiat peg and a net of time-based currency.
2. Currency continually changes hands and users would constantly be at risk that the unified currency they possessed was not created with their native currency. A user in the United States could easily possess currency created with Yuan. An additional currency exchange would be necessary.
3. Decentralized finance, in a sense, is the decentralization of the banking system's sleight of hand. Banks use our inactive deposits to create financial assets. Defi protocols empower depositors by making the same use of deposits and providing a greater return.

   To the industrious, $95 trillion in fiat currency sitting inactive on a blockchain or smart contract would appear to be a tremendous opportunity.

   The opportunity greater than any use this fiat currency could possibly offer is the opportunity to eliminate and transition from our fiat currency system. Failing to resist this temptation could very well mean the continuation of our financial enslavement.

Option 2 (the proposed design): Elimination of the Fiat Currency & Exchange – Once used in the creation of new time-based currency, the fiat currency used to create it would be eliminated and inaccessible to anyone.

To convert the unified time-based currency to a different fiat or digital currency users would simply swap or exchange for it. This would function the same as a purchase with time-based currency, an exchange of units at that location on the currency timeline.

The value of the currency should remain stable during a transition relative to fiat currencies because all users have the ability to create new currency at the exchange rate for fiat currencies at any given point in time. Buyers and sellers would have no reason to deviate from this rate with a purchase or an exchange.

NOTE:
A vulnerability of this design is the following:
The proposal is to eliminate fiat currencies by using them to create a new currency with the argument that the population would want to use it for many reasons, but essentially because it is "better." Then, if the rate of creation used were 1 unit/1 year, a currency with a 2 units /1 year rate of creation would be better and then 3... The same strategy could be used to eliminate each time-based currency with a new currency with a faster rate. We have to assume if it can be created, it will be.

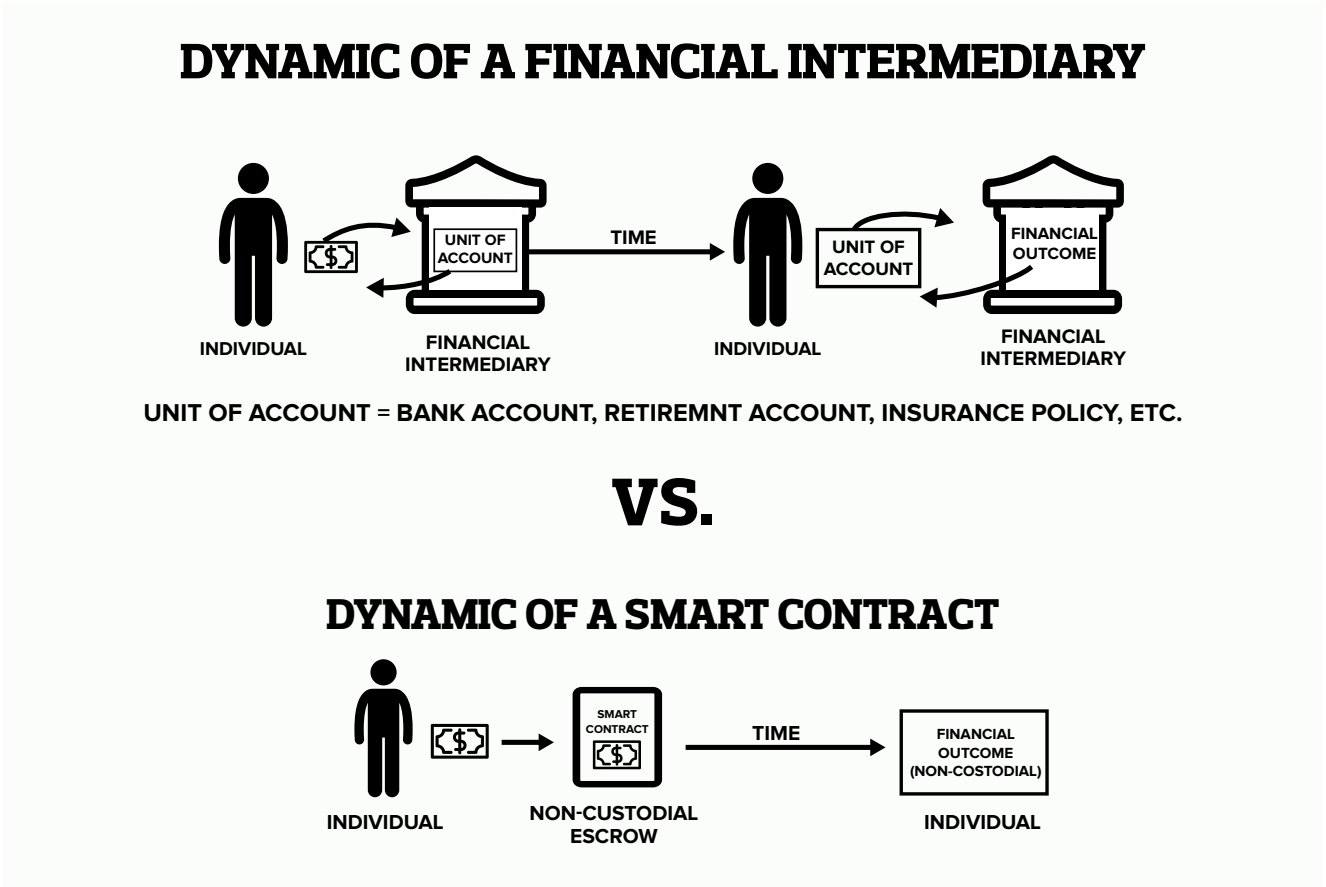
A 1 unit/1 year rate of creation has been used in this proposal to present and evaluate the concept, but before creating a time-based currency, this vulnerability needs to be addressed. I can not offer a definitive argument for a specific rate of creation, but believe the answer lies in one of three possibilities:

1. **A mathematical determination of an optimal rate best suited for the system and/or the greater good**
2. **An answer that lies in the currency's use. For example: 1.618(phi) is clearly best because....**
3. **An answer that lies in the currency's lack of use, meaning the collective consensus becomes, "we will not accept a currency with a rate of creation greater than 1 unit/1 year".**

The Power of Creation

Our disempowerment is the result of the same basic dynamic with all financial intermediaries. We exchange our money for a different unit of account, i.e. a bank account, retirement account, insurance policy, etc. The unit of account exchanged for comes with the promise and expectation of a future financial outcome, but is not the final use of our money.

Smart contracts function as a non-custodial escrow for a process or transaction using blockchain-based software coded to carry out, control and document events and actions according to predefined terms and rules.



Replacing financial intermediaries at scale will not be easy, but the formula for doing so is simple. Create and offer users greater outcomes with smart contracts that don't require sacrificing the possession or control of our money. By keeping this wealth in the personal economy and with the safer, more efficient use of it, we can continue achieving greater outcomes and wealth retention.

Currently, smart contracts have four different uses of value in achieving financial outcomes:

1. **Stablecoins** — Stability is crucial to creating financial outcomes with smart contracts. However, the stablecoins themselves do not increase in quantity or value. An additional event, function or growth mechanism is necessary in achieving outcomes with complexity greater than simply separating risk from return.
2. **Inflation/Deflation in Value** — When the value of an asset increases or decreases, but the quantity of the asset doesn't change, this is inflation or deflation. This type of "growth" is nearly impossible to stabilize or predict, making its use very challenging in creating definitive outcomes with. Over-collateralization is currently used to manage this instability.
3. **Payment** — This use of value most resembles traditional finance. Value is added to a contract manually by a user or through an encoded event or trigger carried out by the contract, often the payment of interest and/or liquidation of an asset.
4. **Creation** — The creation of digital currencies and assets are managed with smart contracts. The processes and the quantities of currency created are predictable. The inconsistency in rates of

creation, the unstable value of the currencies and assets created and the uneven distribution of creation limit the scope of outcomes this use of value can be utilized in achieving.

A unified time-based currency would offer both stability comparable to stablecoins with the same method of initial creation and provide a consistent growth mechanism using a uniform rate of expansion in achieving financial outcomes using smart contracts.

The creation of currency has always been a luxury of the ruling class; a right of the governing. It has never been an element for consideration in traditional finance, certainly not an element for use by the population. A fully inclusive process of creation that continuously distributes new currency uniformly throughout the system directly to users offers tremendous opportunity for financial empowerment.

Interest vs. Creation

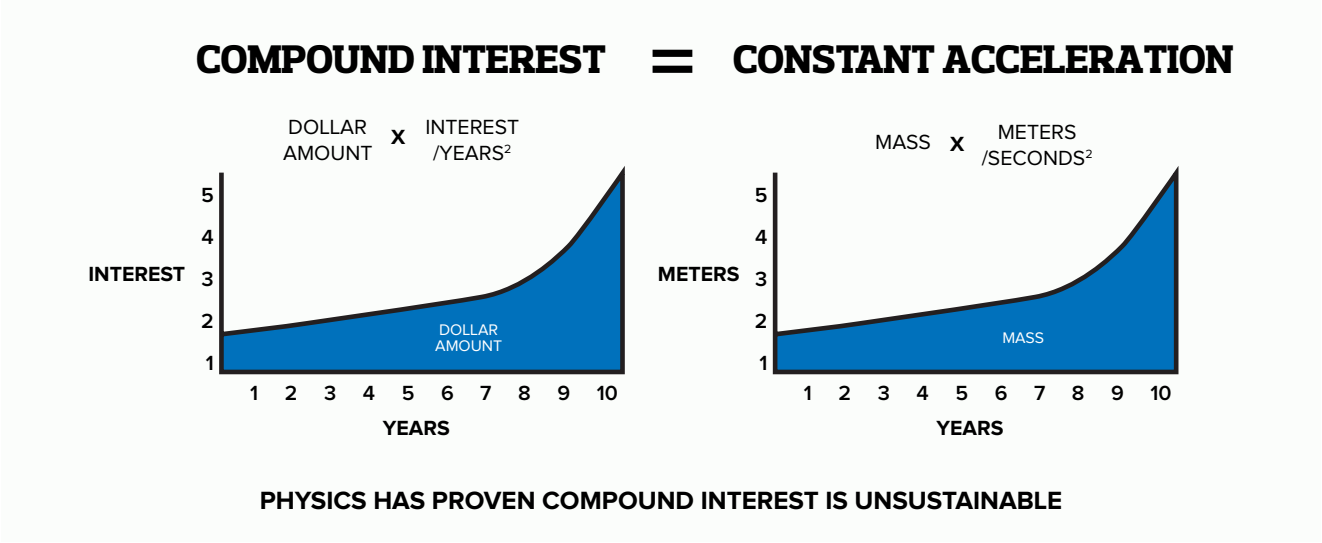
We provide the banking system our money out of habit with little incentive to continue doing so as two of the three primary functions the banking system provides are obsolete. These three functions are:

1. Safety/Security
2. Interest
3. Credit

Safety/Security — We don't give our money to the banking system to be lent. As depositors, we give our money to the banking system for safe keeping. In this day and age, this is a little ironic as the FDIC insures the possibility that the deposit we've given to the bank for safekeeping may no longer be there. Not because Billy the Kid and his gang of thieves have stolen it, but because the bank we have given it to for safe keeping has. Either way, this is an obsolete function of the banking system we have the technology to achieve otherwise.

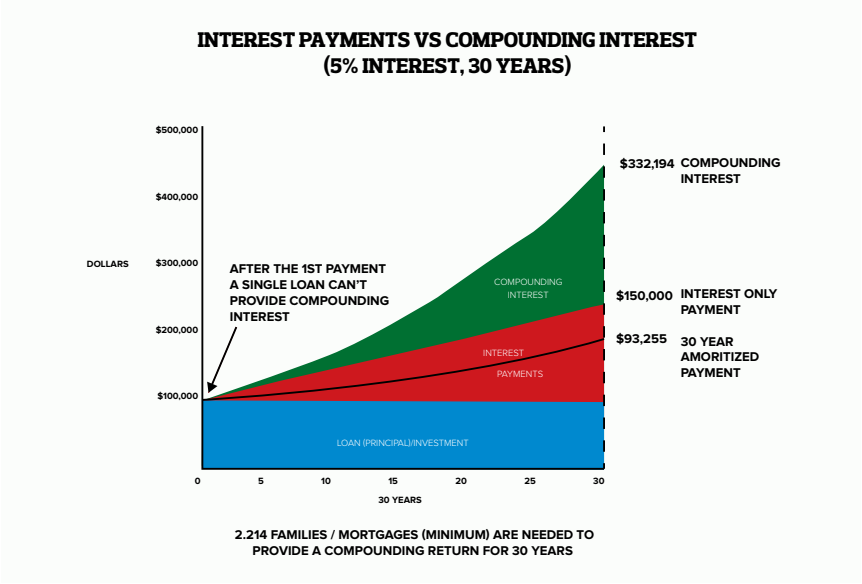
Interest — The average interest rate for a savings account in the U.S. is .06%.

The interest provided to depositors and investors by the banking system serves as a basic fundamental growth mechanism for our financial system. The agreement made with the banking system was that it could use our deposits in making capital available to the market in exchange for sharing the wealth with depositors in the form of interest. However, the majority of interest collected by the banking system is paid to the secondary market as a return on investment, used as payment on leveraged debt or retained as profit. Very little interest is paid to depositors.



The challenge we face with our financial system is that the interest the banking system provides to depositors and investors is compounding.

Compound interest is constant acceleration and is unsustainable; but the root problem with compound interest is in how it's created. Compound interest only occurs through an intermediary such as a bank.



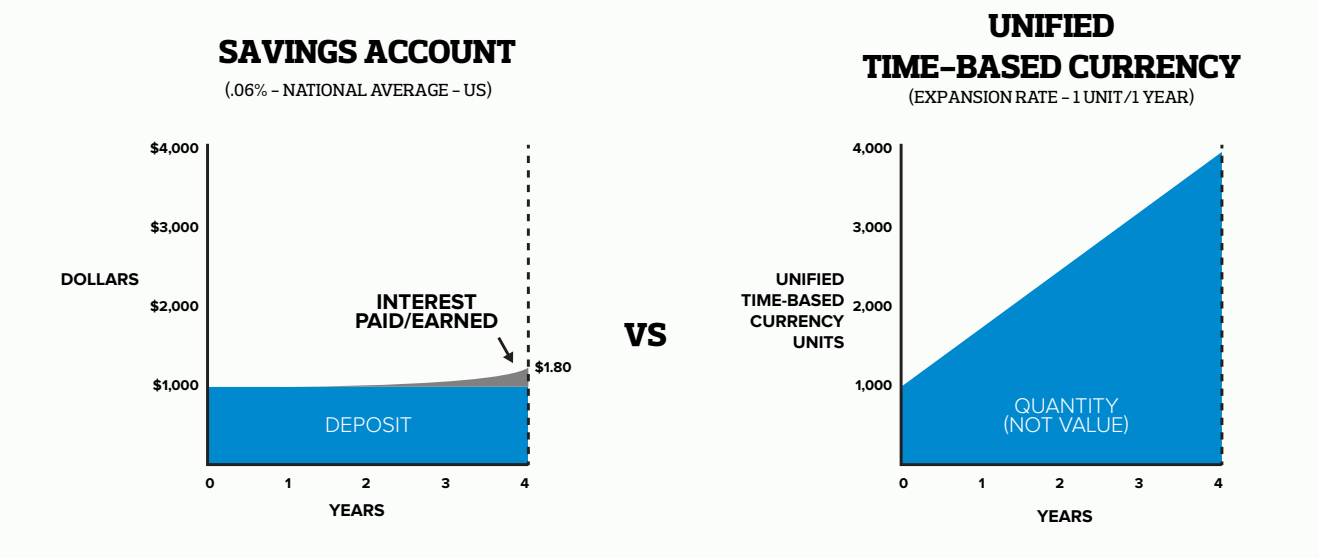
This is true because any loan that is not negatively amortized, meaning the interest is paid—usually monthly which prevents accrual and compounding—after the first payment, can no longer generate enough interest to provide a compounding return for an investment of an equivalent amount and interest. A second loan is needed.

Every dollar in the banking system requires the payment of compound interest. To provide this interest, the banking system needs a never-ending, perpetually increasing supply of debt. The consequence of compound interest is the unsustainable force it places on our financial system to continually generate and sustain more and more debt. This is the source of the systemic risk underlying our entire financial system. However, compound interest is not an unavoidable consequence of any single loan or financing in general. It is simply an age-old unsustainable practice of the banking system.

For interest to be earned, interest must be paid. This is the nature of interest. Creation is not interest. It does not require a source of payment, use of another asset, inflation in the value of anything or taxation to generate or sustain.

We have many alternatives to the banking system with which to grow our money, but few with the potential to scale to 7.8 billion people and $95.7 trillion in currency. A time-based currency has the potential to scale to this volume and it is a sustainable means of accomplishing this fundamental growth mechanism provided by the banking system with interest. It does not require the creation or payment of debt to be provided to the population.

To compare:



There is a *significant* difference in the increase in the quantity of currency in a savings account compared to the proposed increase in the quantity of time-based currency in a private digital wallet.

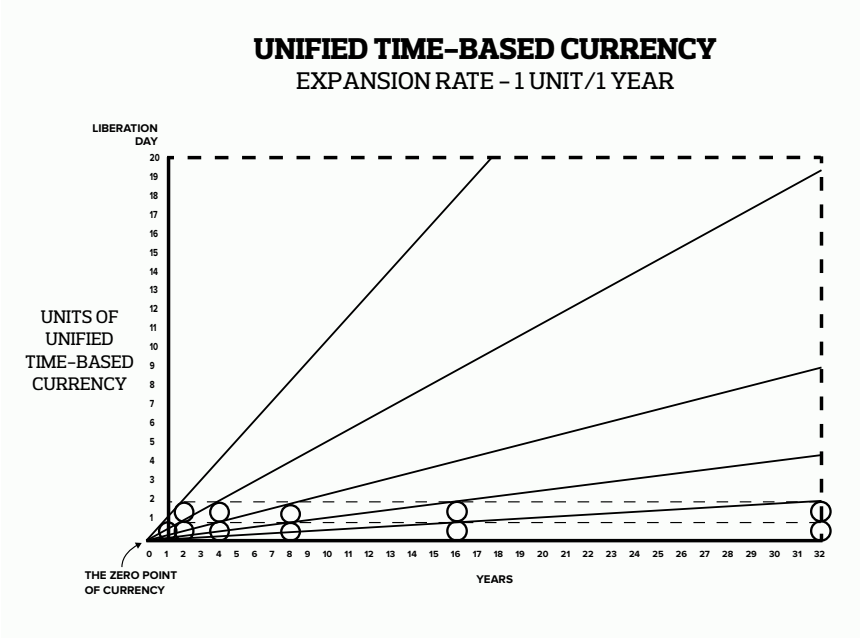
So, the proposal is to turn 1,000 units of currency into 4,000 units in 3 years? Yes!

Here are several things to consider:

1. 10,000 years from now this rate of creation will not result in overinflation of our supply of currency.
2. We have come to accept the belief that the average person can not have a lot of money, that we are supposed to be poor and that life should be hard. A belief we perpetuate through our agreement with the idea that currency should be created and distributed by the ruling class.
   Every solution for the redistribution of wealth and financial equality is a process requiring us to provide our money to an authority and reliance on that authority to decide how best to use and distribute our wealth.
   Public financial services may always have their place in an organized society and handouts are helpful, but they are not empowering or sustainable. They don't ensure the redistribution of wealth remains

that way either. Perhaps a simpler solution is the uniform distribution of new currency through the hands of the population first. We may need to adjust our expectation of poverty and financial hardship.

3. This increase would be tremendously beneficial to both the wealthy and the impoverished. In theory, our financial system will achieve a more natural balance from the equal financial empowerment of all. Imbalance occurs in every system. A free and open financial system should not specifically target the financial disempowerment of anyone.
   The intent of this proposal is not the disempowerment of global leaders, powerful entities or institutions; rather, the intent is to have a financial infrastructure that prevents the manipulation, control and grossly unfair advantage of anyone.
4. Our future financial system will not look or feel like the old one.
5. The 1,000 units of time-based currency will have been created with $1,000 or an equivalent quantity of global fiat currency which will have been eliminated from circulation.
6. In the future, the length of time it will take one unit of currency to become two will increase.
   This "slowing" in the rate of creation for each individual unit of currency gives the impression that money is losing value.
   However, the value of each unit of currency relative to all other units in the system will always be uniform. At no point in time will any one unit of currency or sum of units increase in quantity any faster or slower than any other unit and no unit will ever decrease in quantity.
   Constraining the total supply of currency in the system is the primary intent.



7. An initial "surge" of new currency could help with a transition from our old financial system to a new one.
8. A currency that is not created at an exponential rate will better retain its purchasing power.

Credit — The banking system is a financial intermediary that provides buyers and businesses the ability to borrow depositor's money, sellers a third party to transfer the servicing of financed transactions to and a source for investors to purchase these transactions without servicing them. The ability to access capital and credit is tremendously beneficial to our financial system and it would be very difficult to argue the system hasn't enabled amazing advancements.

We can't expect the banking system's enslavement to end simply because we stop using debt. Doing so would mean sacrificing all of its benefits and it is unnecessary. This function of the banking system must be replaced.

The more difficult it is to create and manage financed transactions, the more likely it is that the banking system retains its stranglehold on the monopoly it has on our money and on our credit.

Conversely, the easier the creation and management of credit becomes, the more risk we can remove from this process, the more stable our financial system will be and the sooner this function of the banking system will become obsolete as well.

A primary objective of decentralized finance and peer-to-peer lending platforms is to create an alternative to our banking system.

Defi platforms and protocols pool depositor's capital to make it available to borrowers. They manage the collateral, collection and distribution of payments and interest without the need for a centralized intermediary.

Peer-to-Peer lending platforms serve a similar function providing individuals the opportunity to include their capital directly in the lending process with a return of interest greater than banks are providing. This capital serves as an alternative source of funding for borrowers to access.

Both have experienced catastrophic failures and neither has been able to replace traditional lending. The powers that be argue that it is a lack of oversight and regulation that leads to failure. And that the expertise and protection of more powerful and experienced governments and institutions are necessary in ensuring the success of our banking and financial systems.

This isn't true. They fail for the same reason 465 U.S. Banks failed from 2008-2012 and globally governments continue bailing out banks and businesses that are deemed "too big to fail." They fail due to the inability to predict and manage risk associated with the unpredictable.

The source of risk with DeFi is management of digital collateral with unstable value like the global housing market collapse of 2008. The cause of failure with peer-to-peer lending platforms is the risk of collecting future payments like the Savings & Loan Crisis in the 1980s and 90s to name a few of the many banking failures we've experienced.

This problem absolutely needs solving. This risk underlies our entire financial system.

It would be ambitious to argue or expect that one solution, a time-based currency, could completely solve this problem; but, solving the problems that exist in our financial system can not be a burden of proof for the solution to the creation of currency. This is the thinking and practice that has to change. For better

or worse, civilizations have always tried to control their financial system, solve problems and achieve outcomes by creating money. It always leads to failure. We can not solve the problems of our financial system, its instability or the distribution of wealth, by creating more money.

That being said, I believe this is how a time-based currency would help.

The essence of credit and debt and the creation of these relationships and contracts are based on one fundamental principle: both parties—borrower and lender—must believe that, with the creation and completion of a transaction, each will experience an improvement either personally or financially compared to their respective positions prior to or without the transaction.

In the case of a financed transaction, the improved condition is achieved for the borrower at the beginning of the transaction with use of the money borrowed. For the lender, an improvement is achieved upon completion of the transaction by receiving a greater sum of money than that with which they began.

This financial improvement for the lender has always been achieved with the payment of interest. **However....**

A time-based currency can provide a gain, an improvement to the financial position of a lender without the payment of interest by the borrower and in many cases without any risk to either party.

Example:

Starting conditions/assumptions:

1. A borrower has possession of 1,000 units of time-based currency in a private digital wallet and 27.78 (1,000/36) units a month in available income/cash flow.
2. The borrower would like to make a purchase for 1,000 units of currency at the beginning of our timeline.
3. A lender has possession of 1,000 units of time-based currency in a private digital wallet they would like to lend/invest.
4. The time-based currency being used by and accessible to both borrower and lender has a constant expansion rate of 1 unit per 1 year.
5. The start date of the loan and start date of the timeline for the time-based currency are both "Liberation Day."

NOTE:
Numbers vary for loans depending on their start date, loan amount and structure, but the basic outcome illustrated here is uniform regardless of when they occur on the currency timeline.

Scenario 1: No Loan

The borrower uses their 1,000 units of saved currency to make their purchase and saves the 27.78 units a month. The lender retains their 1,000 units of currency

No Loan - Purchase w/Savings				
		Buyer/Borrower		Lender
Loan Month	Months from Zero Point	Cashflow/Payments	Savings - Private Wallet	Investment Capital
0	12		1,000.00	1,000.00
1	13	27.78 →	→ 27.78	1,083.33
2	14	27.78 →	→ 57.69	1,166.67
3	15	27.78 →	→ 89.59	1,250.00
4	16	27.78 →	→ 123.34	1,333.33
5	17	27.78 →	→ 158.83	1,416.67
6	18	27.78 →	→ 195.95	1,500.00
7	19	27.78 →	→ 234.61	1,583.33
8	20	27.78 →	→ 274.74	1,666.67
9	21	27.78 →	→ 316.25	1,750.00
10	22	27.78 →	→ 359.09	1,833.33
11	23	27.78 →	→ 403.19	1,916.67
12	24	27.78 →	→ 448.50	2,000.00
13	25	27.78 →	→ 494.96	2,083.33
14	26	27.78 →	→ 542.54	2,166.67
15	27	27.78 →	→ 591.18	2,250.00
16	28	27.78 →	→ 640.86	2,333.33
17	29	27.78 →	→ 691.52	2,416.67
18	30	27.78 →	→ 743.15	2,500.00
19	31	27.78 →	→ 795.70	2,583.33
20	32	27.78 →	→ 849.14	2,666.67
21	33	27.78 →	→ 903.46	2,750.00
22	34	27.78 →	→ 958.61	2,833.33
23	35	27.78 →	→ 1,014.58	2,916.67
24	36	27.78 →	→ 1,071.35	3,000.00
25	37	27.78 →	→ 1,128.89	3,083.33
26	38	27.78 →	→ 1,187.17	3,166.67
27	39	27.78 →	→ 1,246.19	3,250.00
28	40	27.78 →	→ 1,305.92	3,333.33
29	41	27.78 →	→ 1,366.35	3,416.67
30	42	27.78 →	→ 1,427.45	3,500.00
31	43	27.78 →	→ 1,489.22	3,583.33
32	44	27.78 →	→ 1,551.63	3,666.67
33	45	27.78 →	→ 1,614.67	3,750.00
34	46	27.78 →	→ 1,678.33	3,833.33
35	47	27.78 →	→ 1,742.59	3,916.67
36	48	27.78 →	→ 1,807.45	4,000.00

This scenario establishes the financial position of both borrower and lender using a time-based currency without the loan. This is necessary in determining an improvement with the loan.

Scenario 2: Loan w/36 month collateral release, No Payment

To start, the borrower deposits their 1,000 units of currency onto a smart contract as collateral and receives a loan for 1,000 units of currency from the lender, used to make their purchase. In this scenario, no payments are made simulating an immediate default on the loan.

Loan - No Payment (Default Timeline)												
		Buyer/Borrower		Smart Contract					Lender		
Loan	Months from	Cashflow/	Savings -	Principal-Unlocked		Collateral-Locked		Contract	Total	Released	Opportunity
Month	Zero Point	Payments	Private Wallet	Balance	Expansion	Balance	Expansion	Release	Released	Expansion	Cost-No Loan
0	12		1,000.00			1,000.00					1000
1	13	27.78 →	27.78	0.00	0.00	972.22	83.33	111.11 →	111.11	111.11	1,083.33
2	14	27.78 →	57.69	0.00	0.00	944.44	74.79	102.56 →	213.68	222.22	1,166.67
3	15	27.78 →	89.59	0.00	0.00	916.67	67.46	95.24 →	308.91	333.33	1,250.00
4	16	27.78 →	123.34	0.00	0.00	888.89	61.11	88.89 →	397.80	444.44	1,333.33
5	17	27.78 →	158.83	0.00	0.00	861.11	55.56	83.33 →	481.14	555.56	1,416.67
6	18	27.78 →	195.95	0.00	0.00	833.33	50.65	78.43 →	559.57	666.67	1,500.00
7	19	27.78 →	234.61	0.00	0.00	805.56	46.30	74.07 →	633.64	777.78	1,583.33
8	20	27.78 →	274.74	0.00	0.00	777.78	42.40	70.18 →	703.82	888.89	1,666.67
9	21	27.78 →	316.25	0.00	0.00	750.00	38.89	66.67 →	770.48	1,000.00	1,750.00
10	22	27.78 →	359.09	0.00	0.00	722.22	35.71	63.49 →	833.98	1,111.11	1,833.33
11	23	27.78 →	403.19	0.00	0.00	694.44	32.83	60.61 →	894.58	1,222.22	1,916.67
12	24	27.78 →	448.50	0.00	0.00	666.67	30.19	57.97 →	952.55	1,333.33	2,000.00
13	25	27.78 →	494.96	0.00	0.00	638.89	27.78	55.56 →	1,008.11	1,444.44	2,083.33
14	26	27.78 →	542.54	0.00	0.00	611.11	25.56	53.33 →	1,061.44	1,555.56	2,166.67
15	27	27.78 →	591.18	0.00	0.00	583.33	23.50	51.28 →	1,112.72	1,666.67	2,250.00
16	28	27.78 →	640.86	0.00	0.00	555.56	21.60	49.38 →	1,162.11	1,777.78	2,333.33
17	29	27.78 →	691.52	0.00	0.00	527.78	19.84	47.62 →	1,209.72	1,888.89	2,416.67
18	30	27.78 →	743.15	0.00	0.00	500.00	18.20	45.98 →	1,255.70	2,000.00	2,500.00
19	31	27.78 →	795.70	0.00	0.00	472.22	16.67	44.44 →	1,300.15	2,111.11	2,583.33
20	32	27.78 →	849.14	0.00	0.00	444.44	15.23	43.01 →	1,343.16	2,222.22	2,666.67
21	33	27.78 →	903.46	0.00	0.00	416.67	13.89	41.67 →	1,384.82	2,333.33	2,750.00
22	34	27.78 →	958.61	0.00	0.00	388.89	12.63	40.40 →	1,425.23	2,444.44	2,833.33
23	35	27.78 →	1,014.58	0.00	0.00	361.11	11.44	39.22 →	1,464.44	2,555.56	2,916.67
24	36	27.78 →	1,071.35	0.00	0.00	333.33	10.32	38.10 →	1,502.54	2,666.67	3,000.00
25	37	27.78 →	1,128.89	0.00	0.00	305.56	9.26	37.04 →	1,539.58	2,777.78	3,083.33
26	38	27.78 →	1,187.17	0.00	0.00	277.78	8.26	36.04 →	1,575.61	2,888.89	3,166.67
27	39	27.78 →	1,246.19	0.00	0.00	250.00	7.31	35.09 →	1,610.70	3,000.00	3,250.00
28	40	27.78 →	1,305.92	0.00	0.00	222.22	6.41	34.19 →	1,644.89	3,111.11	3,333.33
29	41	27.78 →	1,366.35	0.00	0.00	194.44	5.56	33.33 →	1,678.22	3,222.22	3,416.67
30	42	27.78 →	1,427.45	0.00	0.00	166.67	4.74	32.52 →	1,710.74	3,333.33	3,500.00
31	43	27.78 →	1,489.22	0.00	0.00	138.89	3.97	31.75 →	1,742.49	3,444.44	3,583.33
32	44	27.78 →	1,551.63	0.00	0.00	111.11	3.23	31.01 →	1,773.50	3,555.56	3,666.67
33	45	27.78 →	1,614.67	0.00	0.00	83.33	2.53	30.30 →	1,803.80	3,666.67	3,750.00
34	46	27.78 →	1,678.33	0.00	0.00	55.56	1.85	29.63 →	1,833.43	3,777.78	3,833.33
35	47	27.78 →	1,742.59	0.00	0.00	27.78	1.21	28.99 →	1,862.41	3,888.89	3,916.67
36	48	27.78 →	1,807.45	0.00	0.00	0.00	0.59	28.37 →	1,890.78	4,000.00	4,000.00

If no payments are made, the lender is not at risk of losing any principal, the quantity lent, or any opportunity cost, the increase in quantity they would have realized without the loan.

Loan - No Payment - 950 Unit Loan/1,000 Collateral												
		Buyer/Borrower		Smart Contract					Lender		
Loan	Months from	Cashflow/	Savings -	Principal-Unlocked		Collateral-Locked		Contract	Total	Released	Opportunity
Month	Zero Point	Payments	Private Wallet	Balance	Expansion	Balance	Expansion	Release	Released	Expansion	Cost-No Loan
0	12		1,000.00			1,000.00					950
1	13	27.78	27.78	0.00	0.00	972.22	83.33	111.11	111.11	111.11	1,029.17
2	14	27.78	57.69	0.00	0.00	944.44	74.79	102.56	213.68	222.22	1,108.33
3	15	27.78	89.59	0.00	0.00	916.67	67.46	95.24	308.91	333.33	1,187.50
4	16	27.78	123.34	0.00	0.00	888.89	61.11	88.89	397.80	444.44	1,266.67
5	17	27.78	158.83	0.00	0.00	861.11	55.56	83.33	481.14	555.56	1,345.83
6	18	27.78	195.95	0.00	0.00	833.33	50.65	78.43	559.57	666.67	1,425.00
7	19	27.78	234.61	0.00	0.00	805.56	46.30	74.07	633.64	777.78	1,504.17
8	20	27.78	274.74	0.00	0.00	777.78	42.40	70.18	703.82	888.89	1,583.33
9	21	27.78	316.25	0.00	0.00	750.00	38.89	66.67	770.48	1,000.00	1,662.50
10	22	27.78	359.09	0.00	0.00	722.22	35.71	63.49	833.98	1,111.11	1,741.67
11	23	27.78	403.19	0.00	0.00	694.44	32.83	60.61	894.58	1,222.22	1,820.83
12	24	27.78	448.50	0.00	0.00	666.67	30.19	57.97	952.55	1,333.33	1,900.00
13	25	27.78	494.96	0.00	0.00	638.89	27.78	55.56	1,008.11	1,444.44	1,979.17
14	26	27.78	542.54	0.00	0.00	611.11	25.56	53.33	1,061.44	1,555.56	2,058.33
15	27	27.78	591.18	0.00	0.00	583.33	23.50	51.28	1,112.72	1,666.67	2,137.50
16	28	27.78	640.86	0.00	0.00	555.56	21.60	49.38	1,162.11	1,777.78	2,216.67
17	29	27.78	691.52	0.00	0.00	527.78	19.84	47.62	1,209.72	1,888.89	2,295.83
18	30	27.78	743.15	0.00	0.00	500.00	18.20	45.98	1,255.70	2,000.00	2,375.00
19	31	27.78	795.70	0.00	0.00	472.22	16.67	44.44	1,300.15	2,111.11	2,454.17
20	32	27.78	849.14	0.00	0.00	444.44	15.23	43.01	1,343.16	2,222.22	2,533.33
21	33	27.78	903.46	0.00	0.00	416.67	13.89	41.67	1,384.82	2,333.33	2,612.50
22	34	27.78	958.61	0.00	0.00	388.89	12.63	40.40	1,425.23	2,444.44	2,691.67
23	35	27.78	1,014.58	0.00	0.00	361.11	11.44	39.22	1,464.44	2,555.56	2,770.83
24	36	27.78	1,071.35	0.00	0.00	333.33	10.32	38.10	1,502.54	2,666.67	2,850.00
25	37	27.78	1,128.89	0.00	0.00	305.56	9.26	37.04	1,539.58	2,777.78	2,929.17
26	38	27.78	1,187.17	0.00	0.00	277.78	8.26	36.04	1,575.61	2,888.89	3,008.33
27	39	27.78	1,246.19	0.00	0.00	250.00	7.31	35.09	1,610.70	3,000.00	3,087.50
28	40	27.78	1,305.92	0.00	0.00	222.22	6.41	34.19	1,644.89	3,111.11	3,166.67
29	41	27.78	1,366.35	0.00	0.00	194.44	5.56	33.33	1,678.22	3,222.22	3,245.83
30	42	27.78	1,427.45	0.00	0.00	166.67	4.74	32.52	1,710.74	3,333.33	3,325.00
31	43	27.78	1,489.22	0.00	0.00	138.89	3.97	31.75	1,742.49	3,444.44	3,404.17
32	44	27.78	1,551.63	0.00	0.00	111.11	3.23	31.01	1,773.50	3,555.56	3,483.33
33	45	27.78	1,614.67	0.00	0.00	83.33	2.53	30.30	1,803.80	3,666.67	3,562.50
34	46	27.78	1,678.33	0.00	0.00	55.56	1.85	29.63	1,833.43	3,777.78	3,641.67
35	47	27.78	1,742.59	0.00	0.00	27.78	1.21	28.99	1,862.41	3,888.89	3,720.83
36	48	27.78	1,807.45	0.00	0.00	0.00	0.59	28.37	1,890.78	4,000.00	3,800.00

An improvement to the financial position for the lender can be ensured in one of two ways: a lesser loan amount, 950 units of currency with 1,000 units of collateral—as illustrated above— with the 5% difference used to generate a fee provided to the lender throughout the loan or the same 5% used to provide the lender a gain in the event of default by the borrower on an agreed upon payment schedule.

Scenario 3: Loan w/36 month collateral release & Principal Only Payment of 27.78 units of currency a month (1,000/36 months), No Interest

Loan - Principal Expansion Payment												
		Buyer/Borrower		Smart Contract					Lender		
Loan	Months from	Cashflow/	Savings -	Principal-Unlocked		Collateral-Locked		Contract	Total	Released	Opportunity
Month	Zero Point	Payments	Private Wallet	Balance	Expansion	Balance	Expansion	Release	Released	Expansion	Cost-No Loan
0	12		1,000.00			1,000.00					1000
1	13	27.78	0.00	27.78	0.00	972.22	83.33	111.11	111.11	111.11	1,083.33
2	14	27.78	0.00	55.56	2.14	944.44	74.79	104.70	215.81	224.36	1,166.67
3	15	27.78	0.00	83.33	3.97	916.67	67.46	99.21	315.02	339.59	1,250.00
4	16	27.78	0.00	111.11	5.56	888.89	61.11	94.44	409.46	456.67	1,333.33
5	17	27.78	0.00	138.89	6.94	861.11	55.56	90.28	499.74	575.49	1,416.67
6	18	27.78	0.00	166.67	8.17	833.33	50.65	86.60	586.34	695.95	1,500.00
7	19	27.78	0.00	194.44	9.26	805.56	46.30	83.33	669.68	817.95	1,583.33
8	20	27.78	0.00	222.22	10.23	777.78	42.40	80.41	750.08	941.40	1,666.67
9	21	27.78	0.00	250.00	11.11	750.00	38.89	77.78	827.86	1,066.25	1,750.00
10	22	27.78	0.00	277.78	11.90	722.22	35.71	75.40	903.26	1,192.42	1,833.33
11	23	27.78	0.00	305.56	12.63	694.44	32.83	73.23	976.49	1,319.86	1,916.67
12	24	27.78	0.00	333.33	13.29	666.67	30.19	71.26	1,047.75	1,448.50	2,000.00
13	25	27.78	0.00	361.11	13.89	638.89	27.78	69.44	1,117.19	1,578.30	2,083.33
14	26	27.78	0.00	388.89	14.44	611.11	25.56	67.78	1,184.97	1,709.21	2,166.67
15	27	27.78	0.00	416.67	14.96	583.33	23.50	66.24	1,251.21	1,841.18	2,250.00
16	28	27.78	0.00	444.44	15.43	555.56	21.60	64.81	1,316.02	1,974.19	2,333.33
17	29	27.78	0.00	472.22	15.87	527.78	19.84	63.49	1,379.52	2,108.19	2,416.67
18	30	27.78	0.00	500.00	16.28	500.00	18.20	62.26	1,441.78	2,243.15	2,500.00
19	31	27.78	0.00	527.78	16.67	472.22	16.67	61.11	1,502.89	2,379.03	2,583.33
20	32	27.78	0.00	555.56	17.03	444.44	15.23	60.04	1,562.92	2,515.81	2,666.67
21	33	27.78	0.00	583.33	17.36	416.67	13.89	59.03	1,621.95	2,653.46	2,750.00
22	34	27.78	0.00	611.11	17.68	388.89	12.63	58.08	1,680.03	2,791.94	2,833.33
23	35	27.78	0.00	638.89	17.97	361.11	11.44	57.19	1,737.22	2,931.25	2,916.67
24	36	27.78	0.00	666.67	18.25	333.33	10.32	56.35	1,793.57	3,071.35	3,000.00
25	37	27.78	0.00	694.44	18.52	305.56	9.26	55.56	1,849.13	3,212.22	3,083.33
26	38	27.78	0.00	722.22	18.77	277.78	8.26	54.80	1,903.93	3,353.84	3,166.67
27	39	27.78	0.00	750.00	19.01	250.00	7.31	54.09	1,958.02	3,496.19	3,250.00
28	40	27.78	0.00	777.78	19.23	222.22	6.41	53.42	2,011.44	3,639.26	3,333.33
29	41	27.78	0.00	805.56	19.44	194.44	5.56	52.78	2,064.22	3,783.02	3,416.67
30	42	27.78	0.00	833.33	19.65	166.67	4.74	52.17	2,116.39	3,927.45	3,500.00
31	43	27.78	0.00	861.11	19.84	138.89	3.97	51.59	2,167.98	4,072.55	3,583.33
32	44	27.78	0.00	888.89	20.03	111.11	3.23	51.03	2,219.01	4,218.30	3,666.67
33	45	27.78	0.00	916.67	20.20	83.33	2.53	50.51	2,269.52	4,364.67	3,750.00
34	46	27.78	0.00	944.44	20.37	55.56	1.85	50.00	2,319.52	4,511.66	3,833.33
35	47	27.78	0.00	972.22	20.53	27.78	1.21	49.52	2,369.03	4,659.26	3,916.67
36	48	27.78	0.00	1,000.00	20.69	0.00	0.59	49.05	2,418.09	4,807.45	4,000.00

In this scenario payments are added to the contract as new principal, which also generates the creation of new currency. If the smart contract is created so the new currency created from this principal is provided to the lender, an improvement to the financial position of the lender is achieved in month 23, 13 months earlier than the default timeline or the timeline without creation of the loan. **This is achieved with the borrower only providing 1,000 units of currency in payment, the original amount of the loan.**

It is possible to achieve an improvement to the financial position of the lender without the payment of interest because the principal payments, with time, are increasing in quantity. This results in a greater total quantity of currency to be used in meeting this condition. This can only be achieved with consistency and predictability if the increase to currency is uniform, consistent and predictable.

The borrower has provided the new currency generated from the principal added to the contract, to the lender, which could be perceived as comparable to interest payments. The very important difference with a conventional loan is the interest portion of payments a borrower must work or personally generate in order to pay. In this scenario, the borrower does not need to personally generate more than 1,000 units of currency. The time-based currency from work already completed provides the additional currency. The borrower is not working to pay for the gain realized by the lender; it is created.

The most exciting, empowering aspect of this scenario occurs in month 36.

Loan - Principal Expansion Payment w/Principal & Collateral Return

		Buyer/Borrower			Smart Contract					Lender		
Loan	Months from	Cashflow/	Savings -	Opportunity	Principal-Unlocked		Collateral-Locked		Contract	Total	Released	Opportunity
Month	Zero Point	Payments	Private Wallet	Cost-No Loan	Balance	Expansion	Balance	Expansion	Release	Released	Expansion	Cost-No Loan
0	12		1,000.00				1,000.00					1000
1	13	27.78	0.00	27.78	27.78	0.00	972.22	83.33	111.11	111.11	111.11	1,083.33
2	14	27.78	0.00	57.69	55.56	2.14	944.44	74.79	104.70	215.81	224.36	1,166.67
3	15	27.78	0.00	89.59	83.33	3.97	916.67	67.46	99.21	315.02	339.59	1,250.00
4	16	27.78	0.00	123.34	111.11	5.56	888.89	61.11	94.44	409.46	456.67	1,333.33
5	17	27.78	0.00	158.83	138.89	6.94	861.11	55.56	90.28	499.74	575.49	1,416.67
6	18	27.78	0.00	195.95	166.67	8.17	833.33	50.65	86.60	586.34	695.95	1,500.00
7	19	27.78	0.00	234.61	194.44	9.26	805.56	46.30	83.33	669.68	817.95	1,583.33
8	20	27.78	0.00	274.74	222.22	10.23	777.78	42.40	80.41	750.08	941.40	1,666.67
9	21	27.78	0.00	316.25	250.00	11.11	750.00	38.89	77.78	827.86	1,066.25	1,750.00
10	22	27.78	0.00	359.09	277.78	11.90	722.22	35.71	75.40	903.26	1,192.42	1,833.33
11	23	27.78	0.00	403.19	305.56	12.63	694.44	32.83	73.23	976.49	1,319.86	1,916.67
12	24	27.78	0.00	448.50	333.33	13.29	666.67	30.19	71.26	1,047.75	1,448.50	2,000.00
13	25	27.78	0.00	494.96	361.11	13.89	638.89	27.78	69.44	1,117.19	1,578.30	2,083.33
14	26	27.78	0.00	542.54	388.89	14.44	611.11	25.56	67.78	1,184.97	1,709.21	2,166.67
15	27	27.78	0.00	591.18	416.67	14.96	583.33	23.50	66.24	1,251.21	1,841.18	2,250.00
16	28	27.78	0.00	640.86	444.44	15.43	555.56	21.60	64.81	1,316.02	1,974.19	2,333.33
17	29	27.78	0.00	691.52	472.22	15.87	527.78	19.84	63.49	1,379.52	2,108.19	2,416.67
18	30	27.78	0.00	743.15	500.00	16.28	500.00	18.20	62.26	1,441.78	2,243.15	2,500.00
19	31	27.78	0.00	795.70	527.78	16.67	472.22	16.67	61.11	1,502.89	2,379.03	2,583.33
20	32	27.78	0.00	849.14	555.56	17.03	444.44	15.23	60.04	1,562.92	2,515.81	2,666.67
21	33	27.78	0.00	903.46	583.33	17.36	416.67	13.89	59.03	1,621.95	2,653.46	2,750.00
22	34	27.78	0.00	958.61	611.11	17.68	388.89	12.63	58.08	1,680.03	2,791.94	2,833.33
23	35	27.78	0.00	1,014.58	638.89	17.97	361.11	11.44	57.19	1,737.22	2,931.25	2,916.67
24	36	27.78	1,056.35	1,071.35	0.00	0.00	0.00	0.00	0.00	1,737.22	3,015.00	3,000.00
25	37	27.78	1,113.47	1,128.89	0.00	0.00	0.00	0.00	0.00	1,737.22	3,098.75	3,083.33
26	38	27.78	1,171.34	1,187.17	0.00	0.00	0.00	0.00	0.00	1,737.22	3,182.50	3,166.67
27	39	27.78	1,229.94	1,246.19	0.00	0.00	0.00	0.00	0.00	1,737.22	3,266.25	3,250.00
28	40	27.78	1,289.26	1,305.92	0.00	0.00	0.00	0.00	0.00	1,737.22	3,350.00	3,333.33
29	41	27.78	1,349.27	1,366.35	0.00	0.00	0.00	0.00	0.00	1,737.22	3,433.75	3,416.67
30	42	27.78	1,409.95	1,427.45	0.00	0.00	0.00	0.00	0.00	1,737.22	3,517.50	3,500.00
31	43	27.78	1,471.30	1,489.22	0.00	0.00	0.00	0.00	0.00	1,737.22	3,601.25	3,583.33
32	44	27.78	1,533.30	1,551.63	0.00	0.00	0.00	0.00	0.00	1,737.22	3,685.00	3,666.67
33	45	27.78	1,595.92	1,614.67	0.00	0.00	0.00	0.00	0.00	1,737.22	3,768.75	3,750.00
34	46	27.78	1,659.17	1,678.33	0.00	0.00	0.00	0.00	0.00	1,737.22	3,852.50	3,833.33
35	47	27.78	1,723.01	1,742.59	0.00	0.00	0.00	0.00	0.00	1,737.22	3,936.25	3,916.67
36	48	27.78	1,787.45	1,807.45	0.00	0.00	0.00	0.00	0.00	1,737.22	4,020.00	4,000.00

When an improvement to the financial position of the lender is achieved in month 23, the 638.89 units of principal and 361.11 units of collateral remaining on the contract would be released back to the borrower. Assuming the borrower continues to contribute the same 27.78 toward this balance, in month 36—the original end date of the contract—**they will be in the same financial position they would have been had they not gotten the loan**. This can not be achieved with traditional financing and is not currently being achieved in DeFi.

For all the wealth we give to the banking system and Wall St., the element of the personal economy responsible for more financial disempowerment than any other, is the *Amortization Schedule.*

Debt is a powerful tool in creating leverage and wealth. The amortization schedule makes debt the perfect deception ensuring that it is an equally powerful weapon in sustaining poverty.

Compound interest only occurs in an upward direction, when interest has something to compound with—more interest. All debt that is not negatively amortized (all debt in the personal economy) is simple interest. Paying debt down or off at any rate does not result in compounding. The best that can be accomplished while repaying debt is acceleration of the amortization schedule. It is more beneficial, mathematically, to carry debt by only paying interest, maintain the leverage and invest the principal portion of payments in a compounding investment. The accounting principle supporting this is opportunity cost. Leverage is how wealth is built.

To an individual living paycheck to paycheck, subject to a credit system preventing access to "good debt" and little access to or understanding of investments, this information is completely useless.

Cash flow is always the primary focus in a sparse personal economy. To improve cashflow, any form of leverage (debt) is eliminated. This feels like an improvement to the personal economy because of the improvement to cash flow, but it eliminates the most powerful tool for creating wealth. The amortization schedule ensures the personal economy is a nearly inescapable poverty trap by creating inefficiency. It's impact on cash flow prevents most people from making any decision other than working to eliminate debt.

The loan amount in our scenario is only 1,000 units of currency and to begin the transaction, the borrower has 1,000 units in savings, which doesn't seem useful or empowering to a population with "no money".

We are where we are and to a person with only 1,000 units of currency, their money is just as important to them as it is to a person with a million units of currency. The math is the same for 1,000 units as it is for a million units.

What's important isn't the loan amount, rather what this loan structure has achieved and what's possible with it.

What has been achieved are four things:

1. This loan has no risk of default. It is structured with a default timeline, but the lender has no risk of losing their capital or the opportunity cost of time.
2. This loan technically does not require a payment, which means no definitive impact on monthly cash flow for the borrower.
3. This loan can be completely managed with a smart contract including creation, payment, "default", timed-release of collateral and payoff without servicing.

4. This loan does not require an application or credit check. Decentralized finance has achieved this and this is a powerful step toward financial equality. The credit scoring system is a necessary aspect of our current financial system. It is also a primary cause of inequality and enables the control of our system of credit.

This type of debt contract would enable everyone to leverage every unit of currency that passed through their personal economy throughout their lifetime. Meaning every unit of currency ever earned, before it was spent, could first be used as collateral for a loan of an equivalent amount that required no application, no monthly payment, couldn't be defaulted on and the borrowed unit of currency could be spent rather than the earned unit.

This is what the banking system is doing with our money now, leveraging every unit of currency that passes through the personal economy multiple times. To keep wealth in the personal economy, we must leverage the same source of capital financial intermediaries are, your money.

This is a clear violation of conventional wisdom: *save your money, pay off debt*. The point of this crazy suggestion is not creating debt for the sake of debt. It is the ability for everyone to easily create personal leverage without impacting monthly cash flow in order to create efficiency in their personal economy.

And, to illustrate the answer to the question: *Where do we get the money needed for people to lead more financially abundant lives*? The answer is you!

In the future, the wealth we seek will come from inside the personal economy by keeping, leveraging and with the efficient use of the wealth moving through it. Consider just how much debt a person will borrow and repay in their lifetime and how much of the monthly budget is used in the repayment of it.

All of that debt is the bulk of the personal economy and all of it is a financial asset. These financial assets are the bulk of our economy, but the personal economy doesn't contain any cash flowing financial assets, the reciprocal of that debt. Why? Wealth is extracted from the personal economy with debt, but the average person doesn't have access to the other side of it.

Instead, we attempt to build wealth outside the personal economy with imaginary assets and artificial inflation.

There's no growth on Wall St. Companies use stock exchanges as a source of funding. They issue stocks in exchange for money. When the value of a stock inflates, meaning the unit of account doesn't change, but the value increases, it isn't because that company is sending quarterly profits to Wall St. Stock prices change as a result of countless variables, none of which is actual growth. This inflation in value is completely artificial.

The great wealth realized on Wall St. does not come from the companies for which stocks are named.

It comes from the hard working people sending their wealth to Wall St. every week. The practice of giving our life savings to the financial industry for 50+ years at a time with little to no consequence for performance or lack of performance is nonsensical at best. This wealth can serve a far greater purpose and provide a far greater benefit to individuals with its use in creating efficiency in the personal economy.

The conventional definition of wealth is an accumulation of scarce resources and valuable assets convertible to money. By this definition, making 7.8 billion people wealthy is quite challenging, particularly with stable assets and by sustainable means.

"Rich is measured in money and wealth is measured in time...If you stopped physically working today, how long could you survive at your current standard of living with the money and assets you have now?" Robert Kiyosaki

By this understanding of wealth, it is simply a state of the personal economy in which a minimum standard of living can be maintained from a balance of incoming cash flow, cash flow from stored value and outgoing expenses. The possibility of achieving wealth for the average person is much easier to envision if we are considering it as a task of creating this state of the personal economy rather than wealth from the accumulation or inflation of a sum of valuable assets.

Three specific ways a time-based currency and a timed-collateral release smart debt contract could be used in creating this type of wealth and efficiency in the personal economy:

1. **Capital Empowerment** — The reciprocal of debt, money borrowed, is money lent. Without risk, the lender is able to achieve a financial improvement by lending their capital. The same would be true for the principal payments in our example and the unused capital of borrowers/individuals. Borrowers may be better served lending their capital rather than repaying it and with access to a simple, safe means of lending cash or capital, borrowers would be empowered to become lenders.
2. **The Ability to "Save-through" Debt** — Whether the borrower in our scenario chooses to make their purchase with their savings or accept the loan and make no payment, equal monthly payments, or pay the loan off early with full principal payments, their decision makes no difference in their financial position after 36 months. They have lost no opportunity cost as it relates to time-based currency regardless of their use of debt.
   This is a particularly important quality of a timed-collateral release smart debt contract and time-based currency. It enables individuals to leverage the cash flow moving through their personal economy without experiencing the lost opportunity cost with amortized debt.
3. **Cash flow** — Cash itself would be a cash flowing asset.

NOTE:
A form of Universal Basic Income is not the primary intent of a unified time-based currency. For many individuals it could and absolutely would serve this purpose. The risk of specifically targeting this solution is needing an exponential rate of creation to achieve it, over-inflation of the supply and devaluation of the currency. It is my belief a unified time-based currency would serve as a catalyst leading to greater and more empowering solutions for meeting the basic needs of people rather than being the primary means of achieving it.

Achieving a state of wealth and balancing the cash flow equation within the personal economy is a much easier task without the amortization schedule.

The Perfect Problem

A financial system with uniform access to and operating using a stable currency continually increasing in quantity has the potential to impact all financial transactions that are not immediate settlements, meaning a good or service and payments are not simultaneously exchanged.

Any transaction that included an element of time would have to consider the increase in the quantity of currency.

Every lending scenario and financed transaction would have to answer the question, “Is the opportunity cost of time improved upon?” Meaning, if I make or invest in this loan vs. keeping my time-based currency, will I be better off financially?

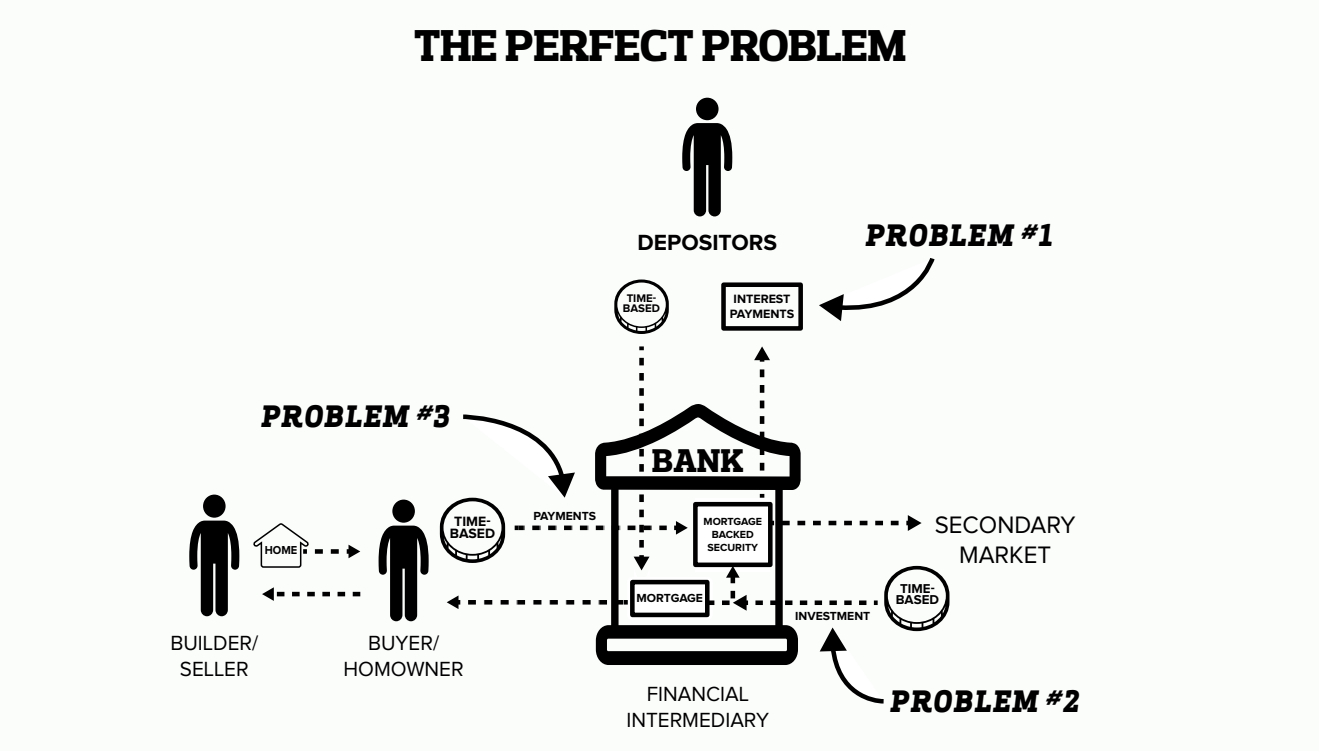
Answering this question would create the greatest problem we could possibly hope for!

Our banking and financial systems function just well enough that they continue and we continue to follow along. Neither is sustainable and neither will ever result in financial equality as they haven’t been designed to. A top down solution for how best to change them is nearly impossible to achieve and equally difficult to envision implementation if it meant global leaders would have to sacrifice control of them.

Our greatest hope for change may be a very simple decision: ***Should I take this 1 unit of currency and do what I’ve always done with it or should I choose to make a different decision? A decision that is undeniably better for me.***

This decision, *what’s best for me*, is the basis on which our financial system operates and, presumably for the foreseeable future, will continue to do so. When a clear answer to this question and corresponding actions results in the perfect set of conditions in which our banking system cannot function, we will have no choice but to change our financial system.

A stable unified time-based currency has the potential to create these conditions.



Problem #1 — A stable currency created by users ensures the fiat currency used to create it is not held in custody by intermediaries and a continuous increase in quantity is a good reason to use it, but neither is a good reason not to deposit the new currency with the banking system.

If everyone had the ability to leverage the cash flow moving through their personal economy with a smart debt contract that did not impact their opportunity cost of time, a great deal of personal economies around the world would have them.

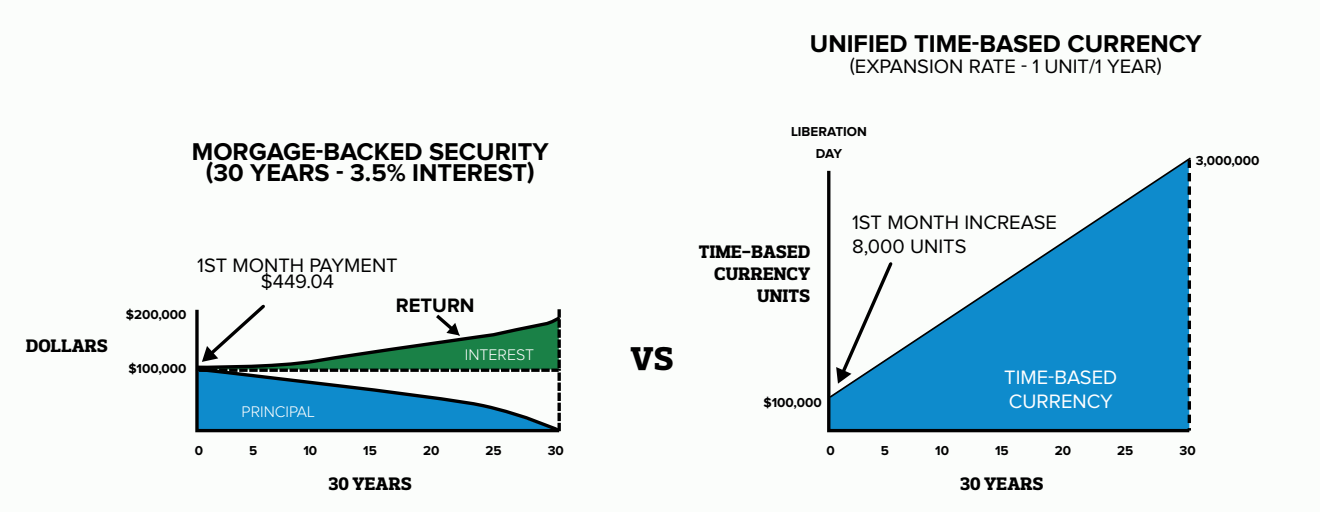
The principal portion of the timed-collateral release smart debt contract is unlocked. It is essentially an accessible short term store of value "working" for users. Exactly like a bank account.

What empties the banking system may not be a non-custodial stable currency in private digital wallets. Our money may just always have a better place to be than sitting in a bank for any period of time. That location will most likely be working for us in some capacity on a non-custodial escrowed smart contract.

Problem #2 — The cyber security of our digital currency and financial information should be considered a basic right and the benefit of all, rather than a source of fear in persuading us to continue providing our money to others.

If the population were convinced, the cyber security offered by the banking system and governments meant depositing our money with the banking system remained the best decision,it would be nearly impossible for the banking system to lend depositor's time-based currency.

At the very least, the banking system would have to provide depositors continuous access to their time-based currency and the increase in quantity. If the banking system were to lend deposits, they would not have access to the increase in new currency, and the principal and interest payments of an amortized loan would not be received at a fast enough rate to replace the time-based increase, provide interest or maintain deposits. Creation is needed which they would not have access to if deposits were lent.



To illustrate the magnitude of the problem widespread adoption of a stable unified time-based currency would create for our banking system, a 100,000 unit mortgage and its corresponding mortgage-backed-security at 3.5% interest amortized over 30 years has a monthly payment of 449.04 units per month. 100,000 units of time-based currency would increase 8,000 units in the first month after Liberation Day.

This rate of increase would slow considerably with time, but the banking system could not continue creating 30-year mortgages or amortized debt as they would not have a market to sell it to. Banks use secondary markets to sell and interbank lending to leverage the debt they create for liquidity. The problem they would face is that no investor or lender, bank or otherwise, could justify the risk of lending or investing capital in order to receive interest payments from an amortized loan when they had so much to gain from keeping time-based currency. If the banking system lent depositor's time-based currency, it could not maintain liquidity or remain solvent.

Problem #3 — A mortgage with a payment of 8,000 units per month could not be created to meet the opportunity cost of time.

If the population of the world chose to use a unified stable time-based currency continuously increasing in quantity as its primary medium of exchange, the banking system could not continue creating amortized debt. The rate of creation of the time-based currency would out-pace the amortization schedule to the point that the banking system could not sell or leverage the debt it created as it does now to maintain liquidity and remain solvent.

If the banking system no longer had access to our money and didn't have a market to sell amortized debt to, the population of the world would hopefully not tolerate it continuing to blatantly create this debt from nothing and stockpiling it.

Empowerment As A Solution

A banking system unable to create amortized debt, maintain liquidity or remain solvent is the perfect problem as it provides the perfect incentive to change.

Our financial system seemingly brought to a standstill would have consequences. Initially, it probably wouldn't feel like a benefit to all. However, the banking system's inability to continue its financial enslavement of the population by its current means doesn't mean the world stops turning.

In our lending scenario, a financial improvement on the opportunity cost of time for the lender is achieved with a timed-collateral released smart debt contract by lending their capital. Lending and investing capital would still be the path to greater financial gain and with great problems comes the opportunity for even greater solutions.

The innovation needed to address this problem is being created right now, but the solution for the 30-year mortgage and our system of credit is not the recreation of them.

Building a new financial system is not a task of innovating new ways to make the same mistakes as the decentralization of disempowerment is not an end to it.

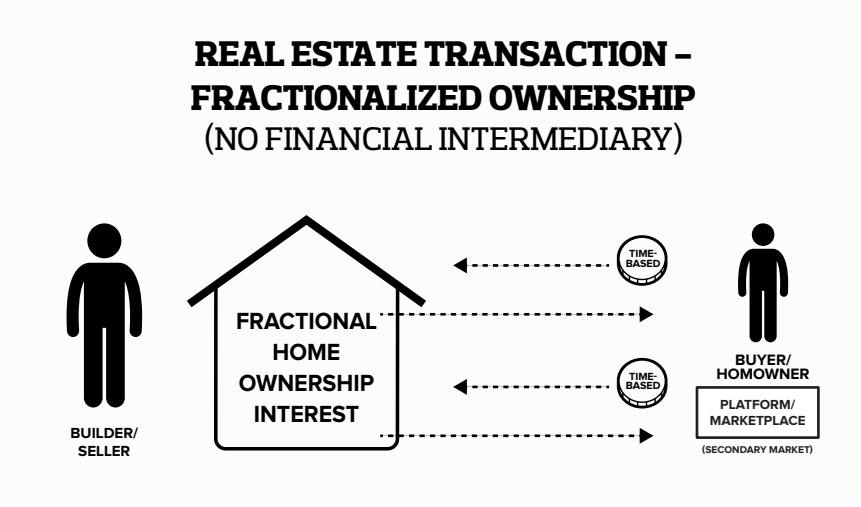
To illustrate how this problem could be solved, it is worth first considering why a 30-year mortgage is a 30-year mortgage?

It isn't because the life expectancy of the homes we are building or the dirt they are on is 30 years. It isn't because home builders or sellers need them to be or buyers of mortgage-backed securities have any expectation they will be paid to term. A 30-year mortgage doesn't make the recovery of loss any easier in the event of default on payments.

The 30-year mortgage is only a 30-year mortgage because it is suited for the financial intermediary in the middle to collect its monthly payment from the personal economy.

This results in a whole real estate process driven by the financial intermediary creating mortgages and the mortgages they can create. Homes are built, priced and sold based on the mortgages the financial industry can create and collect.

Immediately after their creation, as we are heading home to spend the next 30 years working to repay them, mortgages are tranched as mortgage-backed securities by their risk of collection and return and are sold all over the world for profit.



If we remove the financial intermediary from the equation, we can look at a real estate transaction from the other side of the mortgage veil as the sale and purchase of a fractionalized NFTA or non-fungible tokenized asset.

Fractionalizing and tokenizing real estate based on the future

cash flow from mortgage and/or lease payments is very challenging because of the risk associated with collecting future payments. This is the recreation of the current problem or at least the current expectation.

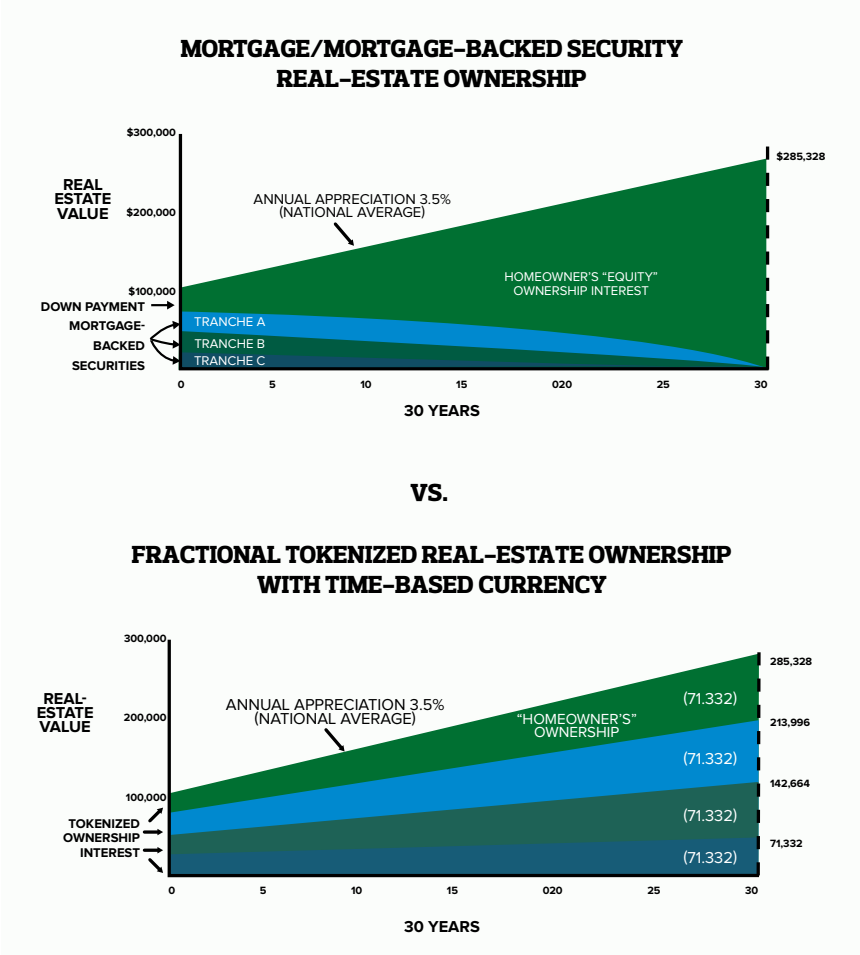
It doesn't have to be.

When an individual buys a piece of gold, they have a 100% equity position in a physical asset that they expect to appreciate in value. The individual does not receive cash flow or payment from the asset, the appreciation of it is their return.

When a buyer purchases a home, they are purchasing 100% ownership of the asset and have the right to the future appreciation of it; but in truth, they only own the unmortgaged equity in their home.

Buyers of mortgage-backed securities have an entitled equity position in the property without the right to future appreciation. Their ownership is of a financial asset with a return realized from the repayment of their investment with interest.

If the ownership interest of mortgage-backed securities were actually a fractionalized equity position in the real estate with the right to and the expectation of appreciation, would a mortgage even be necessary?



Instead of a real estate transaction being a two-step process in which the banking system creates a mortgage using depositor's money and then sells it as mortgage-backed securities to a secondary market, a real estate transaction would be a single step in which builders and sellers could fractionalize ownership of the same asset with the entitled right to appreciation and sell the ownership directly to the same buyers, i.e. property buyers and mortgage-backed security buyers.

If this were the case, mortgages and the financial intermediaries creating them would be unnecessary. Like a physical piece of gold, the digital fractional ownership of tokenized gold and digital gold (Bitcoin), the expectation of owners would be a stable store of value (real estate) or investment with a future gain realized from appreciation and resale at a higher price.

This sounds idealistic, how could we possibly change the current expectation of an entire financial industry, those with the money to buy fractional ownership (currently mortgage-backed securities), or convince anyone to cease a practice that is so unimaginably profitable?

Answer: The Perfect Problem.

With widespread adoption of a stable unified time-based currency, mortgage-backed-securities based on current amortization schedules would be nearly worthless in comparison to the gain realized from keeping time-based currency. *Nearly worthless*, because current mortgage holders would still be obligated to make payments. Securities would still have cash flow, but a unit of time-based currency today would be significantly more valuable than a unit of time-based currency 30 years from now.

Mortgage-backed security buyers would be uninterested in buying new ones and current security owners would be desperate to convert them to time-based currency and other assets that are less vulnerable to the opportunity cost of time, but they couldn't for the same reason they would want to. The only way to sell a mortgage-backed security may be the only way for real estate transactions to occur at scale—if the financial asset being created and sold were fractional ownership of the asset with the right to appreciation.

Homeowners would need to sacrifice their right to the future appreciation of the ownership of their homes and I can think of no better reason for them to do so than in exchange for the obligation of making monthly mortgage payments. With widespread adoption of a stable unified time-based currency, builders and current property owners would almost have to sell real estate as fractional tokenized ownership interest with the right to appreciation. It just wouldn't be feasible or necessary for homeowners to mortgage and purchase 100% of that ownership interest.

Financing the construction, sale/purchase of ownership interest and leveraging of this asset could and certainly would continue, but the entire life cycle of a real estate asset could be accomplished with timed-collateral (tokenized ownership) release smart debt contracts for the actual asset.

I would argue this is a safer, more sustainable approach to real estate ownership and that it is better for everyone except the financial intermediaries currently creating mortgages.

Our Financial System

Systemic Risk — Interest rates, mortgage insurance, credit default swaps and defaulted mortgages are all a reflection and management of the same risk: the risk of mortgage payments stopping.

If the practice of financing the construction of a property and mortgaging the purchase of "100% ownership" were replaced with timed-collateral release smart debt contracts collateralizing fractional tokenized ownership for all financing related to this asset, a borrower's default would simply trigger the loss of their unreleased tokenized ownership or collateral executed by a non-custodial escrowed smart contract.

Foreclosure, resale and remortgaging of 100% ownership interest would be unnecessary for an investor or lender to recover their investment/capital. All of the risk related to mortgage payments stopping would be eliminated from our financial system.

Financial Empowerment — Amortized debt including residential and commercial real estate mortgages have been the banking system's primary tool in the financial enslavement of the population. Losing the ability to create them would empower the entire financial system.

> **IMPORTANT NOTE:**
> **The Treasury Note is the government's version of the mortgage used to enslave countries and taxpayers. The repayment schedule of the Treasury Note and a mortgage are the same and if it were no longer feasible to create amortized debt, this would include National Debt. The same empowering effect realized in the economies of individuals and businesses would be felt by countries.**

Buyers (Homeowners/Individuals & Investors)

The State of Wealth — If homeowners stopped mortgaging the purchase of 100% responsibility masked as 100% ownership of our homes and began buying the equity of the homes we wish to occupy as fractional ownership with timed-collateral release smart debt contracts, this would transform the personal economy and an individual's ability to create a cash flowing state of personal wealth for themselves. This type of debt contract does not have the severe lost opportunity cost of amortized debt.

Financial Inclusion — Technically, the financial institutions creating mortgages/mortgage-backed securities and buying them are not one in the same. Of course at this point, the same handful of powerful entities own both sides of the equation.

The World Bank describes financial inclusion as the availability and equality of individuals and businesses to access financial products and services.

The average person does not own a mortgage-backed security because they are only available on the other side of accredited investor status.

However, all ownership of a fractionalized asset is identical. The ownership interest purchased by a "homeowner," presumably to occupy a property, created by a builder to fund construction and purchased by an investor through a defi protocol or platform would all be the exact same asset.

It wouldn't be necessary for financial institutions to create financial products to provide the population if the creation and sale of real estate only resulted in a single ownership asset to finance and leverage. Real estate ownership would be equal financial inclusion in the same financial asset for everyone. The World Bank would get their wish without having the burden of creating it.

> **IMPORTANT NOTE:**
> **A debt-based financial asset is the present value of a debt contract based on its future cash flow. A timed-collateral release smart debt contract would have a present value, but monetizing it as the amortization schedule is monetized now would be very difficult. The present value of a timed-collateral release smart debt contract would be very nearly restricted to the value of the collateral. Depending on the terms of the contract. Creating 300x leverage, the equivalent of buying a $100,000 house with a $30 million loan as the banking system does now, would be nearly impossible to achieve.**

Builders/Creators/Sellers

Financial Empowerment — Credit and debt are not inherently "bad," rather, they are essential to our financial system. It could not function without the ability to create these relationships, but it's important to note the overwhelming majority of these transactions are created and completed without the presence of upfront capital.

When an employee works for an employer, all week long the employee is extending a credit to their employer, the debtor in this case. The transaction is settled at the end of the week with delivery of a paycheck.

The upfront capital in a financed transaction enables a good or service to be sold without the risk or responsibility of a seller collecting future payments from a buyer. In effect, these functions are transferred to the lender, a tremendous benefit to both buyer and seller.

The fractionalization and tokenization of ownership interest in assets has empowered sellers of all kinds to fund, create and sell their creations to buyers. The focus has been on using these assets as collateral in lending and borrowing in order to make other purchases. While the fractional tokenized sale of dog memes and leverage of real estate ownership on Mars are both very interesting, decentralized finance's

greatest potential benefit to humanity is buyers and sellers ability to safely create and complete financed transactions directly or indirectly through decentralized protocols and platforms for the assets we use in our everyday lives, our homes, vehicles and small businesses, without the need for a financial intermediary to facilitate financing using our money.

This proposal has been created through an inductive process. I did not start with the injustices of our banking system or the vast financial inequality we experience and look for an answer. The proposal was inspired by a single thought: could our financial system work like the universe? The pursuit of answering that question has been fueled by a sincere desire for a free and open financial system capable of achieving a natural balance.

Only after considering how it could be achieved and its potential impacts have I come to believe the QFS is a time-based system. Much further consideration is necessary, particularly if the aim is global implementation and the highest and greatest outcome the intent, but if there is any truth to Sir Josiah Stamp's claim, "take it (the power to create money and control credit) away from them, and all the great fortunes like mine will disappear, and they ought to disappear, for this would be a happier and better world to live in" and any hope a user created time-based currency could help in achieving it, it is certainly worth our time and effort to explore.