New Currencies for a New Era

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Abstract

In this paper we will show how currencies and their use spontaneously emerge within groups of people as dictated by forces of necessity and the biological hardwired need for societal stratification. The shape a currency will take is a function of the technological development (stratification) of a certain society thus feedbacking the loop of an even more sophisticate currency system projecting society toward greater levels of complex organization and advancements.

We will also discuss and propose a three-layer crypto currency model designed to satisfy a broad range of standard and special societal needs and capable of advancing human society beyond what the current fiat currency systems can possibly do.

Evolution of currencies through time

The first practical form of currency ever developed by mankind was barter.

It was a bulky and cumbersome way to do business, not to mention the risk of goods being stolen or lost and the inherent need to be on guard and protect your property and goods at all times.

Barter was good for small groups of people and could only support a simple and mildly stratified society.

Currency technology made a big leap forward with the invention of **price** which is made up of a **number followed by a symbol** either physical or abstract. Numbers are easier to trade, count and multiply simply on the tip of your fingers as opposed to making ratios between quantities of different goods or commodities among parties with different interests and appetites.

The **price-number** must be followed by a **price-symbol**, a token for the price to be functional, and back then the symbol was a physical coin because it was easier to CARRY as opposed to physical goods and also easier to COUNT in quantities above your finger count. The use of price instated a symbolical barter or trade which was more efficient and convenient than the bartering of hard good ratios.

The invention and practical use of prices was only possible alongside the development of basic mathematic such as addition, subtraction, and multiplication. The increased use of

mathematic for trade purposes furthermore contributed to abstract thinking development within the primitive human brains.

Why gold and not titanium?

When people had to forge the first coins, they would have liked to make them out of platinum or titanium (rare, shiny, non-perishable, non-oxidating and chemically stable), but unfortunately these rare titanium metals and steels need quite a sophisticate technology to refine the ore and then bring them to melting temperatures, not to mention the fact that they are incredibly hard materials so very difficult to forge into coins.

Gold on the other end along with silver and copper where easy to extract, low melting temperature and soft, hence easy to forge into coins and with it came their popularity as first medium of exchange.

A small market with a small quantity of people trading and bartering countable pieces of metal as opposed to physical goods in different ratios eventually caught the attention of nearby groups of people which immediately found this system revolutionary and convenient so they also started adopting this system, and the price (number + token) went viral across different societies and all over the world.

As the currency system increases its penetration within society so does social stratification. We no longer need to be all hunters/gatherers but we can specialize ourselves in different

jobs and skillsets and we can optimize and sophisticate our products and services and on the long run we develop and refine technology and stratify society even more.

The need for stratification and specialization

The need for hierarchy and societal stratification appears to be somewhat hardwired within our genetic make-up (see the work of Jordan Peterson) and past attempts to tamper this balance in the name of better and more communistic societies as proven disastrous in the past but these tales can serve as cautionary tales for other more successful social engineering experiments as we shall see further on.

In this regard we can look back at what the late Roman emperors did toward the end of the empire, which was to dilute the currency (coins) with more vulgar elements such as silver first and copper in the end thus exploding inflation and triggering malinvestments of all sorts. However, when people saw their currency getting diluted with copper, they didn't abandon the currency but kept using it in a business as usual fashion.

Imagine if you are a baker and you make bread, every day, in your shop. Clients come in to buy from you but you look at the currency in their hands and you say it is no good because it is too greenish-copperish and you want something in silver or gold! Well rest assured that this baker will go out of business very soon since not many (or no one) carries gold coins anymore.

In this example if our baker is too picky, he won't be able to pay his suppliers or for his own

food and soon enough he will have to revert back to a hunter/gatherer level using rudimental items and crafted weapons. In short, he will have to live the edge of the societal stratification curve and further away from the technological comforts offered by a stratified and specialized society who can handle currency even if symbolic or fiat in nature.

From coins to paper

The next step in currency evolution is printed currency made available by the invention of paper and printing machines. Carrying chests full of gold and silver is not as easy nor practical as opposed to carry countable numbers written on pieces of paper, which are way lighter to carry, they can be concealed more easily than coins, hence paper currency is harder to steal and safer than metal coins!

Even today the coins in your wallet have less value than the paper bills sitting next to them despite the coin value in metal weight is far greater than the weight value of a piece of paper thus reflecting the victory of convenience and technology above physical heavy pieces of metal.

Of course, we still have the problem that paper money can be taken and stolen like coins, so we need something more convenient than a physical form of currency, and before you notice we have currency numbers traded within hard drives of computers by means of chipped pieces of plastic (credit cards) throughout an interconnected IT system.

This Internet form of money is adopted more and more because of its convenience as

opposed to paper or gold money. It is safer, easier and lighter to carry around as opposed to more primitive forms of currencies hence it is widely adopted out of the combined forces of need and convenience.

Different currencies for different purposes

Not all currencies are created equal or are used in the same way across different groups of people.

Imagine you are a drug or arm dealer or a simple John looking for adventures... You need to be able to make deals and move currency around, but you don't want your transactions to be noticeable or logged with your real name or surname on it.

Ideally one currency should allow some degree of privacy or anonymity as there will always be a certain ratio of economy wishing to stay under the radar.

Attempts to eradicate this hidden side of economy are socially unpractical and such efforts will only spur the development of alternative or parallel currency systems and exchanges to satisfy and stratify this kind of economy like the Bitcoin used to do in its early days.

Once you start having unregulated and anonymous alt-coin exchanges you will for sure have hacks and all sorts of financial scams and cons (again see the Bitcoin frenzy) as opposed to guaranteeing a safe space for this part of the economy within a main Blockchain Currency System (BCS).

Imagine next that you are a law-abiding citizen and you like to save your money for the future. You will want to stash some cash for your retirement, and you don't want to expose your savings to inflation. In this case you want to have some form of gold currency in your hands (fixed quantity) so that your savings don't get eroded by inflation over time.

Lastly there are the everyday transactions based on standard fiat currency models which are quick and convenient if it wasn't for the fact that the currency base MUST expand depending on how much the economy grows each year, thus underlying inflation and the need to keep money and economic activity moving at all time to stay on top of the inflation curve.

Understanding currency base expansion

The need to expand cash is not well understood by many and some suggest our currency base should pegged against a fixed mass of valuable metal and this will be far more convenient than having a currency base changing at the whim of central bankers or governments.

If we were to adopt a currency system based on Gold whose quantity is virtually fixed, then deflation will grow rampant and the price of common goods and items will look like 0.00000000000157 (1.57 E-12) nano-grams of Gold because the number of goods and services worldwide gets bigger and bigger every year, but the total currency base is stuck

with the total gold mass available on Earth.

In this system instead of counting price numbers on the tips of your fingers you will end up making operations with negative logarithms in base 10, hence we are losing the counting simplicity and ergonomicity of transactions which must be within grasp of the average person math capabilities.

Also consider the transactability, in the sense that measuring out and transferring across nanograms of gold on each transaction is a lot more challenging technically as opposed to trading numbers on pieces of paper (or numbers on screen of computers), so again the paper or fiat currency wins the day in terms of practicality, speed, simplicity.

Last point against Gold as currency is the fact that it can be physically stolen, whilst stealing from encrypted and password protected bank accounts is much more complex feat as long as the underlying currency software is solid.

Who owns gold?

Most of those who claim to own gold nowadays in their investment portfolio, in fact they only own pieces of paper or digital files claiming they are owed a certain amount of physical gold if ever they want to claim it and have it delivered at their house.

But even then no one wants his/her gold to be delivered at his/her house because it is costly to have it delivered and then it is very risky to store it within your premises unless you live in a fortress, so again these so called gold owners only own and trade pieces of paper

rather than real physical gold. Once again paper or better say digital information and convenience win the day as opposed to physical goods or metals.

OWNING physical gold in your house is a bit like having a horse "parked" next to your car as a backup because horseback was the most convenient way to travel for many centuries before other more practical means of transport were available. Maintaining and moving around on horseback is quite unpractical and inconvenient as opposed to other transport technologies available nowadays. Convenience of use wins the day.

On another note, if you are planning to use gold in its paper forms to stabilize a financial portfolio then gold does have a purpose, but only among other financially educated people who can afford this sophistication and spare some of their excess wealth into diversification, not certainly for everyday transactions, nor it can be used as a safety net in case of societal collapse.

When society collapses

A society collapses financially when the people of that society no longer keep their bums on their seats and they no longer believe the currency system has a value. Then the societal stratification supported by the currency also collapses, meaning the society scales back to more scattered and smaller hunters/gatherers type groups and all the complex skills to support complicate systems and technology is forgotten or superseded by everyday basic

needs such as food/water/shelter/survival.

IT and Internet are the structures with more sophistication and harder to maintain so these will be the ones to collapse first. After that more basic and life supporting ones will fail such as electricity, running water and lastly farming is superseded by pillaging leading to furthermore collapse of population and capability of supporting life sustaining forms of technology...

Eventually the humans are hardwired for stratification as this is the most efficient mean to produce more advanced technology and comfort, thus allowing for greater odds of genetic survival of the specie.

Even in these primitive or decayed societies a currency will sooner or later arise once again along with stratification, first locally and then globally.

The future of currency

By now we have highlighted how currency is a feat of human stratification and technology progressing over time and it is dictated by forces of genetic necessity.

As technology moves forward and becomes lighter, more powerful, and efficient, also the currency will eventually evolve for the better and allow greater development of human society.

Such advanced currency system should be:

1) Based on block chain & IT technology and guarantee a null transaction cost to all its users

2) Should have three layers to allow for the three types of basic economic activities described above (black market transactions, everyday transactions, higher financial transactions)

3) It could encompass not just monetary transactions but also deeds, medical records, public statements, possibly some high-end email communications, geolocation data, etc

4) Maintain anonymity of transactions and personal data but shall allow users to program their own privacy settings, automatic payments, writing and execution of wills, etc as well as allow superuser privileges to undo fraudulent transactions or allow authorities to access personal data within the framework of criminal investigations

5) Allow for free and anonymized data mining and modelling thus helping social engineers and governments to effectively measure and implement social policies

6) **The Blockchain Currency Software also called the Blockchain Currency System or BCS for short,** should be an open-source software. Calibration of the operating parameters or modifications to the software shall be enforced to all users after democratic polling of proposed modifications. No currency hard forks allowed!
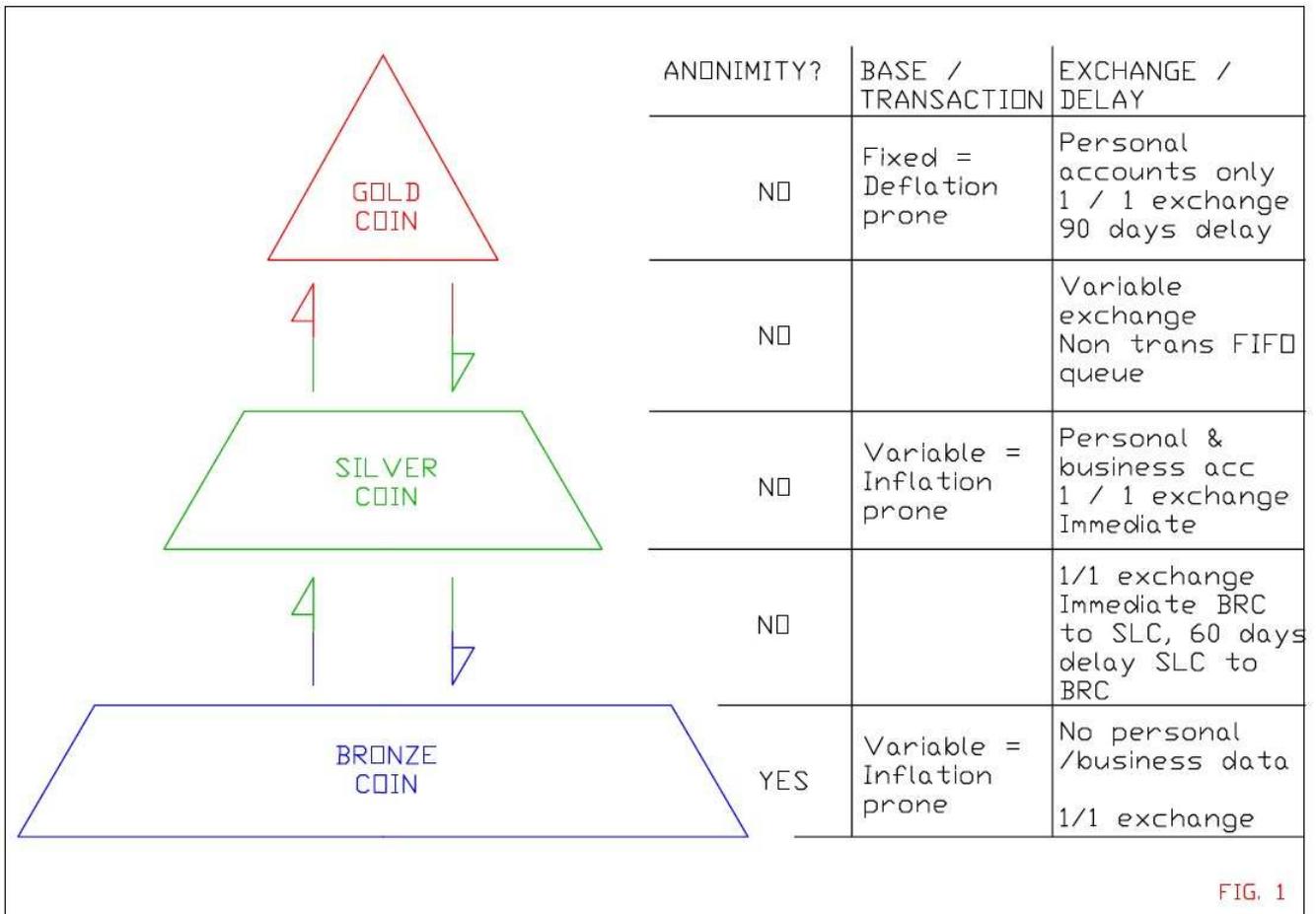
No need for currency mining

Currency mining as intended today is a useless waste of energy and hard disk space. The purpose of this barbarous process in the first digital currencies was to incentive people to keep their computer ON with blockchain based software online in order to make sure the currency network was always available to process and record new transactions.

In a modern blockchain currency system there is no need to have multiple distributed backups of the blockchain file, only a small number of centers might be required for this purpose same as it is done by other infrastructural data networks such as FB, Google, etc.

Still people should be allowed to maintain a local hot wallet backup of their data or even a full sections blockchain file if required. Still it is not very practical to store zetta-bytes of information in your home computer HD but it might be useful to speed up custom datamining queries and analysis within universities and other datacenters.

A practical example of a Blockchain Currency System

In the image below we highlight a three layers crypto currency system and some possible ways in which it could work, leaving aside the part which records deeds and other notary acts for the moment.

	ANONIMITY?	BASE / TRANSACTION	EXCHANGE / DELAY
GOLD COIN	NO	Fixed = Deflation prone	Personal accounts only 1 / 1 exchange 90 days delay
	NO		Variable exchange Non trans FIFO queue
SILVER COIN	NO	Variable = Inflation prone	Personal & business acc 1 / 1 exchange Immediate
	NO		1/1 exchange Immediate BRC to SLC, 60 days delay SLC to BRC
BRONZE COIN	YES	Variable = Inflation prone	No personal /business data 1/1 exchange

FIG. 1

At the top of the pyramid we have the goldcoin. It doesn't mean there is any physical gold behind it, it only means that its quantity is fixed, the total number of goldcoins circulating within this currency space is equal (for argument sake) to the number of people registered into the system.

The way it works is that every time a human is born his or her certificate of birth is registered within the BCS, in that moment a BCS file is created on his/her name.

This new BCS file contains various personal information, a default FORMAL email address and privacy settings (editable by the parents or registered legal tutors) and most

importantly a goldcoin wallet is created on his/her name. In this new goldcoin wallet, one goldcoin is freshly minted FIAT into that account by the BCS.

It is a bit like being born and having a winning lottery ticked already in your pocket, registered under your name, but since goldcoin is a high form of currency, it should have some restrictions to limit its use to higher financial transactions only.

Such restrictions could be something like: Limiting the age at which that goldcoin can be cashed in (ie no sooner than 21 years old), or limiting its use to pay for higher education, can be used for the purchase of your first house or to setup your own company.

Other limitations on goldcoin transactions to prevent speculations and exploitation of the system could be delaying goldcoin transactions by 90 days and transactions can be cancelled at any time by the seller any time within these 90 days waiting period.

The delay in the transaction is not because the BCS software cannot process the transaction immediately but to prevent goldcoin to be used for everyday transactions such as grocery/restaurant bills/etc and dissuade speculative operations.

When someone dies, and its certificate of death is registered into the BCS by a certified officer (BCS superuser), at that moment a goldcoin is erased directly from his/her goldcoin wallet. If no goldcoin is present in said wallet then one goldcoin is erased proportionally from all the goldcoin wallet balances in excess of one goldcoin (daily fractional adjustments on goldcoin wallets due to population fluctuations).

The fluctuation adjustments to goldcoin wallets due to population fluctuations can be programmed in a progressive way in order to preserve the wealth distribution curve shape of the goldcoin wallet population (more on this delicate issue later on this paper).

The balance of the goldcoin wallet in excess of the one goldcoin erased will be distributed to the heirs in accordance with payment programing rules set up by the deceased person in his/her will BCS file.

Another recommended rule is that goldcoin wallets should be personal only (no company accounts), we shall see the reason behind this later on.

Silvercoins

Eventually people will be allowed to sell their goldcoins to other parties and transfer their goldcoin to other goldcoin wallets in exchange for Silvercoins.

Silvercoin wallets are like goldcoin wallets, they are created at the time of birth and registered to a person but their balance is ZERO, meaning you have to work or get donations and save to turn a balance into it.

Another thing you can do to turn a balance into your silvercoin wallet is to sell your goldcoin to another goldcoin wallet in exchange for a silvercoin influx to your silvercoin wallet.

The goldcoin to silvercoin exchange rate is variable depending on the ratio between existing

goldcoins (people) and existing silvercoins (variable monetary base) and the gold-to-silver transactions are processed within a non-transferable FIFO queue.

These BCS rules are needed to prevent speculations such as people upselling or downselling their goldcoins or silvercoins because of unbalances in sellers to buyers ratio on the gold-silver exchange.

People can use their silvercoins for everyday purchases and transactions since transactions are processed immediately within the BCS.

Transactions and balances are registered in your silvercoin or goldcoin hot wallets and within the main Blockchain file, however this sensible personal data IS NOT publicly visible by anybody as it is on the primitive Bitcoin currency system.

Personal financial data is however accessible by investigators (superusers) within the work frame of investigations, or you could grant temporary access to your BCS data to a financial advisor and allow him or her some degree of superuser privileges to allow programing of your BCS file in a desired way.

If someone claims to be victim of a fraud or invalid transactions, then it is possible to freeze the amount under question on the receiver end until the issue is resolved privately first or in a court until said amount is refunded or the transaction confirmed as legitimate.

Bronzecoin

Third level of currency is the so-called Bronzecoin and it serves that part of economy who wishes to stay below the radar for one reason or another.

Bronzecoin is pegged 1 to 1 against silvercoin. A silvercoin is converted to a bronzecoin when transferred to a bronzecoin wallet which does not hold the ledger part related to name and surname of the owner, **bronzecoin pecunia non olet!**

Bronzecoin wallets can be created anonymously within the BCS and they are by definition anonymous, they can be pay as you go / top up chip cards and transactions are still recorded within the blockchain file for statistical treatment purposes.

Bronzecoins work the same way as paper money does in the sense that if said chipped card is stolen, lost or the password on bronzecoin wallet is hacked then said bronzecoins are lost and there is no way to undo these transactions by means of superuser privileges or fraud investigations.

Again it is possible to program a delay when converting silvercoins to bronzecoins but no delay when transferring bronzecoins to silvercoins thus favoring a transparent economy as opposed to black market economy.

The end of hard cold cash

A fourth layer could be a paper type of currency namely the cashcoin. It looks like the paper

and coin currencies we use nowadays, it is pegged 1 to 1 to bronzecoin and it provides the ultimate peace of mind for anonymity.

This requires the maintenance of an ATM network and currency printing infrastructures but it is a needles precaution since the BCS is an open source software and anybody skilled in the art of coding can verify bronzecoin transactions and wallets are in fact anonymous.

Hot and cold wallets

The implementation of a BCS requires IT infrastructures to ensure connectivity of the systems and terminals at all times. Electricity and Internet connections are implied.

What happens if one or the other (mostly Internet) are down?

One solution is for BCS transactions to be registered and stored within cold wallets or cold transaction queues stored locally into the devices and terminals registering the offline transaction locally among themselves. **This is where storing a local hot backup of your BCS file and wallets can come in handy!**

Offline transactions will be processed automatically by terminals and registered onto the global blockchain file once Internet connection is restored to one terminal or another.

Exploiting cold transaction queues to spend more money than what you have in your BCS wallet(s) is eventually a felony and superusers will intervene and program a repayment plan associated to your wallets. Crime does not pay.

What if Internet and electricity are down for prolonged periods of time like months or years?

In that case societal stratification collapses back to a hunter gatherer type society, not just because the BCS cannot operate properly offline for extended periods of times, but also because all our society and technology is based on continuous exchange of information, if that stream of information or energy collapses, then a lot of our technical advances collapse with it too, not just the currency.
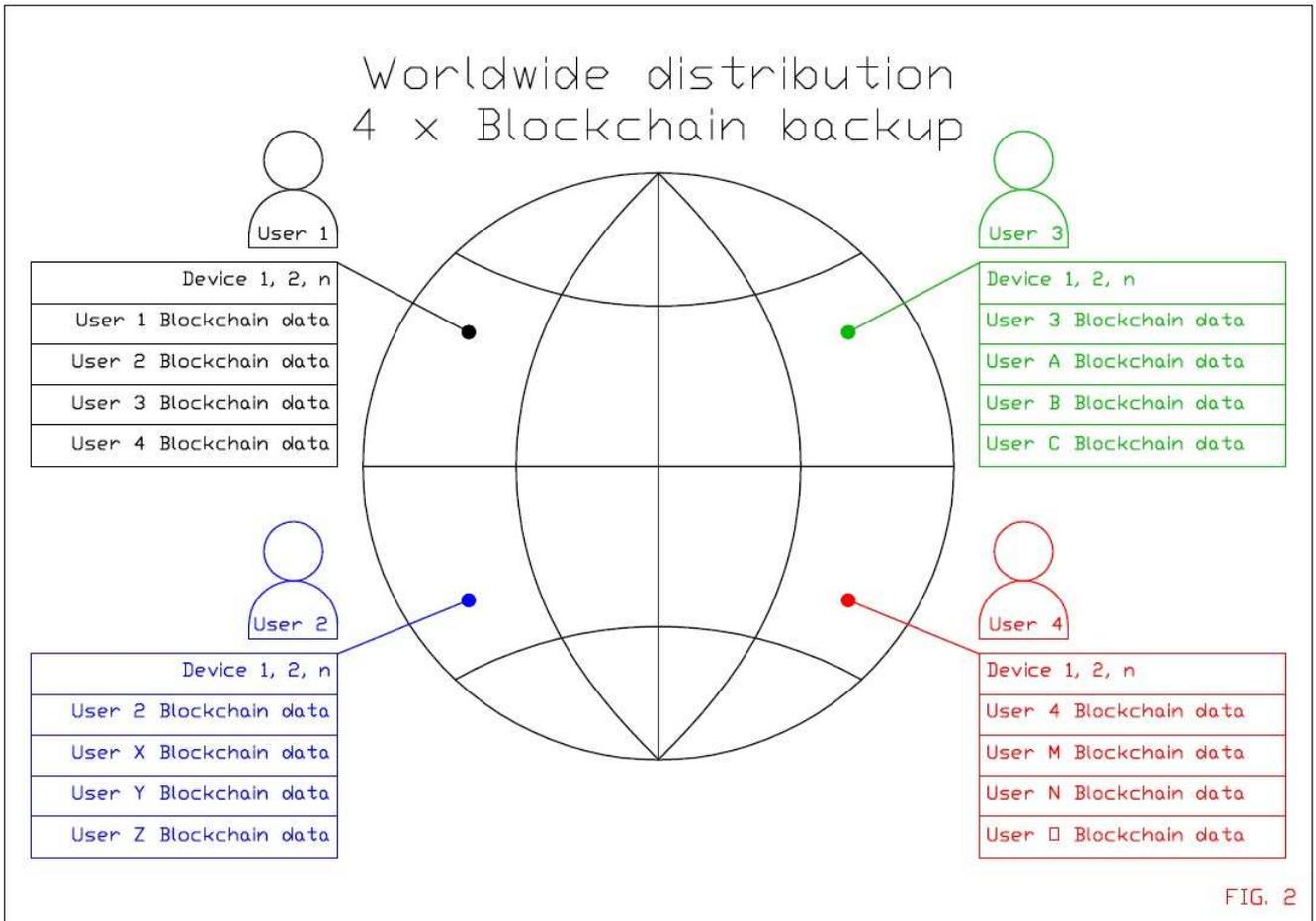
The societal efforts shall go into restoring Internet connection first. Using paper currency to operate all financial transactions will work in an offline world for sure but it is unpractical (like horseback VS car example earlier on).

Paper currency wins the day against digital currencies in all these societies not progressed and developed enough to be able to maintain IT infrastructures.

Blockchain file backup

The blockchain file of a cryptocurrency keeps getting bigger and longer every day as more population and more transactions are added every day, this in turn poses challenges in terms of finding enough HD storage space to safely and reliably backing up this information.

One approach could be to have some centralized data centers (ie at least 4) placed in different geographic locations to maintain all hot wallets of all users. This in turn requires personnel, hardware, electricity, and all the costs associated to maintain this. Live expenses of such datacenters could be backed by a primary monetary stream generated by the blockchain software itself.

Worldwide distribution
4 x Blockchain backup

User 1
Device 1, 2, n
User 1 Blockchain data
User 2 Blockchain data
User 3 Blockchain data
User 4 Blockchain data

User 3
Device 1, 2, n
User 3 Blockchain data
User A Blockchain data
User B Blockchain data
User C Blockchain data

User 2
Device 1, 2, n
User 2 Blockchain data
User X Blockchain data
User Y Blockchain data
User Z Blockchain data

User 4
Device 1, 2, n
User 4 Blockchain data
User M Blockchain data
User N Blockchain data
User □ Blockchain data

FIG. 2

Another possibly simpler and more robust approach is to have the blockchain file distributed

across multiple devices and multiple users as per the image 2 above.

Since the currency system itself needs devices on which to run the BCS software, a certain

HD space is reserved to store an encrypted version of each user blockchain data.

The same user could have multiple devices synching dynamically with his or her own

credentials similarly to other software (ie Dropbox, Google Drive, etc).

However each user is also dynamically backing up the encrypted blockchain data of other 3

unknown users in a worldwide file distribution network so that at least 4 back ups of your personal data exist into at least 4 devices worldwide.

In this way we don't need to store all the transactions of all the users all the time, we only store our own blockchain ledger file along with 3 other unknown ones to maximize reliability and availability.

Of course there might be universities, sociologists and other governance centers who might call for queries to gather anonymized blockchain files of users by geographical location/age/health/income for statistical elaboration purpose. In this case then more than just 4 copies might be statistically available for each BCS user.

It must be noted than even in this 4 x distributed backup system, the amount of old data relative to ancient transactions or relative to people long dead will eventually require more and more space. This old and no longer active data could be purged of the blockchain files or otherwise be stored by other parties for statistical analysis of past econometric events.

An example of this kind of approach is the following: If you have 20 $ bill in your pocket (BCS device) and you want to use this money to buy a T-Shirt, you don't need to produce all the chain of events which brought that "digital bill" in your pocket, you only need to make sure that the currency software who brough that sum into your device hot wallet is secure and the bill hasn't been forged by hacks which are easy to spot if multiple wallet backups

exist on different devices which cannot be easily hacked all at the same time in different geographic areas.

Currency generation and destruction

Currency must be created or sometimes destroyed depending on economic expansion and contraction to maintain inflation goals or ensure the grocery bill stays within your fingertip counting capability.

It is also necessary to maintain certain basic infrastructures such as electricity, connectivity, blockchain file storage centers (maybe) and BCS software engineers (for sure).

The list of basic infrastructure and societal needs could be extended to include also farming, schooling, healthcare, public transport, housing, etc

These are all fundamental subsystems of an advanced and sophisticated society and we must maintain them the same way we would maintain the IT infrastructures to support the BCS.

The BCS should be programmed in such a way to automatically maintain itself and societal stratification in a new and creative way as illustrated in the schematic below (image 3).

FIG. 3
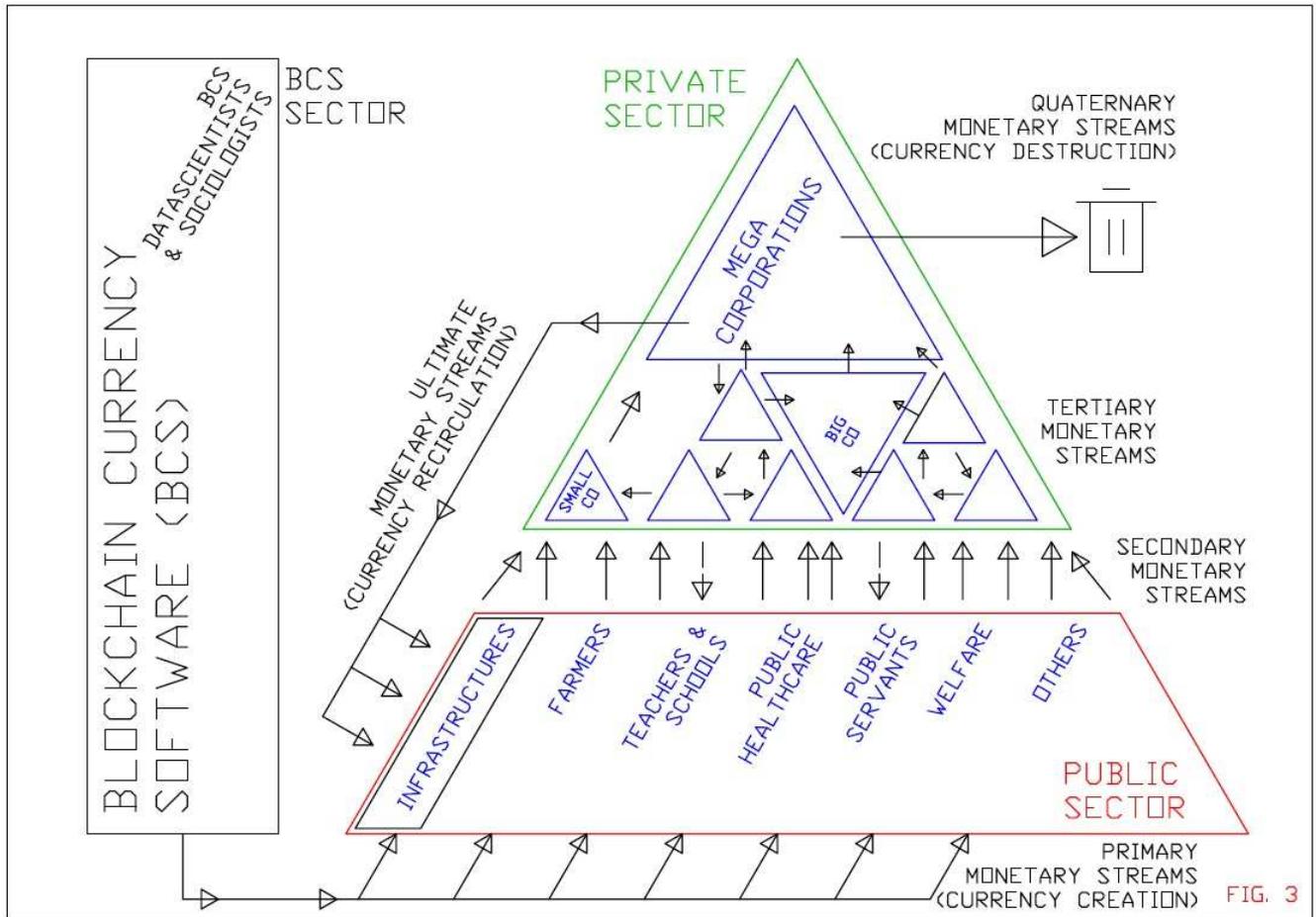
Here we can see how the BCS can be programmed to automatically wire money into silvercoin wallets of public servants and other economic and social actors deemed essential.

In a growing economy and expanding technological base it is expected that these baseline or primary monetary streams will ultimately trickle up toward the private sector (secondary monetary streams).

The public sector is made up of many different company sizes from small all the way up to mega corporations, all operating within the framework of a silvercoin or bronzecoin type

currency system.

It is expected that greater amounts of private sector monetary streams (tertiary streams) will trickle up toward hyper integrated megacorporations which will be sucking up most of the free circulating currency and funnel it within few very wealthy silvercoin wallets.

This is the natural stratification shape and destiny of a stratified society and currency system.

Silvercoin currency sitting idle within massive balance accounts of mega corporations causes the speed of money to decrease and can lead to deflation if it wasn't for the fact that currency is freshly minted and "fiated" within public sector accounts thus stabilizing price of base essential goods and services.

A practical way to prevent unnecessary accumulation of power and money within few hands and corporations is to destroy the excess currency and profits of these wealthy accounts (quaternary streams).

Alternatively, a corporation could decide to forfeit its excess earnings and profits and donate them back toward the public sector or take charge and foot the bill for all kind of deductible infrastructural projects.

The goal is to prevent a corporation to grow above a certain size as this could lead to

monopolies and malinvestment practices, and it promotes tertiary stream exchanges and higher speed of money to maintain a healthy distribution of company sizes and wealth distribution for all entities operating within the private sector.

No taxes asked

You can see that nowhere on this paper we have discussed the issue of taxes.

Taxes are today a barbarous process required for these state nations which do not own the currency they use, similarly to the needless blockchain currency mining processes.

Taxes are not required within the BCS since currency can always be created to support essential services and infrastructure development without the need for middlemen taxmen, central bankers.

Currency generation to foot public sector bills is not something new and it has in fact been around for a long time since no advanced nation is actually paying back its public debt, public debt is always increasing to support base services, no one is ever paying back because no politician is willing to be unpopular and raise taxes and he can simply push the button of free money printing (more about malinvestment practices and consequences later on).

Currency is destroyed or erased from the silvercoin wallets of mega corporations to promote

a certain wealth distribution and maintain economic dynamism, not because it is needed to balance public spending in any way.

A form of taxes or currency destruction streams could be programmed in the BCS for all these transactions deemed less desirable than others such as purchases of alcohols or cigarettes or other similar goods. In that case the price of said goods has a tax (currency destruction percentage) programmed into it in the sense that the purchased item will be more expensive to the buyer and less profitable to the seller because the difference amount between the buyer paid price and the seller received amount is destroyed by the BCS to make this kind of trades less convenient to both parties.

A way around this irritating tax and social engineering push of the system can be bypassed by using bronzecoins. In this case taxes can exist for certain goods but they cannot be too high or they will tip the balance between silvercoin and bronzecoin currency usage.

The BCS sector

This new form of currency is not owned by private entities nor nation states, it belongs to mankind, it is a fundamental infrastructure and no one can claim ownership or superuser rights on it the same way no one can own the language being used by people, nor the air they breathe, nor the things people know within their brains, or claim rights for the genes in our cells.

The BCS is a fundamental human right, the base upon which a better society can be built upon, a mean to rid society of unnecessary speculative currency streams thus allowing people to focus on more productive and creative endeavors.

Still the system itself needs maintenance and care. Social and software engineers need to work on monitoring BCS streams and societal trends, identify and eliminate bugs, etc.

Fine tuning of financial policies (primary and quaternary streams) is to be discussed by politicians or subject to democratic polling by BCS users.

Underfunded and overfunded for dummies

Discussions about which service or industry (or individual) shall be granted a credit line (primary monetary stream at no interest rate) is in fact a matter of delicate econometric measurement revolving around the concept of overfunding or underfunding of a system.

An example of modern overfunding today could be the FED happy printing and financing of any spending of the US government. In turn the US can hire bureaucrats and create all sorts of agencies, some of which provide fundamental and valuable services to society, other agencies not so much.

When a system is overfunded then people are allowed to thrive whilst sitting idle and without doing anything useful with their time and productive capacity, which is what we call misallocation of resources AKA malinvestment.

On the opposite side of the scale we have countries like Greece or Italy which no longer own their currency, therefore they need to beg the EU central government to disburse some funds, and these usually arrive too little, too late, and with caveats attached.

In this case then the State has no cash to sustain its base operations and services, and people are forced to focus on very basic survival activities as opposed to focusing to more productive and valuable activities which valorize their abilities and skills.

This is when a system is underfunded and it cannot produce at the optimum of its potential capacity.

Maintaining a healthy balance between underfunding and overfunding of a certain essential system is a very delicate topic for economist to define and program within the BCS software.

Personal and corporate credit at the time of BCS (DRAFT)

Individuals and private entities (companies) might find themselves in a situation where they are underfunded or overfunded for the goods and services they provide.

We have discussed earlier on how private citizens can cash in their Goldcoin into Silvercoins to finance their own business and operations, still there might be instances where this financial relief might not be sufficient to maintain and expand economic activity.

In all these cases then access to additional credit could also be performed by algorithms of

the BCS capable of issuing personal silvercoin credit with a certain plafond and interest rates as function of your credit score which boils down to an underfunded/overfunded calculation based against your blockchain file statistics.

Companies also need funding to finance their operations, they also have a certain credit score a measurable function of their operations, how many people they employ, how many goods and services they produce and at which operative margin.

Hence again we have a new sort of money multiplier/fractional reserve type circuit which could be the domain of BCS algorithms based against measurable blockchain data and statistic of a person or company trying to maintain each actor within a productivity sweet spot (not too underfunded, not too overfunded).

Even in this currency system dominated by algorithmic credit, nothing forbids a private entity (bank) from lending its silvercoin reserves to debtors with an interest rate attached to it.
Should this private entity have the power of fractional reserve currency multiplication?
Would this human approach to lending be more efficient and spur more productivity than an algorithm based approach, or will it set the stage for malinvestment and misallocation of resources like we are seeing already in these times of financial bizzaro in the stock markets?

One suggestion here would be to allow for NO fractionalization of the credit so a private bank can borrow only silvercoins that it actually owns 100%.

You see how the stakes here are high for investors and stakeholders as they need to very carefully select those investments and ideas deemed more productive and rewarding as opposed to a more slack and careless approach to investment.

Another efficient way for investors to rack up capital is through Goldcoins (which are private wallets only tradeable to silvercoins private people wallets only and with a programmed 90 days delay!!!).

In this case wealthy goldcoin investors decide to pay managers and other key personnel of a startup company in Goldcoins.

This approach allows goldcoin currency recirculation streams from wealthy wallets back down to lower grade wallets and as we have seen before an healthy society is a society where currency streams flow circularly from one class of society to the others as opposed to currency concentration and currency stream constriction.

Cautionary tales about malinvestment

In this image we illustrate few wealth distributions curves or rich/poor distribution.

Typically, a society has many poor, some middle class and few rich people.

There is a natural organic distribution of wealth also function of technological development and penetration, average schooling and knowledge penetration, etc.

Bottomline: A primitive society cannot be very stratified and we are all hunters or gatherers; A highly advanced society is naturally more stratified and allows for people to thrive better.

A society can collapse when the organic and natural shape of this curve is twisted or disrupted by acts of war, revolutions, political upheavals or by simply not allowing the curve to evolve in accordance with new technological and economic conditions of said society.

When a revolution or an act of war or a pandemic takes place, a lot of people are thrown into financial uncertainty and this causes emotional strain because people can no longer understand their place within the disrupted wealth distribution curve as opposed to their original position and status.

A society can grow past its stability point and collapse if said curve is twisted and exasperated by malinvestment policies.
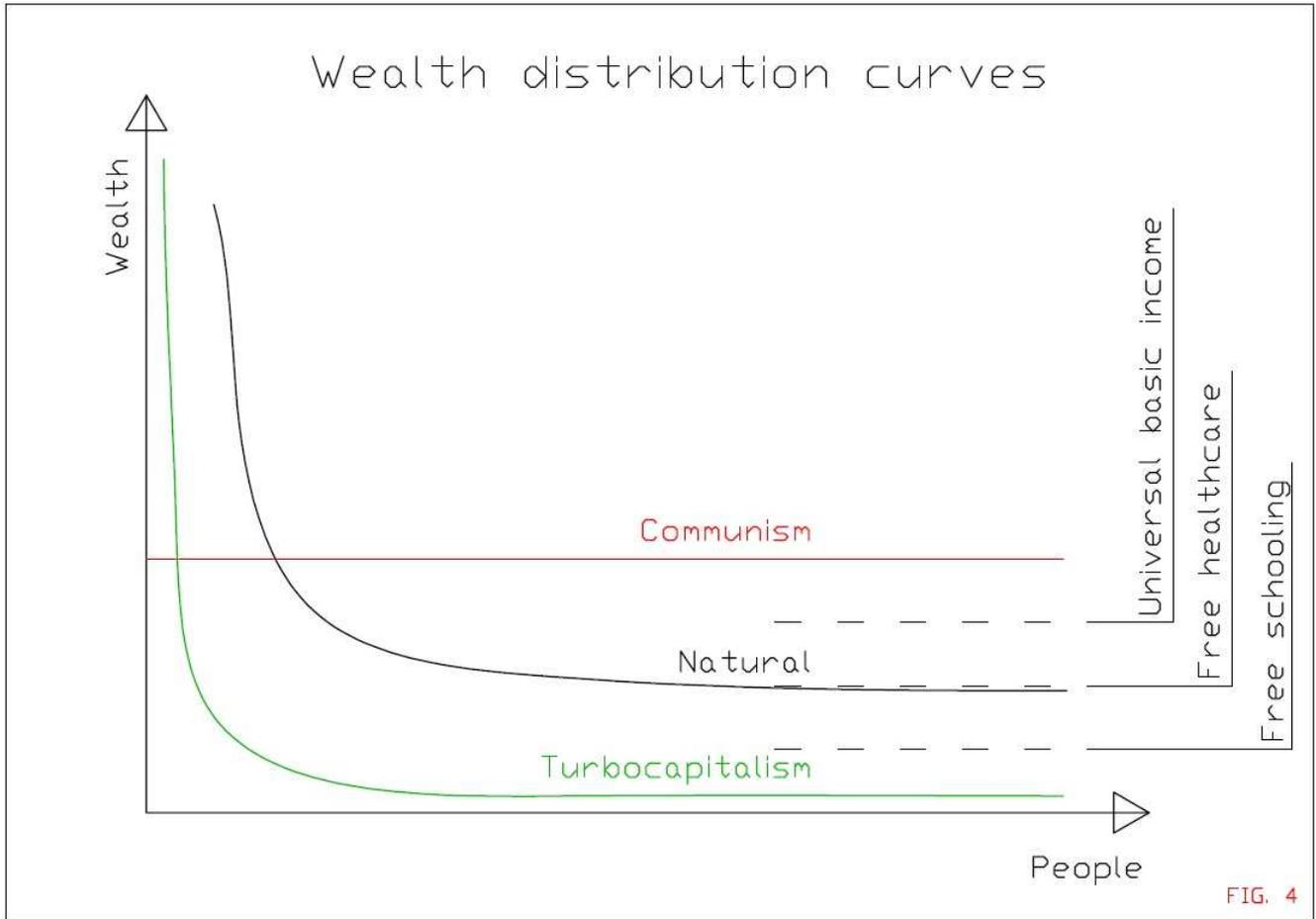
Wealth distribution curves

Figure showing wealth distribution curves with Wealth on the vertical axis and People on the horizontal axis. Three curves are plotted: Communism (red, horizontal line), Natural (black, declining curve), and Turbocapitalism (green, steeply declining curve). On the right side are bracketed labels: Universal basic income, Free healthcare, Free schooling.

FIG. 4

Few examples of decayed or decaying societies are:

1) The communist party mandating societal equality in Russia with disastrous consequences in terms of loss of lives and economic output until a new stratification was restored in terms of political position within the newly reformed society.

   Still the damage was done and society set back.

2) Excess stratification with too many poor, a handful of middleclass and few rich within an educated or technological society will lead to riots and overall destruction of societal tissue; it is an involution of society toward a primitive hunter/gathering state

in order to reset and equalize the curve and allow a new fresh start to most members of society.

3) Excess or abuse of welfare programs can dissuade people from joining the workforce thus undermining societal dynamism and wealth creation.

4) Happy money printing of FED & Co or other helicopter money strategies allow zombie companies to endure and prevents creative destruction of capital thus undermining innovation and economic advance.

On these last two points I shall refer you to Jared Diamond book "Guns, germs and steel" and lead us to a discussion about why China is more advanced than Silicon Valley in the development of 5G and other advanced technologies.

The shape of the wealth curve and its evolution could be set as targets or be operating parameters of the BCS. In any case human intervention will be needed for calibration of the system since humans are the only ones capable of imagining the kind of society we want to live in.

International currency exchange

Lastly we shall address briefly the issue of exchange rates with other states or financial systems using different currencies other than the BCS one.

Here the issue is about establishing an exchange rate between different currencies (states). These exchange rates might be pegged against inflation statistics and relative cost of life

between the two nations gauging their currencies (again an algorithmic issue with minimal human intervention).

Imagine next a foreign tourist wishing to visit a BCS operated state, he then needs to convert some of his foreign currency into silvercoins to be able to "tourist" around. An exchange transaction could be programmed so silvercoins are fiated on a personal tourist account against some of its foreign currency transferred into a BCS foreign currency account. Once the foreign currency is transferred out of the foreign state account this foreign currency is destroyed (deleted) from the BCS record (aside from the ghost transaction image useful for statistical analysis and trends).

This provides a one way only exchange direction from Foreign currency to BCS currency!

This is because BCS only recognize itself as the main currency, it needs not to intervene or influence foreign nations and actors by fiating foreign currencies toward foreign nations.

One risk here is also that a foreign nation will inflate its currency and buy more and more fiated silvercoins in exchange for a less and less valuable currency. This is once again a malinvestment inflationary practice comparable to stealing. Nations engaged in such practices shall have their currency banned from any Foreign-to-BCS transaction, thus effectively banning an entire nation from effectively conducting business with a BCS operated state.

It is a modern form of monetary embargo so to speak and a cautionary tale for all leaders to

wisely operate their financial system. A financial embargo needs not to last decades, it could just last few days, weeks or more for recurring offenders, just enough to cause enough discomfort to a foreign nation.

On another note, shall a foreigner or outsider be allowed to register himself as a BCS user and have an extremely valuable Goldcoin fiated onto his name?
This is strictly related to citizenship issue, if you can make it to become a citizen of a BCS organized nation then you should be rewarded with a goldcoin same as if you were born in this State.

Finally a tourist operating within a BCS system shall be allowed to visit foreign nations operating with different currencies, but they cannot trade their silvercoins for local currencies.
People and companies of said foreign nations shall have Silvercoin wallets registered to their names to be able to receive Silvercoin (or Bronzecoin) payments.
Silvercoin and Bronzecoin wallets have no boundaries so to speak, require no proof of citizenship, can be registered to both physical persons or companies thus allowing for expansion of the BCS system toward other nations.

Unresolved issues

BCS system needs to allow for quantic encryption since this will be the next great technical

disruptive force in IT technology, but otherwise the technology required for BCS implementation is already at hand.

Secondly the implementation and deployment of BCS is expected to encounter much political resistance as it implies a shift of power form central bank board rooms to working-from-home IT geeks.

It is not likely that central banks will allow such a system to become a reality ever, not on their watch.

Secondly we shall highlight the fact that allowing policies to be implemented through polling and voting of BCS users shifts the power from governments back onto people hands.

This practice encourages the formation of direct democracy and new distributed ways of social activism with a plethora of influencers operating within this new society.

If left unchecked then democratic polling and voting could also lead to great malinvestment practices. For example, everybody will for sure vote in favor of "money for nothing" and other happy money printing policies thus leading to malinvestment and ultimately wealth destruction.

To prevent this, we should look forward to one form of central government with the power to enforce a certain policies to maintain and raise the wealth distribution curve and modify

or cancel malinvestment policies within the BCS software

References

Jordan Peterson, "12 rules for life"

Jared Diamond, "Guns, germs and steel"

Bitcoin whitepaper

Libra whitepaper